A Compensatory Framework for Sustainable Development: The Case of Tanzania

Cranfield University

School of Applied Sciences

PhD Thesis

Paul E. Mtoni

Supervisor: **Prof. Joe Morris**

2010

This thesis is submitted in full fulfilment of the requirements for the doctoral degree

Dedication

"This thesis is dedicated to my dad, the late Mzee ***Enock Majani Mtoni*** *for recognising the importance of education; and my son,* ***Timoth****, at the ages of 5 and 6 he constantly and tirelessly reminded me to go to the office and work on my thesis".*

Acknowledgements

Special thanks to the Commonwealth Scholarship Commission in the United Kingdom (UK), Cranfield University and Government of Tanzania (through my employer Sokoine University) for their financial supports that made possible my studies and stay in the UK and, my research work in Tanzania. I also thank all staff of the British Council in both offices in the UK and Tanzania for their constant administrative cooperation and social support rendered throughout my PhD programme. I am thankful for the information provided and time spared for me and my study by villagers in Mwanambaya and Idete communities; staff of SONGAS and KVTC projects and; different service providers and individuals.

My deep sense of gratitude should go to Prof. Joe Morris (my main supervisor) for his tirelessly guidance and support academically, socially and morally throughout my studies. Dr. Paul Trawick, my co-supervisor deserves a special mention as well. I am highly indebted to Dr. Paul Burgess (Chairperson of my thesis committee) for his careful and keen leadership during all five thesis committee meetings convened to evaluate progress of my studies. I am also grateful to Dr. Matt Cook and Dr. David Parsons for their kind advice and technical support throughout my studentship at Cranfield University. I thank all academic and administrative staff, Ms. Angela Colclough in particular and my fellow students at School of Applied Sciences, Cranfield University for their support and cooperation that in one way or another facilitated this achievement.

I would like to thank my dearest wife Dr. Carolyne for her love and tirelessly support to all academic and life challenges met during our stay in the UK and in Tanzania. Many thanks to our sons Tito and Timoth for their tender love, patience, understanding and for being good boys all the times, particularly everywhere we happened to be as a family. On behalf of my family, I would like to express our special heartfelt appreciation to my brother Moses and his family members for their love and especially for ensuring our home remained secure throughout our three year absence. I end by thanking GOD for his grace, protection and blessings that allowed all mentioned above to happen.

Abstract

Development projects, such as plantations and infrastructure improvements, provide benefits for people at the regional and national scales. They can also result in negative impacts and costs borne by some members of society. Projects are deemed worthwhile if overall welfare is enhanced and, in principle, the gainers could compensate the losers. In this respect, compensation is an important measure or method of redistribution of benefits and costs between the gainers and losers in the context of development projects. It is also a potential strategy for addressing concerns of social justice, fairness, equity and disputes through negotiation. This research explores the potential use of compensation for promoting the sustainability of development projects and rural livelihoods in the context of developing economy, namely Tanzania.

The literature review and exploratory visits to the study area revealed relevant theories, concepts and practical issues of compensation. An innovative framework that integrates the *Coase* theorem, Millennium ecosystem approach and the concepts of sustainable livelihoods was developed and used in assessing and analysing compensation practices of two project case studies. The research adapted a case study strategy for studying compensation in its geographical settings. Tanzania was used as the country case from which the teak and gas-pipeline projects were selected as project case studies. One village in each project area was selected for detailed study. Key informants and focus group interviews provided initial insights into project impacts and compensation regimes. Twelve in-depth case studies were carried out on affected households. Key sustainability issues pertinent to compensation, people's livelihoods and projects were verified using a questionnaire survey that involved 120 households. Other two surveys were carried out to collect views on compensation views in Tanzania from project developers and service providers. Triangulation of research methods, tools and sources of information enhanced quality of both qualitative and quantitative information.

As currently practised, compensation schemes in Tanzania lack comprehensive planning, involvement of the host communities, monitoring and record keeping. The elites participating either as service providers or middlemen affect information flows in compensation schemes and in some cases confuse the negotiation process for their own interests. At household level,

both the quantitative and qualitative analyses indicated the association between project impacts, compensation and deterioration of all five household assets namely natural, physical, human, financial and social capitals. Rural livelihoods have been affected due to impacts on annual and perennial farming systems especially due to loss of land. Among the threatened ecosystem functions include agricultural production systems due to land loss (reported by 81% of respondents) and, support and regulation systems in terms of decline of soil fertility (74% of respondents).

Loss of land and reduced agricultural production were the main type of impacts on people's livelihoods and losses encountered by rural communities. The ambiguous ownership of lands between the State, Villages and Villagers means that it is difficult under the current property rights regime in Tanzania to specify compensation entitlements. The study confirmed that unclear property rights, asymmetry of information and high transaction costs in compensation processes in Tanzania prevent the resolution of a *Coasian* welfare maximising outcome. However, the *Coasian* bargaining framework was shown to provide a useful basis for improving negotiation between project developers and affected parties, which is currently limited to *'information-giving'* and *'consultation'*. It can also help to increase the effectiveness and efficiency of compensation systems by reducing transaction costs and improving relationships between project developers and affected parties and host communities.

In contrast to the current conventional *'one-payment'* monetary compensation, the study recommends *'benefit sharing schemes'*, taking a variety of forms, in order to promote fairness and sustainability through enhancement of potential benefit, as well as improved intragenerational and intergenerational equities. Such schemes also have potential to reduce intrusion of elites attracted by money and other short term interests.

Table of Contents

List of Tables

List of Figures

Page

List of acronyms

ADB_{Africa}	African Development Bank
ADB_{Asia}	Asian Development Bank
AIDS	Acquired Immunodeficiency Syndrome
ASDP	Agricultural Sector Development Programme
CBA	Cost Benefit Analysis
CEEST	Centre for Environment Energy Science and Technology
CFAAC	Conceptual Framework for Assessment and Analysis
CGV	Chief Government Valuer
CSO(s)	Civil Society Organisations
CT	Coase Theorem
CTHLs	Calculated Total Household Losses
DCO	District Commissioner's Office
DFID	UK Department For International Development
EFUV	Millennium Assessment's Ecosystem Functions-Uses-Values
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
FAO	Food and Agriculture Organisation
GBP	Great Britain Pound
GDP	Gross Domestic Product
GoI	Government of Indonesia
GoT	Government of Tanzania
HH(s)/hh(s)	Household(s)
HIV	Human Immunodeficiency Virus
IIED	International Institute for Environment and Development
KVTC	Kilombero Valley Teak Company
LEAT	Legal Environmental Action Team
MA	Millennium Approach
MDGs	Millennium Development Goals
NEMC	National Environment Management Council
NGO(s)	Non Government Organisations
NPV	Net Present Value
ODA	Overseas Development Agency
PCC	Pearsons' Coefficient of Correlation
PD(s)	Project Developers
PLHIs	Perceived Losses of Household Incomes
PRs	Property Rights
RPF(s)	Resettlement Policy Frameworks
SADC	Southern Africa Development Community
SAIEA	Southern Africa Institute for Environmental Assessment
SIA	Social Impact Assessment
SLF	Sustainable Livelihoods Frameworks
SONGAS	Songosongo Gas
SP(s)	Service Providers
SPSS	Statistical Package for Social Sciences
TANESCO	Tanzania Electrical Company
TCs	Transaction Costs
TIC	Tanzania Investment Centre
TS	Total Score

TZS	Tanzanian Shillings
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
URT	United Republic of Tanzania
USA	United States of America
USD	United State Dollar
USSR	Union of Socialist Soviet Republics
VC	Village Chairman
VEO	Village Executive Officer
WB	World Bank
WC	Ward Councillor
WCED	World Commission on Environment and Development
WEO	Ward Executive Officer
WTA	Willingness to Accept
WTP	Willingness to Pay
WWF	Worldwide Fund for Nature Conservation

Chapter 1 INTRODUCTION

Chapter one presents introduction to the study in terms of background information and the context. Information collected from exploratory visits to the study area (Tanzania) guided the process of conceptualisation of compensation challenges related to development projects in a developing economy context. The chapter also presents the aim and objectives of the study.

1.1 Context and background

Development projects in developing nations aim to improve people's well-being, yet such projects can impact negatively on some portion of the population. This typically occurs because the projects need land to operate on. Among those adversely affected include those whose assets are taken or modified and, their production activities, flows of services and other benefits are impaired or halted. These people and their communities may become losers despite efforts of project developers to compensate for their losses. Compensation for the losses encountered by rural people in particular is arguably one of the most challenging issues associated with the development projects in developing economies[1].

Despite this, the number and scale of local and foreign private investments have been increasing in many countries (UNCTAD, 2002 cited in Chamani, 2003). This growth has been largely influenced by the radical economic reforms, commonly known as Structural Adjustment Programmes, which were jointly instituted by the International Monetary Fund and the World Bank in early 1980s. Basically, Structural Adjustment Programmes focused on transforming the state-operated economy into a liberalized market economy. However, a series of reviews carried out worldwide by WWF (1992), Cernea (2003) and UNCTAD (2006) report that the social, economic and environmental consequences of Structural Adjustment Programmes have been profound and controversial in many countries. The major reason reported was that the reforms and

[1] Developing economies are found in developing countries and depend heavily on the extraction of their natural resources. They are also characterised by relatively low levels of industrial activities, agricultural mechanisation, technological capability, economic productivity and Human Development Index (HDI). HDI is a United Nations' compound indicator for human development level computed based on income per capita, gross domestic product (GDP), life expectancy, literacy rate and so many factors (UNCTAD, 2006).

subsequent investments disregarded both the local socio-economic priorities and environmental concerns. One of its manifestations is in the compensation issue. In many countries, compensation disputes are increasing and processes of compensation are perceived to be ambiguous, inconsistent and present issues of great concern in relation to future sustainability (ADB$_{Africa}$, 2003 and ADB$_{Asia}$, 2007).

1.2 Compensation in developing economy context

Compensation involves actions to offset or make good the losses incurred by those parties who are, or are likely to be, negatively affected by a development activity. Losses may involve a reduction in the values of assets or incomes of affected parties, or of entitlements to flows of beneficial services such those provided by open access to land or water. Therefore, compensation is an important method of redistribution of benefits and costs between gainers and losers in the context of development projects. Compensation can take a variety of forms, usually involving monetary compensation is more common and in some cases in-kind payment. Likewise, the methodological approaches used neither recognise all losses incurred as a consequence of the development projects nor situations that would have prevailed in the absence of the development projects. Generally, compensation payments in developing countries have not fully recognised changes in the overall welfare of the affected parties and host communities that are attributable to development project compared to the *'without project'* scenario. Here, compensation in principle is made against the 'counterfactual' situation that would have otherwise prevailed possibly involving a continuation of pre-development conditions or, some changes of either an improvement or deterioration in social, economic and environmental conditions.

However, experience shows that compensation associated with development projects is often dominated by disputes between project developers and affected parties or/and host communities (Thabane, 2000; Zaman, 2002; Cernea, 2003). The disputes are largely land and resource-based issues, due to unclear entitlements in particular. Since less attention is paid to these disputes from the outset, few projects have appropriate mechanisms for conflict resolution and management. Circumstances are worse when the affected parties and host communities are dispossessed of their lands and forcibly

relocated elsewhere to give room for development undertakings without adequate consultation, preparation and compensation (Mtoni, 1999; Kironde, 2003; Mwalyosi, 2004). These disputes happen in the developing world because of a number of limitations during project appraisal, implementation and compensation processes. The important limitations reported by Hitchcock and Shauri (1999), Mwalyosi (2004); Orindi and Huggins (2005), include inadequate policy and regulatory frameworks; unclear administrative mechanisms; lack of competent expertise and; few support schemes to both the affected parties and host communities and project developers.

Compensation issues in developing countries often create much dissatisfaction amongst project proponents and affected parties and host communities. The project proponents carry burdens associated with costs of planning, implementation and paying compensation and, maintaining the quality of the environment. They view some of these costs as extra to their proposed projects. On the other hand, most of the affected rural people in developing countries are poor and their livelihoods are entirely dependant on the land which also has many socio-cultural values associated for example with identity, status, ritual, ancestry, sense of place and belonging. When such rural communities are relocated by a development project, it is rare for them to be satisfied with the amount of compensation paid. In this respect, compensation could essentially mean the plan to harmonise or balance the willingness to pay compensation by project developers and willingness to accept compensation by the affected parties and host communities. Depending on whether the affected parties or host communities have entitlement, compensation for the lost welfare could be worked out using utility function that shows changes influenced by a development project. Moreover, compensation outcomes that are likely to bring satisfaction depend on how well the compensation was planned and implemented, there thus has to be a process that involves negotiations between project developer and affected parties and host communities.

While compensation is distinguished as a measure carried out just before the project becomes operative, opportunities exist for the compensation process to reduce costs. This is possible through making use of some information generated by other project appraisal frameworks such as feasibility studies, Environmental Impact Assessment and

Cost Benefit Analysis as input information when planning the compensation schemes. Essentially, it needs repositioning of compensation process in the project appraisal system in order to promote cost-effectiveness. Another opportunity is for the compensation process from the beginning to focus on searching for possible ways of improving relationships between project developers and affected parties and host communities, possibly through negotiations.

1.3 Development projects and compensation practices in Tanzania

Development projects in Tanzania have a long history back to the colonial rule (i.e. mining and farming activities) through post independence (i.e. nationalisation and collective ownership under socialist economy) and currently the liberalised economy. Both the State and private sector are project developers in Tanzania but the latter dominated by foreign private companies is currently the leading investor in the country (TIC, 2009). Project developers have been investing largely in sectors such as manufacturing and industrial processing; road and communication infrastructure; energy generation and distribution infrastructures; mining activities; banking and financial services; agricultural and forestry plantations; conservation, tourism and service facilities. Figure 1.1 shows the number of new projects by sector approved by Tanzania Investment Centre (TIC) for the period between 1990 and 2003.

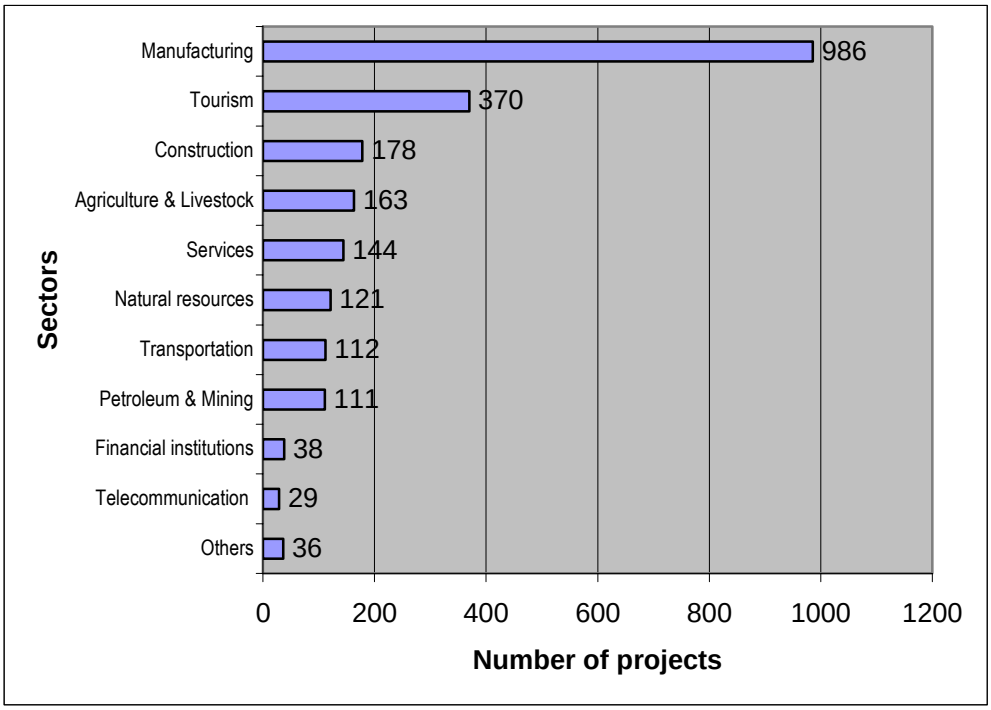


Figure 1.1: Number of new projects approved by Tanzania Investment Centre by sectors for the period of 1990-2003 (Source: ADB*Africa*/OECD, 2006 and Elibariki, 2007)

Despite the economic achievements and other benefits harnessed from the economic reforms, there is need to reflect on compensation processes and outcomes in rural areas where the majority poor people live in developing countries. Among the issues to be looked into critically include impacts of compensation schemes on people's livelihoods, environmental goods and services and, sustainability issues. For instance, the following have been reported to happen in different compensation practices in Tanzania:

- The affected parties and host communities see both the criteria and methods of economic valuation used as a basis for determining compensation are not always suited to address the diverse values of services and goods that they derive from their lands (Kombe and Kreibich, 2001; Lovett, 2001 in Lovett *et al*., 2001).
- Compensation processes lack both transparency and participation in which the affected parties and host communities lose their compensatory entitlements (Hitchcock and Shauri, 1999; URT, 2002).
- Compensation processes involve middlemen actors or agents who are not stakeholders but are attracted by monetary benefits gains and other short-term

interests that can increase costs, delays and involve complicated disputes (Lissu, 1999; Mwalyosi, 2004).

- Although the affected parties are paid compensation, they still experience some losses due to undercompensation and problems associated with late disbursement of compensation (Mtoni, 1999; Kironde, 2004; Mwalyosi, 2004).

1.4 Study aim and objectives

In this context, the aim of this study is to develop and critically evaluate a framework for compensating people impacted by development projects in a developing economy and to inform policy accordingly.

The following study objectives were identified in order to meet the above aim:

01. To identify and describe key stakeholders, their interests in and influence on the process and outcomes of compensation systems.

02. To identify and explain compensation systems commonly used and determine their potential suitability for sustainable development.

03. To identify and explain effects of existing compensation systems on livelihoods of affected parties and their implications on sustainability issues.

04. To propose a form of compensation and its cost-effective implementation suitable for a developing economy context.

05. To apply and critically evaluate relevance and potential of the *Coase* Theorem in understanding project-based compensation systems in a developing economy context.

The study focuses on Tanzania as a case study in order to respond to the above objectives and frame the compensation challenge in the context of development projects. Tanzania was selected as a country case after a careful scrutiny of various issues pertaining to time and financial resources; suitability and accessibility; mobility and logistics and; *'health and safety'*.

1.5 Thesis structure

This thesis has eight chapters. **Chapter 1** introduces the study by giving its context and background information. It also presents the aim and objectives of the study. **Chapter 2** reviews concepts, principles and theories of compensation in the context of development projects, ecosystem functions, sustainable livelihood framework, and *Coase* Theorem as a central theory for this study. The conceptual framework for assessment and analysis of development project-based compensation is also presented in this chapter. **Chapter 3** outlines data needs, sources, methods for collection and analysis. It also presents the research strategy, criteria for selection of different cases and critique of research methodology.

Chapter 4 discusses the findings of stakeholder analysis and their views on compensation systems and practices in Tanzania. **Chapter 5** assesses and discusses post-compensation outcomes in terms of changes and implications on people's livelihoods and ecosystem functions. The chapter also presents project and compensation benefits and costs experienced by affected parties and host communities. **Chapter 6** compares the perceived loss of household income, total household loss and actual compensation paid. It also presents relationships between losses and various contextual factors. **Chapter 7** proposes a compensatory framework for the developing economies by defining compensation, presenting its core values, principles and procedures. The chapter also presents critical evaluation of both the proposed framework and the application of *Coase* Theorem in a developing economy context. **Chapter 8** presents the main conclusions and recommendations of this study including their implications for further research work.

Chapter 2 THEORETICAL FRAMEWORKS FOR ASSESSING PROJECT-BASED COMPENSATION PRACTICES

This chapter presents the main ideas, concepts and theories of sustainable development, socio-economic welfare and ecosystem functions as linked to the compensation matter. Further to that the chapter frames relevant literature information in the context of Coasian seminal work (Coase theorem) that suggests basic compensation principles to observe such as property rights, negotiation and transaction costs. Practices and experiences of compensation from rural Tanzania have largely been used in narrowing down the theoretical information that helped to confirm study questions, validate the research topic and set boundaries of the study (Figure 2.1). Finally, the chapter presents a novel conceptual framework for assessing compensation schemes influenced by development projects in a developing economy context.

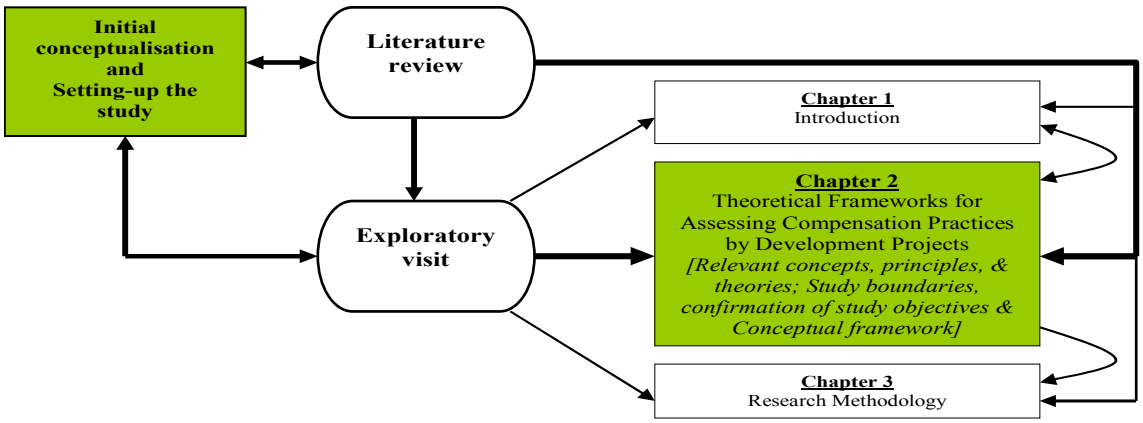


Figure 2.1: Phase I: Setting-up the conceptual framework for the study

2.1 Sustainable development and welfare

Introduction of project activities in an area brings both positive and negative changes to people's living conditions and their environment. Experiences show that many projects quickly jump into administering compensation as a measure for negative impacts that are likely to occur or have occurred already. The big question is can compensation sustain the affected people's livelihoods, environment and project activities. According to SAIEA (2003) the community has to seek to establish a path along which

development activities can progress while enhancing quality of people's life and ensuring the viability of land resources on which both people and their development depend.

However, sustainable development means different things to different people. The definition by the United Nation World Commission on Environment and Development (WCED) is perhaps the most common and quoted within the extensive literature (Bell and Morse, 2003). The Commission's concept constitutes an ethical element that associates with development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (WCED, 1987). Another definition by Asheim (1994) similarly requires the current generation to manage the resource base in such a way that the average quality is maintained and shared by all future generations. Although authors and organisations set out their sustainable development definitions using the wording and phraseology that reflect their own interests, missions and visions, it is very interesting to learn from different definitions (Meter, 1999). For example, many definitions of sustainable development feature aspects of fairness and equity within and across generations.

Robinson (2004) categorises sustainable development definitions into three groups viz., (i) those emphasize social, economic and ecological dimensions as the three pillars of sustainable development; (ii) those emphasize on humanity and nature relationships and; (iii) those perceive development as a source of social and environmental problems. The literature has widely accepted the 3-pillar category as an operational definition for sustainable development as in many communities such perceptions and beliefs exist (Pearce *et al.,* 1990; Rao, 2000; Robinson, 2004). However, the big challenge is how to practically integrate and balance the 3 pillars in order to sustain people's livelihoods, environment and project activities. Since development is a value-loaded word implying positive changes in desirable socio-economic objectives (Pearce *et al.,* 1990), planning, implementation and monitoring remain to be critical aspects of sustainability.

2.1.1: Concept of weak and strong sustainability

Literature has extensively reported several efforts of searching for a more functional definition of sustainability. Environmental and resource economists have gone further by considering sustainability in terms of stocks of resources and the technology used to exploit them, collectively, referred to as capital assets (Atkinson and Hamilton, 2003). Capital assets have been grouped into 5 forms namely natural capital (K_n); human capital (K_h); social capital (K_s); physical capital (K_p) and financial capital (K_f) (Ashley and Carney, 1999). Based on substitutability of natural capital, Turner (1993) identifies four different types of sustainability, ranging from very weak (that assumes complete substitution) to very strong (that assumes no substitution) (Table 2.1). However, from a practical point of view, the two extremes of sustainability sound meaningless as far as development issues are concerned.

Table 2.1: Weak sustainability versus strong sustainability

Very weak sustainability	*Weak sustainability*	*Strong sustainability*	*Very strong sustainability*
• All capital assets (K_n; K_h; K_s; K_p and K_f) should remain constant over time • Allows compensation between capital assets	• Man made capital assets (K_h; K_s; K_p and K_f) are substituted for K_n • Indicates environmental quality at optimal economic level • Undertakes Cost Benefit Analysis (CBA) to evaluate mitigation measures • Potential for decline of environmental quality • Countries facing resource depletion and ecosystems may look sustainable • Environmental Standards is not a priority	• K_n is kept constant (critical K_n is strictly not substitutable) • Acknowledges environmental integrity and rights to nature. • K_n is recognised as essential inputs in the economic production, consumption and welfare • Minimum levels of different forms of capital assets are established and maintained in real physical/biological terms • Requirement to meet environmental standards	• Economic activities kept at extreme lowest level • Strictly promotes ecological efficiency (i.e. every ecosystem, subsystem, species and physical features must be preserved)

According to Hediger (2006), the weak scenario implicitly assumes sustainability would be possible even when savings are invested in manmade physical capital and human capitals and, that physical capital is perfectly substitutable for natural capital. Minimum environmental quality standards are not a matter of priority for the economic development following the logic of this paradigm. Regardless of other development constituents, only one variant of the weak sustainability measure (*present value*) of

development benefits should be positive (Pearce *et al.*, 1990). When substitution of physical capital for natural capital reaches one to one, the environmental quality would be at risk. Once natural capital is transformed into physical capital, depending on the level of technology the process is easier and profitable but in most cases irreversible following system failures due to environmental deterioration (Faber *et al.*, 2002). However, it is very hard to maintain the economic achievements and really impossible to reversing physical capital back to natural capital when either the renewable or non-renewable natural capitals face depletion.

Strong sustainability recognises that all types of natural capital are essential inputs in economic production and consumption but minimum levels of extraction for all types of capitals need to be established and maintained (Ayres *et al.*, 1998). The possible motivations of this school of thought include acknowledgement of environmental integrity and rights to use. This strictly interprets the widely accepted WCED's (1987) definition of sustainable development that requires both the present and future generations to benefit from the resources available. It also fits precisely within Asheim's (1994) sustainable development definition that requires the current generation to manage all land resources so that average quality of each resource is maintained and equitably shared by all generations.

Studies by Hanna *et al.* (1996) and SAIEA (2003) found that sustainability issues in African rural communities are strongly linked to people's rights to nature under their arrangements of *'use and spare'*. These traditional based arrangements are always part of their socio-cultural values and traditional institutions.

Kideghesho and Mtoni (2008a) found that the rural communities bordering Serengeti National Park in Tanzania were ready to support conservation efforts if the conservation benefits compensate all losses caused by wildlife and help to secure their livelihoods. This however, brings doubts whether benefits and costs encountered by affected rural people because of development or conservation projects are carefully considered. There is also the question of whether the overall project benefits and costs are equitably distributed among the concerned parties.

This is possible only when a community has both informal (i.e. non-governmental) and formal (i.e. governmental) institutions functioning properly. As it has been seen earlier, compensating the victims of investments is a process that entails issues of social justice, entitlements and environmental equity, thus the theoretical framework of this study is based on strong sustainability paradigm.

2.1.2: Sustainable livelihood framework

Livelihood thinking goes back to the work of Robert Chambers in the mid 1980s in which according to Chambers and Conway (1992), 'a livelihood comprises the capabilities, assets and activities required for a means of living'. They further noted that a livelihood is sustainable if it copes with and recovers from shocks, stresses and keeps enhancing its capabilities and assets without undermining the natural resource base of now and the future. The sustainable livelihoods approaches evolved over decades from the poverty-vulnerability context and kept its focus on the way resource-disadvantaged (poor) people live and, shocks and risks they normally encounter in their daily life (Ashley and Carney, 1999).

Currently, the concept of sustainable livelihoods is highly linked to aspects of rural development, poverty reduction, natural resources and environmental management (Scoones, 1998). Development and research agencies such as DFID, UNDP, CARE, Oxfam and so many others have made significant contributions towards making these approaches more people-centred and suitable for rural environments. According to Ellis (2000), these efforts were further modelled into different frameworks depending on the goals and objectives of an organisation. For example, CARE developed a framework for analysing the social, economic, political and environmental contexts. On the other hand, DFID came out with the Sustainable Livelihoods Framework (SLF) focusing on social, human, physical, financial and natural assets as important capitals for improvement of well-being of an individual, household or a community (Figure 2.2).

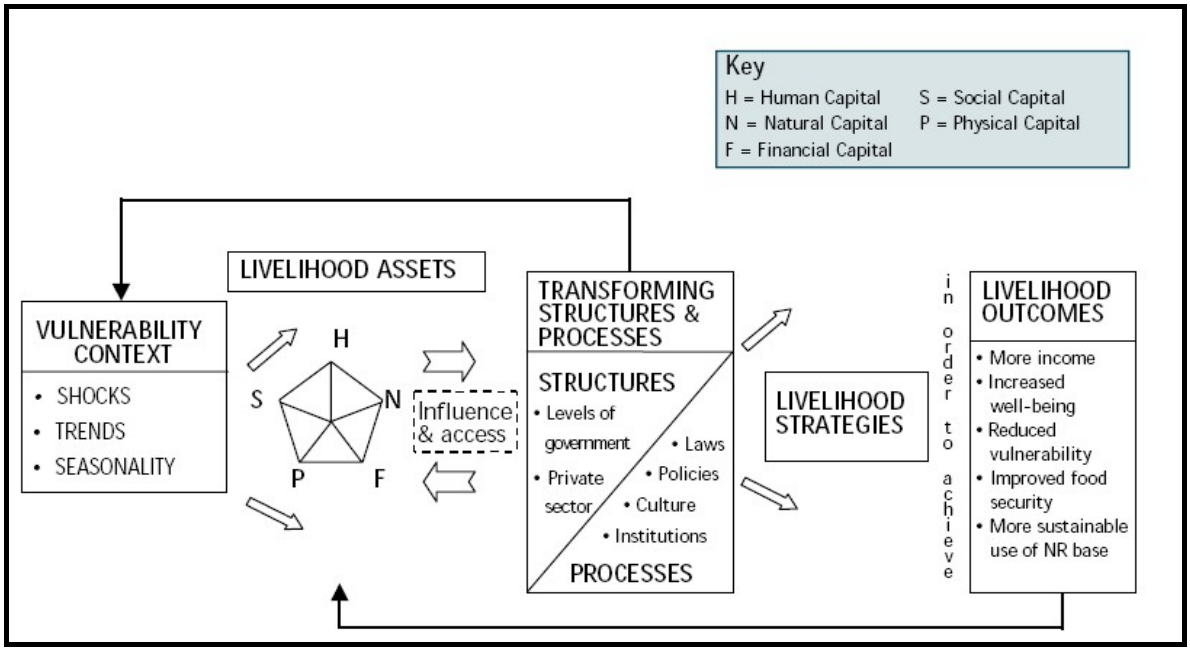


Figure 2.2: DFID's Sustainable livelihood framework (Source: Ashley & Carney, 1999)

According to Ashley and Carney (1999), the DFID's sustainable livelihoods framework has proved to be a quite useful tool in holistic approach, promoting wider informed views and opportunities for development activities and puts people and their priorities at the centre of analysis and solutions. Sustainable livelihoods framework shows potential for providing a framework for conceptualisation, assessment and analysis of changes in rural societies if compensation schemes introduced by project developers are regarded as one of the shocks operated in a context of vulnerability. Alternatively, it can be used as a checklist tool in situations where development approaches put in practice bring confusion to grassroots stakeholders. However, Ellis and Mdoe (2003) caution that sustainable livelihoods framework's effectiveness in application requires relatively more time and financial resources. Another challenge of sustainable livelihoods framework is on understanding and facilitating the link between the micro and macro levels, rather than working only at grassroots level.

2.1.3: Sustainability in the context of millennium ecosystem assessment

Millennium Ecosystem Assessment (MA) is the most recent approach that links ecosystems and human well-being with the view of promoting sustainable development (MA, 2005).

2.1.3.1: Millennium development goals

The Millennium development goals are an output of collective agreement between the majority of the countries and international leading development organisations. Table 2.2 below lists the eight (8) goals and their respective targets to be achieved by 2015.

Table 2.2: Millennium development goals and their targets

Goal	***Goal aim (target)***
Goal 1: to eradicate extreme poverty and hunger	To halve the proportion of people living on less than 1 USD a day, and halve the proportion of people suffering from hunger, to achieve full and productive employment and ensure everyone has access to decent work, including women and young people.
Goal 2: to achieve universal primary education	To ensure that all children, boys and girls complete primary school education
Goal 3: to promote gender equality and empower women	To eliminate gender disparity in primary and secondary education
Goal 4: to reduce child mortality	To reduce mortality rate for children under five by two thirds
Goal 5: to improve maternal health	To reduce by three quarters the number of women who die during pregnancy or in childbirth
Goal 6: to combat HIV/AIDS, malaria and other diseases	To provide universal access to treatment for HIV/AIDS, and to halt and reverse the spread HIV/AIDS, malaria and other major diseases
Goal 7: to ensure environmental sustainability	To integrate principles of sustainable development into government policy, reduce biodiversity loss and to reduce by half the proportion of population without access to safe drinking water and basic sanitation.
Goal 8: to develop global partnership for development	To address the needs of least developed countries, develop non-discriminatory trading and financial systems, deal with developing countries' debt, and make available new technologies

The Millennium development goals act as *a blueprint* that provides a common framework for communities to guide both the policies and programmes in order to promote human well-being. Hindmarch, Harris and Morris (2006) define human well-being as *"a state dependent on a decent, healthy and secure life and conditioned by geography, economic context and a range of social factors"*. As per above definition, a review of contents of the eight goals indicates that the possibility exist for the Millennium development goals to help in addressing human well-being in developing economies if integration with people's preferences, development plans and national policies is well done. Without questioning whether the above eight targets are achievable in the given time frame (i.e. by 2015), it is obvious that a number of challenges exist. Definitely, a good number of projects (i.e. both development and

support projects) is required to facilitate achievement of the targets set for the Millennium development goals.

Other than funding and socio-cultural limitations, there are other constraints that pose big challenges in starting new projects in new areas, particularly rural ones. Mwalyosi and Hughes (1998) found that a number of environmental impact assessment reports in Tanzania reported that generally rural people feel safer if a development project does not involve taking a large area of land. Things get worse when the affected people have to be resettled with or without compensation (Mbiba, 1999; Saku, 2002; Abuodha, 2002; Mwalyosi, 2004; Cernea and Mathur, 2008). Normally, this has been due to fundamental question of security of life and socio-cultural issues as mentioned by Hindmarch, Harris and Morris (2006) in their definition of human well-being.

2.1.3.2: Concepts of ecosystem functions-uses-values

The Ecosystem Functions-Uses-Values framework is built on earlier theoretical works on ecosystems and economic welfare by Costanza *et al.* (1997); de Groot *et al.* (2002) and Turner *et al.* (2003). However, slight differences exist. The Millennium Assessment's ecosystem framework does not explicitly show carrier or habitat function as put forward by de Groot *et al.* (2002). The framework focuses on linkages between ecosystem services and humans as far as human well-being is concerned (MA, 2005). The linkages place humans as integral parts of ecosystems and try to awaken a sense of valuing ecosystem services and not to assume a limitless supply of natural raw materials. Worries exist regarding the ongoing unwise use and exploitation of ecosystems. To a large extent, this is aggravated by the failure of both the national economic plans and policies to recognise the importance of ecosystem services (Hindmarch, Harris and Morris, 2006).

i) Functions

According to de Groot *et al.* (2002) ecosystem functions are renewable environmental goods and services that flow from the natural capital base to satisfy human needs. MA (2005) categorizes ecosystem functions into four main groups, namely;

- *Production functions*: provision of resources e.g. water, food, raw materials and energy.
- *Support and regulation functions*: regulation of essential ecological processes and life support systems e.g. climate, flood, diseases, water purification and recycling of nutrients.
- *Cultural or Information functions*: contribution to knowledge and experience and sense of relationship with context such as spiritual experiences, aesthetic pleasure and recreation.
- *Habitat and carrier functions*: provision of space and location for activities, unique refuges, nurseries for plants and animals, conservation, recreation and so many others.

Figure 2.3 shows the ecosystem functions and services likely to be affected by development projects and potential for mediation by socio-economic factors (MA, 2005) which are among the critical aspects to be dealt with during compensation schemes (Sebenius *et al.,* 2005). It also estimates intensity of linkages between ecosystem services and constituents of human well-being.

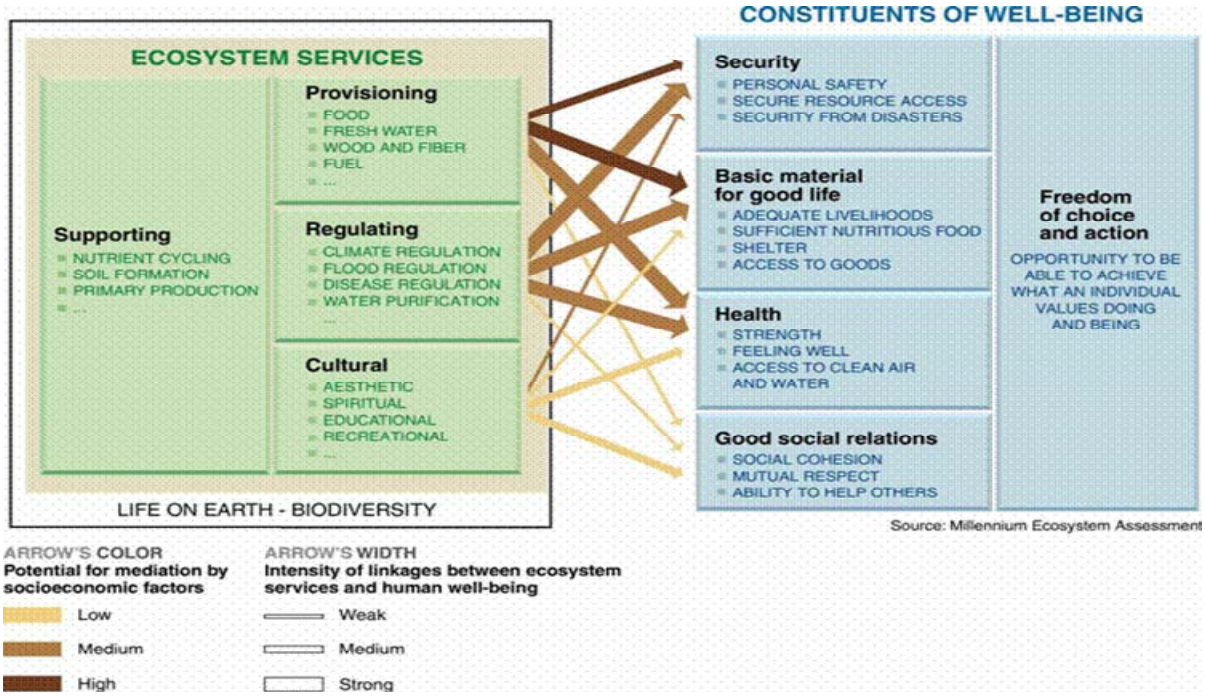


Figure 2.3: MA ecosystem functions and services framework (Source: MA, 2005)

ii) Uses

According to de Groot *et al.* (2002), use is an act or practice of obtaining goods or services from the function in order to fulfil a certain purpose. For example, wetlands provide for direct use through goods (water and fish) and services (wildlife habitat or flood control). Uses fall under major types of human activities such as agriculture, fisheries, conservation, recreation and amenity. As with functions and services, uses may be compatible or competitive as well.

iii) Values

Value is the beneficial effect of an entity on another entity and is reflective of usefulness in terms of fitness for purpose (Teitenberg, 2003). Alternatively, value can be measured in terms of the cost of providing the service by some other means (Turner *et al*., 2001). Value simply shows both human interests to and appreciation of goods and services (de Groot *et al.,* 2002). In real practice, market prices of goods and services are the most commonly used for comparison and exchange, and provide signals of both value and scarcity of a service or good (Costanza *et al*., 1989; Clarke and Joosten 2002; Brauer, 2003). However, market is most effective where there are large numbers of buyers and sellers and there is a clear system of property rights. Unfortunately, these conditions do not apply to all ecosystem functions, especially those generating indirect use-values (e.g. hydrological functions of wetlands) and those associated with 'non-use benefits (e.g. bequest, existence values of conserved wildlife).

Joosten and Clarke (2002) suggest three approaches to determine values namely:-

(i) *Idealistic*: specifies value as ideal, objective and independent of the real world

(ii) *Naturalistic*: specifies value based on the objective properties of an entity independent of the assessor

(iii) *Preference*: each person assigns value of an entity based on the way he/she feels about it.

The current practices of compensation around the world, in developing countries in particular support the preference approach where a "valuer or assessor" decides values of estates (assets and properties). Many authors such as Sebenius *et al.* (2005),

MacDaniels and Trousdale (2005) and Cernea (2008) identify valuation stage as the source of most of the distortions and disputes happening in the compensation process.

Based on the concept of total economic value, utilitarian value of ecosystems can be grouped into two main categories namely use (instrumental) and non-use (intrinsic) values. Use value of an ecosystem includes a service or good that is used by humans for consumption or production. It can be tangible or intangible, direct or indirect or service or good with potential of providing future use values. Non-use value is when people assign value to an entity because it exists even if they do not use it directly.

However, Brouwer *et al.* (1999) call for careful judgments during estimation of various values so as, not to undermine ecosystem functions. Further to that, Garrod & Willis (2001) & Turner *et al*. (2003) suggest that the estimates be regarded as indicators of relative values and not as absolute values.

2.2 Coase Theorem: The question of transaction costs and efficiency

The seminal work titled *"The Problem of Social Cost"* by Coase (1960) that later became famous in the name of Coase theorem can be summarised as presented in Figure 2.4 below. According to Webster (1998), the Coase theorem tends to focus on transaction costs rather than simply social costs, process efficiency rather than outcome efficiency, and the allocation of property rights rather than just the allocation of resources.

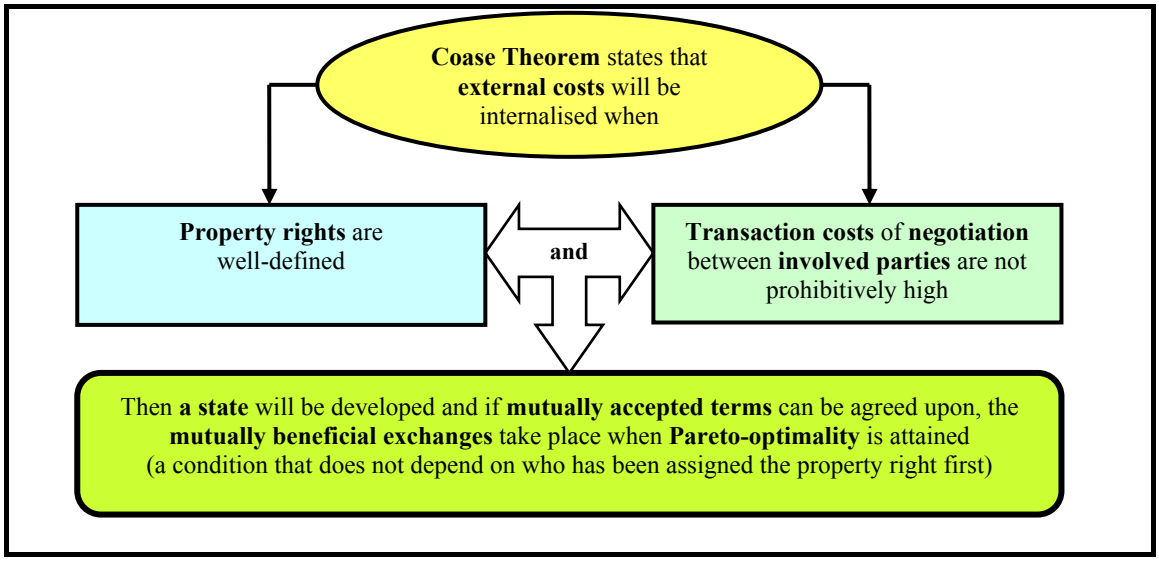


Figure 2.4: Concept flowchart of Coase Theorem

Coase (1988) examined what would happen in a world in which transaction costs were assumed to be zero. The assumption describes a simple setting in which further analysis of fundamental role of transaction costs in shaping the institutions is necessary. The Coasian assumption of zero transaction costs draws out implications of perfect competition which many welfare economists view it as the central perspective in modern economic analysis. In perfect competition, pricing system operates without cost (Coase, 1988). Likewise, Stigler's (1966) price theory makes a similar connection between perfect competition and zero transaction costs and emphasises that under perfect competition private and social costs will be equal and in fact this is Coase theorem. Because transaction costs are never zero and sometimes are very high, Stigler (1966) named Coase's insight the Coase theorem and regards it as the case where people who value the good more than its price get the good and those who have the initial property right but do not value the good as much as its price, get the money (i.e. compensation).

While Coase (1992) saw his theorem as a stepping stone on the way to analyses of economy with positive transaction costs, Hirschey (2003) regards Coase theorem as one of the cornerstones of institutional economics. According to Gilpin (2000); Ostrom (2003); Schmid (2004), the Coase theorem has become an important basis for most of the economic analyses of government policies and regulations, in North America in

particular. For instance, the Coase theorem examined the widely accepted Pigovian tax imposition of *"polluter pays principle"* and viewed an externality as the question of entitlements and voluntary negotiation between the concerned parties (Cerin, 2006). According to Stigler and Pashigian (1989); Coase (1992), actions of some governments that use taxes, subsidies and other legal actions to restrain activities that have negative effects on others are based on standard economic theory which assumes zero transaction costs. Coase (1988 & 1992) argue that the solutions to an externality problem which are based on taxes, subsidies and other regulations always have high transaction costs and are unnecessary in situations where the concerned parties would have voluntarily negotiated to maximise wealth.

Although, the Coase theorem generally considers the market-based mechanisms of exchange can be more economically efficient than regulatory methods, Coase (1992) argues that in some circumstances, regardless of high transaction costs, government interventions could produce more efficient outcomes than negotiations. For example, when one side of a negotiation process involves many parties, especially where the affected parties are as generally poor as rural people in developing countries, many would decide to *free-ride*. A *free-riding* incentive is a common phenomenon when large numbers of individuals or groups are involved in negotiations (Webster, 1998). It is worth noting that an externality can be positive and squatters are a typical example of people who benefit from land services and goods as *free-riders*. This behaviour not only increases transaction costs, but also causes the failure of market-based solutions during negotiations (Coase, 1992).

Another example of where the government intervention is necessary is when the concerned parties have unjustifiable claims which can prevent negotiation from reaching an agreement, even if the expected gains from agreeing outweigh the transaction costs. This has been a big challenge in rural areas in developing nations where property rights are not well defined. In such situations, the regulators may use compulsory purchase orders to acquire land or property for public benefits (Webster, 1998). Although, the compulsory acquisition of lands is necessary to allow projects to proceed in the public interests, affected parties still have the rights to compensation,

negotiate, make representations, refer to property arbitrators and, object and be heard (Harris, 2002). In other words, the compulsory acquisition or purchase order may be the last resort but will facilitate negotiation.

The Coase theorem treatment of an externality seems to suggest aspects that are equally important to compensation influenced by development projects, namely; (i) an externality implies inefficiency, (ii) government intervention does not necessarily result in efficiency and, (iii) inefficiencies provide opportunities for potential gains if they are dealt with or reduced. The Coase theorem perceives negotiation as an effective way for engaging concerned parties in the process of dealing with externalities that commonly affect development projects in the developing world. The Coase theorem is a theorem of exchange potentially based on the Pareto improvement and since in the real world transaction costs could not be neglected, therefore the initial allocation of property rights matters. It thus provides a possible framework for project developers and project hosts to find efficient ways possible to compensate each other through better distribution of project costs and benefits.

Another interesting part of the Coase theorem is who is supposed to compensate the other between a party generating negative externality and the affected parties. Some writers (Posner, 1993; Medema and Samuels, 1997; Butler and Garnett, 2003) interpret the Coase theorem to imply that, depending on whoever possesses the property rights, any one side could compensate the other. This means that there might be circumstances where the affected parties would compensate the developer for not implementing the project, or some aspects of it. Theoretically, other authors have found this conclusion absurd especially from the moral point of view. However, this review views it differently and tends to support the basic argument of the Coase theorem that where the socially efficient solution is to maximise overall welfare (i.e. a combination of private benefits and social costs), an externality problem is not about one party hurting the other, but it is about how best to allocate entitlements among the concerned parties in order to redress bias (Coase, 1960). Who is to compensate whom, should be determined by who has the property rights and whether the private benefits are enough to cater for project costs including the amount needed to pay compensation. The review found

Coase theorem's argument valid if exchanges of *'win-win principle'* application are carefully considered. This calls for careful study of what capital assets the affected parties would willingly forego or sacrifice for the sake of having a project in their area without affecting their livelihoods.

2.2.1: Concept of bargain in compensation context

Coase theorem perceives bargain as an effective way that concerned parties could use to arrive at efficient resolution of an externality (Coase, 1960). Bargain would make sense for the hosts (affected parties) to negotiate with the externality causer (developer) to reduce effects and compensate for the loss of its private benefits (Figure 2.5). The bargain would continue to the point where it is not possible to further increase overall welfare. This optimal point *'S'* is where the marginal private benefits (and cost of compensation) equal the marginal external social costs (benefits of mitigation) (Webster, 1998).

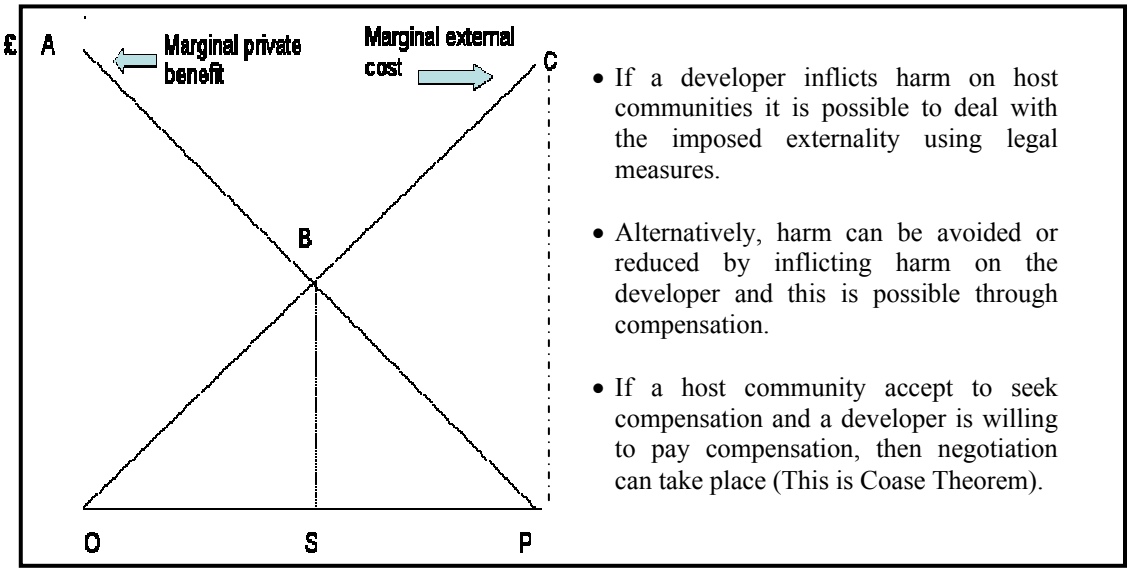


Figure 2.5: Coasian bargain process

Webster (1998), Tietenburg (2003) and Sebenius *et al.* (2005) foresee the *Coasian* bargain theory as an opportunity for the affected parties to defend their interests and negotiate for mutual benefits from the proposed undertakings. However, Rhoads and Shogren (1998) and Shogren *et al.* (2002) cast doubts on whether the bargainers would not tend to look for moderate outcomes-best described by their constrained self-

interests. Views from both groups of authors suggest the possible outcomes of individual affected parties to benefit from the *Coasian* bargain. However, doubts raised by the group of authors are equally important. With high levels of poverty in most rural areas, such a bargain may pose potential threats to commonly owned resources such as most of the ecosystem goods and services. There are two important aspects here that need consideration viz, (i) not only households incur losses due to compensation but also a host community and different groups inside and outside the community may suffer as well, (ii) Depending on motives and preferences people have during the bargain process, interests of the affected households can possibly override those of the community or group(s) and its *vice versa*. In Box 2.1 below, Sebenius *et al.* (2005) presents a bargain case showing complexity, approach used and outcomes.

Box 2.1: Bargain between community and community
Source: **[Sebenius *et al.*, 2005]**

Ideological compensation is a very interesting idea. An example might be the Montana dispute over who owned the Snake River. The local native American tribe saw the river as its lifeblood, whereas local Mormon farmers saw it as a commodity for use and livelihood. The dispute was settled by combining their short and long-term views through negotiation. The native tribe was satisfied by long-term protection of the river. The agricultural community was convinced to negotiate by the short-use provisions. The above Snake River dispute example, exactly shows the:

- solution came from Coase theorem-framework and both sides were satisfied with the so-called *ideological* compensation.
- practical and less costly solutions are possible through negotiation

However, Harris (2002) and Hackl *et al.* (2007) argue that both the self-organisation and cost-effective coordination of the concerned parties in their respective groups could potentially help to overcome many foreseeable problems such as equity issues, *free-riding* and *holdout* incentives during Coasian or non-Coasian bargaining. These measures, the cost-effective coordination in particular, could potentially help to cut down unnecessary transaction costs (Hackl *et al.,* 2007). Use of a system of representation and general rules during negotiation may be efficient for both sides.

The project developers proposing activities involving large areas of land such as plantations may face a potential *holdout* problem (Hoffman and Spitzer, 1986; Miceli and Sirmans, 2007; Cadigan *et al*., 2009). This happens when negotiation that involves

a large number of affected parties and those whose property is essential to the completion of the agreement for the project to begin, strategically have incentives to demand very high payments of compensation (Cadigan *et al*., 2009). The *holdout* problem can delay an agreement and is a potential source of high transaction costs and obstruction of development activities *(Ibid.)*. Miceli and Sirmans (2007) and Cadigan *et al*. (2009) found that the *holdout* problem is similar to land speculation problem where land owners hold large areas of land while doing no development or production at all. Such land owners do so with expectations of selling their lands in future when land prices go up. Like what many countries do in dealing with land speculation behaviour, Miceli and Sirmans (2007) and Cadigan *et al*. (2009) recommend rules be enacted to regulate the behaviour that leads to the *holdout* problem.

2.2.2: Concept of transaction costs in the context of bargain

According to Lai (1994), transaction costs refer to all costs other than the costs of physical development or production. Focusing on information, Buitelaar (2004) argues that transaction costs emerge because of incomplete information and imperfect rationality and thus transaction costs are both financial and non-financial costs incurred to increase information availability. The transaction costs also appear in the form of institutional costs because both the creation and use of institutions cost resources (i.e. time, effort and money) (Furubotn and Richter, 1991). According to North (1990b), institutions are referred to as humanly devised rules of games (constraints) that shape human interactions in a society. Kideghesho and Mtoni (2008b) reported that rural communities in west Serengeti were found to have functioning traditional institutions that govern their daily life and resource base in a cost-effective way. Costs are cut-down as community members volunteer in fulfilling different obligations required by their traditional systems. Bromley (1991) and Ungaro (2005) found that functional traditional institutions in different communities have potentials of minimising uncertainties. For example, in a very specific way Mahapatra (1999) discusses the roles of tribal-based institutions in avoiding landlessness, food insecurity, social disarticulation and other shocks and risks caused by resettlement and compensation schemes in India. This suggests a rationale for considering local or traditional institutions as a possible way for

reducing transaction costs, compensation uncertainties and a means for organising the affected parties to enter into the compensatory bargain process.

Coase (1960) assumes zero transaction costs and Coase (1988) emphasizes that in the real world transaction costs are not zero but opportunities exist for minimising them. In order to have optimal transaction costs, it is probably very important to get to know possible sources and associated factors from both concerned parties that generate transaction costs in key stages of compensation process. Table 2.3 below provides a generic list of potential sources for transaction costs during compensation process as suggested by Buitelaar (2004) and Ungaro (2005).

Table 2.3: Possible sources of transaction costs in the compensation process

Crucial aspects of compensation process	***Possible TC-generating factors***
Planning stage: 1. Land acquisition process 2. Resettlement/relocation 3. Valuation 4. Participation process 5. Execution 6. Complaint handling mechanisms 7. Post-compensation monitoring 8. Entire communication process	• Exploration (feasibility study) • Type of land ownership • Conflict of interest • Types of assets and land resources involved • Number of parties involved • Information search • Methods and approaches to compensation • Agency (consultants & middlemen) • Forms of compensation • Stakeholder participation • Structure of the plan (expertise requirements) • Structure of the plan (legal requirements) • Structure of the plan (administrative requirements)
Implementation stage: 1. Valuation 2. Agreement draw up, preparation & signing up 3. Executing payments	• WTA/WTP compensation • Conflict of interest • Number of parties involved • Bargaining processes • Agency (consultants & middlemen) • Structure of the contract, (detailed & flexibility) • Complains and appeals • Intermediations (repeated transactions to reduce uncertainties) • Litigation
Post-compensation stage: 1. Monitoring and reporting 2. Policing and enforcement	• Policing and enforcement of compensation agreements • Conflict of interest • Number of parties involved • Monitoring programme (simple & participatory) • Feedback mechanisms • Intermediations (repeated transactions to reduce uncertainties)

Source: (Buitelaar, 2004 and Ungaro, 2005)

According to Hennart (2006), the common theoretical transaction costs in relation to agreement processes aiming at establishing equity among parties include:- *(i) information costs* (i.e. costs incurred when searching for initial information about

different aspects), *(ii) contract costs* (i.e. costs of bringing the key parties together for bargaining) and *(iii) policing and enforcement costs (i.e.* costs of making sure that parties stick to the terms of the contract). However, focusing on rural settings in developing countries, more factors that tend to raise transaction costs may exist and they have never been analysed before as far as compensation and bargain processes are concerned. High transaction costs may even limit the participation of affected parties in the bargaining process. Hence, mechanisms for ensuring negotiation provide efficient outcomes in compensation schemes need to be devised. This will include establishing criteria on how to get a reasonable number of players to participate in negotiation at possible optimal transaction costs and how to safeguard collective public interests and enhance overall community welfare. Some of the important information this study has to find out with respect to Tanzanian compensation context includes; what are necessary and unnecessary transaction costs? What main factors contribute to unnecessary transaction costs? What social institutions are best suited to the Coasian bargain process? How do institutions define compensation entitlements? What are legitimate decisions within an institutional setting?

2.2.3: Property rights: The critical issue of compensation

In common use, property is simply one's-own-thing and refers to the relationship between individuals and objects. In law, property is conceptualised as the rights of ownership (Hackl *et al.*, 2007). Scholars in social sciences conceive of property as a bundle of rights and obligations. To them, property is not a relationship between people and things, but a relationship between people with regard to things. According to Gilpin (2000) property rights and duties are entitlements that accompany the ownership or control of assets such as land or water, together with the associated duties that may be imposed by laws, planning, licensing or leasing conditions.

It has been argued by Tietenberg (1996 & 2003), Berglund and Johansson (2004) and Carpenter and Folke (2006) that allocation of property rights is essential to the rational allocation of resources and the resolution of dispute. The property rights facilitate regulation and control of the resource base through preventing misuse, overuse and speculative use of resources and transferability process (Tietenberg, 2003). However, challenges exist in the property right regimes (Gilpin, 2000). For instance, difficulties

exist in assigning property rights to some of environmental goods, transboundary resources in particular such as air and waters *(Ibid.)*. According to Hanna *et al*. (1996), the property right regimes fail because of pursuit of short-term profits, rapid technological changes, cultural change, population pressures and inappropriate policies. Thus, the property rights offer a necessary but not sufficient requirement for efficient resource management and environmental safeguard. In addition, the aspect of responsibility is important for property rights to function effectively. All community members have duties and responsibilities to fulfil if the property right regime has to function effectively and efficiently.

Kolstad (2000) argues that well-defined property rights make assets excludable and, this is a pre-condition for smooth operation of markets. Similarly, De Soto (2001) and Saku (2001) underscore the importance of developing countries to clearly-define property rights in order to transform their locked capitals into legally recognised assets in the competitive market economies. Tietenberg (1996) argue that property rights are clearly defined if they satisfy the four conditions for efficient allocation of resources, namely;

i. Universality: rights over costs and benefits (entitlements) are completely defined and specified,
ii. Exclusivity: all benefits or rewards and costs or penalties resulting from ownership and use are accrued to the owner (common ownership and use do not exist),
iii. Transferability: all property rights are voluntarily transferable from one owner to another, and
iv. Enforceability: property rights holders are secured in their entitlements and free from unlawful seizure or encroachment by others.

It is on the same ground that eligibility to compensation is coupled to *'clearly-defined property rights'* and the same are used to determine compensation entitlements someone deserves. Literature is relatively consistent that clearly-defined property rights avoid or minimise externalities and disputes and safeguarding private properties (Kolstad, 2000). However, things are not happening to be the same in common resources (public goods) because of the irresponsible behaviour among the resource users. The situation is even

worse when outsiders in one way or another infringe the resource base without clear consent of the resource owners (local communities). It is noted that local communities face difficulty in challenging the power and influence of big companies pursuing corporate economic interests in the developing world (Morris *et al.,* 2006) and this may include compensation plans as well. In this context, the relationships between communities and ecosystems are currently changing to a large extent because of development activities. According to Carpenter and Folke (2006), institutions are also supposed to continuously transform accordingly. This study supports the idea of *'adaptive governance'* where further investigation is necessary to ascertain how and to what extent realignments of property rights and permitting or licensing procedures are required to facilitate fair compensation.

2.3 Estimation of costs and benefits of development projects

2.3.1: Concept of Cost Benefit Analysis

Cost benefit analysis was another main theoretical contribution made in the 20th century. It uses concepts of modern welfare economics to determine the total value of a proposed project in terms of inputs and outputs. Cost benefit analysis evaluates the social costs and benefits of proposed project when deciding upon its desirability. If the net present value is positive, proposed changes including those in resource use and environment are desirable regardless of the impact disparity on groups and individuals (Chapman, 1999). According to Turner (1988), cost benefit analysis incorporates potential problems of equity, as it does not support welfare as a multidimensional concept, which encompasses, among other variables, per capita gross domestic product, distributional equity and environmental quality. Moreover, it does not emphasise that the project should go ahead only if gainers compensate losers all losses or costs encountered (Beardshaw *et al.*, 1998).

Although, cost benefit analysis tries to place values on costs and benefits that never go through the market, the monetary values placed on environmental goods and services do not capture their all values (Field and Field, 2006). There is need to rethink about approaches and methods used during economic valuation. It is critically important to know how development projects affect social welfare and the environment, and also

how benefits and costs are distributed among project developers and affected parties and also among different social groups in the host communities.

2.3.2: Valuation: A challenge to compensation and sustainability

Economics is an important tool for environmental management and human-well being while valuation forms a key part of environmental economics (Emerton, 1996). One of the most important contributions of environmental economics is the estimation of the value of the environmental goods and services in terms of the support it gives to human economic or development activities. Through valuation, economics can help to quantify environmental benefits and costs and facilitate incorporation into decisions. However, getting the values of both the benefits (gains) and costs (losses) for compensation purposes is perhaps the most important and a big challenge in valuation process (Sebenius *et al.*, 2005). This is case because people or communities have a unique set of value judgements about what ought to be produced, consumed and reserved and the way natural resources ought to be distributed between now and future generations (Pass *et al.*, 1988). Since compensation is happening within spheres of social and economic welfare, satisfaction of stakeholders and sustainability issues are both critical requirements for a successful compensation.

2.3.3: Measuring welfare gains and losses in compensation

Environmental services and goods support both life and production of other goods, which in turn, enhance quality of life (Kirby, 2001). Contrary to that, unmitigated adverse impacts of development activities often degrade the environment and consequently causing serious harm to human social-economic welfare of the affected communities. According to Costanza *et al.* (1997), the overall social and economic (human) welfare depends on capital stock that exists at a time in a certain society, and is the product of natural capital stocks and human capital stocks. All natural capital stocks exist in *physical forms* while human-made capital stocks exist in both *tangible* and *intangible forms*. Determination of losses from both the natural and human capital stocks encountered by the affected parties has been a big challenge and a serious issue of concern during compensation. Goulder and Kennedy (1997) report the reason behind the challenge is that stakeholders (i.e. local communities, developer, valuers, scholars,

etc.) conceive differently the values of land resources and ecosystems to human well-being.

In recent years, there has been an increase in recognition of the fact that natural ecosystems generate a range of goods and services that are highly valuable but may not have an immediately apparent market value (Scoones *et al*. (1992). Peters *et al.* (1989) and Campbell *et al*. (1997) show that it is possible to assign monetary value to environmental goods and services in order to estimate their values and represent them in the market. Progress has been made in the proposition of different valuation methods such as contingent valuation, hedonic, travel costs and so many others. However, Portney (1994), Common (1995) and Ludwig (2000) object to the use of proposed valuation methods since most of the economic theories and assumptions underlying them lack empirical evidence. Arguing in similar line, Godoy (1992); IIED (1997) and Garrod & Willis (2001), caution that many rural people within their local environment enjoy a number of environmental goods and services including the resources owned collectively as a community. Despite the achievements realized by some approaches in estimating welfare loss of the affected parties, the review realizes challenges ahead in establishing some values such as socio-cultural links people have to their ecosystems.

During determination of the losses encountered by the project-affected communities, very recent studies recommend the valuation process to focus on the affected people's views (Finholt and Fyksen, 2001; Rawles, 2002; Kim and Kim, 2002; Sebenius *et al.*, 2005; McDaniels and Trousdale, 2005). Some values that valuers or assessors may place on these losses are likely to be incomplete as they lack socio-cultural ingredients. Ravnborg and Westermann (2002) support the idea by an argument that valuation results require scholars to have a clear understanding of existing social, economic and ecological interactions within the society. Different works by Ewert *et al.* (2004) & MA (2005), want values assigned to natural resources to be more multidimensional values. For example, forests are not only for timber, but also provide for amenity, recreation, wildlife management, water quality, microclimate regulation and so many others (Box 2.2). Moreover, some communities value directly or indirectly the ecosystem goods and services that are currently not utilized (non-use values).

Box 2.2: Environmental and social values as part of the value of the house
Source: Garrod & Willis (2001)
A house primarily provides shelter and based on its architectural design and location. It may also give varied levels of comfort, security, easy access to quantities and qualities of public or community services, quality and quantity environmental goods and services. The values of all these need to be valuated together with other obvious features (e.g. plot size, house size, number of rooms, workmanship, types of materials, etc.) in order to determine the house value.

It is now clear that standard methods of economic valuation as a basis for determining compensation are often not capable of computing all losses, especially when important resources are impaired by development activities. Many important intangible values do not arise in contexts in which market based values are meaningful to the affected parties. It is therefore important to focus on communities that have had compensation experience in the past and acquire much information as far as valuation is concerned. The study intends to make use of the MA's ecosystem function framework as a starting point for evaluation of losses encountered by the affected parties in relation to development projects and their compensation schemes.

2.4 Compensation: Definitions, concepts and theories

2.4.1: Defining compensation

The definition of compensation rests on the assumption that there is something to be compensated for and a party whom in one way or another has been affected. According to Chambers (1997), the verb to compensate (from Latin word *'compensare'*) means to weigh one against another in order to make amends for loss encountered, or to recompense, to counterbalance, to offset. The definition by Schwindt (1992) states that compensation is a process that generally aims at making the affected parties feel indifferently about their losses. McDaniels and Trousdale (2005) present a *'well-being-based'* definition of 'fair compensation' as a way that puts the affected people in *'a good position'* as if the losses had never occurred. Sebenius *et al.* (2005) recommend 'fair compensation' to compose both monetary and in-kind payments made to the affected parties. However, Rawles (2002) argues that compensation would typically be understood as a legal procedure to make amends for perceived or actual loss, injury, harm, damage or imposition of risks to persons and their properties.

In summing up the afore-mentioned definitions, the main points include, compensation is a term that primarily entails procedural, distributional and justice matters. In order to attain the level of development that sustains the economy, people's livelihoods and environment, it is important for compensation to have and observe special ideals such as guiding principles, standards, morals and ethics. Similarly, Cernea (1999) cautions that it is likely for the compensation to adversely impact on the affected parties if ethical issues are not adhered to. The likely negative impacts include causing social disorganisation, psycho-cultural stresses, loss of assets, impoverishment risks and loss of welfare. Sebenius *et al.* (2005) analyse the above-mentioned adversity from political point of view that in development processes, both the economic losses and ecosystem impairment signal a failure in policy or markets in a particular society. Compensation has been a big development challenge as it assures that policy and project objectives primarily have development benefits greater than costs; that everyone is better off in aggregate; and that it addresses distributional and equity aspects of development. In view of this, compensation is not only about fairness but also efficiency.

2.4.2: Concepts of social-economic welfare: Cornerstones of compensation

The theoretical work on compensation has its historical roots back to early 19th century and involves contributions from a number of welfare economists namely Jules Dupuit (1804-1866), Alfred Marshall (1842-1924) Vilfredo Pareto (1848-1923), John Hicks (1904-1989) and Nicholas Kaldor (1908-1986). These laid down the foundation work that devised a way of determining total value of a proposed undertaking in terms of inputs and outputs.

According to Gilpin (2000), Pareto efficiency is a welfare position where no one can be made better off without at least making some people worse-off. Essentially, the Pareto criterion seeks improvement of allocation in such a way that all parties get optimal satisfaction. In other words, if there is a way to make someone better off without hurting somebody else, why not do it? (Varian, 1996). In some incidences, welfare economists recognise the failure of Pareto optimality in identifying the socially-acceptable allocations (Gilpin, 2000; Magyari-Beck, 2002). From the practical point of view,

Chapman (1999) finds the criterion to be very strict as it is quite impossible to have development and policies that do not impose some costs (however small) on some individuals.

In attempts to deal with cases of losers and gainers, Kaldor and Hicks developed further the Pareto optimality into the compensation principle (Hicks-Kaldo Criterion). The principle states that if those who gain from the change could pay damages to the sufferers of the same change and still remain better off, the change should then be implemented. Primarily, the concept is for enhancement of total community welfare through having policies, programmes and technologies with so large gains in order to compensate the losers. The principle however, is criticised for lacking a quantifiable verification of relative gains and losses (Chapman, 1999), and doubts intragenerational and intergenerational equity issues (i.e. distribution of benefits and costs) (Gilpin, 2000). The current practices of compensation have been concentrating on the identification of losers only and forgetting other beneficiaries apart from the developers. Potentials exist for this group of beneficiaries to share compensation costs with developers or governments.

2.4.3: Concepts of social satisfaction

Scitovsky (1976) provides a quite useful reference for the relative importance of economic value and other values. He underscores the importance of understanding the fact that human good life includes satisfaction in terms of comfort and inspiration. Both can happen up to a certain point, but beyond that point they behave as mutually exclusive events. That is, one is more achieved at the expense of another. Scitovsky (1976) concluded that good life is always a compromise, and to make the best compromise, one must try hard to understand the nature of the conflict between comfort and inspiration. Dealing or determining somebody's satisfaction (good life) is even more complex, but it is only possible through respecting people's choices and preferences. According to Bishop (2003), 'revealed preferences' are good indicators of actual commitments that people might have on various socio-economic, socio-cultural and environmental resources. Scitovsky (1997) in Magyari-Beck (2002) concludes that better general socio-economic welfare can be achieved when there is larger consensus

among community members on what should be done and how. Within the context of this study, Scitovsky's (1976 & 1997) ideas underline the relevance of investigating more on how the affected parties' satisfaction can be met. Since satisfaction differs from one person to another and from one society to another, only data from carefully studied cases can however add into a process of developing a generalized social-economic welfare framework.

2.4.4: Indifference curve theory

Economists often use concepts of utility to measure changes in the welfare of an individual (Hanley and Spash, 1998; Boardman *et al.,* 2006). New development projects, policies or programmes are intended to improve overall welfare but may lead to deterioration in welfare of some affected parties (Perman *et al.,* 2003). According to Pauwels (1978); Perman *et al.* (2003); Mishan and Quah (2007) there are two widely used monetary measures of the utility change, namely compensating variation and equivalent variation. Indifference curves can be used to illustrate the concepts of compensating variation and equivalent variation (Knetsch and Sinden, 1984; Perman *et al.,* 2003; Zhao and Kling, 2004; Mishan and Quah, 2007). An indifference curve, which is also known as utility function, maps out all choices comprising combination bundles of goods and services that have the same satisfaction level of utility (Figures 2.6 and 2.7).

2.4.4.1: Compensating variation measure

Considering a situation where the quantity or quality of services provided by the affected party's land have been reduced as a consequence of a development project, an equivalent money payment that would compensate for the lost welfare could be worked out using the utility function (Figure 2.6).

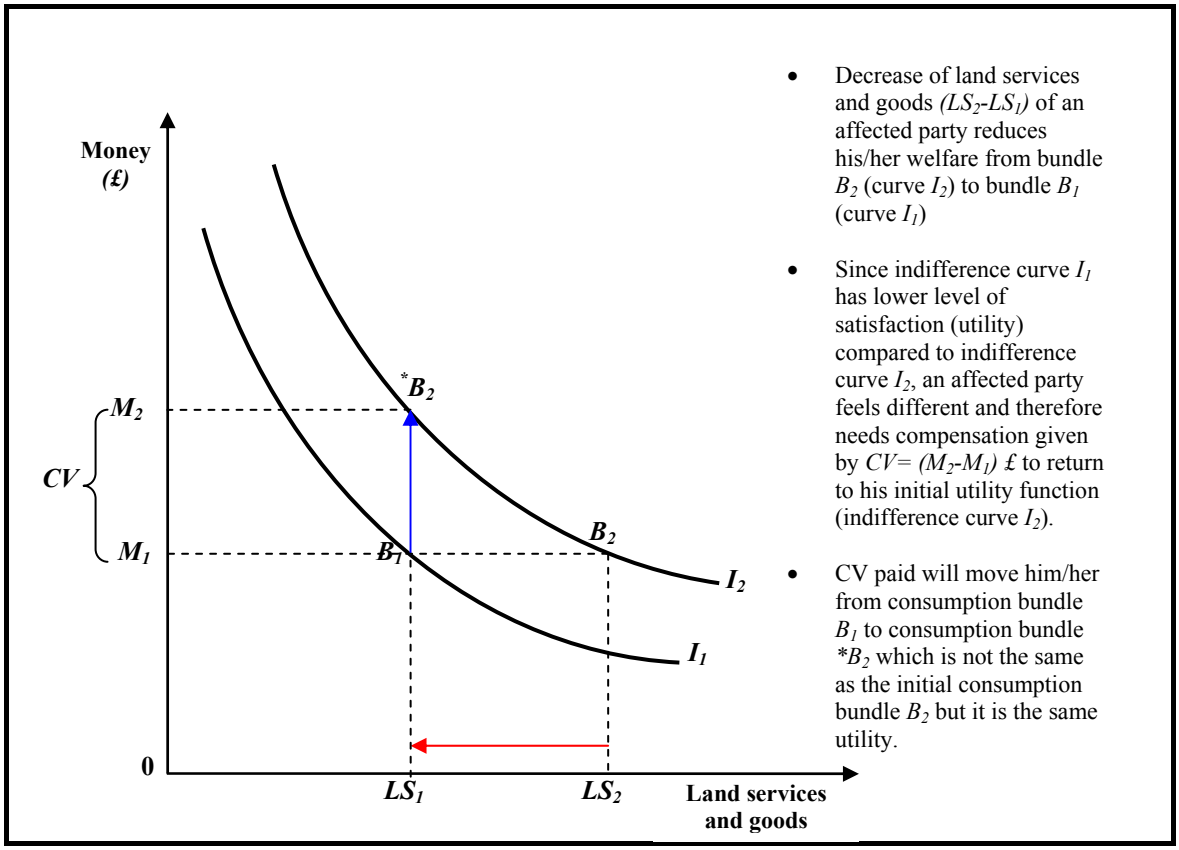


Figure 2.6: Indifference curve analysis indicating compensating variation measure

The loss in welfare associated with the decrease of land services (LS_2-LS_1) corresponds exactly to the compensating variation value (M_2-M_1), which essentially is an amount of money that the affected party would need to recover the original level of utility (curve I_2). Thus this payment of money substitutes in terms of utility for the loss of goods and services from land. The decrease in the utility of an affected party provides a close approximation of his/her willingness to accept (WTA) compensation to avoid deterioration (Perman *et al.,* 2003; Boardman *et al.,* 2006; Mishan and Quah, 2007) and this is possible if the affected party has an entitlement. The compensating variation measure therefore is the minimum amount of money an affected party would need in order to prevent a fall in utility due to a decrease of his/her land services because of the project. However, from a project developer's viewpoint, a project developer could pay more than the compensating variation value if expected benefits are larger than the total

cost of project implementation, including compensation payments. If this happens, an affected party's level of utility would move to a higher indifference curve (above I_2).

2.4.4.2: Equivalent variation measure

The equivalent variation measure is an amount of money that would make an individual feel indifferent between that amount of money and a given increase in the services and goods of land (Boardman *et al.*, 2006). It can therefore be viewed as an amount of paid by a beneficiary to secure the increase in utility that would be associated with a given increase in land services and goods for which there is no prior entitlement (for example LS_1 to LS_2 in Figure 2.7). Alternatively Perman *et al.* (2003); Mishan and Quah (2007) use the equivalent variation measure to show equal willingness to accept (WTA) compensation for the change not occurring when there is a perceived prior entitlement.

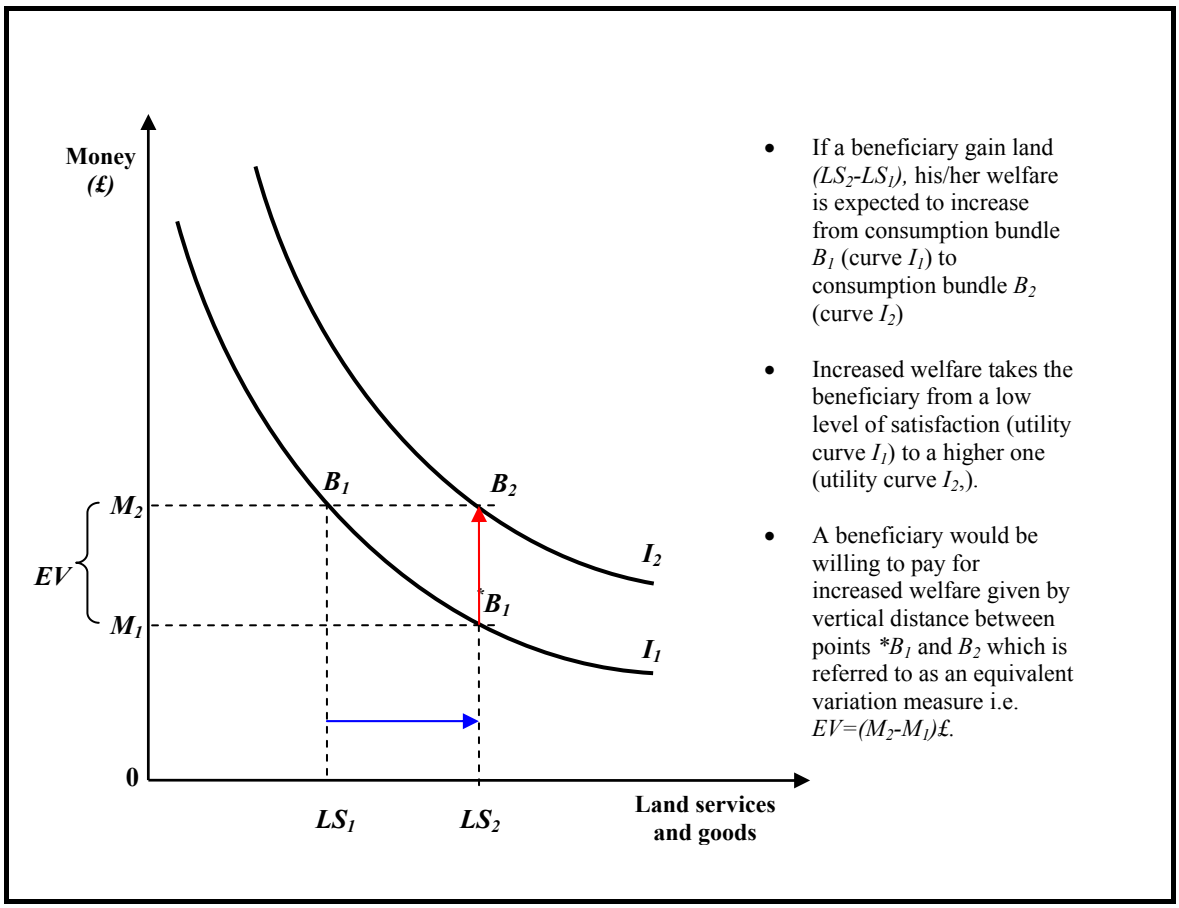


Figure 2.7: Indifference curve analysis indicating equivalent variation measure

According to Levy and Friedman (1994); Medema and Zerbe (1999); Mishan and Quah (2007), for normal goods as opposed to inferior ones, researchers have empirically and repeatedly demonstrated that compensating variation as a measure of WTA tend to be higher than equivalent variation measure of WTP. The discrepancy is significantly higher for special or unique goods and services connected to people's livelihoods such as land and other environmental services and goods (Chapman, 2000; Mishan and Quah, 2007). Based on empirical evidence, literature suggests that an affected party's demand for (WTA) compensation to give up for instance, land services and goods in his/her possession or enjoyment is greater than his/her willingness to pay (WTP) to acquire the same goods not currently in his/her possession (Knetsch and Sinden, 1984; Zhao and Kling, 2004; Mishan and Quah, 2007). The differences are due to loss aversion, risk aversion, income effects and substitution possibilities (Hoehn and Randall, 1987; Hanemann, 1991; Shogren *et al.*, 1992; Hoffmann and Spitzer, 1986). Zhao and Kling (2004); Mishan and Quah (2007) recommend that consideration of realistic conditions that involve uncertainty, irreversibility and future risks is necessary for effective estimation of values of goods and services in terms of welfare gains and losses.

It should also be noted that the WTP argument is a function of budget constraint and entitlement whereas the WTA is a function of psychological sense of ownership (Perman *et al.,* 2003; Boardman *et al.*, 2006). On ethical grounds, some people are unwilling to accept compensation for the loss of environmental services and goods (Hanley and Spash, 1998; Chapman, 2000). WTA often reflects protest responses leading to large claims for compensation. For this reason, WTP estimates are often used due to their conservatism *(Ibid.)*. This however, does not adequately justify the use of WTP bids over WTA bids in determining compensation value, as it is possible that chances exist for WTP to underestimate WTA indirectly. WTP estimate is therefore appropriately used when the affected parties do not own the resource providing the service or when the service levels are being increased, and WTA is properly used when the affected parties own the resource providing the service or when the service levels are being reduced.

Those designing, estimating or soliciting WTP/WTA bids need a thorough understanding of the characteristics, entitlements and capabilities to engage in compensatory processes of the concerned parties before hand. It is also important to establish specific factors from institutional, socio-economic and socio-cultural dimensions that influence compensation choices, WTP and WTA compensation. Box 2.3 gives an example of disparities between the developer's WTP compensation and affected parties' WTA.

Box 2.3: Songosongo Gas to Electricity Project (SONGAS) in Tanzania
[Source: CEEST (1997) & Innocent (2004)]

SONGAS is a project owned by a number of private companies and the Government of Tanzania. The project is designed to extract natural gas from Songosongo Island and transport it 232km through pipeline to the capital city Dar es Salaam for electricity generation purposes. In compensating the affected parties that gave up their land for the project gas pipe wayleave, SONGAS used market-based rates. An amount received by every affected party was 3 times higher than the compensation computed using government rates. Yet more complaints were heard, especially from those who had dwelled longer in their affected areas, implying that there were some losses in association with the duration of occupying land were probably not adequately considered. However, the key question is whether the affected parties have full entitlement to compensation. If they do have, the developer's willingness to pay (WTP) compensation would have been higher in order to secure land for the project. Otherwise, affected parties' willingness to accept (WTA) compensation will be less than if they had full entitlement. If affected parties have no full entitlement, they possess no negotiation powers and get what they are given.

2.5 Systems of compensation: approaches, practices and experiences

Compensation regimes differ from one country to another because of the approaches used, the legal frameworks backing them and how the involvement of key stakeholders, the affected parties in particular is done (McGovern, 1995). The following sections present approaches, practices, legislation and experiences drawn from different compensation systems globally and Tanzania.

2.5.1: Compensation in the context of Environmental Impact Assessment framework

Globally, environmental impact assessment is widely used as an effective environmental management tool and appropriate project planning tool (Canter, 1996; SAIEA, 2003; UNEP 2004). Its operation in many countries has been simplified in terms of well-prepared country-based procedures, guidelines, user-friendly checklists

and integration of policy-legal frameworks (SADC, 1996; SAIEA, 2003 UNEP 2004). It also tries to enhance project benefits through promotion of potential positive aspects of project proposals and also to reduce social and environmental costs of development projects by suggesting cost-effective mitigation measures for likely significant effects (Mbiba, 1999 and Abuodha, 2002). Therivel and Partidario (1996) and UNEP (2004) report the way environmental impact assessment based monitoring and auditing make environmental impact assessment a strategic tool that suggests changes and direction for policies, legislations, regulations, and procedures.

An environmental impact assessment strives to achieve balance and justice among various choices (alternatives) and among different stakeholders (UNEP, 2004). Experience from several countries shows that when environmental impact assessment studies foresee the possibility of having compensation, compensation becomes an integral part of impact assessment and when confirmed, the developer is liable of paying all compensation costs caused (SAIEA, 2003; UNEP, 2004 and NEMC, 2004). In environmental impact assessment context, compensation is prescribed as the last resort remedy of unavoidable residual adverse effects (Figure 2.8). Implicitly, environmental impact assessment regards compensation as a challenging process that requires proper approaches to its planning and implementation. Learning from the environmental impact assessment experiences, this study perceives the compensatory framework as important as far as procedural matters are concerned.

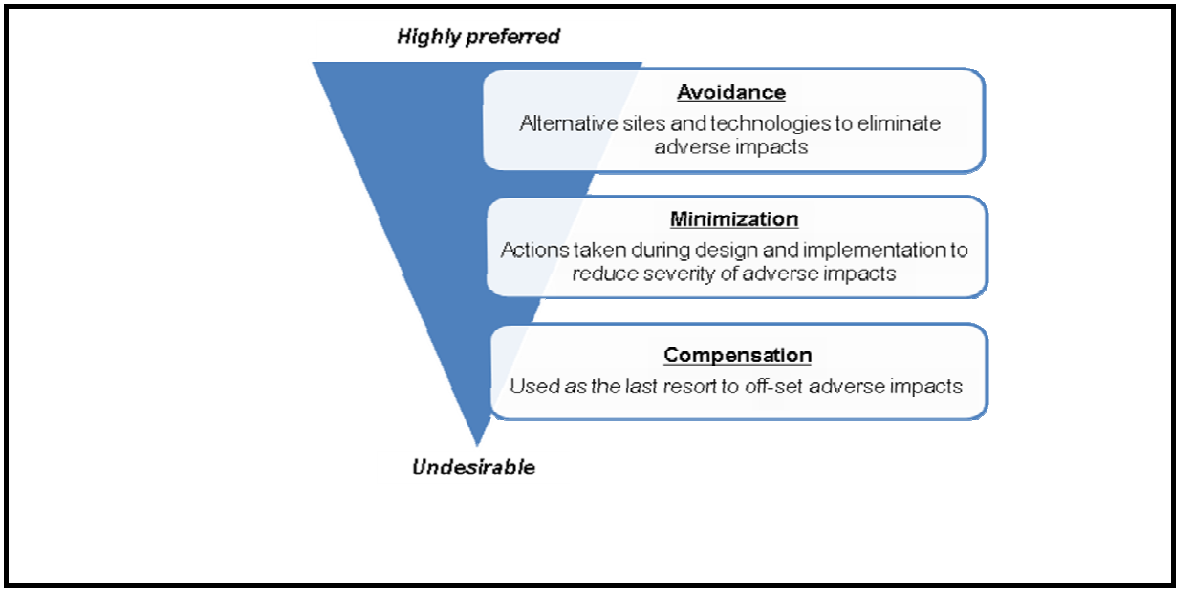


Figure 2.8: Environmental impact assessment based hierarchy for project impact mitigation measures (Source: NEMC, 2004).

2.5.2: Types of compensation

Compensation paid to the affected parties can take different forms (Kunreuther and Easterling, 1996). According to URT (2005a), the World Bank compensation to affected individuals, households or community can be monetary or in-kind compensation. Depending on the need, the World Bank has been advising project developers to provide support or assistance to the affected parties and host communities before, during and after compensation as it has many benefits to both sides (Cernea, 2006). Furthermore, many socio-economist researchers such as Van Wicklin (1998); Cernea (2008); Égré *et al.* (2008); Nakayama and Furuyashiki (2008) and Trembath (2008) emphasize compensation payments based on benefit sharing schemes as outlined in section 2.5.2.3.

2.5.2.1: Monetary compensation

This is a conventional approach used when private property is expropriated to make way for a project (Nirex, 2002). Depending on agreements reached, developers pay lump sum compensation to the affected landowners for the losses encountered. Other monetary compensation that may be paid indirectly is through either *property value*

guarantees and *contingency fund* (Kunreuther and Easterling, 1996). *Property value guarantees* are funds earmarked to protect properties against any decline that might occur in the areas contiguous to the project area. With *contingency fund,* the developer promises to cover any losses that might occur from future accident in case it happens. Many like Ludwig (2000) have been constantly opposing granted monetary compensation without thorough evaluation of likely impacts. He argues that although it provides the affected parties with money, the amount of money provided cannot always make up for the trauma faced during relocation and in the post-compensation era (Box 2.4).

Box 2.4: Modern Land Agreements and Northern Canadian Aboriginal Communities

[Source: Saku, 2001]

Here is a very interesting compensation experience from Canada. According to Saku (2001), in mid 1970s, the Canadian government started a modern treaty approach to resolve critical issues related to land rights, compensation rights and other benefits in the aboriginal communities. His evaluation study revealed the approach had no substantial positive socio-economic development on the aboriginal people. The study did not explain why the programme failed. However, learning from the data by ARA Consulting Group (1995) in Saku (2001), it is clearly presented that benefits accrued from these agreements were largely financial in nature. In the current liberalized market economy, money as medium of exchange has gained precedence over in-kind exchanges. Many people in both rural and urban areas prefer cash to other material things. However, this study would like to explore why people prefer to have cash over other forms of compensation? What are the likely pros and cons of each form of compensation? How can fair and effective compensation be realized within a given environmental set up?

2.5.2.2: In-kind compensation

In-kind compensation provides material-things such as alternative land, house, building materials, seedlings and so many others to the affected parties and host communities (URT, 2005a & 2005b). Social scientists and development researchers have found in-kind compensation appropriate for the affected parties and host communities that are vulnerable to poverty (Cernea, 1999). According to Cernea (2005), major reasons of offering in-kind compensation are to offset potential effects due to risks by adverse impacts of some development projects and those associated with cash such as theft, inflation, depreciation, misuse and misallocation. For instance, Kunreuther and Easterling (1996) found that both the *benefit assurance* and *economic good-will incentives* aim at raising the overall standard of living of the affected parties or host communities.

In-kind compensation may include provision of services (e.g. food, accommodation, transport, labour, special training, microfinance, etc.) that are requested if deemed necessary by the affected parties and host communities (GoI, 2005). According to Claro (2002), through giving assistance or support to the affected parties, it facilitates them to offer their cooperation during resettlement or compensation processes and to the project in the post-compensation era.

2.5.2.3: Benefit sharing schemes

According to Égré *et al.* (2008), benefit sharing is a mechanism that ensures redistribution of shares of project revenues to the population adversely affected by projects. McLeod (2000) refers to benefit sharing schemes as rent equity, and argues that the schemes go beyond compensation through providing rehabilitation of disrupted livelihoods and financing for development activities in the affected communities. Benefit sharing schemes can be implemented either by providing benefits in monetary terms or in-kind support to community services such as education, health and water projects to mention a few (Van Wicklin, 1998). According to Égré *et al.* (2008); Nakayama and Furuyashiki (2008) and Trembath (2008), such schemes are suitable for forced relocated communities. And according to Égré *et al.* (2008), the overall advantage of benefit sharing schemes over other forms of compensation is provision of full compensation of both social and environmental costs. However, Cernea (2008) reports that project developers in developing countries have been so reluctant in adopting benefit sharing schemes, as the arrangements are not supported by policy and legal frameworks in many countries.

However, literature review shows potentials exist for improvement of compensation efficiency and cost-effectiveness if project developers would seek to have combinations of different forms of compensation. These can be determined based on the nature of livelihoods of affected parties; their eligibility and entitlements to compensation and; both temporary and permanent losses caused by the project.

2.5.3: International practices and experiences in compensation

McDaniels and Trousdale (2005) point out that compensation for losses of both market and non-market values faced by the affected poor people on their land resources and ecosystem goods and services are crucial issues for both legal and social justice. An international comparative survey by Hagman (1978) cited in Kim and Kim (2002) established that most of the countries have no compensational issues mentioned in their constitutions. Kim and Kim (2002) report an interesting case of Korean practice where its constitution calls for fair compensation to be effected "according to the law". Surprisingly, the Korean Supreme Court's decision 1976.10.12, Dae-Pan-76-Da-1443 interpreted 'according to the law' as no compensation if there is no proper legislation governing the specifics. This emphasizes the necessity of having clear compensation legislation, regulations, procedures and criteria in place.

Compensation experiences show that irrespective of constitutional and legal provisions in many countries, compensation is more likely to be offered if the affected parties confront the regulators and project developers (Kim and Kim, 2002). Sometimes, personal interests of regulators and project developers significantly influence decisions whether to pay or not to pay compensation (Sebenius *et al.* 2005). They also influence selection of approaches to valuation and subsequently the entire compensation process. For instance, Garrod and Willis (2001) observe that the USA Comprehensive Environmental Response, Compensation and Liability Act of 1980 was formulated based on restoration or replacement costs approach. An environmental good is valued based on its replacement costs after it has been damaged.

According to Mbiba (1999), both legislation and government decisions can override other provisions and interests. He pointed out the Mineral Act of 1990 in Zimbabwe which has caused the following consequences in *Mutoko* district:-

- developers considered themselves not legally or administratively obliged to compensate affected parties for their losses and,
- affected people and local authorities had no power to negotiate project effects, type and amount of compensation.

Literature shows consistently that nations have different approaches to compensation process. Compensation is represented in national constitutions; as fully-fledged laws; as strategies for implementing policies and projects; as special programmes or plans in dealing with special events or changes that have adverse consequences to communities. A very fundamental question is how best the framework for the project-influenced compensation can be represented nationally.

2.5.4: Tanzanian experience in compensation: Legislation and practices

According to Sections 5 and 6 of the Tanzania Investment Act No. 26 of 1997, project proponents are required to register their new project or investment proposals with the Tanzania Investment Centre where among others, their project goals and financial capabilities are initially evaluated against the national development interests (URT, 1997a). The next step prior to project implementation is for the project proponent to carry out environmental impact assessment studies and obtain an environmental clearance certificate issued by the Minister responsible for environmental management affairs (URT, 2004a). This certificate is a pre-requisite for a developer to be served with other relevant permits and licences such as land occupancy certificates and water abstraction rights obtained from different sectoral ministries *(Ibid.)*. Land occupancy certificates are the most important and are intended to ensure compensation matters have been settled and that no land disputes exist between a project proponent and other land users.

2.5.4.1: Legislation governing compensation in Tanzanian

Section 24(1) of the National Constitution of Tanzania emphasizes on the rights of Tanzanians to own property and protection of the property held in accordance with the law (URT, 2005c). In Section 24(2), the Constitution states that it is unlawful for any affected party to be deprived of property for development purposes including nationalisation without fair and adequate compensation *(Ibid.)*. The big challenge is how to determine fairness and adequacy of compensation payments. Further to the

Constitution, a number of laws[2] provide legal requirements for addressing compensation issues in Tanzania, but in some aspects of compensation, some laws are not consistent with others (Box 2.6). Compensation in Tanzania is mainly regulated through land legislation which consists of the Land Acquisition Act (No. 47 of 1967), Land Act (No. 4 of 1999) and Village Land Act (No. 5 of 1999).

Land Acquisition Act, 1967 governs the processes of obtaining land and compensation in Tanzania. According to URT (1967) all land in Tanzania is public land and remains vested in the Head of State (the President) as the trustee for and behalf of the citizens of Tanzania. Sections 3 and 4 of this Act give powers to the Head of State to acquire land on a compulsory basis for the public development purposes or interests that have been approved by the Parliament *(Ibid)*. Further to that Sections 12(2 & 3) state that compensation not exceeding the value equal to the cost of the development done on the land be paid to the affected party before land is acquired. Regardless of the type of land occupancy involved, Section 12(1) of this law restricts compensation to be paid only for development done on the affected land and not on interest in holding land such as profit expected to be derived from future development plans that involve the same land. Although this helps to avoid holding land on speculative basis, the reported experience shows that many stakeholders including regulators, decision makers and project developers have either misinterpreted or assumed that undeveloped land has *'no value'* irrespective of land been cleared and used for agricultural production (Hitchcock and Shauri, 1999; Lissu, 1999). This has however been pointed out by Lissu (1999) and Mwalyosi (2004) as one of the major sources of compensation disputes in rural areas in Tanzania. Basically, this is linked to the forgone benefits which their compensation could be determined counterfactually.

The law also emphasises the use of compulsory land acquisition order to resolve compensation disputes. Section 13(1) of the Act stipulates that *"if such dispute or disagreement is not settled by the concerned parties within six weeks from the date of the publication of notice that the land is required for a public purpose, a holding or claiming any interest in the land may institute a suit in the Court of law"*.

[2] The National Constitution of 1977, Land Acquisition Act (No. 47 of 1967), Mining Act (No. 15 of 1998), Land Act (No. 4 of 1999), Village Land Act (No. 5 of 1999) and the Forestry Act (No. 14 of 2002)

Land Act No. 4 of 1999 provides for the basic law in relation to land other than the village land, the management of land and settlement of disputes (URT, 1999a), where the Village Land Act No. 5 of 1999 regulates the related matters of lands in villages (URT, 1999b). According to the Section 1(1) of the Land Act of 1999, the objective of the land laws in Tanzania is based on the fundamental principles of the National Land Policy (URT, 1999a). One of these principles is to pay full, fair and prompt compensation to an affected party whose right of occupancy is revoked by the State under on compulsorily basis *(Ibid.)*. Section 34(3) of the Land Act, 1999 and Sections 4, 5 and 6 of Village Land Act, 1999 recognise both the occupancy under customary rights and directs prompt payment of full compensation for loss of any interest in land and other losses incurred due to interference with their occupation. Compensation shall be based on market value of the real property; disturbance allowance; transport allowance; loss of profits or accommodation; cost of acquiring or getting the subject land; any other loss or capital expenditure incurred to the development of the subject land and; interest charged at market rate in case of delays in paying compensation *(Ibid.)*. According to URT (2001), Sections 13 – 19 of the regulations to implement Village Land Act, 1999 provide more information on how the above mentioned compensation entitlements shall be worked out (See Appendix 2.2).

While Section 21 of the regulations to implement the Village Land Act, 1999 requires the affected party to submit his/her claims for compensation on a special form within not less than 60 days of the receipt of the notice, Section 24 states that where a claim has not been accepted and mediation has failed, the claim may be referred to the court of law (URT, 2001). In relation to the types of compensation, Section 25 of the regulations lists seven (7) possible forms of compensation that may be negotiated between the affected parties and project developer and these include:

1) land of comparable quality, extent and productive potential to the land lost,
2) a building of comparable quality, extent and use with comparable to the building affected,
3) plants and seedlings,
4) access to communal assets,

5) a sum of money equal in value to the development done on land, loss of land, disturbance and other losses specified in the Act,
6) regular supplies of grains and other basic foodstuffs for a specified time and,
7) such other forms of compensation as may be agreed between the claimant and the developer.

In view of the aspects of compensation listed above, it is therefore necessary to establish from the perceptions of key stakeholders which types or forms of compensation maintain and sustain the livelihoods of the affected parties in developing economy context.

Section 8(a) of the regulations to implement the Village Land Act, 1999 recognises losses encountered at community level that the village council may claim compensation on behalf of the villagers in respect of the losses of communal land, assets and benefits derived from that communal land. Sections 9 – 12 stipulate the basis for assessment is market value and valuation be carried out by qualified valuer(s) and verified by the Chief Government Valuer positioned within the ministry responsible for lands. In principle, compensation regulations in the new land legislation[3] are based on market values of land lost, development done on land, transport costs involved in relocation, disturbance caused and need of accommodation for the affected homes (URT, 2001). Despite the fact that the current legislation regulates all land expropriation, land acquisition and compensation issues (Wily, 2003), but still different approaches to compensation exist. This is partly due to inconsistencies in the legal framework.

Although, the review shows that the basis for compensation is reasonably comprehensive in principle, all land laws outlined above, including the land regulations of 2001 do not take into consideration transaction costs involved in the processes of acquiring land, preparing and paying compensation and, dispute resolution. Furthermore, the review revealed that the current legal framework for compensation lacks administrative procedures and guidelines which potentially could have increased

[3] Land Act No.4 , 1999 and Village Land Act No.5, 1999

an overall compensation efficiency and effectiveness through minimisation of disputes and transaction costs.

Compensation regulations in the new land legislation[4] are based on market values of land lost, development done on land, transport costs involved in relocation, disturbance caused and need of accommodation for the affected homes (URT, 2001). Despite the fact that the current legislation regulates all land expropriation, land acquisition and compensation issues (Wily, 2003), there exists different approaches to compensation. This is partly due to inconsistencies in the legal framework (Box 2.6).

Box 2.6: Inconsistencies Between the New Land Legislation and the Mining Act (No.15 of 1998)
[Source: URT, 1998; URT, 1999b; URT, 2001]

New land legislation enacted in 1999 states that undeveloped land has value (which is a new concept in Tanzania) but the Mining Act, 1998 still based on an old general assumption that undeveloped land has no value. It therefore directs compensation based on losses related to the limitation of the property rights by mining or prospecting licence. Valuation of damages is based on lawful occupier's interests but strictly excluding values due to speculation created by the discovery of minerals in the area. This regulation is difficult to implement without triggering massive disputes. Experience shows that in many mining operations, mineral exploration is a continuous activity done within and outside of their licensed areas. Moreover, the "no-value" land in areas contiguous to the ones licensed for prospecting and mining activities could suddenly fetch high values and attract more people that seek for employment and business opportunities. Based on the compensation regulations of the new land legislation, such people deserve compensation through customary rights of occupancy if their stay in the area is continuous for at least 3 years. However, this is viewed as a speculative stay by the Mining Act, 1998 and thus the affected parties deserve no compensation. Under the on going land and economic reforms, land owned or occupied through customary land tenure systems is gradually turning into a commodity and therefore perceived to have value that can be bartered and exchanged for personal economic gain.

2.5.4.2: Compensation practices in Tanzania

Planning for compensation schemes in Tanzania is done and guided by the State, but largely influenced by project proponents and financiers. Mwalyosi (2004) reports that compensation paid to the victims of newly established development projects in Tanzania depend much on either the pre-prepared resettlement policies or negotiations held between investors and affected parties. When the government is the developer, normally, the responsible sector ministry takes a lead in preparing the compensation scheme (URT, 2005b). However, the process is hardly independent of influence from donors. For instance, the Tanzanian law relating to land acquisition and compensation

[4] Land Act No.4 , 1999 and Village Land Act No.5, 1999

does not recognise tenants (property occupiers) as eligible for compensation. But the World Bank policy (OP 4.12) recognises them as being eligible to receive some compensation entitlements such as disturbance allowance and relocation assistance. World Bank environmental policies require all their funded projects (predominantly Government-owned) to prepare Resettlement Policy Frameworks (RPFs) (Box 2.7) within which compensation is the main component (O'Brien, 2007 and URT, 2003a).

Box 2.7: Agricultural Sector Development Programme (ASDP)
[Source: URT (2006)]

The government of Tanzania (GoT) was requested by the World Bank to prepare a Resettlement Policy Framework (RPF) before appraisal of ASDP. In this case the GoT, represented by the Ministry of Agriculture and Food Security prepared the RPF in accordance to World Bank policy (OP4.12). The RPF establishes principles, organizational arrangements and design criteria for resettlement and compensation to meet the needs of the people who may be affected by the implementation of ASDP nation wide. Among others, the RPF highlights principles, criteria, eligibility, valuation methods and grievance redress mechanisms in regard to compensation. The RPF also requests the District Agricultural Authorities (main implementers of the ASDP) to prepare their district specific Resettlement and Compensation Action Plans. All approved investments whether they involve resettlement and compensation or not, would be subject to the final approval and confirmation of the World Bank.

On the other hand, privately owned projects after securing relevant investment permits, embark on land acquisition process which normally involves discussing potential losses and appropriate compensation payments with potential affected parties (Box 2.8). Other stakeholders regarded this process as land purchase.

Box 2.8: Kilombero Valley Timber Company (KVTC)
[Source: Mwalyosi & Hughes(1998)]

The KVTC Environmental Impact Statement recommended that the affected villagers should receive monetary compensation and be facilitated further to participate in teak out-grower schemes. The developer did not implement this recommendation, instead the project is currently compensating villagers through special established Community Social Fund. Under this arrangement, the KVTC pays annual index-linked payments for each hectare leased to the project for teak growing and other in-kind payments such as preferential employment. In the beginning, KVTC contracted Plan International (NGO operating in the area) to facilitate villagers in the identification of their development priority needs, planning and implementation of their community based development activities such as construction of classrooms, clinic and market. Plan International also helped in disbursing social funds to the all host villages in Kilombero and Ulanga district. According to the discussion held with the KVTC project manager in June 2006, the KVTC top management decided the project officials should deal with local communities directly in relation to social funds and other supports since the intermediary agent (NGO) did not effectively link the project and host communities for relationship improvement.

Although, some plans for the implementation of compensation schemes by some developers seem to ensure the affected parties' satisfaction, the compensation processes are still problematic (Baya *et al.*, 1996; CEEST, 1997 and Innocent, 2004). Different reports by Kombe and Kreibich (2001); Lovett *et al.* (2001); URT (2002); Hernandez (2003); Kironde (2004); Mwalyosi (2004) are relatively consistent about the factors like lack of participation, unprocedural and corruption acts that bring delays and disputes in the compensation processes.

Clear frameworks, principles and criteria for use during compensation processes are very crucial and urgently needed to minimise compensation disputes and transaction costs involved. For example, when all compensation processes get documented properly and sectoral laws address among others the compensation issue in a specific way, chances of having disputes would narrow down (Box 2.9).

Box 2.9: Extended Compensation Entitlements by the Forestry Act (No.14 of 2002)
[Source: URT, 2002]

The Forestry Act, 2002 that was enacted after the new land legislation, comes out as a good example of a carefully prepared law that tries to consider more broadly the losses and damages faced by the affected parties. The review has found no contradictions between the Forestry Act, 2002 and new land legislation of 1999. Instead, the Forestry Act has extensively broadened compensation entitlements to cover both direct and indirect losses due to: diminution in value of the existing rights; damages done to the forest reserves; damages caused by protection plans and protected wild animals; interference by new rights; breach of agreements and; environmental damage including damage to the sustainability of the forest reserves or any part thereof. However, neither the Act nor its regulations states the criteria for valuing the losses. The big challenge lying ahead is how to find competent experts to precisely carry out impact assessment and evaluation of the above-listed losses.

2.6 A framework for assessment and analysis of compensation

If transaction costs are kept as low as possible, the *Coasian* bargaining process has potentials to influence efficient compensation outcomes. Unlike the *Coasian* bargaining where only two parties (externality causer and affected person) participate in the negotiation, the study assumes possibility of having bargaining process that is open to all key stakeholders, particularly the developer and the affected parties. This has potentials for avoiding effects of "self interests" and safeguards the public welfare.

On the other hand, the recently established Millennium ecosystem functions framework and the DFID's sustainable livelihood framework have demonstrated potentials of providing the study with the conceptual and assessment framework if combined together with Coase theorem. The ecosystem functions framework provides effective approach towards the assessment and analysing of benefits that individuals and society derive directly or indirectly from their environment. It therefore discloses their uses and values. The sustainable livelihood framework as a research tool is used as a special checklist that helps identification of contextual information, main livelihood assets and challenges at the interface of development projects and people's livelihoods. It describes the transformation processes of each asset, livelihood outcomes and strategies in place.

A combination of ecosystem functions framework, sustainable livelihood framework and other institutional factors within *Coasian* bargain context, provide a novel conceptual framework that will also be used for assessing and analysing both the gains and losses in compensation processes. Thus a conceptual and analytical framework (Figure 2.9) links compensation process and Coase Theorem and provides for a basis to compare and contrast performance, efficiency, sustainability, equity and outcomes of various alternative processes. Finally, the conceptual and analytical framework tentatively provides a basis for the assembly of variables and contextual factors to formulate the compensatory framework for sustainable development and carry out its critical evaluation.

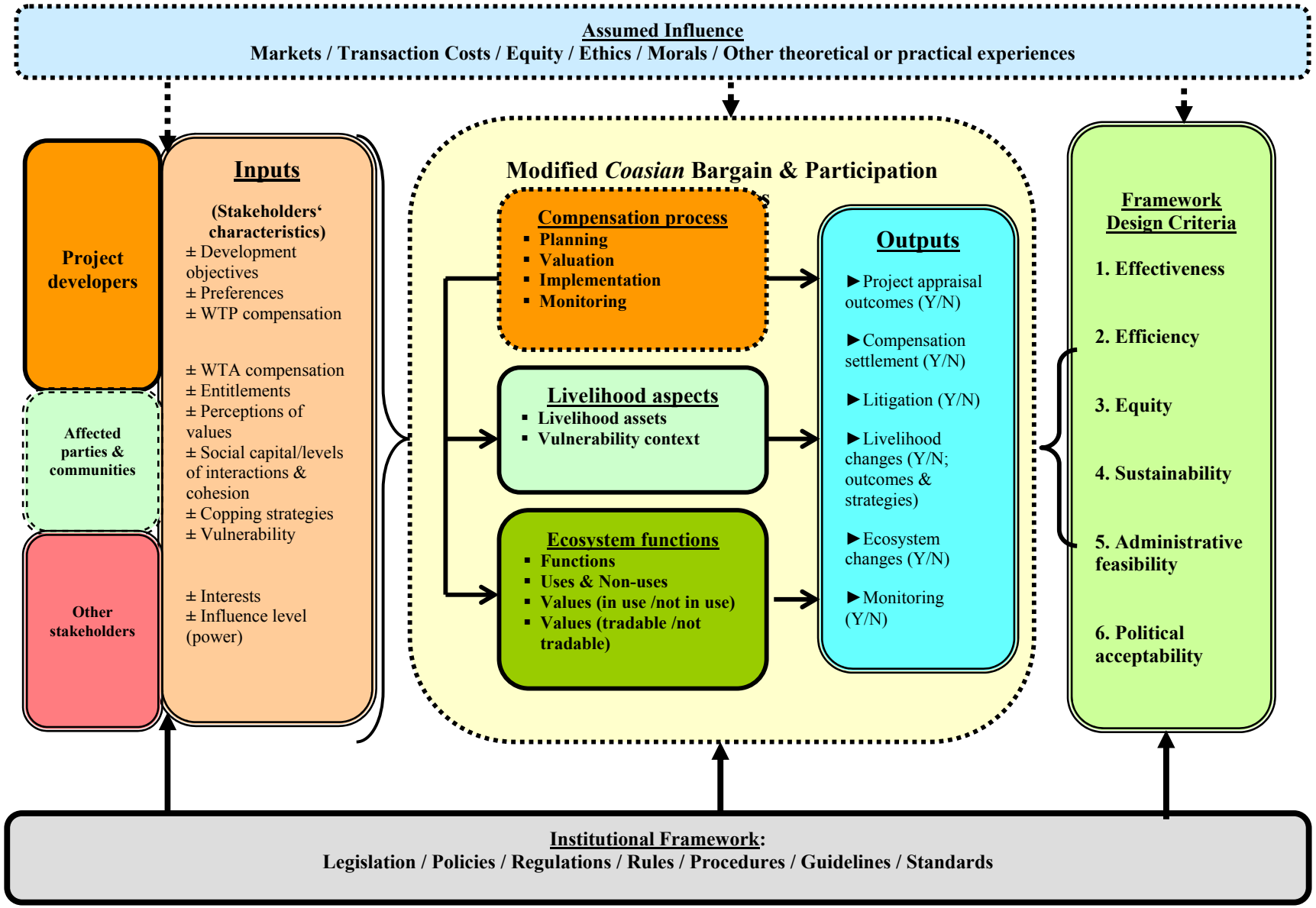


Figure 2.9: Conceptual framework for assessment and analysis of compensation influenced by development projects

2.7 Key messages from the literature review

The literature review has identified the following key aspects in relation to the proposed study:

In general, compensation that is caused by development projects has not been clearly defined. Instead, there have been several efforts trying to express it using different concepts from both the human well-being viewpoint and welfare economics perspective. Summing up all main concepts of compensation, it is clear that both researchers and authors have been expecting compensation practice to achieve the following, viz. recognition of entitlements and people's preferences; fair distribution of benefits and costs among concerned parties and; promotion of people's satisfaction through observing procedural, moral, ethical and equity matters. This study is therefore tentatively defining project-influenced compensation as a bargain-based procedure or process that recognises entitlements, preferences, morals and ethics of concerned parties in order to equitably distribute benefits and costs among them.

Through comparing the theory and practices of compensation, the review has revealed a serious gap between the two. Compensation practice, the valuation in particular concentrates on the identification of losers and their losses only and forgets side beneficiaries who in one way or another, direct or indirectly benefit from the same project operations. The review further realised the potential of this group of beneficiaries to share compensation costs with developers and subsequently influence positively the developers' willingness to pay compensation.

The *Coasian* bargaining process has potentials to influence efficient compensation outcomes. If negotiation process involves two sides, developer and affected parties, it can potentially avoid effects of *'self interests'* in compensation process and public welfare. However, this is likely to be limited by high transaction costs involved and greater knowledge and wealth differences between the two sides.

This literature review has shown that the Millennium ecosystem functions framework links properly people and their environment, through ecosystem goods and services they get from the natural capital. In addition, the sustainable livelihood framework helps to show the way development projects influence or change household livelihoods assets. The review has

therefore confirmed that both the ecosystem functions framework and DFID's sustainable livelihood framework have potentials for helping in the assessment of both benefits and costs during compensation.

A combination of conceptual and analytical framework and other institutional factors provides a novel conceptual framework that will also be used for assessing and analysing gains and losses in compensation processes in developing countries. Using Tanzania as a country case, conceptual and analytical framework provides for a basis to identify contextual factors required for the formulation of compensatory framework. Finally, the review confirms the validity of the research questions and justifies the importance of this study entitled **"Compensatory Framework for Sustainable Development: The Case of Tanzania".**

Chapter 3 RESEARCH METHODOLOGY

This chapter presents the considerations upon which the methodology and entire operational process of the study are rooted. The connections between key theoretical concepts related to compensation and the way they were linked together to formulate a framework for conceptualisation, assessment and analysis have been presented as the main methodological tool for this study. It also reports on the criteria used in the selection of the study area, project case studies, village cases, household cases, and other respondents of this research. It further presents the approach to the study, type of data required, their potential sources, sampling procedures and strategies used in the fieldwork. Information from literature and interviews held during exploratory visits to the study area provided a scientific background to the methodological concepts used in this study (Fig 3.1).

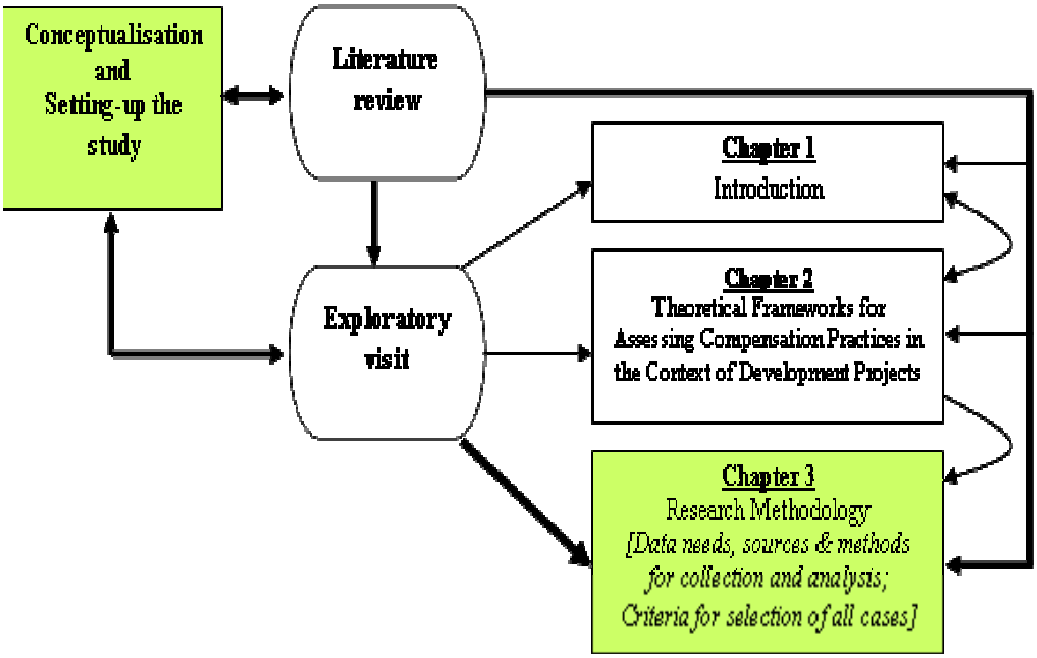


Figure 3.1: Phase I: Design of research methodology

3.1 Overview of research approach

Figure 3.1 summarises the main research components and steps taken to achieve the research objectives and yield the expected research outputs. The research comprised three main operational phases namely study set-up, data collection and initial analysis and, critical data analysis and formulation of compensatory framework.

3.1.1: Phase 1: Study set-up

Information from literature review, opinions and views collected from different stakeholders and experts facilitated in the identification of gaps and issues of concern; formulation and

confirmation of the research questions (objectives) and; setting the study boundaries. The exploratory visits paid to the study area provided the study with useful information for development of the conceptual framework for assessment and analysis of compensation influenced by development projects (Fig 2.4 in chapter 2). It also confirmed the criteria for selection of project case studies and village cases. The criteria for selection of the affected household cases was tentatively drafted and confirmed later during fieldwork (beginning of data collection phase). Phase one ended by working out data required to achieve each objective and confirming their sources, methods of collecting and analysing them (Table 3.2).

3.1.2: Phase two: Data collection and initial analysis

This was the phase for data collection, preliminary analysis and initial interpretation of data in the field. The study collected both qualitative and quantitative information on performances in compensation schemes, development projects, people's livelihood assets, ecosystem goods and services and sustainability issues. Data collection started by mailing a questionnaire to both the project developers and services providers to solicit their views and opinions on general aspects of compensation and development projects in Tanzania.

Primary data collection involved two project case studies from Tanzania. One village case was selected from each project case study and und different numbers of household cases were selected for in-depth (rich) interviews. Application of methods was carefully triangulated in an orderly manner that the first applied method provided useful information to other methods that followed latter.

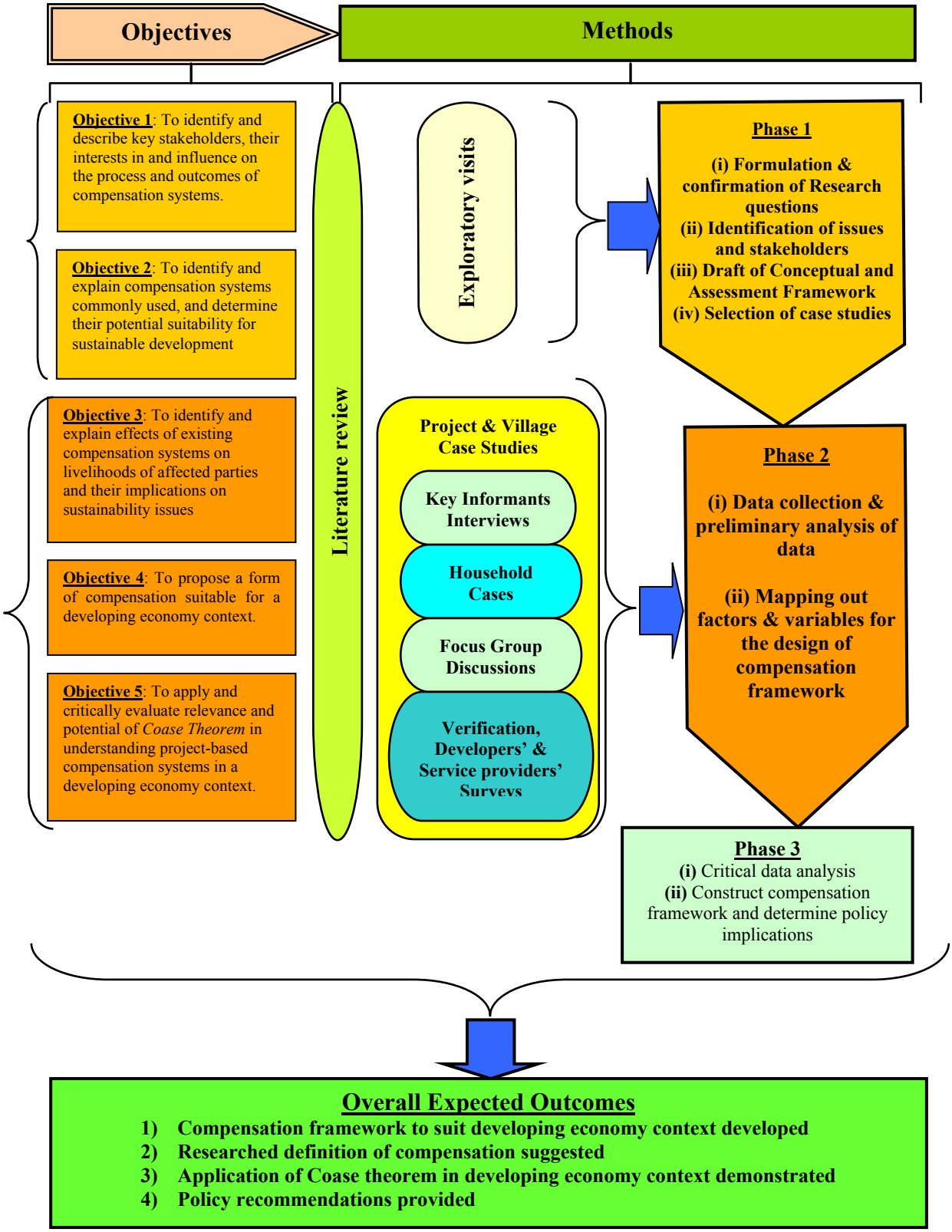


Figure 3.2: Research methodological and operational framework

Different methods were used for different purposes. Information about people, places, projects and compensation performances by project cases were collected using key informants' interviews. The conceptual framework for assessment and analysis of compensation influenced by development projects was used at household level (in-depth household cases) to study in-depth both the compensation and project performances; distribution of benefits and costs at individual household and community levels and; their implications on people's livelihoods and ecosystem goods and services.

Focus group discussions were used throughout the fieldwork to investigate further selected issues that needed either clarification or more details and thereafter the information was fed into the conceptual framework for assessment and analysis of compensation. Outputs from preliminary analysis and interpretation of data informed and supported data collection processes in the field. For instance, all key issues pertinent to compensation, people's livelihoods, sustainability were verified using a questionnaire survey that involved a larger sample of households (n=60) in each village case study. Other methods such as photographing, researcher's observations and collection of secondary data (i.e. reports, maps and letters) were put in use throughout the period of data collection.

3.1.3: Phase 3: Critical data analysis and formulation of compensatory framework

This comprises critical data analyses and results interpretation that were made through embedding results onto the conceptual framework for assessment and analysis of compensation. Variables with significant results in regard to compensation related aspects were further analysed statistically and analytically to have contextual factors related to compensation. It also involved assembling all relevant contextual factors into a framework for addressing compensation challenge in the context of development projects in the developing world economy. This phase also involved determination of policy implications and necessary adjustments; suggestions to theory including definition of compensation suited to development project context and; finally communication of the research findings (thesis writing).

3.2 Conceptual frameworks in research design

According to Neuman (2003), theories provide ideas, concepts and general information on various issues that researchers pull them together to establish possible linkages for easy

understanding. This could be presented as simple flow charts or diagrams named as conceptual framework (Robson, 2002). Conceptual frameworks establish and group variables and help to focus the study on the most important data only (Marshall and Rossman, 2006). The formulation of the conceptual framework for assessing and analysing compensation issues in this study (simply called conceptual and analytical framework) was guided by relevant or key issues that emerged from the literature review as presented in chapter two.

The conceptual framework for assessment and analysis of compensation integrates the Coase theorem, ecosystems framework and the concepts of sustainable livelihoods framework in order to frame the compensation challenges in the context of development projects. The sustainable livelihoods framework provides a versatile checklist for identifying stocks and flows of livelihood assets in and out of a rural-based household (Ashley and Carney, 1999). At the interface of a rural community (people's livelihoods) and development projects (compensation schemes), sustainable livelihoods framework helps to capture transformation processes of different types of assets (capitals) in the community. It helps also in identifying the influenced changes, coping strategies, outcomes and their implications to people's livelihoods and sustainability at individual, household or community. On the other hand, the ecosystem functions framework helps to reveal preferences and interests of different stakeholders on ecosystem goods and services (MA, 2005). This was specifically done using ecosystem functions framework to link the underlying goods and services of ecosystems to the uses people have or had before.

The Coase theorem suggests an approach towards resolving externality problems through which concerned parties bargain for efficient compensation outcomes. However, in the real world, developing economies in particular, the bargain process is likely to be shaped and influenced by a number of factors including interests of bargainers and other stakeholders; poverty issues; cultural aspects; market-based aspects; policies, institutions and so many others. Therefore, Coase theorem integrates together information from sustainable livelihoods framework and ecosystem functions framework and focuses on the assessment of compensation practices by project cases. However, efficient compensation outcomes by Coase theorem framework are realised when two key assumptions are met (i.e. concerned parties accept willingly to meet and bargain at lowest possible transaction costs and; property rights are well-defined). Following these assumptions, factors affecting bargain and clarity of property rights and those influencing transaction costs were identified and analysed. The

analysis made a base for the identification of factors limiting application of Coase theorem in the developing economy context.

The nature of operation, use and application of all three frameworks (i.e. sustainable livelihoods, ecosystem functions and Coase theorem) are centred on *"valuation"*. This integration forms a quite useful framework in assessing and analysing compensation as it involves *"valuation"* as a critical stage that determines the well-being of the affected people. This naïve integrated framework showed versatile strengths in the identification and analysis of costs and benefits, their flows and distribution among concerned parties.

3.3 Design of research methods

Designing study methodology is a well planned procedure aiming at obtaining valid and accurate answers to the research questions in a cost-effective way (Kumar, 2005). A successful research design according to Robson (2002) should logically link the study aim, objectives and methods. However, determination of data requirements is the first thing and the second is identification of the right sources of data.

3.3.1: Determining requirements and right sources of data

The conceptual framework for assessing and analysing compensation (Figure 2.9) helped to logically link the study purpose, theory and research objectives or questions in order to determine type of information required to answer research questions. In other words, the gaps, misconceptions and malpractices identified during the review of literature (chapter 2), summarised and expressed in terms of research questions pointed out the data needs. Likewise, the stakeholder identification done during exploratory visits to the study area (chapter 4) suggested possible sources of the information required. The nature of the data required when combined with stakeholder analysis suggested the possible methods to use in collecting information from the identified sources and likely methods for analysis. Table 3.1 summarises the linkages between study objectives, data needs, sources of data, methods of collection and analysis for this study. The main sources of primary data were both the compensated and non-compensated households located in the communities that hosted project case studies. Others included key informants, purposively formed groups, project developers and service providers. Section 3.4 provides more details of how data was collected from each source.

3.3.2: Research strategy.

A research strategy is defined by Robson (2002) as a roadmap or a plan for undertaking a systematic investigation of something studied. Yin (2003a) points out that research strategies include experiments, surveys, archival analysis, historical analysis and case studies. The *'type of study questions'* influence the choice of research strategy (Robson, 2002) and according to Yin (2003a), the case study is the right research strategy as it would appropriately cover most of the contextual conditions of broad research topics and enhance reliability if multiple sources of data are used. Yin (2003b) recommends study questions of a *'why'* and *'how'* - nature are suited for case studies, history and experiments. A case study approach was therefore adapted as the right research strategy for this study. Yin (2003b) suggests the case studies be combined with other methods applied in a well pre-determined order. Therefore, the research strategy for this study included sub case studies (i.e. Tanzania as a country case study; two project case studies; two village case studies – one for each project and; 12 in-depth household cases) and a number of methods. Section 3.3.3 below describes the categories of case studies involved in this research and the criteria used for their selection.

Table 3.1: Data requirements, sources and proposed methods for data collection analysis per each objective

Objectives	Data needs *(i.e. information on:)*	Data sources	Collection methods	Analysis methods
Objective no.1: To identify and describe key stakeholders, their interests in and influence on process and outcomes of compensation systems	• key stakeholders of compensation and their roles, preferences, plans and strategies now and in future. • stakeholder analysis	• Reports, records project docs from Govt depts., Project developers (PDs) & Service providers SPs); • Libraries, Documentation centres & Electronic sources • Sampled affected households (HHs) & PDs & SPs.	(1) Search for documented data (2) Interviews & discussions during exploratory visits (3) Service providers' survey (4) Project developers' survey	Content Analysis & Descriptive Analysis & Qualitative Analysis
Objective no.2: To identify and explain compensation systems commonly used, and determine their potential suitability for sustainable development.	• compensation system, approaches, methods criteria used and policy-legal statements in Tz. • participation, negotiation and decision-making processes • mechanisms for handling compensation disputes and environmental problems • transaction costs during compensation. • stakeholders views on different changes influenced by compensation system.	• Reports, records project docs from the Govt depts., PDs & SPs; • Libraries, Documentation centres & Electronic sources • Sampled affected PDs & SPs • Civil Society Organisations (CSOs)	(1) Search for documented data (2) Interviews & discussions during exploratory visits (3) Service providers' survey (4) Project developers' survey	Content Analysis & Descriptive Analysis & Qualitative Analysis & Statistical Analyses
Objective no.3: To identify and explain effects of existing compensation systems on livelihoods of affected parties and their implications on sustainability issues.	• livelihood assets, their current status and changes that have happened on assets • distribution of benefits and costs of projects among different groups of people • gains and losses due to compensation • values lost due to compensation • affected people's responses to changes caused and consequences	• Sampled affected HHs • Service providers; • Project developers • Civil Society Organisations (CSOs)	(1) Key informants (2) Rich household case studies (3) Focus group discussions (4) Verification Surveys	Qualitative Analysis & Statistical Analyses
Objective no.4: To propose a form of compensation suitable for a developing economy context.	• forms of compensation, advantages, disadvantages & embedded risks of each and AP's preferences • potentials for combining different forms of compensation and/or having alternative compensation that promotes equity.	• Sampled affected HHs • Service providers; • Project developers • Civil Society Organisations (CSOs)	(1) Key informants (2) Rich household case studies (3) Focus group discussions (4) Verification Surveys	Qualitative Analysis & Statistical Analysis
Objective no. 5: To apply and critically evaluate relevance and potential of Coase Theorem in understanding project-based compensation systems in a developing economy context.	• strong and weak points of CT in the context of developing economy • Necessary policy and community adjustments if CT has to be adapted.	• Results and outputs of data analysis		

3.3.3: Selection of case studies and samples

Taking account of available time and financial resources; suitability and accessibility; mobility and logistics; health and safety issues and, sponsorship conditionality, Tanzania was selected as the country case study. The above decision considered and observed research ethics in regard to selection of research sites and sampling procedure as put forward by Bryman and Cramer (1994); Robson (2002); Neuman (2003) and; Marshall and Rossman (2006). An interest to study rural livelihoods was influenced by the current trends of the development projects in developing countries being targeting rural areas where lands can easily be obtain.

Prior to selection of both project case studies and village cases for this research, a two month exploratory visit to Tanzania was arranged between mid April and mid June 2006. During this time interviews and discussions were held with different groups of stakeholders including service providers, project developers and village communities hosting different development projects in Dar es Salaam, Coast, Morogoro and Dodoma regions. The purposes of the exploratory visit were among others to obtain details on conditions and general information about the study area; collect relevant secondary data on project-influenced compensation processes in Tanzania and; apply and process research permit. The collected information was analysed and the results helped to develop criteria for selecting both project case studies and village cases. Sections 3.4.2.1 and 3.4.2.2 explain the steps and criteria used.

3.3.3.1: Selection of project case studies

Table 3.2 below gives three multistage criteria that were used to select the two cases. At first place, it was assumed that studying from rural communities that received compensation from development projects, might provide rich information that is useful in developing the compensation framework. The study focused on rural communities because they have direct link to most of the natural resources and thus may offer diverse structural and contextual issues related to compensation challenges. In this case, a list of all major development projects that compensated rural communities in Tanzania was generated as a sampling frame.

Table 3.2: Criteria for choosing project case studies

Criteria	*Target*	*Outcome based on real situation*	*Decision*
1. Involvement in compensation.	To identify projects that paid compensation to the affected rural communities	A list of 13 big projects was identified national wide.	Two case studies are needed to allow comparison
2. Controversy and Sensitivity	To identify projects that were controversial or sensitive or had on-going cases in courts	▪ Government intervention to review agreements of all mining projects was likely to influence responses of respondents due to expectations people had in regard to the unresolved disputes between communities and mining companies. ▪ Poses possibilities of not accessing some important information that may be branded as "confidential"	Based on data reliability and accessibility, all mining projects and those with ongoing court cases were dropped from the list.
3. Ownership and Implementation	To have both the government and privately owned and operated projects.	▪ Govt of Tanzania (GoT) shares ownership with private sector in all govt-affiliated projects. ▪ GoT has utmost 35% shares in all projects except in Songosongo Gas-to-Electricity Project, where it has at least 50% shares and implementation including project monitoring is done by GoT. ▪ GoT was found to have neither shares nor implementation influence in Kilombero Valley Teak Project	▪ Songosongo Gas-to-Electricity Project selected as a government-influenced case and, ▪ Kilombero Valley Teak Project qualified as a privately operated project case.

3.3.3.2: Selection of the village cases

Selection of study areas was done with respect to the project case studies selected in section 3.3.3.1 above. Geographically, each project case was found to have activities in more than one district. Apart from urban areas in Dar es Salaam-based districts, the Songosongo Gas-to-Electricity (SONGAS) project covers a number of rural-based communities in Mkuranga and Rufiji districts (Coast region) and Kilwa district in Lindi region. The Kilombero Valley Teak Company (KVTC) project operates in Kilombero and Ulanga districts in Morogoro region (Figure 3.3).

In the first place, all villages that host the above-selected project case studies were identified. Totals of twelve (12) and nine (9) village communities were considered as sampling frames for SONGAS and KVTC project cases respectively. Due to the nature of this study being to learn from the previous compensation experiences from rural communities, all urban based communities whether compensated or not were eliminated at the second stage of sampling procedure. Only Idete and Namawala villages of Kilombero district were involved in compensation paid by the developer of KVTC project. Considering the possibility of getting a good number of compensated households from two villages in the shortest possible distance

was the third sampling procedure. 14 and 5 households were compensated in Idete and Namawala villages respectively. Based on the number of compensated households, Idete village (14) was selected over Namawala village (5). Mwanambaya (abbreviated as M'baya) village was selected over other villages based on shortest distance (511km) from Idete village. Thus, Idete in Kilombero district (for KVTC project) and M'baya in Mkuranga district (for SONGAS project) qualified as village cases (study areas). This was the only combination possible to facilitate the researcher to budget effectively in terms of time and financial resources while studying the two project case studies.

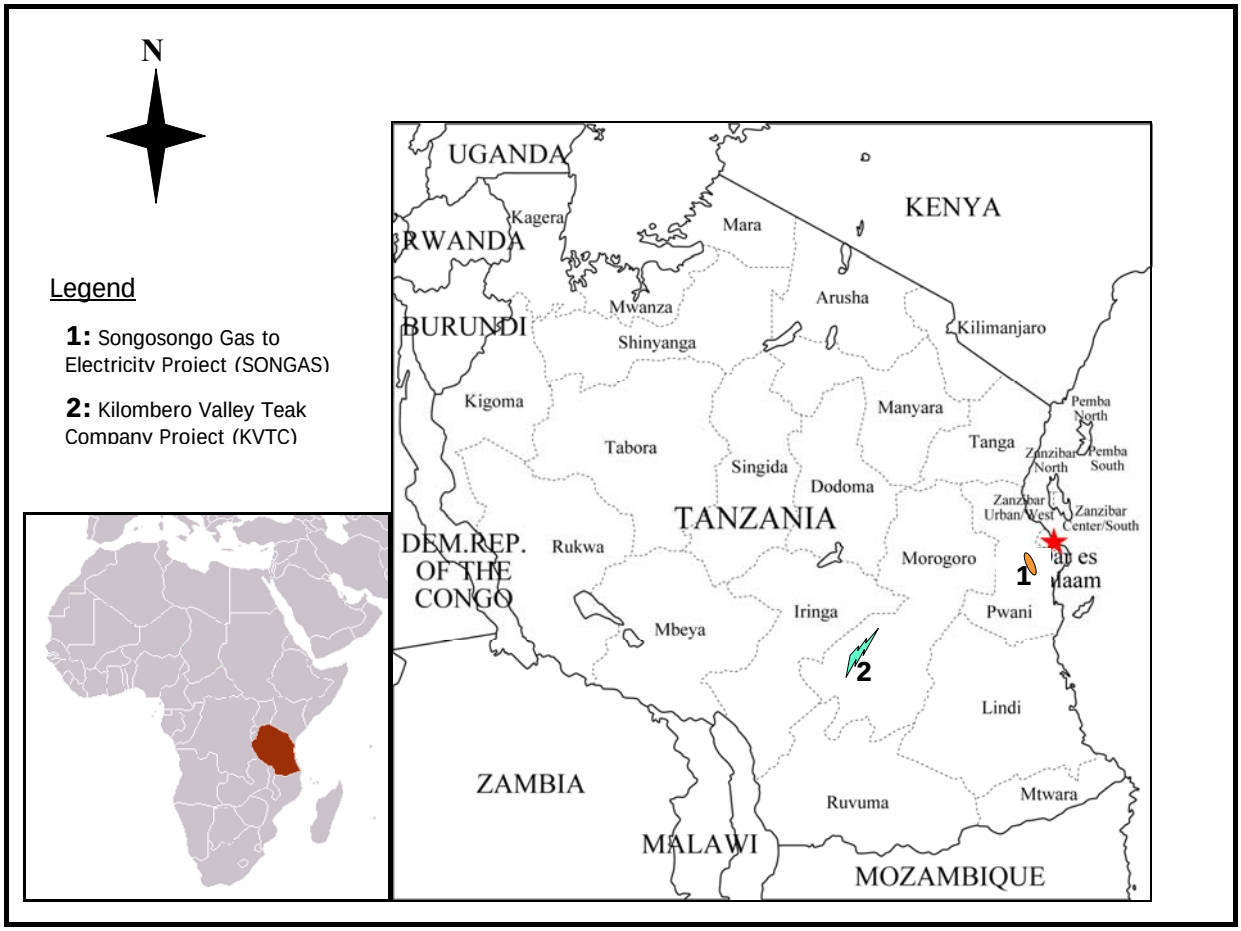


Figure 3.3: Map of Tanzania showing study areas and locations of project case studies

3.3.3.3: Selection of household case studies

Key informant interviews and initial focus group discussions carried out at the beginning of fieldwork were used to quickly collect background and general information in both Idete and M'baya villages. The information helped in making necessary adjustments to the sampling approach. It was tentatively planned to involve eight (8) household cases compensated by the project case studies (i.e. four from each project case) in the in-depth household study. However, this was adjusted based on the conditions found in the study areas. For example, in Idete (with KVTC project), there was about 43 households who were not compensated and yet their names appeared in both sampling lists presented by the village leaders and KVTC officials.

Studying more about why 43 households did not receive compensation was necessary for the study intended to reveal contextual factors for the formulation of a compensatory framework. It was later decided to have four compensated and four uncompensated households from Idete and four compensated household from M'baya.

The collected background and general information during key informant interviews and focus group discussion helped in setting out criteria for the selection of household cases for the in-depth household study. Because of the adjustments made, some criteria applied to both village cases and some were specific to one village case. The criteria used included:-

1) *Compensation by project case studies*: In-depth household study to involve households that at least received compensation from the project cases. Households compensated by other projects such as SIEMENS/TANESCO and Church (Mission) in Idete village were excluded in the in-depth household study. However, their views and experience in regard to projects and compensation schemes were thought relevant and solicited using focus group discussions.

2) *Household headship*: This was meant to balance male and female-headed households (gender aspects) during the study. However, there was only one female-headed household in each list presented by the village leaders for sampling. A total of three (3) out of twelve (12) households who participated in the entire in-depth household

studies were female headed. It was however, observed that in most of interview and discussion sessions held, wives and other family members joined in.

3) *Existing compensation disputes*: It was quickly discovered that in each village there were groups of people whose assets were affected following implementation of mini-projects intended to deliver the agreed benefits to the host communities. The *'road construction project'* in Idete and *'construction of electricity distribution line project'* in M'baya affected farmers' crops and triggered new compensation claims that were unsettled in both villages. These households were excluded from sampling frame to avoid bias for the information that could have been provided. However, focus group discussions were used again to have their views and opinions in relation to compensation, benefit implementation in particular.

3.3.3.4: Selection of respondents for the surveys

According to Glasow (2005), sampling strategy needs to observe both the statistical procedures and other community-based conditions in order to have reliable and valid data. The sections below clearly show how the above mentioned aspects were carefully observed in all selections done in this research.

i) Selection of respondents for project developers' and service providers' surveys

Lists of 52 project developers and 62 service providers and both their postal and physical addresses were obtained from the offices of National Environment Management Council. The National Environment Management Council is the national environmental agency responsible for environmental protection, management and enforcement issues including Environmental Impact Assessment in Tanzania. The National Environment Management Council has updated records of all developers and service providers that were involved in Environmental Impact Assessment in Tanzania and compensation schemes in the country. Project developers had different nature of activities ranging from plantations, mining, conservation, tourism, agriculture, power generation and many others. Lists of service providers included researchers, consultants, contractors, government departments and Civil Society Organisations. No sampling was done here, as the questionnaires were sent to all project developers and service providers by post. The target was to get at least 30 questionnaires back from each category.

ii) Selection of respondents of the verification survey

The intention was to obtain a representative sample of both the compensated and uncompensated households that were involved in compensation schemes by the project cases. Among the very important things observed carefully, was to make sure that the sampling procedure used allow various statistical tests such as tests of significance, analysis of variance, correlation and regression analyses. Therefore, purpose sampling coupled with randomisation was adopted. Sampling frames were made from lists of people who received compensation from the developers of the two project cases. The lists were received from both the project and village leaders. Harmonisations of the lists were done which involved village executive committee members, project officers (applicable only for KVTC project) and few people drawn from the lists presented.

Idete village had a sampling frame of 14 households who received compensation from KVTC project and a list of 61 households who were not compensated. Only 13 out 14 compensated households participated in the survey in Idete village. The survey randomly picked 47 households from the list of uncompensated affected households to have a total of 60 respondents. In the other site, M'baya presented a list of 55 households compensated by SONGAS, out of which 38 households responded to the questionnaire survey. The whereabouts of the other 17 were not exactly known. However, some were known to be deceased and some are Dar es Salaam city dwellers who owned farms in M'baya village. The survey had to obtain their close relatives who responded to the questionnaire on their behalf based on their knowledge.

3.4 Data collection methods

Collection of data included both primary and secondary information from different sources as described in sections 3.4.1 and 3.4.2 below. In total, more than three hundred (>300) people contributed to this research through giving their views, opinions and experience in regard to development projects and compensation schemes. Table 3.3 also summarises all methods used in this research, their order of application and outlines type of data (information) collected.

Table 3.3: The type and amount of data or information collected

	Sources/Methods	***Type of information collected***	***Number of responses, meetings & cases***	***Topic/issue/theme***
1.	Project Developers' Survey	Notes	24 (out of 52)	Views and opinions on different aspects of compensation including distribution of costs and benefits among stakeholders
	Service Providers' Survey	Notes	38 (out of 62)	
2.	Key Informants' Interviews	Audios and notes	7	Historical and background information about study areas, project cases and compensation processes
3.	In-depth Household case studies (Compensated)	Audios and notes	8	Project case study and livelihood aspects in relation to compensation (un)paid.
	In-depth Household case studies (Non-compensated)	Audios and notes	4	
4.	Focus Group Discussions	Audios and notes	6	Selected issues that needed clarification and details in connection to Project cases, compensation and study areas
5.	Household/Questionnaire interviews	Notes	120 (out of 120)	Verification of the informed issues
6.	Field photographs	Images	About 200	Various scenes and field events
7.	Secondary data	Reports, letters & maps	Many	Community meetings, compensation correspondence and maps of study areas

3.4.1: Ethical considerations

Ethical matters in research are important and need to be considered at an early stage of the preparations for the research work up to the time of communicating the research findings (Robson, 2002). Fieldwork-based ethical matters for this study included obtaining research consent from authorities and respondents. Plans for obtaining research permit were made earlier during exploratory visit and it was a pre-requisite for the fieldwork (data collection). The permit to carry out this study was obtained from Sokoine University, as the Vice Chancellor of the Sokoine University is mandated by the law (Act No. 6 of 1984) to provide his/her academic staff, students and affiliated researchers with research permits. Both the research permit and introduction letter from Cranfield University were presented to various authorities and more importantly to officials of the project case studies and authorities of Mkuranga and Kilombero districts. The research clearances (consent) were obtained from project cases and District authorities. The District authorities provided introduction letters and copies were channelled down to the government leaders at M'baya and Idete villages, also serving copies to a number of intermediary government bodies.

Neuman (2003) emphasises on respondent's ethical matters that *"the greater the risk of potential harm to study subjects the greater the need for a written consent statement"*. However, Blaikie (2000) and McIntyre (2005) suggest that when respondents are assured of anonymity and confidentiality an informed verbal consent is preferred. This study used both the written assurance to the respondents of mailed questionnaires and verbal assurance for the rest of respondents. Prior to data collection all respondents were informed about the study, purpose and expected outcomes of the study. It was emphasised that the study was done for academic purposes only. Both anonymity and confidentiality aspects were highly emphasized to all respondents and respondents were given freedom not to respond to questions they felt uncomfortable with. All relevant ethical matters were carefully observed and maintained throughout the project life and this was promised to continue even after the research.

3.4.2: Primary data collection

Different qualitative and quantitative methods were used and triangulated in the collection of primary data in order to enhance data reliability and validity of results. The methods used are outlined below.

3.4.2.1: Key informant interviews

Key informants are people with adequate knowledge of either the target community (area) involved in the study or the subject matter being studied (Kakuru, 2006). According to Robson (2002), anthropologists normally use the key informant techniques to collect information, where an informant controls the interview and the interviewer maintains a passive role but active in listening and observing. This study adapted the same techniques in using the key informants as sources of important information. In each study area, introductory discussions were separately held with the staff of project case studies, contractors and government leaders at district and village levels. The discussions covered the introduction to the study; historical background of the project cases; the way compensation was carried out; existing relationships and collaborations between projects and nearby local communities and; who did what during the processes of land acquisition by project cases and implementation of compensation schemes. Key informants that are familiar with both the compensated communities and the project cases were easily identified from these discussions for further interviews. Data collected among others included background and general information necessary for setting out criteria for the selection of household cases for the in-depth study (section 3.3.3.3).

3.4.2.2: Case studies

Case study is an effective approach to both creation of an understanding of empirical phenomena and generation of novel theory (Eisenhardt, 1989 and Yin, 2003a). According to Yin (2003b), case study research should have a very specific protocol which is a procedure or a way for increasing the reliability of case study through guiding the researcher in how to approach and carry out case study investigations. Data collected from both the secondary sources and interviews during exploratory visits to the study area, supported the creation of the case study protocol as expressed in section 3.3.3 above. A multiple case study approach in which a couple of methods for identification and probing more on the compensation issues from planning to post-compensation eras deemed appropriate for this study. In each case, the study involved multiple data sources to produce evidence in order to answer the research questions. Through comparison of compensation experiences of the two project cases plus views from other stakeholders, very useful information was revealed and which made possible the mapping out of key issues for the factors or variables of the compensatory framework.

3.4.2.3: Focus group discussions

According to Nueman (2003), focus group discussions are useful in exploratory research, generation of new ideas for hypotheses, generation of questionnaire items, clarification and analysis of information and interpretation of results. In this study, a total of 8 meetings of focus group discussions of 1½ - 2 hours were held to explore further and to seek more clarification on issues that were found unclear from both the key informant interviews and in-depth household case studies (Photos 3.1 & 3.2). Responses (opinions and views) from discussions were only regarded as raw data and were subjected to verification through other focus group discussions and some taken into the verification survey. All focus group discussions were recorded to capture the discussion details for *aide-memoir* purposes only. Prior to the start of each focus group discussion session, permission to record the discussion was sought from the participants. Some accepted easily but some were left to discuss amongst themselves until a common agreement was reached.

Photo 3.1: One of the focus group discussion that involved parties that were affected when the Contractor was installing the electrical transmission line (a benefit that was promised by the developer of SONGAS project) in M'baya village (Appendix 5.23).

Photo 3.2: One of the focus group discussion that involved young farmers (youths) in Idete village to discuss benefits and costs of KVTC project in their community (Appendix 5.24).

Nueman (2003) and Robson (2002) recommend 6-12 people as optimum sizes for effective group discussions. Based on the *"valuation"* nature the compensation has, the focus group discussions of this study were however planned based on Mullings' (1985) proposition that *"for specific purposes such as assessment and evaluation, an optimum number for group discussion is 6 participants"*. The focus group discussions composed of 4-6 people where in most meetings the number of participants was 6 in order to avoid too small and too large groups that normally lead into shallow ideas and experiences and difficult in manageability and moderation respectively.

3.4.2.4: Surveys

The study carried out three (3) surveys which involved project developers, service providers and household heads as respondents. Categorically, the first two surveys had the same purpose of generating information (understanding) on identified issues of compensation and development projects. It also provided a unique opportunity for project developers and service providers as stakeholders of development and compensation process in the country to

contribute their views and opinions based on their experience. The last survey was for verification purposes. Its questionnaire comprised questions formulated from information collected through the review of secondary data, the first two surveys, key informant interviews, focus group discussions; in-depth household study and field observations. The information was carefully sorted out and the very important ones that needed verification was put on the semi-structured questionnaire and got administered using a large sample size of respondents (n=60) in study area. Section 3.3.3.4 presents the way sampling of respondents was approached step by step in all three surveys conducted in this study.

i) Project developers' and service providers' surveys

Two different questionnaires (Appendices 3.1 & 3.2) with both open and closed-ended questions were mailed to 52 project developers and 62 service providers. Both questionnaires sought to solicit their views and perceptions on various issues of compensation and development projects that were identified to be very important for the compensatory framework. The project developers and service providers were provided with four weeks to respond to the questionnaire and send it back using an enclosed envelop with pre-paid postage and return address printed on it. After four weeks, a person was recruited to follow-up on the delayed responses by telephone, e-mail and visiting them physically for those based in Dar es Salaam. This helped to achieve 46.2% and 61.3% responses from project developers and service providers respectively.

ii) Verification survey

This used a questionnaire survey intended to collect both quantitative and qualitative information from both compensated and non-compensated households residing in the two village cases. Questionnaires used in the two study areas were slightly different following different conditions found on both sites. KVTC project has established social fund and contracts systems to channel benefits to all involved villages while none existed on the other side of SONGAS. Both questionnaires however, comprised of open and closed-ended questions (Appendix 3.3)**.**

As pilot study becomes necessary for ensuring that a developed questionnaire serves the intended purposes of the study (Robson, 2002), the questionnaires were tested using 20 respondents in each study area, before they were put in use by enumerators. All aspects identified to have brought confusion to either respondents or enumerators were adjusted. In

each study area, two enumerators were trained on the research topic, respondents and how to ask both the key and probing questions. Each enumerator had an average of administering three questionnaires a day and a total of 60 respondents were interviewed in each village case study. Interviews took a *"question and answers approach"* with few cases (i.e. very aged respondents) where a questionnaire was administered in a conversational manner while making sure all key questions were responded to.

3.4.3: Secondary data

According to Helstad (2006), data from documents are stable and useful as they are usually produced for other reasons than research, which means, it is not possible for the researcher to influence them. Information relevant to compensation and development projects were collected in the form of reports, maps, letters and other documents. Most of this information was collected during exploratory visits in Tanzania. Reports included Environmental Impact Statements, Resettlement Policy Frameworks, Project feasibility study reports and Monitoring reports. Collection of secondary data from different stakeholders continued during and after the fieldwork.

3.5 Data analysis and management

3.5.1: Approach to data analysis and strategies

The study used several strategies in handling, cleaning and counterchecking information collected from each source. These involved the order of applying different methods of data collection and type of questions asked. The approach adapted to data analysis that started in the fieldwork and made to overlap with data collection helped to clean data, enhanced clarity of information and flagged gaps of information as described below:

i) Types of data required and their respective methods of analysis (i.e. content, statistical or qualitative analyses) were known early before data collection started in the field.

ii) All variables were categorised into four levels of measurement (i.e. nominal, ordinal, interval and ratio scales) in order to determine the appropriate tests required and amount of information each variable can give.

iii) Initial analysis of data overlapped data collection in the field to reveal out useful adjustments to data collection methods in order improve their effectiveness based on conditions met in the field. The initial analysis of data was extended into preliminary interpretation of how various issues under investigation were related.

This clarified issues that seemed to be ambiguous and also detected gaps in terms of information collected. For effective qualitative-based research, Stone and Harris (1984b); Robson (2002); Neuman (2003); Stake (2005) and; Marshall and Rossman (2006) recommend that the final analysis of data to be preceded by pre-analysis which goes hand-in-hand with data collection in the field.

iv) Focus group discussion was used throughout data collection period as both a method of seeking more information (i.e. details and clarification of issues) and as a tool for analysis of qualitative data.

v) The questionnaire that was used in a household survey held at the end of the fieldwork was informed by other methods of data collection. Questions asked included issues that needed verification and more digestion (pre-analysis) using larger sample size.

3.5.2: Analysis of qualitative data

i) Stakeholder analysis

The study used a two stepped technique in carrying out stakeholder analysis. First, interviews and discussions were carried out with different project developers and service providers during exploratory visits in order to identify potential stakeholders in development and compensation processes in Tanzania. Potential list of stakeholders was created and categorised into three main groups namely, affected parties and host communities, project developers and service providers. The latter group comprises of government departments and agencies, consulting firms, academic and research institutions and civil society organisations. Initial information on their characteristics (roles, interests, interactions, expectations, preferences and future plans) were also obtained during the visits.

Secondly, the questionnaire surveys that involved project developers and service providers confirmed the key stakeholders and their characteristics. Respondents were also asked to gauge their interests and influence by allocating relative weights using a *'four-point scale'* (i.e. 1=Very low; 2=Low; 3=High and 4=Very high) (Appendix 4.1). Each respondent was also asked to gauge others using the same scale. The allocated relative weights allocated to each stakeholder were summed, averaged and rounded to the nearest integers. Then these were finally put into a classification matrix (Figure 4.2) which was firstly developed by Lindenberg and Crosby (1981), used and developed further by Eden and Ackerman (1998) and more recently applied in natural resource management by Reed *et al.* (2009).

ii) Analysis of audio information

Audio information from key informants, in-depth household cases and focus group discussions in each project case study were transcribed into text (transcripts) and arranged together with other text information (self notes) into matrix displays. In order to simplify a search for patterns all issues raised were expressed in terms of narratives and summarised in 1-2 pages (Appendices 5.1 – 5.26) and grouped into their related themes. Key messages (main issues) from each thematic narration were pulled out and presented as summaries of ½-1 of A4 sheet and such information appears in the thesis as either findings or evidence to support other results.

Conceptual themes central to research objectives, questions and variables studied were coded based on the way contents were related to the theoretical concepts and their cause-effects explained in the theoretical framework of the study as linkages were established. Comprehensive notes were built on all observed variables that appeared to be significant and relevant. After factual information on various variables was deduced, their influence to compensation and implications to rural people's livelihoods and sustainable development were then identified and discussed. Additionally, both reading and re-reading the transcripts and listening and re-listening to the original recorded audios were adopted as a strategy during result discussion to avoid loss of the original meaning of the information. This helped to extract all relevant contextual information that was expressed by respondents. In the course of making inferences, evidence were provided based on the bounds of the discussion context, the framework of assessment and analysis of this study and also comparing and contrasting with secondary information.

iii) Analysis of surveyed categorical data

Qualitative information from surveys was tested statistically using computer aided software of Statistical Package for Social Sciences (SPSS-15) to determine performance of the project case studies in regard to different variables (aspects). With respect to different categorical variables, cross tabulation using *Chi square (χ^2) tests* was mainly carried out to determine whether significant differences existed between respondents of the two village cases. Respondents' preferences or ranks to various aspects including benefits, costs and types of compensation were assigned numeric values (weights) using a relative scale such as (1 – 3) or

(1 – 4) across sample(s). For instance, *first rank = 3; second rank = 2* and *third rank = 1*. The score for each ranked aspect was calculated as the product of corresponding number of households and weight allocated. Finally, the total score for each benefit or cost was obtained by summing up all scores obtained when it was ranked first, second and third. The following mathematical expression summarises the computation.

$$TS = \sum n_i w_i$$

Where:

TS	= Total score calculated for each benefit/cost identified
n	= Number of counted households who ranked it
w	= Weight allocation (w = 1, 2 & 3)
i	= Integers designating first, second and third rank.

Such results were compared with other qualitative responses from other sources such as in-depth household cases and focus group discussions in order to draw out inferences around different variables. In most cases, other sources provided basis and guidance to the discussions.

3.5.3: Analysis of quantitative data

According to Robson (2002) and Neuman (2003) quantitative data are normally organised, manipulated and subjected to descriptive analysis and presented as descriptive and inferential statistics; percentages; tables, charts, figures or graphs. This study used the Statistical Package for Social Sciences (SPSS-15) for quantitative analyses, a user-friendly software that facilitates data management and analysis (Field, 2005).

i) Descriptive statistics and T- test

Quantitative data were analysed to obtain descriptive statistics for household assets and flows in relation to losses encountered and actual compensation received in both village cases. The T-test was carried out to examine whether the means of different household assets, flows and other numeric variables were significant different between the studied villages.

ii) Correlation test and regression analysis

Correlation test was carried out against all household-based numeric variables that were considered to be possibly associated with losses suffered by the affected parties during compensation. Losses were identified as loss of land, perceived loss of household income and

perceived intangible losses. Variables involved during the analysis included demographic, production and distribution factors. Correlation matrices for each village case and an overall case are presented in Appendices 6.2, 6.3 & 6.4. Multiple linear regression analysis was carried out for all independent variables that were at least moderately correlated (Pearson's coefficient of correlation above 0.4) to the perceived household loss of income (TZS/household). This established relationships between various predictor variables (factors) and perceived household loss of income as a dependent variable. However, some variables were dropped in order to avoid multi-co-linearity effect. It should be noted that the calculated total household loss *(CTHL)* was not involved in the multiple linear regression analysis since it was not an observed variable. No regression analysis was done for land and perceived intangible losses as both showed weak correlation with most of the variables (Tables 6.5 and 6.7).

iii) Comparison of compensation payments and losses

Respondents of the household verification survey carried out in each village case estimated their perceived losses of household annual income (*PLHIs)* caused by the respective development projects. As it was established from the previous methods of data collection that household incomes in both villages were agriculturally based, estimations of *PLHIs* were also based on their lost production or harvests of various agricultural crops. Respondents were asked a day before the interview to work together with their family members to prepare in a written form the estimates of their perceived losses of household annual incomes from their lost farmlands, crop harvests and selling prices by then. This was possible because most of the respondents and some of their family members were literate. During interviews the same respondents (Appendix 3.3) were asked to provide information on their:

i. areas of lost farmlands by household (ha/hh);
ii. types of crops cultivated on their lost farmlands;
iii. estimated proportion (0, 0.25, 0.5, 0.75 or 1) for each crop grown in mixed cropping system in the lost farmland;
iv. average annual harvest for each crop (measured in either volume or weight basis);
v. number of times the crop is harvested in a year (i.e. 1, 2, 3…) and;
vi. average selling price of each crop.

The above information helped to check the self-reported biases and also in working out crop values once categorised in annual, semi-permanent and permanent or perennial crops. Further to that, information in relation to crop productivity and their respective prices obtained from other sources of data (mentioned in step 3 below) helped to verify household derived values for *PLHIs*. Moreover, the following steps were undertaken to treat further the estimated losses of perceived household annual incomes and to calculate total household losses:

1) Data of size of household lost land (ha), types of crops that were formerly cultivated on the lost land and average harvests per hectare for all crops were obtained during the verification survey.
2) Crop prices were computed using average price of the three preceding years obtained in the nearby markets (i.e. 1995-97 for M'baya and 2004-06 for Idete).
3) Other necessary data such as interest, inflation and discount rates and farm operational costs for rain-fed subsistence farming were obtained from Central Bank of Tanzania, Planning Commission and Ministry of Agriculture.
4) Discount rates were adjusted using the following formula before were used:
   [$d = (1+r)/(1+i) - 1$], where d = discount rate; r = interest rate and;
   i = inflation rate.
5) The net future income flows from permanent crops (fruit, cashew and coconut trees) and semi-permanent crops (banana, pineapples and canes) were discounted at 15% rate for 7 and 3 years respectively and aggregated to determine their present value sums.
6) The value of each area of farmland lost was calculated using income or yield capitalisation method present worth of all future income streams to be generated by the land were discounted and summed for 20 success years.
7) Estimations for gross incomes of annual crops and values of structures (houses and huts) were calculated using actual market costs adjusted according to condition, quality and age.

Actual amount of compensation paid to the affected parties, perceived loss of household income *(PLHI)* and calculated total household loss *(CTHL)* were compared in each village case to establish relationships between the three parameters. Graphical method and simple linear regression analysis were both used in establishing the relationships between the three

parameters. Results were then compared between village cases. However, the fractions of the variations in the dependent variable *(R^2)* explained by predictor variables in all simple linear regression analyses were low (Table 6.2).

A written guide on how to estimate perceived loss of household income *(PLHI)* was provided to the respondents a day before the interview during the verification survey. Essentially, the guide requested information in relation to size of lost land (ha), types of crops that were formerly cultivated on the lost land, average harvests per hectare per year and selling prices for all crops by then. This helped to check the self reported biases through comparison of their crop harvests and estimated loss of household income. Furthermore, information in relation to crop productivity and their respective prices obtained from other sources of data (mentioned in step 3 above) helped to adjust some *PLHI* estimations.

3.5.4: Counterfactual analysis

The counterfactual analysis against which compensation payments can be set is the situation that would have prevailed in the absence of the development projects. The counterfactually relevant aspects and the basis for compensation (i.e. the performance of agriculture and provision of community services) were derived from surveys carried out in the study areas and informed by reviews of prospects in the rural and agricultural sectors in Tanzania. In arriving at appropriate counterfactual inferences, predictions of possible situations that might have turned out differently in the *'without'* project situation in each village case was carried out (Section 5.4.3). The future *'without'* project could be different from the present, and this was taken into account. For example, deterioration of soils in the *'without'* situation would call for a reduction in compensation, because income loss would be less and if yields are predicted to increase due to improved technologies compensation might be greater. However, justification for either less or higher compensation payments was established in recognition of property rights and compensation entitlements.

3.6 Critique of the research methodology

Obtaining accurate results in research is always challenging, particularly when human beings are used as sources of information (Sharon, 1999 and Neuman, 2003). Sometimes the quality of responses is affected by biases in selecting research methods, samples and measurements. Neuman (2003) suggests a thorough conceptualisation of research constructs, establishing appropriate levels of measurements and pre-testing as effective methods of improving both reliability and validity aspects of research quality. Major limitations of this study are associated to sensitivity of the research topic, practical definition of compensation and use of case study in terms of data collection and generalisation of the findings (Figure 3.4).

To some extent, confidentiality affected availability of information relevant to the study. In some instances some information in relation to compensation schemes and project economic performances were branded *'confidential'* or *'top secret'*. For example, feasibility study report of one project case was not made available for the same reasons and this limited comparison to be done between the two project cases. Furthermore, the study expected to have relevant special documents such as project monitoring reports or environmental monitoring reports explaining also the post-compensation issues. Both types of reports existed but none explained or even mentioned conditions after compensation. It was identified as a serious oversight in the process of development. This hindered the study from getting important information in order to compare with the collected primary data on assessment of the post-effects of compensation schemes. The study however, depended on quality information collected and counterchecked through triangulation of methods. Secondary data by World Bank studies in other developing countries were also put in use to suit the need. The proposed framework has recommended monitoring of post-compensation effects as part of the compensation procedures.

The use of case study approach has inherent methodological problems associated to generalisation. The main output of this study is a framework for compensation in the context of developing economy. The country case was carefully selected to minimise distinctive effect. Despite the existing differences between developing countries, Tanzania has most of the socio-economic and well-being attributes of poor countries. The project cases were also carefully selected for the study to make use of all information from comparing and contrasting the ownership and nature of projects. Project ownership in many developing

countries is either by the State, private sector or both. However, the compensatory framework developed based on information collected from multi-storey layers of cases, using a combination of methods and analysed using an integrated conceptual framework presents potential approach towards framing the compensation challenge in the context of development.

Comparing financial and time resources, the research project suffered most from the shortage of time. Not only the time for collection and analysis of data, but also for applying the developed framework elsewhere in order to enhance its generalisation. Knowing that time was not adequate, the criteria for framework design were established and critically used to evaluate the developed framework in order to increase its robustness and versatility (Section 7.3).

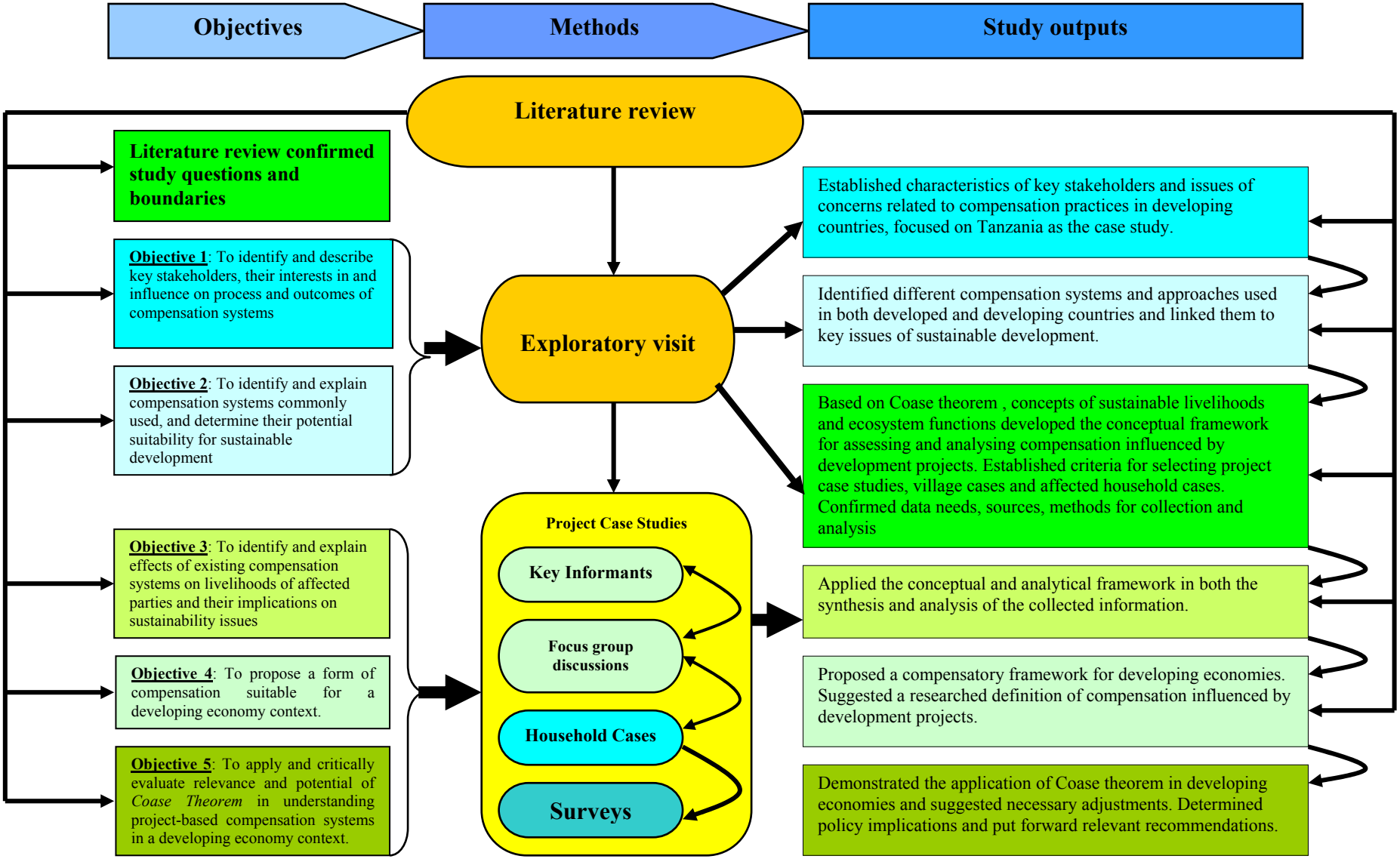


Figure 3.4: Linkages between research objectives, methods and study outputs

3.7 Key messages

The following key messages arise from this chapter:

i) The challenge of integrating together information of different nature collected using different methods shows the importance of having the conceptual and analytical framework like in this study. This links well the study objectives, methods and expected outputs of the study (Figure 3.4).

ii) The conceptual and analytical framework simplifies the task of identifying gaps in both theory and practice and possible contributions of this research project.

iii) The methodology is both central and critical part of any research work. Research design is a challenging task but if properly done step by step while considering all ethical issues pertaining to research provides a roadmap to quality research work as it improves all aspects of validity and reliability.

iv) Carrying out self-critique while planning and conducting the rest of research activities builds an internal evaluation mechanism within the process and consequently enhances the quality of research outputs.

v) Triangulations of research methods, tools and sources in relation to both data collection and analysis when applied in an appropriate order has potential of providing a lot of quality information.

vi) Depending on the nature of research project, triangulation has potentials of saving both time and financial resources in research projects.

Chapter 4 COMPENSATION PRACTICES IN TANZANIA

Chapter four focuses on stakeholder roles and perceptions on the performance of country-level compensation regimes in relation to development projects in Tanzania. The perceptions were collected from government officials, project officers, consultants, researchers and actors of the civil society organisations using interviews and discussions held during exploratory visits. It should be noted that views and perceptions from the affected parties and host communities are presented in chapters five and six. The exploratory interviews and discussions were held to identify key issues and potential stakeholders of compensation practices in Tanzania. The exploratory interviews and discussions also helped to identify key components of the conceptual framework and confirmation of the study objectives, data requirements, sources and methods of collection and analysis (presented in chapters two and three). The chapter also reports views and perceptions of both the project developers and service providers collected using questionnaire surveys, a year later after exploratory visits. The surveys helped to confirm compensation stakeholders, their roles, interests in and influence over various compensation issues in the country. Furthermore, the surveys have also enabled the study to critically review key issues of the current compensation processes and establish possible links to the Coasian bargain framework.

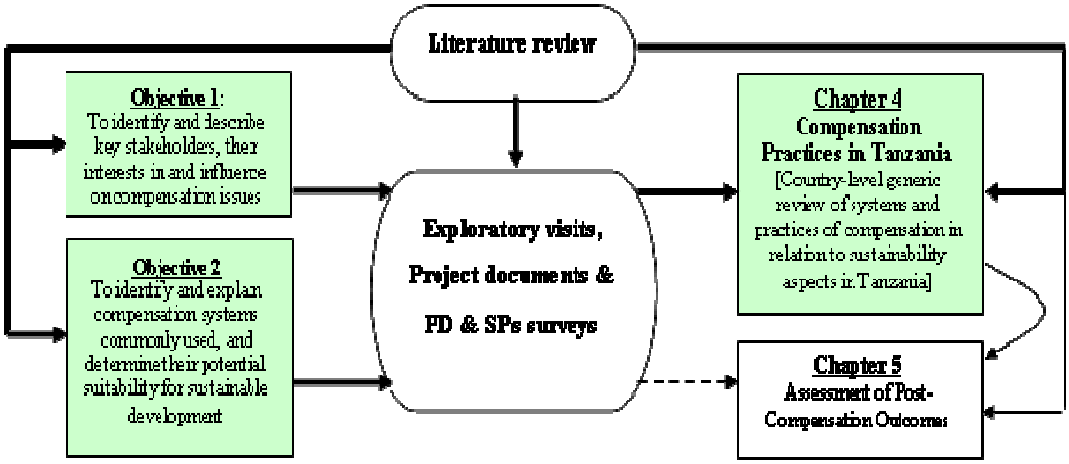


Figure 4.1: Methods used to assess compensation practices in Tanzania

4.1 Development projects in Tanzania

UNEP/SMAP (2006) defines a project as a finite activity undertaken to create good(s) or service(s) which brings about beneficial change(s) to a certain group of people, society or both. Early processes of projects involve proposing, selecting workable ideas and transforming them into clearly defined objectives, actions and requirements in responding to a particular need (O'Brien, 2007). According to Neefjes (2000), a project can be regarded as an instrument that leads to effective and efficient management of planned activities, resources and people in order to achieve agreed goals.

Several ways exist in which projects can be categorised. Projects can be put into three main groups such as *development*, *conservation* and *research* projects (Mahanty, 2002). Projects can further be categorised based on their purposes, needs and sizes (Elibariki (2007). According to NEMC (2004), the size of the project can be expressed in terms of its inputs and outputs or total financial investment capital. However, based on land requirements, purposes of projects give a more meaningful and useful categorisation of projects as far as matters of compensation and rural livelihoods are concerned. This assumes that the main impact pathway is through land and, therefore development projects in rural areas can be grouped into two, namely, '*land-based'* and '*non-land-based'* projects.

Land-based projects are area development in which contiguous units of land are used for new purposes especially associated with production, settlement or possibly protection of water catchments, wildlife and habitats. This group constitute more than 95% of all projects, and are largely owned and operated by the State, foreign companies or as a joint venture between the state and foreign investors. For such projects to become operative, they usually involve massive relocation of land inhabitants and their activities.

On the other hand, the non-land-based are mainly linear development activities associated with infrastructure such as roads, rails, pipelines, power distribution lines and flood control defence (dykes). These projects take relatively small amount of land from the affected communities compared to the land-take projects. However, total land taken by the entire length of infrastructure such as the road, railway or pipeline is as larger as plantations (land-take projects). With this category of projects, an effect of land loss is distributed among many village communities where the project passes through. The non-land-take projects have greater chances of minimising relocation of people if not avoiding it completely.

4.2 Identification of stakeholders in compensation system in Tanzania

This section presents findings of the identification of stakeholders involved in compensation processes in Tanzania. This was the first step of the stakeholder analysis carried out with emphasis on describing potential ways of engaging stakeholders in improving performances in both compensation practices and development projects. Potential stakeholders of development and compensation processes were identified using information collected using interviews and discussions held with different actors during exploratory visits in the study

area. Organisations visited and their number in brackets included government offices (10), development and conservation projects (13), civil society organisations (4), consulting firms (2) and freelance consultants (2). A list of potential stakeholders was established and placed into three major groups based on their roles (Table 4.1).

Table 4.1: Description of stakeholders in development/compensation processes in Tanzania

Stakeholder groups	***Description***
Project developers (PDs)	• Can be a foreign, local or jointly owned project, investment or a company • Can be government departments/organisations, private firms or jointly owned project/investment/company • Has relatively high financial and project managerial powers • Directly concerned with the project and compensation process
Affected parties (APs)	• Can be individuals, households, groups or host communities • Among the losses faced include loss of land to projects. • Potential recipients of compensation payments • Typically a marginalised group during development and compensation processes. • Directly affected by the development and compensation processes
Service providers (SPs)	• Represents a range of expertise available for hire as consulting firms or freelance consultants. • Includes central and local government departments, academic and research institutions and, civil society organisations. • Normally carry out feasibility studies, baseline surveys, valuations for compensation and environmental studies such as impact assessments, monitoring and audits. • Usually are the first agents to interact with the affected parties. • Involved directly/indirectly in the development and compensation processes.

Source: Exploratory visit, 2006

The synthesised information on roles, interests, resource inputs and capacity gaps of stakeholders collected during exploratory interviews and discussion are presented in Appendix 4.1 and discussed with other results of the second step of stakeholder analysis (i.e. stakeholder classification) in next Section 4.3.

Secondly compensation stakeholders were confirmed through analysis of information collected using surveys that involved the project developers and service providers (Section 4.2.2). Other purposes of carrying out stakeholder analysis included to identify relations and tensions between key stakeholders which could respectively be improved, as they are potential sources of conflicts and risks in the compensation processes.

4.3 Classification of compensation stakeholders in Tanzania

Both the DFID (2003) and Gawler (2005) consider the stakeholder importance or interests in and influences over development or compensation processes quite useful in classifying and determining levels of interaction among key stakeholders. Stakeholder classification was therefore considered important in this study as a method of identifying relationships, tensions and associated potential risks between stakeholders, and which, can be used to determine possibilities of stakeholder engagement in the *Coasian* or *non-Coasian* bargaining framework during compensation schemes. Moreover, further analysis of the above-mentioned possibilities can prompt identification of gaps and suggestions of their adjustments at both the compensation process and policy levels.

The stakeholder classification was carried out based on the information collected during the questionnaire surveys that involved the project developers and service providers. Prior to classification of stakeholders, information from the afore-mentioned surveys were also used to confirm compensation stakeholders from a list of potential stakeholders suggested during the exploratory visits (section 4.2). Information on stakeholder 'importance or interest' and 'influence power' were analysed as explained in section 3.5.2*(ii)* and presented in Appendix 4.1. The allocated relative weights were finally put into a classification matrix which was firstly developed by Lindenberg and Crosby (1981), used and developed further by Eden and Ackerman (1998) and more recently applied in natural resource management by (Reed *et al.*, 2009). Stakeholders were grouped into four main groups as shown in Figure 4.2 and discussed below.

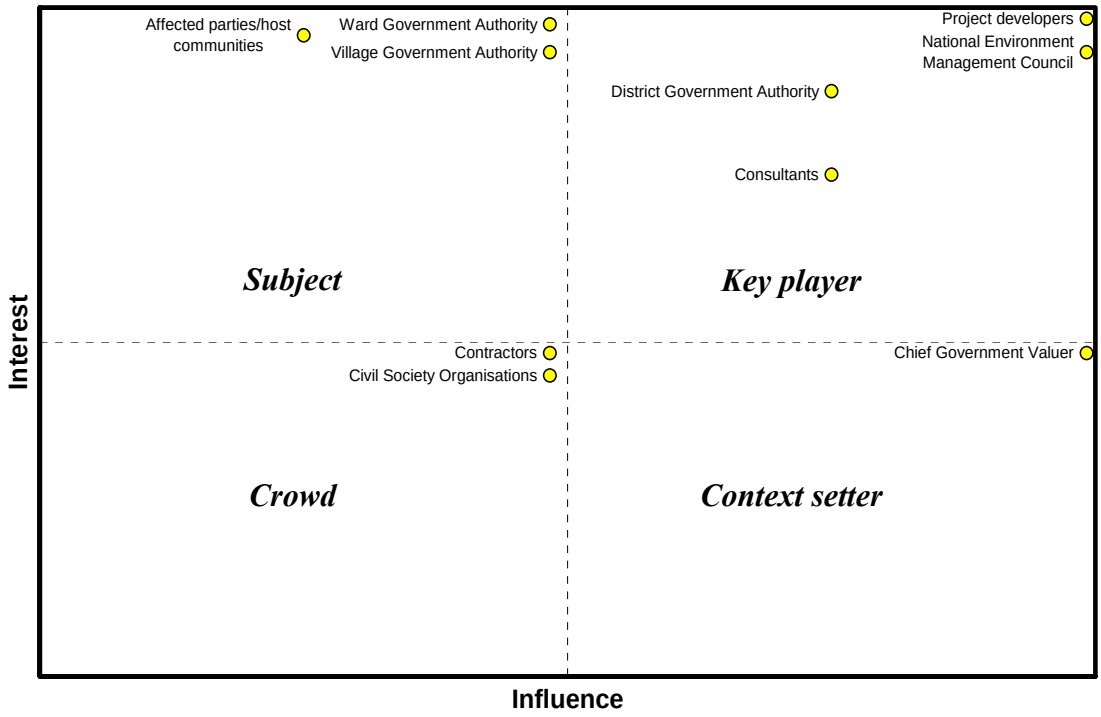


Figure 4.2: Classification matrix of stakeholder interests in and influence over compensation systems in Tanzania

4.3.1: Key players

This is a group of high or very importance in and high or very high influence on compensation matters, which included project developers, National Environment Management Council, District government authorities and consultants.

i) Project developers

In the Tanzanian context, project developers are predominantly government departments and foreign private companies. Interests of project developers were identified as a desire to maximise benefits and avoidance of liabilities during operation. Appendix 4.1 shows that project developers have very high interest *(weight=4)* and, also command a relatively very high level of influence *(weight=4)* in development or compensation issues in Tanzania. Both their importance and influence were associated with their financial capability and their experience in running development activities. Exploratory interviews and discussions pointed out that project developers have high power of influence because they are supported and favoured by the new policy-legal frameworks in Tanzania. This was clearly demonstrated by the major reforms of policy and legal frameworks between 1990 and 2005 to create 'attractive environment for investments' which included 'free' land and tax exemption.

Parallel to those reforms, the government also established the Investment Promotion Centre (currently known as Tanzania Investment Centre) to promote and attract more investments through providing potential developers with relevant information (URT, 2008b).

ii) National environment management council

The National Environment Management Council is a Tanzanian based national environmental agency established by the Parliamentary Act No. 19 of 1983. National Environment Management Council is charged with responsibilities of enforcing the Environmental Management Act No. 20 of 2004 to safeguard the environment, health and lives of people against environmental disruptions that may result from both human and project activities. The above environmental legislation requires National Environment Management Council to promote sound environmental management practices in the country through institutionalisation of the environmental impact assessment. According to NEMC (1997) and NEMC (2004), if compensation has been recommended as one of the mitigation measures during the reviews of environmental impact assessment, a proponent is required to undertake social impact assessment. Burdge and Vanclay (1996) found social impact assessment an effective tool for collection of baseline information needed for planning, implementation and monitoring processes of development projects and compensation schemes that involve massive relocation of people.

Interests of the National Environment Management Council included the protection of public welfare and promotion of sustainability. Both the importance and influence of National Environment Management Council were gauged very high *(weight=4)*. Interests and roles National Environment Management Council were found to be central to goals of development projects and compensation schemes. In this case, National Environment Management Council is a watchdog and custodian of people's livelihoods and environment. On the other hand, the Environmental Management Act No. 20 of 2004 gives National Environment Management Council legal powers to deal with development projects in relation to environment. Environmental regulations state that when compensation is found to be inevitable, it should be done in accordance with the Environmental Management Act No.20 of 2004, Land Acquisition Act No.43 of 1967, Land Act No.4 of 1999 and the Village Land Act No.5 of 1999 (URT, 2005e). Therefore, National Environment Management Council shares legal powers with the Ministry of Lands to ensure compensation disputes are settled before the developer acquires environmental clearance certificate, land and other licences.

Possibilities of minimising compensation disputes exist within this set-up of issuance of environmental certificate and other important permits and licences. National Environment Management Council is a potential collaborator (actor) in dealing with compensation influenced by development projects.

In order to fulfil these obligations, National Environment Management Council should ensure effective enforcement of environmental law including institutionalisation of environmental impact assessment. However, levels of enforcement and support mechanisms remain as critical issues for National Environment Management Council's achievements in promoting sustainable development. Operations of National Environment Management Council are limited by a number of factors including that of having no offices located near the rural areas where big investments target. National Environment Management Council's operations could have been more effective if it was operating from the district[5] level. Alternatively, National Environment Management Council could have decentralised its operations through opening offices in all five (5) zones if the district offices are costly to run.

iii) District authorities

The Office of District Commissioner oversees both the plans and preparations for the implementation of a compensation scheme and pass recommendations to the Chief Government Valuer for final approval. In addition, the District Commissioner's Office has a responsibility of ensuring that the affected parties are involved in the process of determining their compensation payments and all laws and regulation are adhered to *(personal communication with the District Commissioners of Mkuranga and Kilombero districts, June 2006)*. District Commissioner's importance and influence over compensation matters were ranked very high *(weight=4)* and high *(weight=3)* respectively. District Commissioner's power of influence over compensation matters at the grassroots level is provided by Land Acquisition Act No. 43 of 1967. District Commissioners operate down to the grassroots through the Ward and Village Executive Officers.

iv) Consultants

This group represent a range of experts that provide specialist services, especially technical assistance. Their expertises are available for hire as freelance consultants or consulting firms

[5] Total numbers of districts in Tanzania mainland and Zanzibar currently stand at 117 and 10 respectively.

and are usually hired by developers or regulators. They are responsible for providing both scientific and technical advice with respect to the proposal at hand. Normally, these are the first people to interact with the host communities when undertaking feasibility studies or searching appropriate areas for the project. In regard to compensation, consultants are responsible for carrying out baseline surveys, valuations (as private valuers), dispute mediation, monitoring and other assignments of similar nature. Their importance in and influence over the processes of development and compensation in Tanzania were both weighted high *(weight=3)*.

Information asymmetry is an issue of great concern if compensation has to be sorted out through the *Coasean* bargain framework. The affected parties and host communities in rural areas are always on information disadvantage compared to the developer's side. The affected parties and host communities need a special attention through empowerment and facilitation during negotiation processes. The exploratory interviews and discussions held with different officials indicated that consultants affect information exchange between developers and affected parties and host communities, unintentionally and sometimes intentionally. Unintentional impairment of information exchange happens when consultants lack expertise required to deal with the nature of challenges faced in the field such as cultural aspects, mistrust, elitism, conflicting resource rights and so many others. An intentional disruption of communication is associated with personal interests the consultants may have. Kunreuther and Easterling (1996) found both qualifications and experience of consultants in relation to a project proposal to be very important aspects for establishment good rapport and relationships with host communities.

Service providers reported a similar problem that it has become common during compensation processes to have a number of agents, often members of the elite groups acting as intermediaries between developers and affecting parties and host communities. Apparently, such *de facto* experts[6] are not formally recruited by project developers, consulting firms or the affected parties and host communities. They often operate informally for their own short term monetary benefits. In such a situation, they deliberately distort

[6] This is a group of opportunists (commonly known as *"vishoka"* in *Swahili*) who know well the weaknesses of all stakeholders including the government and capitalise to make money out on every weak point identified in the compensation process. Some of them happened to work with the government machinery in the past.

information, bring confusion and put affected parties and host communities at great risks of losing (part of) their compensation payments.

4.3.2: Subjects

This group comprises of stakeholders with high or very high importance but low or very low influence on compensation matters. Figure 4.2 shows stakeholders falling under this category are the affected parties and host communities, Village and Ward government authorities and all directly associated with people at local levels. High interests of these stakeholders show their importance in compensation scheme is high as well. However, this group is a marginalised one with the least power of influence over the compensation matters in Tanzania.

i) Affected parties and host communities

An affected party refers to the affected individuals and households whereas an affected host community refers to all members of the community in relation to losses incurred as a community. The affected parties are potential hosts of the proposed projects and are directly affected by development projects as they lose use rights of land, other stocks of assets and flows of services. Larger lands targeted by big development projects are found in rural areas where most of these lands are occupied and used by either individual community members (households) or by communities as a common resource under customary land rights. In terms of security and entitlements to compensation, the land legislation recognises both the recorded and unrecorded customary land rights as equal as granted land rights of occupancy (URT, 1999b). Section 4.4.1*(ii)* discusses more land tenure issues. In this case however, the affected parties and host communities are potentially important stakeholders as they do have occupancy and use rights connected to land and other natural resources around. Further to that they have knowledge of their local environment that can be tapped and used by the project or incorporated into baseline data. The affected parties also include other groups of individuals such as land or property occupants who directly or indirectly suffer from changes in assets, flows of services, incomes and expenditures. These affected parties are currently considered by the legislation to have no right to compensation. However, the World Bank funded development projects have also compensated property occupants for transport costs and disturbance involved during relocation.

The affected parties and host communities showed an interest in socio-economic development and maintenance of people's livelihoods. They also indicated expectations of socio-economic development, employment, compensation payments and other supports they may have from development projects. Based on their principal roles and interests, the importance of affected parties and host communities was weighed very high *(weight=4)*. Many respondents in service providers' survey indicated that if customary rights of land occupancy of the affected parties and host communities are adequately enforced using the current legislation (Section 2.5.4.1), this would impact on the compensation processes positively. It would influence change of their attitude, improve relationships, build trust and subsequently reduce compensation disputes.

Despite the fact that affected parties and host communities have potentials to provide basic resource inputs required by development projects, such as land, other natural resources, labour and security to project activities, this group of stakeholders was gauged with a very low level of influence *(weight=1)*. Experiences from many projects in Tanzania as observed by, Mwalyosi and Hughes (1998), Hernandez (2003), Mwalyosi (2004), Kideghesho and Mtoni (2008a), like elsewhere worldwide, WB (1993), Muntemba (1996), Gawler (2005), Mathur (2008) and Pearce and Swanson (2008) show that host communities are less empowered and marginalised compared to other stakeholders. They often lack relevant information, strong leadership and the majority are poor people. Furthermore, the affected parties and host communities lack recognition and capacity to participate on an equal basis with other stakeholders. Special efforts are required to ensure that their involvement grows beyond the consultative and collaborative processes currently being practised by many actors. Söderbaum (2009) recommended the search for paths towards sustainable development which should open more dialogue among all stakeholders to participate actively while emphasising respect and consideration of all contributions.

In making sure that compensation goal is attained, the affected parties and host communities need empowerment. Special efforts are required to enhance their participation through training and information giving. Local people should also mobilise themselves to establish their own simple information centres (mini libraries) with both old and up-to-date information. These would provide the rural community members with various news and relevant information such as agriculture, natural resources and development, to mention few.

ii) Village government authority

The Village authority is led by the Village Chairman as an elected leader and Village Executive Officer a recruited leader. Both leaders have been involved in compensation processes at the grassroots level in different ways. Project developers depend on their help and support in organising meetings, identification and verification of the affected parties. Some project proponents involve them in the coordination of valuation exercise in the field (identification of farm owners and boundaries) and other projects have been co-opting them in the dispute resolution teams.

The interests of village government authority were found to focus on increase of budget for the improvements of different services such as education, health, water, roads and market infrastructures. The Village authority's importance was reported to be very high *(weight=4)*, but their power to influence many decisions including those made during compensation processes was scaled low *(weight=2)*. Exploratory interviews held with service providers revealed that sometimes leaders at village level implement directives from their respective higher authorities regardless of the consequences likely to happen. When implementation involves giving away village lands to developers it has negative implications on people's production systems, as land is critical asset to rural livelihoods. This is normally a precursor to negative attitudes and sentiments with the project. Under such a situation, never expect to have a compensation scheme free from disputes.

iii) Ward government authority

Ward level government authority is made up by the Ward Councillor as an elected leader and the Ward Executive Officer as recruited leader. Although their roles were found to be similar to those of the Village leaders, the Ward leaders and the Ward Councillor in particular plays great role of linking the grassroots and the District authorities. On behalf of the District authorities, the Councillor oversees the implementation of compensation scheme. The importance in and influence over compensation matters by the Ward authority were ranked as very high *(weight=4)* and low *(weight=2)* respectively.

4.3.3: Context setters

This is the group of low to very low importance in and high to very high influence over compensation matters. The chief government valuer was the only stakeholder classified under this group. The chief government valuer represents the ministry responsible for land and

compensation matters in Tanzania, and is the overall overseer of the compensation processes in Tanzania. The chief government valuer was reported to have low importance in *(weight=2)* but strong influence *(weight=4)* on the process of compensation. Interests of the chief government valuer included promoting investments, enforcement of land legislation and resolution of land and compensation disputes. The mechanism of dispute resolution is a very important component of any compensation scheme or process, especially when it is designed to operate on site in order to avoid costly litigation processes. Somehow the classification results (Figure 4.2) look strange, as the chief government valuer, the overall in-charge of compensation matters in the country appears to be not a key player because of low interests. Perhaps, the views collected during exploratory interviews held with different stakeholders can provide insights to why the chief government valuer was classified with low interest.

It was indicated that the chief government valuer operates very far from the project sites and therefore coordination of compensation matters depends largely on feedback from either the district actors and project developers or their representatives, usually consultants. According to many respondents, this mode of operation was viewed inadequate as it gives loopholes for the elites to get into (and even dominate) the compensation processes and deliberately impair communication between project developer, authorities and affected parties for their own interests. This was confirmed by respondents as a major source of compensation disputes.

Apart from having great interests and strong influence, the overall overseer of the compensation process is also required to operate from or very close the project site especially when compensation processes are continuing. Alternatively, there is need to establish strong link with District-based authorities in order to improve coordination performance of compensation systems. This would involve empowering district authorities in terms of capacity and other resources.

4.3.4: Crowd

This is a group of stakeholders with very low or low importance in and very low or low influence on development and compensation processes. Two stakeholders (i.e. contractors and civil society organisation) were classified under this group.

i) Contractors

In the context of development and compensation, a contractor is a person or organisation that is commissioned by the developer to carry out tasks or supply the goods and materials required. Contractors have also been involved in compensation schemes. For example, when compensation includes in-kind payments to the affected parties and host communities, contractors carry out some tasks or activities. Although their service is not required throughout the process, it remains critically important in making compensation schemes successful. Their interests were identified as profit maximisation through accomplishing tasks within time limits. Their importance in and level of influence over development and compensation matters were both gauged low *(weight=2)*. From the generic point of view, stakeholders in this group (crowd) appear to pose less risk to the processes of development and compensation. However, other service providers indicated that monitoring of contractors' actions, work performance and quality of their workmanship is necessary, as many contracts have turned into sources of disputes.

ii) Civil society organisations

Civil society organisations include the non government organisations, community based organisations, religious and activist or pressure groups. The exploratory interviews and discussions and, the surveys that involved project developers and service providers indicated that the civil society organisations can in particular help to sensitise the disadvantaged people on the wake of their rights. More importantly the civil society organisations can help to mediate compensation disputes in a way that reduces the higher transaction costs that are incurred if case complaints are taken to courts of law. Appendix 4.1 shows that both the importance in and influence over development and compensation processes of the civil society organisations were weighted low *(weight=2)*.

Respondents of the surveys showed that the civil society organisations in Tanzania are still new movements to the majority and need guidance to ensure their growth towards benefiting the communities. Likewise, the majority of officials and experts involved in the exploratory interviews and discussions doubted the capability and keen interests of civil society organisations in helping rural communities to deal with life challenges, as most of the civil society organisations were urban-based, elite-owned and donor-dependant. Similarly, Shivji (2004) found that the civil society organisations in Tanzania, the non-governmental

organisations in particular are not responding to public interests because are donor-driven, typically top-down, not membership-based and are mainly accountable to small groups of elites.

However, in the area of development and compensation in developing nations, a lot of niches exist for the civil society organisations. What is needed is for the civil society organisations to reform their organisational set-ups, make them more constituency or community-based and engage in defending public or people's interests. For example, the civil society organisations can help in preparing, sensitizing, mobilizing and engaging the affected parties into participation and negotiating processes for better ways of having the project in their areas and how to benefit from compensation schemes. The community-based civil society organisations that know well their communities stand a better chance of becoming good mediators in case of disputes of any nature. It was noted that few good examples of people-centred civil society organisations such as Lawyers Environmental Action Team exist and show great potential of assuming worthwhile roles in development and compensation processes in the country (Box 4.1).

4.3.5: Other stakeholders

A number of project developers and service providers who responded to the questionnaire surveys identified the World Bank and media as stakeholders of development and compensation processes in Tanzania. Interviews and discussions with officials of visited projects (listed in Appendix 4.2) showed that as well as being a financier, the World Bank has been providing environmental safeguard and compensation guidelines. Respondents regarded the media as a pressure group and a very important stakeholder that facilitates transparency through disclosing hidden interests and plans of other stakeholders.

Box 4.1: Lawyers Environmental Action Team (LEAT)

LEAT is a civil society organisation registered in 1994 to carry out policy research, advocacy, and selected public interest litigation. Its member attorneys (lawyers) are concerned with environmental sustainability and democratic governance in Tanzania. The team works with the foresight that ***"change is a slow and agonizing process and that patience and persistence eventually prevails"***. With less than perfect working conditions and meagre financial resources, LEAT has managed to accomplish many in a decade time. LEAT has actively been involved in demanding for legal rights of forcibly evicted small-scale miners and several rural community members in Geita, Kahama, Tarime and Nzega districts. In some of these cases, many were relocated without compensation and few were paid little compensation. LEAT has been facilitating reconciliation through mediation process between the conflicting parties in a very cost-effective way. For example, up to June 2006, LEAT had mediated 18 land, resource and compensation related disputes and also resolved 5 disputes of the same nature through court litigation. Its lawyers have been focusing not only on resolving conflicts but also on making sure parties build partnership for the sake of promoting safety, security and sustainability in their community.

Key roles played by LEAT include: litigates public interest suits; advocates local or indigenous people's rights to their natural resources, fair compensation and other human rights; creates environmental awareness through outreach programs and education to sensitize people on their legal environmental rights; helps into formulation of new environmentally linked policies and laws such as Land Act No.4 of 1999, Village Land Act No.5 of 1999, Environmental Management Act No. 20 of 2004 and their respective regulations and; collaborates with lawyers, human right activists, journalists, scientists, researchers, teachers, volunteers, and whoever with a deep environmental concern to fight problems of environmental injustice, abuse of human rights, and destruction of natural resources.

It was interesting to note that nearly all LEAT staff mentioned boldly that their successes come from carefully researched information. There was also an indication that constant pressure LEAT has been exerting on the government in different court cases has challenged the government to enact policy-legal research units in two principal ministries that had none before. Recently (in early 2000s) the government established a division of policy planning and research to improve performance in the ministry responsible for external and foreign affairs and, judiciary, union and constitution affairs. LEAT has the following future plans and strategies in increasing their highly demanded services all over the country and also cutting down operation costs:

(i) Open regional offices to take their services close to the resource-disadvantaged people such as the communities affected by conservation and mining projects.
(ii) Recruit more lawyers through providing places for both internship and externship to fresh graduates with the aim of sensitizing them on human rights issues.
(iii) Promotion of policy planning and research within sectors in order to increase level of people-centred planning within the government machinery.

LEAT's way of operation and its future plans give constructive ideas potential for improving compensation process in Tanzania, especially in resolving disputes in a cost-effective manner and dealing with social problems in a proactive way (importance of research on policy matters). It was however, noted that LEAT was operating in one major threat of losing professional credibility as some of its staff are gradually staging on political arena. This has potential risks of turning whatever good professional advice into incredible useless political debates.

4.4 Perceptions of stakeholders on compensation systems in Tanzania

Perceptions of project developers and service providers provided the base for evaluating various aspects of compensation schemes in regard to policy, planning, valuation, forms or types, implementation and monitoring as currently practised in Tanzania.

4.4.1: Perceptions on policy-legal matters of compensation in Tanzania

While through policy formulation a problem is analysed, strategies are set, resources are mobilised and overall guidance of policy implementation is designed, the legislation is used to sanction and regulate the practices of different actors in the entire process. Therefore, policy and legal statements are equally important in shaping and influencing different aspects of both the development and compensation regimes. Despite the inconsistencies and overlapping mandates policy and legal frameworks have in Tanzania, the respondents identified three major inadequacies in regard to compensation as follows:

i) Emphasis on compensation matters

Service providers expressed their concern that the recent policy reforms that took place in 1995 – 2005 promoted investments but did not provide a clear framework (guidance) for addressing compensation issues in relation to development activities. It was noted that the reviewed sectoral policies (listed in Appendix 4.3) require development projects to undertake environmental impact assessment. This was a commendable effort towards sustainable development by the government. The Reviews however, showed that only the Land, Mining and Forestry sectors mention compensation as a policy issue that need attention. Considering the fact[7] that every three out of the approved five development projects resettle people and their activities, the above omission was viewed as a big challenge to sustainable development in the country, as far as the importance of policy is concerned.

Currently, the World Bank has been trying to bridge this policy gap by requesting all implementers of projects funded by the World Bank to prepare '*resettlement and compensation policy framework documents'* well in advance before the project starts. Efforts by the World Bank have demonstrated the importance of having sectoral policies addressing and guiding resettlement and compensation matters worldwide (Van Wicklin, 1998). For instance, it was revealed that most of the compensation schemes prepared and implemented under the World Bank directives provide comprehensive compensation to the affected parties compared to those prepared under national or government based policies. A number of project officials interviewed during exploratory visits pointed out two major differences that exist between the above-mentioned two compensation schemes as (i) approaches used (i.e.

[7] Personal communication with the Acting Director General of Environmental Agency (National Environment Management Council, May 2006.

involvement of affected parties and communities) and, (ii) the bases for determination of compensation eligibility and entitlements. These differences confuse the affected parties as they do not know which compensation system is supported by government regulations. Therefore, common approach and guided practices in compensation are needed for fair and equitable distribution of benefits and costs among the gainers and losers. Thus the guiding principles which are essentially rules that ensure important aspects of the process such as participation of key stakeholders, transparency in the process, negotiations and cost-effectiveness would help to guide both the planning and implementation of compensation schemes.

Theoretically, there is a maximum payment from the developer's view and there is a minimum receipt from the affected party's view. In other words developers want to pay as minimum as possible and the affected parties want to receive as maximum as possible. This shows the need for the two sides to engage in negotiations. Section 2.5.4.1 indicates that the framework for negotiation is legally defined by the regulations to implement the Village Land Act, 1999. But there are problems associated with uncertainties of benefits and costs that affect equitable distribution, biased power relations that affect involvement of key stakeholders, affected parties and host communities in particular and lack of well defined entitlements that affect both performance and efficiency of an entire compensation scheme. In view of maximisation of overall welfare, the criteria such as equity, sustainability, cost-effectiveness, administrative and political acceptability as presented in the conceptual framework (Figure 2.9) would help in assessing efficiency and performance of the compensation arrangements.

It should be noted that compensation is a livelihood issue and linked to sustainability of many aspects. Policy statement is therefore very important, as it gives information about the problem and how to go through in resolving it and sometimes in a proactive way. Moreover, policy statement appears in a plain language that many ordinary people can easily understand. As the policy environments in many developing countries have been acting in favour of development projects for decades, it is therefore equally important to safeguard interests of local communities including compensation matters using policy-legal frameworks.

ii) Security of tenure

According to URT (1999a & 1999b), land and land-based compensation issues in mainland Tanzania are regulated by Land Acts[8] (Nos. 4 & 5 of 1999) and Land Acquisition Act No.43 of 1967 (Section 2.5.4). Land in Tanzania is classified into three categories namely *'general lands'* (under the State), *'village lands'* (under village authorities) and, *'reserved lands'* (under forestry and wildlife protection authorities). Economic activities are only allowed on general and village lands (URT, 1999a & 1999b). However, the Land legislation states all lands in Tanzania is public and remain vested in the Head of State (President) as trustee for and behalf of the citizens of Tanzania *(Ibid.)* and therefore any land can be compulsorily acquired by the government (government influence) for public interests.

Clearly defined property rights are one of the pre-requisites for applicability of *Coase* theorem and determination of compensation eligibility and entitlements. Views and perceptions from exploratory interviews and discussions were used together with documented information to determine whether property rights in Tanzania are clearly defined. Four conditions for efficient resource allocation by Tietenberg's (1996) outlined in Section 2.2.3 were used to check whether property rights are clear or not and results are presented in Table 4.2 below.

Table 4.2: General characteristics of property rights in Tanzania

Tietenberg's (1996) criteria	***Assessment results***	
	Characteristics	***Level of achievement***
Universality	• The State own all lands in Tanzania • The village government own all village lands • Most of the villagers possess occupancy and use lands through customary rights. • Costs and benefits in relation to customary land rights are not completely specified	LOW
Exclusivity	• Lands are used exclusively by households through customary rights • In rural areas some lands are commonly used	LOW
Transferability	• Transferability of the known rights of use is possible	MODERATE
Enforceability	• According to Land legislation customary and statutory land rights of occupancy are equal in terms of security and entitlements to compensation. • Boundaries separating village lands from general lands, protected lands and lands owned by other villages are not clearly defined.	LOW

[8] Land Act No.4 , 1999 and Village Land Act No.5, 1999

The land legislation states that both the customary (recorded and unrecorded) and granted rights of occupancy are equal in terms of security and entitlements to compensation (URT, 1999b). However, the project developers' and service providers' surveys identified customary land users face land insecurity problems associated with physical boundaries and unclear type of land ownership (Table 4.2). Lack of clearly defined physical land boundaries between a village and other villages; and general lands; and protected areas was also perceived, contributing to insecurity of customary land rights in Tanzania. This has caused a number of land boundary crises between villages (Shivji, 1998; Mtoni, 1999) and between villages and conservation authorities (Kideghesho and Mtoni, 2008a). The Village Land Act, 1999 requires all lands under customary use rights to be recorded in the special village land register. This exercise however has been delayed because of the above-mentioned boundary problems. If boundaries are clearly established would at least allow customary land users to be registered and therefore enhancement of tenure security and, perhaps this would facilitate the customary entitlements become specified and visible. In short, lack of village land use plans and delays in registration of customary land rights have jointly caused difficulties in the determination of compensation entitlements of the affected parties in rural areas. This is one of the major compensation problems in Tanzania as it causes many to lose access to land without or with little compensation.

Ownership ambiguity over the village lands created by the current legislation makes villagers' land insecure. The land legislation states that Village lands are owned by the Village authorities and all lands in Tanzania including village lands are owned by the State. According to respondents it has been easier for the government to alienate lands under customary rights than those used through granted rights of occupancy. The process of revoking a title deed is a complicated process in which its authorisation involves the Commissioner for Lands, Minister responsible for Lands and finally the Head of State. Unlike granted rights of occupancy, a group of affected customary users can easily lose their rights of using the land through actions by ordinary land officials so long as they get an approval of the Commissioner for Lands. In this regard even recorded customary land users are less secure compared with granted rights of occupancy, as rural people can be particularly affected by compulsory acquisition orders due to low levels of awareness and understanding of their legal rights.

iii) Common resources

Many and different common resources such as grazing lands, natural forests and water sources exist in rural areas. Both access to and uses of common resources have great contribution to rural people's livelihoods. But neither policies nor legislation state whether losses in relation to common resources used through customary rights should be recognised and compensated for their losses. Only one project (Table 4.3) was reported to have special arrangements in place for compensating the host communities for the losses of both access to and use rights of common resources through *'benefit sharing schemes'*. Through the same arrangements the project developer and community members jointly conserve and develop further the remaining common resources for the benefits of both the present and future generations. These initiatives go beyond the current policy and legal requirements in relation to compensation in Tanzania.

4.4.2: Perceptions on compensation process in Tanzania

This section presents the views on the process of compensation schemes in Tanzania as reported and discussed by different stakeholders. Aspects of administration, planning, valuation, types (forms) of compensation, implementation and monitoring are discussed with a view of suggesting possible ways of improving compensation practices. Table 4.3 shows the number of projects visited and their involvement in various aspects of compensation.

Table 4.3: Involvement of project developers in various compensation aspects revealed during interviews with project officials

Selected aspects of compensation process	**Responses from project respondents** *(N=13)* *(multiple responses applied)*	
	Count	**Percent (%)**
Projects with documented plan of compensation scheme	5	39
Projects that had their own dispute resolution systems	6	46
Projects had compensation disputes settled in the court of law	4	31
Projects offered training/advisory services to affected parties before payments	1	8
Projects paid monetary compensation	13	100
Projects paid through bank/cheque system	7	54
Projects paid compensation through instalments	3	20
Projects paid compensation within 6 months after valuation	7	54
Projects paid full or part of compensation as in-kind payments	1	8
Projects happened to provide in-kind supports to host communities	13	100
Project practicing *"benefit sharing schemes"*	1	8
Project with programme for compensation scheme monitoring	1	8

(Source: Exploratory visits, 2006)

i) Administration of compensation process

According to the Village Land Regulations of 2001, the current process of compensation in Tanzania formally starts by the claimant assisted by an authorised officer (normally district land officer) to initiate compensation claim using special forms. A claim for compensation has to be submitted to the Chief Government Valuer positioned within the Ministry of Lands for verification. The Chief Government Valuer is also responsible for ensuring the compensation process is done according to laws and regulations. A compensation claim has to be endorsed by the Commissioner for Lands and finally be approved by the Minister responsible for Lands. In case of disagreement on the compensation claim, the Minister would appoint a person to act as a mediator. Where mediation fails to assist parties reach an agreement or where parties or one of them is unwilling to refer the compensation claim to a mediator, the claim shall be referred to a Court of Law.

The most obvious shortcoming of the above-mentioned set-up is perhaps the decision making-process that is centralised at the national level and completely detached from the local stakeholders who initiated the process (claim). The distance and gap of communication (feedbacks) between the district and national levels create loopholes for elites to pursue their interests including corruption and other misconducts. For example, URT (2002) reports on the affected farmers' complaints in Iringa region about the way their compensation claims were handled, as no information of any sort was provided to them during the process. During the surveys, both the project developers and service providers reported that an increase of compensation disputes was largely contributed by lack of information, participation, transparency and clarity in the process (Table 4.4). All these factors lead into asymmetry of information where most of the relevant information is known to the developer's side unlike to the other affected side. This causes inefficiency in decisions and outcomes of whatever market transactions including *Coasian* bargaining for compensation. According to Dixit and Olson (2000), information asymmetry creates transaction imbalance of power which can sometimes cause skewed decisions that are costly.

Table 4.4: Potential sources of compensation disputes in Tanzania as perceived by project developers and service providers

Sources/Factors	Number of respondents and scores *(N=62)*						Total Score (TS)
	1st Rank		*2nd Rank*		*3rd Rank*		
	Count	**Score***	**Count**	**Score***	**Count**	**Score***	
Lack of participation, information, transparency and feedbacks	26	78	18	36	12	12	126
Lack of clear property rights and clear entitlement to assets and compensation	7	21	21	42	12	12	75
Unnecessary bureaucracy	10	30	7	14	21	21	65
Lack of clear compensation procedures and guidelines	13	39	6	12	8	8	59
High expectations and unjustifiable claims from the affected parties	6	18	10	20	9	9	47

Source: PDs' and SPs' Surveys, 2007
Legend: Weight allocated: (1st Rank = 3); (2nd Rank = 2); and (3rd Rank = 1).
**Score = Number of respondents (Counts) times weight allocated to each rank.*

The discussions with service providers during exploratory visits, generally, concluded that compensation process in Tanzania is inconsistent, as project developers approach it differently. For example, many respondents explained that the above-mentioned inconsistency is manifested in many forms including a project can treat affected people from one community differently while their losses are almost of similar nature. Moreover, a project can administer compensation scheme differently in different communities. One consultant claimed to have learned a big lesson from compensation experience that *"compensation laws and regulations in Tanzania can change over night simply because compensation means money"*. Literally, the message he was putting across was that compensation practices do not follow laws and regulations because of both personal interests and conflicting interests among the actors. As discussed above (section 4.4.1), unclear property rights and compensation entitlements also contribute into laxity in enforcement of the existing compensation laws and regulations. These results are consistent to Sebenius' *et al.* (2005), findings which revealed that relocation and compensation schemes in developing countries are carried out in *tohu vavohu* (a Hebrew term meaning "messy and disorganised") for the same reasons. Consistency in using the principles and criteria set for the determination of compensation the affected parties and host communities deserve, creates a sense of fairness and legitimacy and according to Sebenius *et al.* (2005) is perhaps the most important part of the administration of compensation process.

ii) Planning a compensation scheme

Planning guides both the implementation and monitoring of both projects and compensation schemes (ADB$_{Africa}$, 2003 and ADB$_{Asia}$, 2007). To be able to pay adequate attention to several aspects like livelihoods of the affected parties and host communities, sustainability matters that may come out especially after compensation, early planning is necessary. Respondents reported a number of issues of concern regarding planning process including:

Haphazard implementation of compensation schemes has been a big problem in development processes in developing nations. Interviews with service providers revealed that project developers contribute significantly to this problem, as majority of them view compensation scheme, as a liability and tend to look for whatever means of not paying or paying little compensation. These are projects that implement compensation without record keeping (documentation of both the compensation process and payments). For instance, out of 13 projects visited during the exploratory visits, only five (39%) had complete resettlement and compensation policy documents and, these were all World Bank funded projects (Table 4.3). Although many development-based policies and legislation require the affected parties and other key stakeholders to be involved from the early stages of project planning, many developers carry out consultation with village and community leaders of potentially affected parties and host communities. This cannot influence decision-making processes as intended and such inadequacy in communication between decision makers and affected parties is one of the root-causes of compensation disputes and problems. Section 4.4.2(iii) discusses causes of lack of effective stakeholder participation.

iii) Participation

Active participation of key stakeholders in planning and designing of both the development projects and compensation schemes can enable stakeholders to express and safeguard their rights and interests (Zuindeau, 2006). Rawles (2002) argues that in order for a compensation process to have active involvement it has *(i)* to be open to the affected parties and host communities and consider their deliberations; *(ii)* to be guided by clear and reasonable criteria; *(iii)* to involve experts with critical roles to the process; *(iv)* to demonstrate validity of chains of reasoning involved and; *(v)* no prearranged outcomes. These participation principles are compared with perceptions of respondents and actuality as follows:

Table 4.5 shows that project developers who tried to involve other stakeholders, their planning processes had a number of inadequacies as pointed out by the service providers. For

example, the majority respondents (71%) involved in the service providers' survey indicated that participation in compensation processes is always limited to experts and leaders at district and village levels (Table 4.5). Despite the fact that legislation, administrative procedures and development policies in Tanzania emphasize the involvement of key stakeholders, participation of the most important groups is the most neglected aspect. Mwalyosi and Hughes (1998) and Mwalyosi (2004) reported that very few development projects were found to involve the affected parties and communities during environmental impact assessment and compensation processes respectively.

Table 4.5: Issues of concerns in relation to planning of compensation schemes as perceived by service providers

Issue of concern (factors)	**Respondents (N=38)**	
	Count*	***(%)of what?***
Planning with leaders and experts only	27	71
Lack of transparency and feedback to other stakeholders	25	66
Late communication of information about the project	24	63
Lack of baseline information	21	55
Project officials and experts control levels of participation	18	47
Late planning or late involvement of affected parties and host communities	8	21

Source: SPs' Survey, 2007 ** Multiple responses*

Earlier discussions in Sections 4.3.1 and 4.3.2 showed that such communication problems are likely to affect compensation processes, participation in particular. It would be difficult to apply *Coasian bargain process* in such a state of asymmetry of information, unless some measures are taken. Conditions or criteria should be set by stakeholders in order to control factors affecting communication during stakeholder involvement (Friedman and Miles, 2006). Service providers reported lack of transparency and lack of feedback to key stakeholders (66%) and late communication (63%) were among the factors limiting participation (Table 4.5). It was however, revealed during exploratory discussions that these factors significantly affected information flow and was mainly caused by a tendency of some project officials and functional officers that tend to protect their interests through classifying relevant information as confidential.

On the other hand, involvement of stakeholders often take place at discrete points involving few selected stages, very late or inputs from stakeholders not considered during decision-making processes. Participation done in this way is meaningless and project developers practicing it are not getting the best of participation. For the compensation processes to

benefit more from participatory process, the affected parties and host communities should be involved from earlier stages of project design. This makes their participation in further stages including planning for compensation schemes easier and effective in influencing decision-making processes (ADB*Asia*, 2007).

The majority respondents (55%) also indicated that lack of baseline information caused by inadequate baseline studies affects compensation planning process and subsequent participation of stakeholders. Both project developers' and service providers' surveys indicated that difficulties exist in development and compensation systems in obtaining information about procedures, guidelines, checklists, fact sheets and other helpful data in Tanzania. Pallangyo (2007) also reported the same problem that project developers in Tanzania do not know exactly where to go for their information needs. It is however, important for all stakeholders, particularly service providers to cooperate in the collection and documentation of relevant findings into different forms in order to facilitate development and compensation processes.

A special strategy is required to ensure that all stakeholders get relevant information they need in the right time. The strategy should deal with all factors affecting communication including those related to ignorance and culture in order to promote information flow among stakeholders. ADB*Asia* (2007) reported that Slovakia enacted Environmental Impact Assessment Act in 1994 which established consultative information centres to provide the public with more information about development, proposed projects and environment. Kunreuther and Easterling (1996) support the importance of especially helping the affected parties and host communities to acquire the right information about the proposal for them to have an active opportunity to discuss and contribute in the project design and plans.

Exploratory interviews and discussions with different respondents showed that large numbers of experts who participate in the implementation of compensation schemes is an issue of great concern. However, as noted in the previous findings (Table 4.1 and Figure 4.2) and discussions in sections 4.2.2*(ii)* and 4.2.3*(ii)*, experts are required to facilitate and guide participation of the affected parties and host communities. In order to minimise potential disputes in compensation processes, few experts only with critical roles have to participate. Negotiation process can be adopted and promoted as a strategy for dual purposes. First, negotiation tends to bring the matter or problem to the attention of only two disputing sides

(parties), as key players and thus it has potentials of reducing intrusion of elites attracted by their personal interests. Negotiation can also help to improve effectiveness of participation which is currently limited to information-giving and consultation.

Large proportion (47%) of service providers mentioned that in most cases, project officials and experts use different means to control levels of participation such as selecting stakeholders to involve and not to involve or involve leaders. To ensure full stakeholder participation, stakeholders' contributions have been considered during decision making process and in order to avoid pre-arranged outcomes, it was suggested that project developers demonstrate how the key stakeholders, affected parties and host communities in particular have been actively involved in the compensation process. This can be done by showing contributions or inputs from key stakeholders in all main decisions made.

iv) Valuation

Before compensation is paid, losses are identified, verified, assessed, quantified and given monetary values by experts during valuation. The estimated amount of compensation payment is not exactly equal to the quantified losses, as a number of factors are involved during valuation process (Adewale, 1989). Valuation for compensation for land, structures and crops in Tanzania is done according to the Land Act, 1999 and Village Land Act, 1999 which advocate for a "full, fair and prompt compensation based on the market value" (URT, 2001). The market value of the real property should be derived by sales comparison approach[9], income approach or replacement cost approach where an asset is of special nature *(Ibid.)*, such as farmland which is not easily saleable in rural areas. The adequacy of compensation could be achieved through the assessment of the affected assets and flows of services based on their current market prices and also considering a period to re-establishment of the affected assets and services. This is suggested in the National Land Policy and given a legal effect by the Land Act, 1999 and Village Land Act, 1999. Valuation guidelines by development banks in both Africa and Asia support the use of market value of the real property (assets) arrived at by the use of either sales comparison approach, income approach or replacement approach (ADB$_{Africa}$, 2003 and ADB$_{Asia}$, 2007).

[9] Sales ccomparison approach is the valuation method that relies on market information to value assets (land in particular) on basis that a recent sale from a willing seller to a willing buyer of an asset (the comparable asset) can best reflect the value of a similar asset (the subject asset) in the vicinity (ADB$_{Asia}$, 2007).

Despite the fact that the legislation in Tanzania recognise the importance of compensating community-based losses such as losses of communal grazing lands, forests and so many others, the study revealed that the practices recognise only individual losses. The results of the survey that involved the service providers show valuation stage of compensation faces substantial shortcomings caused by a number factors presented in Table 4.6. These factors can be grouped into two main categories namely, those factors leading to (i) undervaluation and, (ii) inconsistence.

Table 4.6: Factors making valuation inappropriate and unjust as perceived by service providers in Tanzania

Factors made valuation perceived inappropriate and unjust	Respondents' responses ***(N=38)*** *(multiple responses applied)*	
	Count	Percent (%)
Assets undervalued (low rates applied)	33	87
Some values/qualities of assets (e.g. profit loss) were not considered	31	82
Land and annual crops were not valued	29	76
Some assets were not counted accurately (estimation applied)	23	61

(Source: SPs' Survey, 2007)

Undervaluation

Undervaluation of assets during estimation of losses encountered by affected parties and host communities was perceived as the first big problem in Tanzania (87%) by service providers (Table 4.6). The causes behind undervaluation were identified as low rates of compensation and some values or qualities of some assets such as permanent crops are not considered. Perhaps, the outdated low rates of compensation are the leading cause of the widespread undervaluation problem in Tanzania. For example, in the case of agricultural crops, it was noted from the discussion held with the Chief Government Valuer in May 2006 that the crop valuation rates in most parts of the country were last updated in 1992. It was not clear as to why compensation rates were not reviewed frequently.

Table 4.6 shows respondents also expressed undervaluation caused by not considering some values and qualities of some assets, permanent crops in particular (82%). For example, it was reported by service providers that valuation of trees and permanent crops are valuated like annual crops and their cumulative future values lost for their productive life are not taken into consideration. Moreover, respondents claimed that both ages and stages of permanent crops were rarely considered. Estimation of cumulative future values of permanent crops needs quality market data and computation involves rigorous iterations that may as of necessity use

of computer and special software. Learning from the past valuation practices in developing countries with developed countries such as United Kingdom and Italy, valuers in the former lack the necessary capacity to carry out valuation efficiently. Studies by ADB*Africa* (2003); McDaniels and Trousdale (2005) and ADB*Asia* (2007) concluded that lack of dynamic research-based knowledge and techniques among valuers affect various valuation processes in developing countries. Therefore, enhancing valuation capacity of government valuers who in most cases carry out compensation valuations would improve their performance and capability to overcome valuation challenges using different approaches and methods.

Inconsistence

Inconsistence in compensation or valuation occurs when affected parties and their losses receive partial treatment from the same compensation scheme or when compensation laws, rules and criteria are applied differently by different compensation schemes (Sebenius *et al.,* 2005). Inconsistence in valuation was perceived by service providers as another major problem in Tanzania (76%). According to exploratory interviewees, inconsistent treatments of the affected parties happen due to negligence and incompetence and, according to service providers, inconsistence is mainly caused by dishonesty and manipulation. The former findings concur with Cernea's (2008) findings from studying the World Bank projects in developing countries in which it was revealed that valuers and implementers deliberately manipulate valuation inventories and computation of compensation. This can be done in different ways by excluding tangible measurable assets and lowering their quantities and qualities.

v) Implementation

Implementation stage of the compensation process includes three main components, namely coordination, support mechanisms and compensation payments. The surveys that involved project developers and service providers as respondents revealed the following issues.

Coordination

Coordination of compensation scheme by government authorities includes responsibilities of overseeing all actions from the beginning to an end of the compensation process. Coordination performance of compensation schemes in Tanzania is so important, as it is done at two distant levels (i.e. national and grassroots levels). Interviews held with district, ward and village authorities indicated that uneven distribution of responsibilities in coordinating

compensation schemes exist in the current arrangement. The local authority officials at district level in particular felt they are currently doing a lot compared with the coordination done at national level while there is no financial allocation to cater for that purposes (Section 4.3.3). District officials reported that some tasks such as verification of losses and compensation payments allocated to every affected party are not accomplished properly due to lack of funds and staff. In the discussions held with one of the District Commissioners it was indicated that coordination of compensation schemes in rural communities is extremely difficult and costly, as projects touch the only means of people's livelihoods (i.e. land). Essentially, an issue of concern in coordination of compensation scheme was strongly linked to transaction costs. The first five leading factors in increasing transaction costs during compensation schemes in Tanzania are ranked and presented in Table 4.8 and almost all take place at grassroots level (Section 4.4.5).

As suggested earlier (Section 4.3.3), there is need to empower local authorities in terms of capacity and financial resources for them to take responsibility of coordinating most of the activities and outcomes of compensation schemes. This should include providing local authorities with more sources of revenues, as most of the compensation activities take place at grassroots levels. Chambers' (2009) opinion supports this idea when observes that if adequate financial sources at local level organisations are ensured, the overall coordination of various development matters are likely to experience lower administrative and procedural burdens and thus low operational costs.

Support mechanisms

Support mechanisms in regard to compensation scheme are well-defined systems or teams with procedures established to provide necessary services to affected parties such as resolving complaints or disputes, advisory services and so many others.

Compensation schemes need to have clear mechanisms in place to handle potential disputes. Table 4.3 learned from exploratory interviews held with project officials that six projects out of 13 visited had dispute resolution teams and four projects settled compensation disputes in a court. However, discussions with service providers during exploratory visits indicated that compensation schemes lack the mechanism to handle and resolve disputes. The complainants have been normally advised to take their complaints either to the Village Government, Ward Executive Office, Police Forces or the District Court. All these channels including dispute

resolution team and special mediation have been emphasised by the law regulating compensation in Tanzania (URT, 1999b). However, project developers' survey indicated that all respondents prefer compensation complaints or disputes be settled outside of court system, as normal litigation processes have proved to be time consuming, expensive and causing delays to the project schedules. Discussions held with service providers indicated that for one reason or another, a side that lose the court case usually end-up with unsatisfactory outcomes which in turn create ill feelings which lead to unpleasant relationship with the other side. This is contrary to the outcomes provided by either negotiation or mediation where in most cases mutual agreement is emphasised. If a compensation scheme is to create good relationships amongst stakeholders, its process should integrate a simple, accessible and transparent system for resolving disputes efficiently (Box 4.1).

Some service providers mentioned about the importance of provision for training and advisory services before affected parties receive their compensation payments. This service was not a common arrangement, as only one out of the thirteen projects visited (Table 4.3) gave advice to the affected parties on how to keep, handle and spend their compensation money wisely. However, such a practice has potentials of promoting safety and security in the community when compensation involves cash payments, especially in rural areas where bank services are located far.

Compensation payments

Two main issues were raised as far as compensation payments are concerned. Table 4.3 shows that only seven out of thirteen projects paid compensation in time (i.e. within 6 months after their valuations ended) and, three out of thirteen projects paid through instalments. The delayed payment was reported as a major source of unanticipated problems for the affected parties who had stopped farming their land once valuation was concluded. There is a feeling among the affected parties in particular that delayed payments and payments made in instalments are inappropriate especially given uncertain market conditions and high levels of inflation in developing economies. Such compensation payments fail to recover the original levels of loss. Referring to the willingness to accept compensation Regulations to implement Village Land Act, 1999 directs compensation to be paid within 6 months of valuation, otherwise the current bank interest rates should be applied (URT, 2001). Other developers face difficulties with their financiers that lead to disbursing compensation payments by instalments. This is contrary to Land Acquisition Act, 1967 which emphasizes that all amount

of compensation should be paid promptly and in full. With regard to problems associated with delayed and instalment payments of compensation, the laws safeguard interests of the affected parties, but the prescribed methods for making payments are not fully enforced (see section 4.4.3*(ii)*). Thus it is often the implementation of the existing legal framework that is lacking and leads to compensation failure.

vi) Monitoring of compensation schemes

An Environmental Impact Assessment (EIA) system in Tanzania requires monitoring of socio-economic parameters including post-compensation outcomes to be carried out as an integral component of environmental monitoring programme of the entire project (NEMC, 1997 and URT, 2005e). Despite the above-mentioned legal requirement for monitoring, it was learned from the documented information and different respondents including project developers and service providers that there has been little monitoring of compensation schemes in Tanzania. Table 4.3 indicates that only one project out of the thirteen projects visited during exploratory study had been monitoring post-compensation outcomes as part of its environmental monitoring.

However, it is argued in this study that meaningful monitoring in relation to compensation schemes is the one that aims at avoiding undesired compensation outcomes from happening (choice of suitable measures). According to Sonnenberg and Münster (2001), monitoring should focus on the post-compensation era, as indicators of socio-cultural and sustainability aspects or parameters take months and years to be verified whether there is improvement or deterioration. Monitoring should therefore start with compensation processes and continue to follow-up the post-compensation outcomes (effectiveness to be determined). This can effectively be carried out by project developers in collaboration with other stakeholders, including the affected and host communities. On the other hand, assessment of whether compensation schemes have met their objectives or not, can be measured using evaluation indicators for the influenced effects or impacts and should be done by a third party. It is worth noting that if both monitoring and evaluation of the compensation schemes are done as required it would provide opportunities to learn from the past experience with the aim of improving future planning of compensation schemes.

4.4.3: Perceptions on types and forms of compensation

Compensation payments can take a variety of forms as presented in section 2.5.2. Compensation in Tanzania like in other developing countries is delivered in cash and in few cases in-kind. However, discussions and interviews held with different project officials and service providers during exploratory visits showed that the interest of project developers is gradually shifting towards supporting affected and host communities through in-kind payments. Respondents of the surveys that involved project developers, service providers and household heads, suggested three major types of compensation that have potentials of enhancing livelihoods of the affected rural people and also promote sustainability. Table 4.7 shows the overall ranked preferences by respondents *(N=182)* involved in all three surveys. Advantages and disadvantages for each type of compensation payments are listed in Appendix 4.6.

Table 4.7: Preferences on types of compensation as suggested by respondents involved in all three surveys.

Types/Forms of compensation	**Number of respondents and scores (N=182)**						**Total Score (TS)**
	1st Rank		*2nd Rank*		*3rd Rank*		
	Count	Score	Count	Score	Count	Score	
Monetary payments	111	333	44	88	56	56	477
Shareholders (benefit sharing scheme)	36	108	70	140	69	69	317
In-kind payments	35	105	68	136	57	57	298

Source: Surveys, 2007

Legend: Weight allocated: (1st Rank = 3); (2nd Rank = 2); and (3rd Rank = 1).
Score = Number of respondents (Counts) times weight allocated to each rank.

i) Monetary payments

Table 4.7 shows that the majority respondents preferred most monetary compensation (TS=477). An over reliance on cash compensation was also noted in all thirteen projects visited during the exploratory study (Table 4.3). Project developers find it much easier to administer monetary compensation than any other forms of compensation and most of the affected parties prefer cash over in-kind compensation as it gives them freedom in exchanging cash for desired commodities. Perhaps that is why Sebenius *et al.* (2005) found that to many people, compensation simply means money. According to disadvantages listed by respondents in Appendix 4.6, compensation paid in cash is administratively more difficult to handle. However, the recipients perceive that the risks of handling cash are high, they would likely switch to another option such as bank payments.

ii) Benefit sharing schemes (shareholders)

Table 4.7 indicates respondents ranked benefit sharing through shareholding the second most suitable type of compensation (TS=317). Benefit sharing schemes are best suited for projects that displace a big number of people. The schemes as pioneered by World Bank in Brazil, China and Columbia operate under the principle of improving the destructed livelihoods (Tamondong, 2008). Essentially, the purpose of benefit sharing schemes is to channel the benefits generated by development projects to the affected parties and host communities on top or instead of the monetary compensation payments. According to Van Wicklin (1998), a typology of benefits under benefit sharing scheme can be developed from project outputs to include both the in-kind benefits (i.e. services and facilities) and revenue-based gains. For the benefits to have impact on the reconstruction of livelihoods of the affected parties, Égré *et al.* (2008) recommend benefits be channelled through their host communities. Improving the lessons learned from examples of in-kind compensation and the Social Fund Scheme by teak (KVTC) project in Tanzania, benefit sharing schemes have multi potentials that include:-

i) Benefit sharing has features of continuity that take care of future generation hence promotion of intergenerational equity as explained in section 2.3.6.
ii) Intragenerational equity demands that compensation paid be distributed fairly within the same generation (McLeod, 2000). Gains channelled to a host community in the form of services and facilities such as support to education, health, water supply, to list a few, benefit all community members and subsequently ensure intragenerational equity.
iii) Benefit sharing scheme using in-kind payments can help to minimise the exploitation of compensation systems by elites.
iv) Benefit sharing scheme can be applied as a blanket compensation for losses that are difficult to quantify such psychological effects and social distractions.

Inspite of over two decades of experience of benefit sharing schemes since the World Bank initiated them for the first time in 1987, few projects have been practicing them *(Ibid.)*. Table 4.3 shows that out of the 13 projects visited during the exploratory phase, only one project (Kilombero Valley Teak Company "KVTC") was found practising benefit sharing schemes in Tanzania (Appendix 4.4). Evidence from Brazil, Columbia and China show that the number of projects practising benefit sharing schemes has increased following the

incorporation of benefit sharing schemes in national policies and legislation (Van Wicklin, 1998; Égré *et al.*, 2008). Similarly, in Canada and Japan, benefit sharing schemes are mandatory when forced relocation is inevitable (Égré *et al.*, 2008; Nakayama and Furuyashiki, 2008; Trembath, 2008). However, this study argues that the commitment of project developers and joint creativity in using available resources with the host communities are crucial aspects required to make benefit sharing schemes successful. More studies are needed to identify cost-effective ways of sharing both benefits and costs and to explore the roles of stakeholders in benefit sharing schemes for developers and governments in particular.

iii) In-kind payments

Although in-kind payments are distinct from benefit sharing schemes (Sections 2.5.2.2 and 2.5.2.3), the two have commonalities in their purposes and approaches as in-kind payments are found to be integrated within benefit sharing schemes. In-kind payments are usually made by project developers to provide assistance to the affected parties and host communities. According to Kunreuther and Easterling (1996), in-kind compensation payments can be in terms of services, infrastructures, facilities and preferential employment. Table 4.6 shows that in-kind payments were collectively ranked third position (TS=298). All thirteen (13) projects visited during exploratory visits helped their host communities through in-kind support, but there was only one project that regarded this kind of support as an extended form of compensation payments. This indicates that few project developers appreciate the potential of or understand well compensation and other forms of compensation payments apart from cash. Many project developers have shown little interest in exploring better ways of implementing compensation schemes that establish and maintain good relationships with the affected parties and host communities.

4.4.4: Perceptions on transaction costs involved in compensation schemes

The costs involved in working out different stages of a compensation scheme from information search, planning, valuation, resolving disputes, negotiation, preparation of agreements, implementation, enforcement and monitoring are collectively referred to as transaction costs. If the transaction costs of a compensation scheme tend to increase unnecessarily, the possibility exists where the transaction costs may exceed the expected benefits and this may in turn prohibit the start of negotiation between the project developer and affected parties and host communities and thus affecting the entire compensation scheme.

Hence, finding out early the possible transaction costs and their causes and trends is very important in trying to identify ways of minimising transaction costs. Table 4.8 shows the ranked factors that contribute to high transaction costs in compensation schemes in Tanzania, as perceived by project developers and service providers. The first five factors were; conflict of interests (TS=151); handling of complaints and disputes (TS=125); excessive numbers of actors involved in the process (TS=109); charges by middlemen and other charges (TS=99) and; unclear types of land ownership (TS=64).

Table 4.8: Factors contributing to high transaction costs in compensation schemes in Tanzania as perceived by project developers and service providers

Factor	Number of respondents and scores *(N=62)*					Total Score (TS)
	1st Rank	*2nd Rank*	*3rd Rank*	*4th Rank*	*5th Rank*	
	Score	**Score**	**Score**	**Score**	**Score**	
Conflict of interests	(15)**75**	(5)**20**	(14)**42**	(4)**8**	(6)**6**	**151**
Handling of complaints and appeals	(8)**40**	(11)**44**	(6)**18**	(7)**14**	(9)**9**	**125**
Number of parties involved in compensation	(5)**25**	(6)**24**	(11)**33**	(7)**14**	(13)**13**	**109**
Middlemen and *"other"* charges	(4)**20**	(9)**36**	(10)**30**	(5)**10**	(3)**3**	**99**
Unclear types of land ownership	(4)**20**	(2)**8**	(4)**12**	(10)**20**	(4)**4**	**64**
Litigation/court processes	(3)**15**	(4)**16**	(3)**9**	(2)**4**	(10)**10**	**54**
Repeated actions to reduce uncertainties	(3)**15**	(6)**24**	(2)**6**	(4)**8**	(1)**1**	**54**
Developers' WTP compensation	(4)**20**	(4)**16**	(1)**3**	(4)**8**	(2)**2**	**49**
Types of natural resources and assets involved	(5)**25**	(1)**4**	(3)**9**	(3)**6**	(2)**2**	**46**
Affected parties' WTA compensation	(3)**15**	(4)**16**	(2)**6**	(1)**2**	(1)**1**	**40**

Source: PDs' and SPs' Survey, 2007
Legend: Number of respondents are shown in brackets
Weight allocated: (1st Rank = 5); (2nd Rank = 4); (3rd Rank = 3); (4th Rank = 2); and (5th Rank = 1).
Score = Number of respondents (count) times weight allocated to each rank.

Respondents felt that the mandates of government-based organisations and agencies responsible for management of environment, natural resources and lands, including compensation matters, overlap and this was identified as a source of conflicts. The mining sector was cited as an example where policy and legislation contradict other sectoral policies and laws. It was further revealed from exploratory interviews that the nature of most of the compensation disputes was linked with conflict of interests by government organisations. This showed signs of institutional failure in coordinating and settling conflicts arising in various sectors. This has increased transaction costs, as most of the compensation disputes are settled in courts of law. It was further learned from the cost scale established by the Legal Environmental Action Team (Box 4.1) that cost of resolving compensation disputes is lower during negotiation, moderate in mediation process and higher if litigation is involved.

The transaction costs of compensation were perceived to be high, as the compensation processes involve large number stakeholders. This is often due to lack of coordination of compensation matters as discussed in section 4.3.2*(i)*. However, the study by Hackl *et al.* (2007) found that a greater number of parties in compensatory bargain process was beneficial, as it increased the diversity of ideas and subsequently influenced the quality of bargained outcomes in terms of effectiveness. Cost-effective coordination can potentially filter-out opportunistic and undesirable actors or parties like middlemen that are pursuing personal interests and, perhaps helping to identify an optimal number of participants, especially, regarding representatives for affected parties. The affected parties are better able to appoint representatives to defend their present and future interests where social cohesion is strong among community members. According to Barrow and Murphree (2001) social cohesion has a great role in community life in rural areas, especially when community members are faced with resettlement and compensation. Unfortunately, section 5.2.5 reports on decline of social cohesion due to modernisation and *'divide and rule'* strategies as applied by the majority of the project developers. Empirical studies by Harris (2002) and Hackl *et al.* (2007) suggest that both self-organisation and cost-and coordination of responses by concerned parties could potentially help to reduce transaction costs. However, at empowerment in terms of sensitisation and training is necessary for the rural affected parties to get organised in relation to the nature of the project and issues at hand. On the other hand, it is recognised that unclear property rights as discussed in section 4.6.1*(ii)*, contributes into compensation disputes and hence extra costs in resolving them.

4.5 Key messages

The following are the key messages arising from the review of Tanzanian compensation regimes associated with development projects, as perceived by project developers, service providers and government actors.

Compensation stakeholders:

The majority compensation stakeholders in Tanzania have great interests in compensation but the following have strong influence over compensation processes, Project Developers, Environmental Agency, Chief Government Valuer, District Commissioner's Office, and Consultants. The affected parties and host communities, Civil Society Organisations, Contractors, Village and Ward Government Authorities possess low power of influence. Lack of active participation of key stakeholders increases marginalisation of the affected parties and host communities in compensation processes. Elite intruders that are attracted to compensation processes or schemes by money and other short term interests affect compensation payments of the affected parties and subsequently lead into compensation disputes. More complicated compensation disputes result from an event where some key stakeholders mix professional matters and political interests. This also has potential risks of turning down an incredible professional image into useless propaganda and subsequently deters development processes.

Project and compensation information:

Possibilities exist for the project developers and affected parties and host communities to negotiate on compensation payments, but the later group is disadvantaged in terms of very important information about both the development projects and compensation schemes. Dissemination of relevant project or compensation information in Tanzania is a responsibility of project developers and depends on their efforts and resources. This system contributes to information asymmetry during participation processes and is likely to affect negatively the negotiation processes during compensation.

Compensatory policy, legislation and practices in Tanzania:

The study found that the legal basis for compensation is reasonably comprehensive in principle, but seems to be not applied in practice. Perceptions of service providers and project developers collected during the surveys revealed that the Tanzanian compensation systems

have several shortcomings including lack of clear compensation procedure, criteria, principles, guidelines and checklists; unclear property rights and compensation entitlements and; lack of involvement of key stakeholders.

Property rights and compensation entitlements:

Most of the affected parties in Tanzanian rural areas occupy and use land through unregistered customary rights. Customary land tenure rights remain insecure until hypothetical land boundaries that separate village lands from general, public and protected lands become visible and permanent. Based on Tietenberg's (1996) universality, exclusivity, transferability and enforceability criteria, land tenure regimes in Tanzania are unclear. Both unclear property rights and compensation entitlements are among the potential major sources of compensation disputes in Tanzania.

Transaction costs in compensation regimes in Tanzania:

Conflict of interests, complaint resolution, intermediary parties or agents and, unclear property rights are sources of compensation disputes and leading factors that contribute to unnecessary transaction costs during compensation processes. Experience has indicated that transaction costs of resolving compensation disputes increase from negotiation process (low - moderate), mediation process (moderate - high) and litigation process (high - very high).

Monitoring:

Compensation schemes in Tanzania lack monitoring and evaluation. Monitoring carried out jointly with project developer and other stakeholders, affected parties and host communities in particular helps to track both the implementation process of compensation scheme and post-compensation outcomes. Monitoring would ensure suitability of measures taken and their effectiveness too. Monitoring of compensation schemes can help to document successes, failures and challenging experiences encountered during valuation, implementation and post-compensation era. This would strategically help to develop or improve compensation procedures, guidelines and checklists through action-research. For example, using monitoring findings, project developers and the affected parties and host communities can jointly prepare guidelines to serve as 'code of practice' for contractors to carry out various tasks including implementation of in-kind compensation.

Chapter 5 ASSESSMENT OF POST-COMPENSATION OUTCOMES

*This chapter presents and discusses the results of the post-compensation outcomes collected using key informant interviews, household cases and focus group discussions as verified during the household survey (Figure 5.1). The Chi square (χ^2) and **t**-tests were carried out to determine the qualitative and quantitative significant differences respectively between M'baya and Idete village cases. The synthesised qualitative information on changes and implications on household livelihood assets and ecosystem functions provided evidence for arguments when significant results were discussed. The chapter also presents and discusses various benefits and costs of projects and compensation schemes implemented by the developers of gas pipeline and teak projects in M'baya and Idete villages respectively.*

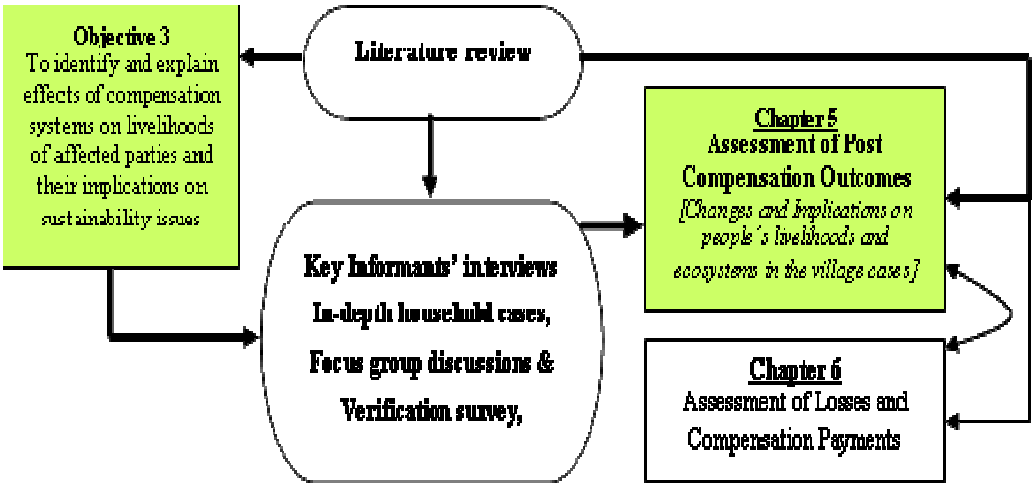


Figure 5.1: Methods for assessing post compensation outcomes

5.1 Description of main respondents in the studied village cases

The primary information on compensation schemes by project case studies was collected from seven key informants, seven focus group discussion meetings, twelve in-depth household cases and three questionnaire surveys. A total of 120 households in two village cases participated in the verification survey. Households involved in in-depth (rich) household interviews and verification survey were the main respondents in this research since their contributions in terms of information were relatively great and central to the research questions. While the key informant interviews provided useful information in guiding the study from the beginning of data collection, focus group discussion meetings were used to clarify some issues during data collection.

It is recognised that possible bias exists following the study to substantially rely on evidence and other information collected from the affected parties. This effect was however minimised

through seeking clarification and repeated verification of information from the non affected parties during key informant interviews and focus group discussions. Another possible bias is that the sample omitted coverage of some potential respondents. Some of the affected parties in both village cases had moved away from the studied villages because they had lost all their landholdings as a result of the projects. In regard to this, two and three affected parties who had moved from M'baya and Idete respectively to the neighbouring villages were traced and interviewed.

5.1.1: Respondents involved in the in-depth household study

The study involved 4 household cases compensated by SONGAS project in M'baya village. In relation to KVTC teak project, a total of 8 households (4 compensated and 4 uncompensated) participated in household in-depth study in Idete village. In both village cases, most of the interview sessions held with household cases were attended by husbands and their wives. Respondents were not asked to have that arrangement but perhaps they found the subject matter interesting and important as they decided to spare their precious time to attend all three interview sessions, where each lasted for 2 – 3 hours. Respondents were asked to describe various changes in household assets and outcomes at both household and community levels due to development projects, compensation schemes in particular. General analysis of household case studies confirmed that affected parties between village cases were treated differently and thus compensation impacts may vary considerably depending on the nature of both the people's livelihood activities and project activities.

5.1.2: Characteristics of respondents involved in the verification survey

Population and demographic factors carry important information on production and consumption trends either at household or community level, which are linked to their socio-economic, socio-cultural and ecological features (Flyvbjerg, 2001). The same factors if measured properly can explain variations in compensation processes, payments and outcomes between and within affected parties and host communities.

i) Gender of household heads

Gender is a determinant of use and control of resources at both household and community levels. Due to gender imbalance, male and female headed households in many communities in developing countries tend to experience temporary and permanent negative effects of compensation respectively (ADB*Asia*, 2007). Of the total number of (120) surveyed households, 91 (76%) were male-headed and 29 (24%) were female-headed. Idete's female respondents were slightly higher (16 {27%}) compared to M'baya's (13 {22%}), but no significant difference *(p=0.522)* was observed (Table 5.1).

Table 5.1: General characteristics of respondents participated in the verification survey

Variable	Category	Percentages of respondents (%)			Pearson Chi-square ($\chi 2$)	*p*-Value
		M'baya *(N=60)*	Idete *(N=60)*	Totals *(N=120)*		
Gender of respondents	Female	22	27	24	0.409	
	Male	78	73	76	(df=1)	0.522
Age of respondents	Youth (18 - 35 years old)	3	25	14		
	Adult (36 – 55 years old)	42	52	47	18.265	
	Old/elder (>55 years old)	55	23	39	(df=2)	0.000
Education level of respondents	Primary level education	47	80.0	63		
	Secondary level education	8	2	5	14.667	
	Informal education	45	18	32	(df=2)	0.001
Household size in groups	Small family (1 – 4 people)	12	30	21		
	Moderate family (5–6 people)	30	38	34	10.190	
	Large family (7 and above)	58	32	45	(df=2)	0.006
Household duration of stay in village	Short stay (up to 20 years)	32	50	41		
	Long stay (21 – 40 years)	45	45	45	9.587	
	Very long stay (>40 years)	23	5	14	(df=2)	0.008
Farming systems practiced in the village cases	*Growing permanent crops?*					
	YES	58	10	34	31.156	
	NO	42	90	66	(df=1)	0.000
	Growing semi-permanent crops?					
	YES	55	40	47	2.707	
	NO	45	60	53	(df=1)	0.072
	Growing annual crops?					
	YES	37	90	63	36.746	
	NO	63	10	37	(df=1)	0.000

Source: Verification Survey, 2007

Both cultural and religious based factors have great influence on men-women relationships in many rural communities in developing countries. Gradually, the great influence of males over all affairs in many communities is decreasing as many community members recognise the importance of gender balance in development issues. This was shown by every household

case in M'baya mentioning something interesting about gender aspects in association with compensation. For example, *Mzee*[10] *Omega* (Appendix 5.3) in his conversation mentioned that his wife kept him informed of the progress of SONGAS compensation while he was hospitalised and she put in great efforts during the construction of their new home. *Mr. Kisikisi* (Appendix 5.4) pointed out that participation should start at home. Similarly, *Mzee Msasa* (Appendix 5.5) emphasized on what he believed that *"more successes would be achieved if women get involved in planning, decision-making and implementation of household activities – because women are very good at close monitoring"*.

Mr. Ustaadhi (Appendix 5.6), another household case from M'baya expressed his concern that most of the compensated people who lost or misused their compensation money did not involve their wives in planning and spending. He went further onto suggesting that gender balance be considered important and community members need sensitisation programme on this aspect.

ii) Age of household heads

Age of household head is linked to accumulation of household assets such as land, labour, experience and so many others linked to household livelihood. It can also suggest a scale of disruption likely to be caused by compensation. Minimum and maximum ages of respondents were 21 and 85 years respectively with an overall mean of (52 ± 1.4). Ages of respondents were grouped into youth (18 – 35 years old), Adult (36 – 55 years old) and old/elder (>55 years old) based on the country's laws. According to URT (2005d), 18 years is a lower limit of teenager's age to be regarded as a youth and to have the legal rights to vote and make decisions regarding his/her marriage. The age of 35 is the upper limit of youth and 55 is an age where someone is considered as an old person and willingly he/she can retire from work (*Ibid.*).

At Idete there were higher *($p<0.001$)* proportions of adults (52%) and youth (25%), than the proportions of 42% and 3% in M'baya respectively (Table 5.1). However, larger proportion (55%) of elderly respondents was interviewed in M'baya compared to (23%) of Idete.

[10] Mzee is a Swahili title given to elderly males indicating respect to their age.

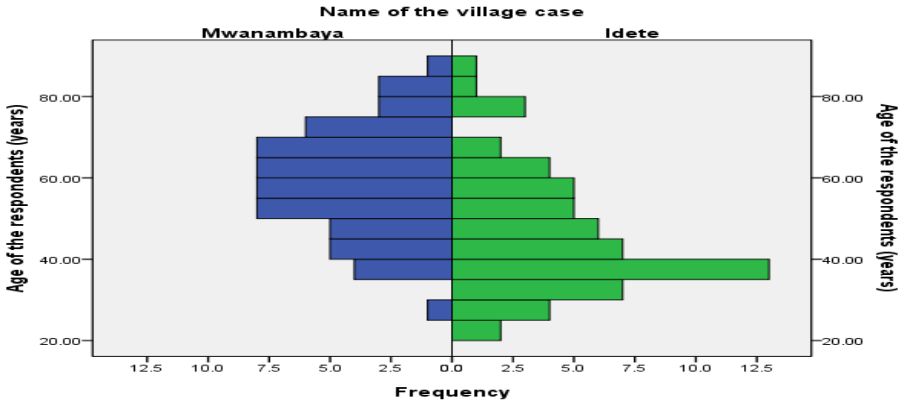


Figure 5.2: Respondents' age distribution structure by village cases

However, the significant difference observed was largely influenced by the numbers of elderly and youth respondents. This can partly be explained by the fact that M'baya is an old village that has existed since the German colonial rule by the name of *'Kiloweko'* while Idete village started 1975.

iii) Education background of respondents

Both formal and informal types of education play an important role in life, as both tend to facilitate increase of people's knowledge, skills and general awareness on various life matters including development and compensation aspects. Education can also promote participation in development and compensation processes. Table 5.1 presents results of education levels (i.e. *primary, secondary* and *informal*) of respondents which showed significant difference *(p=0.001)* between villages. Idete had higher percentage (80%) of respondents with "*primary level"* than M'baya's 47%. While M'baya had higher proportions of respondents with *"informal"* (45%) and *"secondary"* (8%) levels, Idete had 18% and 2% respectively.

All four (4) household cases interviewed at M'baya expressed their concerns that many households in the Coast region have not put as much emphasis on education matters compared to other regions. They perceived that inadequate compensation received from SONGAS was linked to illiteracy and lack of education. They further pointed out that they noted that compensation that was paid did not cover all losses adequately, but they did not know where to go for help. However, this notion was not supported by the results from Idete where an overwhelmingly majority (82%) had formal education and yet many of them were not compensated at all. Moreover, those who were compensated received less compensation

per hectare of land lost compared to those compensated in M'baya. The study tends to agree with the fact that education level of affected parties could be one reason for inadequate compensation received, as education expands awareness and knowledge on various life matters. However, for the affected parties to secure fair compensation, more factors exist.

iv) Household size

Apart from showing a total number of family members, household size also shows composition of household in terms of dependants, labour force and other social groups, as they are linked to property (land), production, consumption and needs. Household sizes were put into three groups namely *"small family"* (1-4 people), *"moderate family"* (5-6 people) and *"large family"* (7 people and above). At M'baya, there were significantly *(p=0.006)* many respondents (58%) with larger families compared to Idete's respondents (32%). But Idete had relatively higher proportions of moderate (38%) and small (21%) size families than the respective proportions (30%) and (12%) of M'baya. The observed differences in larger and small family sizes can partly be explained by religious influence on the two communities. The majority of M'baya's people are Muslims and their large families are likely to be influenced by Islamic faith where a man is allowed to marry up to four wives. At Idete Christianity is dominant and according to the Christian faith marriage is restricted to one husband and one wife.

v) Household duration of stay in the village

Duration of stay is linked to accumulation of experience and knowledge generation by household members in regard to their local environment. It also reflects previous investment in a property and scale of disruption (losses) caused by relocation. The period for which the household has continuously stayed in the village was categorised into *"short stay"* (up to 20 years), *"long stay"* (21-40 years) and *"very long stay"* (above 40 years). Table 6.1 shows Idete had significantly *(p=0.008)* large proportions (50%) of *"short stay"* respondents than M'baya's 32%. But M'baya showed extremely higher proportion (23%) respondents in the category of *"very long"* compared to 5% of Idete. Proportions of *"long stay"* respondents in both villages were the same (45%). Significant difference observed in duration of stay in the village cases is by the reasons explained in Section 5.1.2*(ii)* above.

vi) Livelihood activities of respondents

Livelihood activities carried out by people that are likely to be affected by a project are critically important in determination of losses and basis for compensation. Respondents in both village cases practice crop production agriculture as a livelihood opportunity, but the farming systems in terms of types of crops grown were significant *($p<0.001$)* in the studied villages (Table 5.1). When crops were categorised based on *"perennial"* and *"annual"* crops, many respondents (58%) in M'baya depend on permanent crops (i.e. coconut, cashew nut, mango and orange) for their livelihoods. Whereas the majority respondents (90%) in Idete grow annual crops such as rice, maize, legumes and horticultural produces. No significance *($p=0.072$)* was observed in regard to cultivation of semi-permanent crops, though 55% of M'baya's respondents grow cassava and pineapples and 40% of Idete's respondents cultivate banana and sugarcane.

Coconuts, cashew nuts, sugarcane, fruits, pineapples and horticultural crops are mainly raised for income earning, whilst rice, maize cassava, banana and legumes are grown for both food and cash purposes.

5.2 Assessing changes in livelihood assets

According to Carney (1998), livelihood comprises the capabilities, assets and activities required for a means of living. The livelihood at a household level critically depends on the capital assets (assets and flows of services) that the household possesses or is accessible to. Assessment of livelihood outcomes was done through comparing capital assets and flows of services in the two villages. The 2 villages were tested for variations. Evidence collected from household cases and other qualitative interviews and discussions were used to explain for the observed significant differences between the villages. Assessment involved five livelihood assets namely human, natural, financial, physical and social capitals.

5.2.1: Human capital

i) Age of household heads

Table 5.2 shows that household heads of M'baya were significantly *($p<0.001$)* aged *(58.1 ± 1.7 years)* compared to those of Idete *(45.9 ± 1.9 years)*. In addition to the reasons discussed under Section 5.1.2*(ii)*, the old age in M'baya village is associated with the coconut crop on which the majority depend for their livelihoods. Traditionally, in coconut-based livelihood

communities such as M'baya, farmers own coconut farms up to the old age which does not allow them to carry out farm activities in turn leads them to transfer farm ownership to their descendants. Unlike to Idete village, that is why farm owners who were respondents in this study in M'baya were more aged than those in Idete.

Table 5.2: Comparison of human capital indicators/variables between studied villages

Tested variable	Groups	N	Means	Std Dev	Lavene's F & *(p)* values	*t* & (df) values	*p*-value
Age of household heads (years)	M'baya	60	58.1±1.7	13.2	F=0.741 (p=0.391)	4.707 (df=118)	0.000
	Idete	60	45.9±1.9	15.1			
Household size	M'baya	60	7.4±0.4	3.1	F=3.211 (p=0.076)	3.305 (df=118)	0.001
	Idete	60	5.7±0.3	2.3			
Number of children (0 – 17 years)	M'baya	60	3.8±0.3	2.3	F=1.189 (p=0.278)	1.798 (df=118)	0.075
	Idete	60	3.1±0.3	2.0			
Number of young people (18 – 35 yrs)	M'baya	60	1.8±0.2	1.8	F=8.737 (p=0.004)	2.244 (df=100)	0.027
	Idete	60	1.2±0.1	1.1			
Number of adult people (36 – 54 years)	M'baya	60	0.9±0.1	0.9	F=0.958 (p=0.33)	-0.529 (df=118)	0.598
	Idete	60	1.0±0.1	0.8			
Number of elderly people (≥55 years)	M'baya	60	1.0±0.1	0.8	F=0.246 (p=0.621)	3.550 (df=118)	0.001
	Idete	60	0.5±0.1	0.8			
Number of dependants (0–17 yrs & >55 yrs)	M'baya	60	4.8±0.3	2.5	F=7.033 (p=0.009)	3.062 (df=108)	0.003
	Idete	60	3.6±0.2	1.8			
Household labour force per hactare of land farmed (N/ha)	M'baya	60	1.8±0.4	2.8	F=5.839 (p=0.017)	0.961 (df= 81)	0.339
	Idete	60	1.4±0.2	1.2			
Household dependant – labour force ratio	M'baya	60	2.2±0.3	1.9	F=8.671 (p=0.004)	1.762 (df=80)	0.082
	Idete	60	1.7±0.2	1.1			
Duration of stay in the village (years)	M'baya	60	30.8±2.5	19.4	F=6.721 (p=0.011)	2.270 (df=104)	0.025
	Idete	60	23.9±1.7	13.4			
Time worked on the lost land "Land occupancy" (years)	M'baya	38	39.3±3.7	23.1	F=33.421 (p=0.000)	5.144 (df=51)	0.000
	Idete	55	18.4±1.6	11.8			
Proportion of compensation (%) invested in education	M'baya	38	6.7±1.6	9.2	F=0.184 (p=0.670)	0.475 (df=45)	0.637
	Idete	13	5.2±3.0	10.4			

Source: Verification Survey, 2007

ii) Household size and composition by age

On average, household size was highly significant *(p<0.001)* for M'baya's households showing a higher mean *(7.4 ± 0.4)* than that of Idete *(5.7 ± 0.3)* (Table 5.2). Households in the studied areas utmost composed of four age groups and were found to be significant between villages as follows: children (0 – 17 years), *(p=0.075);* youth (18 - 35years) *(p=0.027);* adults (36-54 years) *(p=0.598)* and; elders (55 years and above) *(p=0.001)*.

The elderly, youth and children age groups at M'baya showed higher mean values than Idete. According to the interviews held with household cases in M'baya, the observed longevity among the elders in M'baya is linked to the coconut produce. *Mzee Msasa*[11] claimed that people in the coast for decades have been consuming dishes prepared with coconut oil and drinking both coconut local brew *(mnazi)* and natural juice *(dafu)* and the community was therefore saved from suffering many diseases including diabetes. The health benefits of coconut oil are supported by many research findings (Fife, 2006; Corrêa *et al.*, 2008; Gunathilake and Abeyrathne, 2008). Further to health benefits, Mr. *Ustaadhi* explained that coconut as important crop as it ensures steady flow of household income throughout the year and thus loss of coconut trees has a considerable impact on welfare in coastal communities.

iii) Household labour force

Labour force is a critical factor of production and at household level, labour force (measured by number of family members able to work) is an important livelihood asset. Household labour force in rural areas is highly linked to land occupied or used by a household and any land alienation even with compensation may adversely affect household labour productivity and livelihood.

Despite considerable contributions of children and elderly people, the youth and adult groups provide most of the required labour force (workforce) at a household level. Table 5.2 shows that M'baya had relatively greater mean *(1.8 ± 0.4)* of household labour force per hectare currently farmed than Idete village *(1.4 ± 0.2)*. However, the difference was not significant *(p=0.339)*.

Apart from having higher average number of workforce per hectare, M'baya seems to have low use-efficiency of household labour per hectare as compared to Idete based on the nature of their farming systems. Farmers in M'baya practice mixed cropping of permanent, semi-permanent and annual crops. Here labour is saved in different ways including no annual farm preparation, reduced weeding as the nature of crops raised are not too involving (less labour-intensive crops). While at Idete where annual crops (rice, maize and horticultural crops) are raised, intensive labour is required to carry out all farm operations on annual basis. Rice is a

[11] *"Watu wanasemasema mnazi na dafu vinaleta busha, mimi nasema uongo huo. Sisi watu wa Pwani kwa miongo mingi tumekuwa tunatumia vinywaji hivyo kila siku na faida yake kubwa ni kuwa hatuugui magonjwa mengi kama ya kisukari, viungo vya mwili kutofanya kazi vizuri, n.k. Kusemakweli kwa watu wa umri wangu na wazazi wetu huko nyuma tumekuwa na maisha marefu sababu ya zao la mnazi"*

very important crop to farmers in Idete, as it is produced for both food and cash purposes and has almost no storage pests. (FAO, 2002) supports the fact that rice lands are characterised with higher income earnings and intensive labour-absorptive nature. Research findings coordinated by FAO have also revealed that the mixed cropping farming systems have more advantages compared to its disadvantages of water and nutrients competition which affect other crops (FAO, 2004). Studies by El-Ghonemy (1990) caution about labour redundancy caused by *ad hoc* land reforms and changes in land uses is now becoming a big threat to rural livelihoods as it affects both the farming systems and types of crops to be grown. Main crops such as coconuts for M'baya and rice for Idete, including their mixed farming systems and employed labour force are potential sources of loss that need careful scrutiny by compensation schemes.

iv) Land occupancy

The land occupancy in this study is the term used to refer to the time (in years) a household has spent working in its farmland before losing it to the project. Land occupancy was found to be important in knowledge generation and accumulation of experience in relation to their varied local environments.

At M'baya, respondents had significantly *($p<0.001$)* higher mean value *(39.3 ± 3.7)* of land occupancy than that of Idete *($M=18.4 \pm 1.6$)* (Table 5.2). Also, when the occupancy was put into groups of short (up to 20 years), long (21 – 40 years) and very long (above 40 years), M'baya had extremely *($p<0.001$)* many respondents (44.7%) with very long land occupancy than Idete (3.6%). M'baya and Idete villages respectively had (26.3%) and (60%) proportions of short occupancy (Table 5.3).

The observed difference between the villages can partly be explained by their historical backgrounds and the nature of their farming systems (Appendices 5.1 & 5.2). Although M'baya's history goes back to the Germany colonial rule in the early 1900s, the main livelihood crops such as cassava, coconuts and cashew nuts were respectively, introduced in the coastal areas of Tanganyika earlier by the Portuguese (14^{th} century), Arabs (17^{th} century) and German (19^{th} Century) (Johnson *et al.*, 1971). From that period, the *Swahili* farmers evolved different systems locally and attained its current stability as a mixed cropping of all permanent, semi-permanent and annual crops. Evidences from household cases show that this type of farming evolved locally incorporating traditional knowledge and cultural values with

minimum influence of modern agricultural extension services. For example *Mr. Ustaadhi* gave a remark that *"Approaches used by social and extension workers are not effective because their mind set does not recognise local people's traditional knowledge systems"* (Appendix 5.6).

According to focus group discussion held with Village leaders, Idete village started as a farming camp 1969 with five households and by 1975 the number of households had grown to 250. Following the implementation of structural adjustment policies by the World Bank and International Monetary Fund in mid 1980s, the government of Tanzania was forced to remove subsidies in agricultural inputs, fertilizers in particular. This led to a number of smallholder farmers from the nearby regions (i.e. Ruvuma, Iringa and Rukwa) to move around looking for fertile lands where they could have farmed without using artificial fertilizers. Over 500 households settled in Idete in the late 1980s and kept on exploring the land and came out with a good local land use plan based on agronomic requirements of different types of crops. Fertile valleys and highlands were identified and allocated proper use in terms of agricultural produces. Highlands were used for settlements, permanent fruit trees and annual crops and lowlands (valleys) were for mixed cropping of annual horticultural and semi-permanent crops (banana and sugarcanes). Distant fertile highlands were demarcated and used for fallow cultivation of annual crops (maize and legumes). Mascarenhas (2005) reported strong links between livelihood systems and natural assets, historical and cultural integrity and dynamism of the knowledge base found in an area. KVTC project targeted the same lands as fertile and suitable for teak plantation (KVTC, 1991). KVTC demarcated and leased the land in 1992, and farmers were forcibly relocated in 2006.

Respondents mentioned three major aspects that happened to interfere with their evolution of traditional farming, livelihood and related knowledge systems namely (i) government policies such as monoculture (plantations and estates), unsuitable innovations and top-down approaches; (ii) implementation of villagisation[12] policy; (iii) loss of land and access to important natural resources caused by big development and conservation projects with both national and international interests.

[12] Villagisation policy as is commonly known as *'operesheni sogeza'* (in Idete) and *'operesheni vijiji'* (in most parts of Tanzania) was implemented country wide, and many households were relocated to the earmarked settlements literally known as socialist villages *(vijiji vya ujamaa)* to facilitate service delivery to villagers.

5.2.2: Natural capital

Under natural capital, the asset that is most linked to compensation schemes was land. Land is a major and basic factor of production for the rural based economy in which the study was able to trace historical events and inequalities in land matters in both village cases as reported below.

i) Land ownership and acquisition

In Tanzania, compensation for losses of various asset stocks and flows of services is linked to ownership, occupancy and/or use rights of land. If someone loses it, he/she become ineligible for compensation. All land in Tanzania is owned by the State (URT, 1999a). Most of the land in both villages is accessed and used under customary rights (Table 5.3). It was further learned from key informants that big farms (with title deeds) owned by nearby elite urbanites exist in both villages. There was a general feeling of land insecurity in the study areas as respondents perceived the process of land registration as too costly for rural people to afford. Without mentioning the exact amount required, the majority pointed out that the costs involved in cadastral surveys were too high for villagers to afford. They also complained that the process of land registration had been bureaucratic and centralized in the ministry headquarters (Dar es Salaam) and thus inaccessible to farmers in rural areas. Despite the new land legislation recognising customary land rights, rural people lose their lands due to lack of necessary information on the rights, duties and entitlements they have, especially when it involves transferring their land occupancy to other parties. This was also reported by Odgaard (2002) and Morris *et al.* (2006) who observed that local communities face difficulties in challenging the authorities and big companies pursuing corporate economic interests in developing nations, especially in land acquisition processes.

Table 5.3: Means of acquiring land by village cases against other areas in Tanzania

Mode of acquiring land	***Percentage (%) of respondents***				
	M'baya village ***(N=60)***	Idete village ***(N=60)***	Overall Population ***(N=120)***	Rutasitara's, (2005) ***(N=4889)***	Mtoni's, (1999) ***(N=120)***
Inheritance	63.3	23.3	43.3	42.7	23.4
Allocation by village councils	5.0	30.0	17.5	21.7	45.0
Self allocation (bush clearing)	0.0	26.7	13.4	18.0	18.3
Purchase	26.7	13.3	20.0	12.1	13.3
No land	5.0	6.7	5.8	5.5	0.0

Sources: Verification Survey, 2007; Rutasitara (2005) & Mtoni (1999).

Rural landlessness recorded in 7 households (5.8%) was an issue of great concern (Table 5.3). This however, was contrary to what Rukuni (1994) concluded in his findings that landlessness would not be a problem in most of African rural communities where land is largely characterised with attributes of inclusiveness rather than exclusiveness. It is true that African rural communities embrace *'extended families'* where the family-related-people tend to come close to each other where a problem of one family member (including need for land) is felt and dealt with by all family members. Unfortunately, such social cohesion is gradually eroding following scarcity of land and also land has become a tradable commodity. With the trend of decreasing household acreage (less than 2ha) in many developing countries, researchers predict dramatic increase of landless people in rural areas (Rutasitara, 2005; Mascarenhas, 2005). Landlessness signals worse scenarios for both rural and urban communities and the most probable risks associate with it include food insecurity and increased poverty.

ii) Household landholdings

All interviewed households with the exception of 3 from M'baya and 4 from Idete own land ranging from 0.2 to 12.0 ha. In terms of significance, Table 5.5 shows that households in M'baya had significantly *(p=0.024)* larger mean land size *(2.88 ± 0.33 ha)* than Idete *(1.9 ± 0.3 ha)*. When landholdings were categorised into *'small holdings'* (<2ha), *'medium holdings'* (2 – 4 ha) and *'large holdings'* (>4 ha), it also showed the same level of significance *(p=0.021)* (Table 5.4). The majority of respondents in Idete (62.5%) and M'baya (42.1%) had small landholdings of less than 2 ha. M'baya's proportion of respondents with lands larger than 4 ha (17.5%) was relatively greater than that of Idete (3.6%).

Table 5.4: Comparison of land related aspects in study areas

Variable	Category	Percentages of respondents (%)			Pearson Chi-square ($\chi 2$)	*p*-Value
		M'baya	Idete	Totals		
Land currently		***(n=57)***	***(n=56)***	***(n=113)***		
occupied/used	Small size (<2 ha)	42.1	62.5	52.2		
by households	Medium size (2 – 4 ha)	40.4	33.9	37.2	7.757	
	Large size (>4 ha)	17.5	3.6	10.6	(df=2)	0.021
Land lost to the		***(n=38)***	***(n=55)***	***(n=93)***		
projects	Small size (<2 ha)	95.0	72.7	82.1		
	Medium size (2 – 4 ha)	5.0	14.5	10.5	8.495	
	Large size (>4 ha)	0	12.7	7.4	(df=2)	0.014
Household		***(n=38)***	***(n=55)***	***(n=93)***		
experience with	Short (up to 20 yrs)	26.3	60.0	46.3		
lost land	Long (21 – 40 yrs)	30.0	36.4	33.3	24.467	
	Very long (>40 yrs)	44.7	3.6	20.4	(df=2)	0.000
Land renting-in		***(N=60)***	***(N=60)***	***(N=120)***		
by households	YES	10.0	35.0	22.5	10.753	
	NO	90.0	65.0	77.5	(df=1)	0.002
Severity of land loss		***(n=38)***	***(n=55)***	***(n=93)***		
effect (Ratio of land	Extremely severe (<0.50)	10.5	63.6	42.0		
used after to land	Severe (0.50 – 0.75)	47.4	30.9	37.6	31.510	
used before comp.)	Less severe (>0.75)	42.1	5.5	20.4	(df=2)	0.000

Source: Verification Survey, 2007

Land shortage

One of the critical implications for compensation in rural areas is land shortage. Land shortage is a growing problem challenging both the livelihoods of rural communities and sustainability aspects. The land shortage in the studied village cases is caused by outsiders including individual big farmers, organisations, development and conservation projects alienating big lands from villages and farmers (Appendices 5.27 and 5.28). Idete was a typical example village that has been affected by the above mentioned aspects. According to a focus group discussion that involved young farmers at Idete, during the period of 1980 – 1993, Idete Prisons has constantly been expanding its boundaries inside the village land to possess over 6,000 ha and this has caused serious resentments. From 1984 to 1991, a private company called *MIFURA* and several individual big farmers obtained over 600 ha of land from Idete without the consent of the villagers. Both the establishment of *Udzungwa* national park in 1991 and subsequently demarcation of a buffer zone area incorporated large village land (over 5,000 ha) in the northern parts of the village. In 1992, the village encountered another loss of over 4,000 ha of land to Kilombero Valley Teak Company (KVTC) project.

Land uses and estimated total areas affected by the teak project in Idete included; agriculture (about 100 ha), farm settlements (about 18 ha), natural forests (about 2,800 ha) and open rangelands (over 1,000 ha).

At M'baya land shortage is largely influenced by demographic factors coupled with cultural values of land inheritance that leads into land fragmentation. Average household size of M'baya (7.4 ± 0.4) is 1.5 times greater than the national household size of 4.9 (URT, 2003). Land shortage is most felt when household landholdings are compared with their respective household sizes. For instance, comparing mean values of household landholdings (2.88 ha) and household sizes (7.4 people) in Table 5.5, land fragmentation for each child (excluding the 2 parents) is 0.5ha. Land loss in densely populated areas is particularly challenging. Evidence shows that the location of M'baya being very close (i.e. 40 km) to the capital city Dar es Salaam, partly contributes into the land shortage. The number of city dwellers having farms in M'baya has increased from 1 (1982) to 34 (2007) and, have been buying lands ranging from 2 ha up to 50 ha. Apart from contributing to land shortage, it puts the future of children of M'baya at stake. However, SONGAS project in M'baya village has affected over 51 ha of agricultural farmlands, 4.2 ha of settlements and 8.6 ha of communal grasslands.

Table 5.5: Comparison of natural capital indicators or variables between studied villages

Tested variable	Groups	N	Means (±SE)	Std Dev	Lavene's F & *(p)* values	*t*-value	*p*-value
Land occupied/used by household (ha)	M'baya	57	2.9±0.3	2.5	F=3.728	2.297	
	Idete	56	1.9±0.3	1.9	(p=0.056)	(df=111)	0.024
Land rented-in by households (ha)	M'baya	6	0.8±0.1	0.3	F=4.084	-0.565	
	Idete	21	0.9±0.1	0.5	(p=0.054)	(df=25)	0.577
Land rented-out by households (ha)	M'baya	2	1.0±0.2	0.3		0.577	
	Idete	1	0.8±0.0	--	--	(df=1)	0.667
Household land lost as a result of the project (ha)	M'baya	38	0.8±0.1	0.7	F=10.240	-4.900	
	Idete	55	1.8±0.2	1.3	(p=0.002)	(df=84)	0.000
Land used after the project to land used before the project ratio	M'baya	38	0.6±0.0	0.5	F=11.357	-5.052	
	Idete	55	0.4±0.0	0.7	(p=0.001)	(df=64)	0.000
Proportion of compensation used in buying land (%)	M'baya	38	11.6±3.6	21.4	F=3.149	-1.452	
	Idete	13	23.4±9.1	31.7	(p=0.083)	(df=45)	0.154

Source: Verification Survey, 2007

iii) Severity of land losses

Change in the land occupied or used by households before and after the project was one of the indicators used to assess the impacts of compensation on people's livelihoods. The land occupied or used now (after the project) compared with the land occupied or used before by a

household gives a ratio (LU_{now}/LU_{before})[13] which is a relative measure of land loss. The ratio was used to determine severity levels in which households suffered from land loss caused by development projects. Table 5.4 presents results of LU_{now}/LU_{before} ratio when was categorised into 3 levels of severity namely, *'extremely severe'* (LU_{now}/LU_{before} <0.5) *'severe'* (LU_{now}/LU_{before} = 0.5 – 0.75) and *'less severe'* (LU_{now}/LU_{before} > 0.75). The LU_{now}/LU_{before} ratio showed a significant difference *($p<0.001$)* between studied villages. At Idete, the majority proportion of respondents (64%) was affected 'extremely severe' by land loss as compared to M'baya's proportion (11%). But M'baya had large proportions of its respondents affected severely (47%) and less severely (42%) compared to the respective proportions of Idete (i.e. 31% and 6%).

The observed difference in levels of severity in regard to land loss can largely be explained by the nature of the two project cases. The teak project is a land-taker by nature and in the process of acquiring 4000 ha of land in Idete village, over 68 households lost their farms and homes and 4 out of 60 households involved in the survey lost all their lands. According to an environmental impact assessment report (ODA, 1991), interviews held at Idete showed that their village was seriously facing land scarcity caused by contiguous protected areas, expansion of Prisons' farms and immigrants from other regions. Surprisingly, the land acquisition process continued without even undertaking further studies as recommended by environmental impact assessment report.

Unlike Idete, the farms of affected parties at M'baya were impacted differently by the gas pipeline project. SONGAS project wanted a strip of land 60 m wide and 5 - 6 km long from M'baya village. Responses by key informants in the village concurred with the contents found in the project documents (URT, 1997b & 2000) that the project followed closely the World Bank's guidelines in order to minimise the negative effects to local people. The majority of the affected parties in M'baya lost land ranging from (25 – 50%) of their remaining lands and 7 households remained with less than 0.2 ha after the way-leave were bought plots for relocating their homes. The affected parties in all affected villages including M'baya were also allowed to cultivate both semi-permanent and annual crops on their lost lands. However, loss of income due to loss of permanent crops (i.e. coconuts and cash nuts) remained a serious concern reported and discussed at length in Section 5.2.3.

[13] LU_{now}=Land used or occupied by affected households after implementation of the project; LU_{before}=Land used or occupied by affected households before introduction of development project.

Land renting

Land renting is another indication of both severity of land loss and land shortage. Table 5.4 shows that Idete had significantly *(p=0.002)* many respondents (35%) than M'baya (10%) who rented-in land. However, no significant variation *(p=0.557),* was observed on the average land sizes rented-in by households in Idete *(0.9 ± 0.1 ha)* and M'baya *(0.8 ± 0.1 ha)* (Table 5.5). While land renting in M'baya did not appear to be a common practice, at Idete it was only possible by renting-in land from neighbouring villages provided a renter had good references in the other village. Land for rent in Idete was not possible because most of the households (96%) had acreage ranging from 0 – 4 ha. And those willing to rent-out their lands would always commit to either a very distant or peripheral located lands, where crop predation by wildlife such as baboons, monkey and elephants was identified as a big problem.

Generally, an hectare of farmland was rented-in for TZS[14]. 30000.00 – 50000.00 (13.05 – 21.75 GBP) a year. Idete villagers rent-in land from neighbouring villages of *Kisegesi* and *Miwangani* at a slightly cheaper rate of TZS. 20000.00 (8.70 GBP) per hectare per a year. Idete's land renters walk relatively longer mean distance *(3.5 ± 1.4)* km compared to M'baya *(1.1 ± 0.3)* km from their home to where rented-in lands are located (Table 5.5). During the entire farming season, farmers spend 4-6 hours a day walking to and from their distant rented-in farms. Directly, this reduces effective time of production in the field and, indirectly, it lowers daily farmers' labour output due to body exhaustion and fatigue caused by walking long distances. Also distant farms incorporate high risks associated with crop losses that may happen due to theft and outbreaks of bush fires. Despite risks and uncertainties attached to the far located farmlands, at Idete, farmers found it worth to rent-in land far away from teak plantations, since they harbour big populations of crop predatory wildlife. Household cases at Idete reported that it was not possible for the affected parties or households to buy land that was averagely sold at TZS 1000000.00 (435.00 GBP) per hectare because of financial limitations. The sale price for land was found to be more than twenty (20) times higher compared to the annual rental value due to high demand exceeding land availability.

[14] During time of fieldwork (May – July, 2007), 1 GBP = 2,300/= TZS.

5.2.3: Financial capital

Financial capital includes stocks of financial assets and flow of financial revenues (cash) which are available to people and provide them with different livelihood options. Financial capital plays an important role of enabling other types of capitals such as natural, human and physical capitals to be owned and traded. However, this study was interested mostly with changes that happened on status of financial capital at household level following the introduction of development projects and their compensation schemes. Data collected included household revenues, household agricultural based losses due to land loss and compensation payments received. Other liquid financial sources such as credit, pension, savings, remittances and off-farm income generating activities in the studied villages were found not to be relevant to compensation, thus excluded from this study.

i) Estimated income losses of crops

Household annual loss of income per hectare of lost land was estimated for all main annual, semi-permanent and permanent crops. Household annual loss of income and amount received as compensation were used to compare flows of household financial resources in the studied village cases. As most of the respondents (typical rural farmers) did not keep records of their sales and incomes, the estimation approach was adopted to workout household annual loss of income from the average harvest of each crop and its prevailing price in the nearby market.

Annual crops

Annual crops include all crops grown and harvested within one farming season cycle (within a calendar year). In regard to average annual income loss of annual crops per lost hectare of land, Idete had a significantly *($p<0.001$)* higher mean value *($1.7 \pm 0.2)10^6$* TZS/ha than *($0.3 \pm 0.1)10^6$* TZS/ha of M'baya (Table 5.6).

Table 5.6: Comparison of financial indicators/variables between studied villages

Tested variable	Groups	N	Means (±SE) (000 000)	Std Dev (000 000)	Lavene's F & *(p)* values	*t*-value	*p*-value
Estimated loss of annual crops (TZS/hh/yr)	M'baya	22	0.3±0.1	0.3	F=2.982	-4.055	
	Idete	54	1.7±0.2	1.4	(p=0.088)	(df=74)	0.000
Estimated loss of s/permanent crops (TZS/hh/yr)	M'baya	33	0.3±0.1	0.3	F=4.349	1.243	
	Idete	24	0.5±0.1	0.4	(p=0.042)	(df=53)	0.219
Estimated loss of-permanent crops (TZS/hh/yr)	M'baya	35	1.1±0.3	1.7	F=4.394	3.950	
	Idete	6	0.3±0.1	0.2	(p=0.043)	(df=36)	0.000
Compensation received (TZS/hh)	M'baya	30	2.0±0.4	2.2	F=15.854	5.099	
	Idete	13	0.3±0.1	0.3	(p=0.000)	(df=30)	0.000

Source: Verification Survey, 2007

The difference observed is likely to be influenced by several factors including the type of crops cultivated, market prices and agronomical reasons. M'baya's farmers (36% of respondents) largely grew legumes peas for their own food consumption and little for sale locally within their village or ward. However, household cases and key informants disclosed to why the coastal villagers including M'baya keep on cultivating low priced peas and cassava for a special purpose. They mentioned that peas, cassava and cassava leaf vegetable[15] cushion families against food insecurity, as their annual traditional dances[16] tend to exploit and exhaust all household savings. While at Idete, a large proportion (over 90%) of its population grow annual crops such as rice and horticultural crops that are sold at nearby and distant markets which offer competitive prices. Idete's loss of income in association with annual crops was relatively large because before the teak project, farmers had good valley lands that kept moist soils throughout the year. This allowed them to grow rice and maize twice a year. Using the same valley lands they also harvested horticultural produces 3 – 4 times a year. In other words, the livelihoods of people of Idete were found to be strongly linked to annual crops and fertile valleylands (unique valleys) (Photo 5.1).

Photo 5.1: Part of the remaining fertile valleylands in Idete village

[15] Commonly known as *kisamvu* in Swahili
[16] Commonly known as *mdundiko* in Swahili

Semi-permanent crops

These are crops which take more than a year to yield harvests. They include cassava, pineapples and other like banana and sugarcane keep on yielding harvests for long period of time. On average, Idete's respondents lost more $(0.5 \pm 0.1)10^6$ TZS/ha than M'baya's respondents $(0.3 \pm 0.1)10^6$ TZS/ha in regard to annual income by semi-permanent crops (Table 5.6). It should be recalled that SONGAS allowed M'baya's affected parties to continue using their former lands to raise non-permanent crops. However, it was noted that some farmers were not using this opportunity. For instance, during the interviews, *Mr. Ustaadhi* (one of the household cases at M'baya) said *"a farm with no coconut trees is wastage of labour and he was so astonished others do not realise it"*[17]. This was not consistent with other respondents who confirmed the practice of growing cassava, legumes, pineapples, passions and water-melon were still profitable so long as theft of the latter three crops does not happen.

Permanent crops

Permanent crops contribute significantly to many rural livelihoods in developing countries. Permanent crops take years to reach maturity and yield for many years and are therefore among the high-valued assets by affected parties during compensation. For example, a coconut tree takes seven to ten years to have the first harvest and according to household cases in M'baya, a coconut tree can keep yielding (income) for up to 100 years. In regard to the loss of income due to permanent crops per hectare of lost land, M'baya recorded a significantly $(p<0.001)$ higher mean $(1.1 \pm 0.3)10^6$ compared to $(0.3\pm 0.1)10^6$ of Idete (Table 5.6). The observed difference can partly be explained by the fact that few respondents (10%) in Idete had 1 – 4 trees of fruits (oranges, mango, palm and other citric trees) while at M'baya, 58.3% of respondents had at least half an acre (0.2 ha) of mixed perennial crops (i.e. coconut, cashew nuts and mango trees). The majority of M'baya's households were found to have orchards and few households had few fruit trees around their homesteads. The livelihood of M'baya's people is built on mixed cropping and is to say the least, heavily dependant on permanent crops.

[17] *"Siwezi kuwa mjinga sampli hiyo wa kulima ardhi isiyokuwa yangu na huku nikijua wazi bila mnazi ni kuupoteza nguvukazi na hasara hii, wengine hawaioni ati!!"*

ii) Compensation paid

Although most of the affected parties in both villages discussed the amount of compensation received associating it with the land lost, the compensation paid was not computed based on land sizes lost by the affected households. While household cases in M'baya reported to have received compensation for losses of permanent crops and structures, while Idete's affected parties were compensated for permanent crops only. On average, M'baya's affected parties received a significantly *($p<0.001$)* higher (approx. to 7 folds) compensation per hectare *($2.0 \pm 0.4)10^6$ TZS* compared to the one received by Idete's affected parties *($0.3 \pm 0.1)10^6$ TZS* (Table 5.6).

The way compensation process and land rights were handled in two villages contributed to the observed difference of compensation payments between the studied villages. Firstly, in M'baya the affected parties were considered as legitimate occupiers of their respective farmlands unlike to those of Idete where the affected parties were regarded as squatters. The compensation scheme by SONGAs project in M'baya was prepared and implemented based on World Bank's Operative Directive (OD 4.30) on involuntary resettlement and compensation matters. At some stages of the implementation, the process at least involved consultations with village government leaders and villagers. According to the project resettlement plan documents, URT (1997b & 2000), SONGAS planned to compute compensation of the affected assets using government rates. Despite complaints reported, the affected parties in M'baya received compensation payments calculated based on market rates which by then were approximately three times more than the government rates (Innocent, 2004). The majority respondents at M'baya complained for uncompensated land and loss of profit from their permanent crops.

At Idete, it seems that the KVTC project had a plan from the beginning to focus on assisting the host communities through community development and services rather than paying compensation to the few individual affected parties. Following a 14 year (1992 – 2006) land dispute between the project and affected parties, the KVTC decided to compensate permanent and semi-permanent crops and thus few (13) affected parties qualified to get compensation. The compensation process took about 3 months and left the majority affected parties (about 70) uncompensated and the compensated ones unsatisfied with the amount received, as annual crops and lands were not compensated for. From the developer's point of view, affected parties had no formal entitlements to land and there was a concern that paying

compensation to those claiming squatter's rights could set a dangerous precedent. Compensation paid was regarded as a token provided on humanitarian basis.

5.2.4: Physical capital

According to Carney (1998), physical capital refers to basic infrastructure such as shelter, transport, water, energy supplies, communication and equipment and, means used in production in connection to their livelihoods. Table 5.7 shows the results of how households spent their compensation in acquiring some basic physical assets. Overall, there were only 2 respondents from M'baya who managed to buy houses, few renovated (improved) their homes and others also bought radios, wheelbarrows, bicycles, knapsack pumps and other agricultural hand implements. The acquired physical assets however were categorised into two main groups as presented in Table 5.7 below. Idete had relatively higher proportion of respondents (*30.0± 10.7)%* who bought or improved their homes (houses) using compensation money than M'baya *(19.7 ± 4.4)%*. However, for respondents who bought other physical assets, Idete shows a relatively low proportion *(13.0 ± 5.4)%* as compared to M'baya *(20.9± 5.4)%*.

Table 5.7: Comparison of physical capital indicators/variables between studied villages

Tested variable	Groups	N	Means	Std Dev	Lavene's F & *(p)* values	*t*-value	*p*-value
Proportion of comp used to buy/improve home/house (%)	M'baya	38	19.7±4.4	26.3	F=2.038 (p=0.160)	-1.356 *(df=45)*	0.182
	Idete	13	33.0±10.7	37.2			
Proportion of comp used to buy other assets (%)	M'baya	38	20.9±5.4	31.9	F=2.433 (p=0.126)	0.812 *(df=45)*	0.421
	Idete	13	13.0±5.4	18.7			

Source: Verification Survey, 2007

5.2.5: Social capital

According to Barrow and Murphree (2001), social cohesion as important component of social capital refers to a sense of common identity and interest which serves to bring people together. It arises from a shared history and culture and acts as social glue which persuades people, in spite of their differences, to act collectively to enhance mutual interest. Household cases reported a decline of social cohesion among community members in their respective communities, caused by both development projects and other factors. Respondents were able to identify the general causes of the deterioration of social relations among community members which included modernisation that has led many people to concentrate on their nuclear families as opposed to extended ones.

Many respondents in both villages raised a serious concern that development projects approach host communities with *'divide and rule'* tactic in order to achieve their interests. For example, household cases and key informants mentioned that there was strong opposition to project (in Idete) and controversies in compensation payments (in M'baya). Regardless of this recognition, project developers normally do whatever they can, to prevent the affected parties from getting full support of their village leaders, influential and educated people. However, this can be regarded as a normal situation, as Nakayama (1998) found in many studied Asian and African community cases that villagers tend to cast doubts on their leaders during emergencies like compensation.

The declining *social cohesion* in M'baya was also associated with the decreasing number of the big mango trees (*magnifera indica*) in the community as mentioned by household cases. It is a very interesting and sensible social-construct story expressed by *Mr. Kisikisi* (one of the household cases) of M'baya village (Box 5.1)

Box 5.1: "Dodo mango tree a symbol of social relations in coastal communities"

"The society of M'baya continues to face a huge loss of social values such as social cohesion that was embedded in big mango trees/fruits". This was a serious social concern from Mr. Kisikisi aged 51 years and head of the household of 6 people.

In the past, a minority who had no mango trees were allowed to gather mango fruits that have fallen on the ground from any mango tree. Of course very few mango owners climbed such big mango trees with wide branches. Instead people were accustomed to picking mangoes that have fallen on the ground by the influences of wind and bats. This traditional system allowed a gatherer to carry any amount of mangoes his/her hands could hold at once (i.e. no bags/vessels) free of charge and this went without asking. The community by then supported this arrangement by the commonly adopted slogan that *"Why destruct our social relations while a mango is a seasonal fruit?"* This mango-based social relation brought people (i.e. individuals/families) closer to each other.

According to Mr. Kisikisi, SONGAS project has significantly reduced this social arrangement as it destroyed more than 150 mango trees (*Maginifera indica*) in M'baya village. He went on to claim that over the past 10 year period, the attitude of M'baya people towards this mango-based social arrangement has changed to worse. From his point of view, he identified both the SONGAS project and compensation paid to the affected parties as a leading factor in the disruption of social relations between households and individuals and subsequently weak social cohesion. Some mango tree owners reached a point of telling the mango gatherers who were compensated for losses of their assets including mango trees, *"there are no free mangoes, buy, otherwise go and eat your papers"* - meaning compensation money". However, Mr. Kisikisi also mentioned other factors that have been constantly contributing in the destruction of the mango-based social relations as, (i) urbanisation that turns everything including mango fruits into market commodities. Majority of mango owners are currently restricting people from having few mangoes because of money and (ii) other mango owners have replaced varieties of *dodo* by new bled shorter and early maturity varieties which do not suit the mango-based social arrangement anymore.

It was further discovered that in M'baya, the coconut crop carries socio-cultural values from one generation to another and this is hinged on respect and inheritance. From social point of view, the coconut farm is a symbol of wealth and depending on the farm size, a farm owner is in a better position to command respect within his/his family and the society at large. According to household cases in M'baya, since coconut trees live longer (more than 70 years), societies living in the Coast strip in Tanzania value coconut farm as inheritable asset, expecting valuers to recognise this value during compensation.

5.3 Local perceptions of status of ecosystem functions and values

Respondents' perceptions of whether ecosystem functions were at increase, decrease or remain unchanged helped to assess the status of various ecosystems in both study areas. Respondents had to compare the times with (after) and without (before) projects.

5.3.1: Changes in land availability

Across the village cases, over 82% of respondents described the changes in land availability as *'decreased'* (Table 5.8). Land unavailability problem was significantly *(p=0.033)* perceived bigger in Idete (85%) compared to M'baya (78%). Considerable proportions of respondents in M'baya (20%) and Idete (7%) perceived land availability was at '*increase'* in their villages. A number of issues and factors leading to differences between the village cases in regard to land shortage have been discussed in section 5.2.2. However, other respondents argued that land was available, but was selling at very high prices for poor people to afford. For example, in Idete, depending on land suitability, the current market values of one hectare of farmland ranges between 450,000/= – 600,000/= TZS. Before the project, prices for one hectare were between 50,000/= 120,000/= TZS. At M'baya, one hectare is valued at more than 2 million TZS, partly due to high demand relative to land available near to the capital city. Depending on the farming system practised, the land shortage due to high demand relative to land available challenges production systems differently in each village and were also caused by different factors, including the demands for land by the projects studied. The analyses on this problem in M'baya and Idete revealed that SONGAS and KVTC development projects were not the only cause of land pressure but other factors exist such as conservation projects (in Idete) and land buyers and speculators from the capital city (in M'baya). Section 5.2.2*(ii)* presents details of these factors and Appendices 5.27 and 5.28 summarise them in the form of flow chart. Major negative outcomes of this problem reported

by respondents in both village cases included reduced household food production and decreased household annual incomes.

5.3.2: Changes in soil fertility

Table 5.8 shows that 74% of overall respondents were aware that their lands were constantly losing soil fertility. In Idete, a significant higher proportion *($p<0.001$)* of respondents (88%) reported the decrease of soil fertility in their farms compared to M'baya's proportion (60%). Proportions of 22% and 12% from M'baya and Idete respectively noted that the soil fertility was *'unchanged'* in their farms. While no one (0%) at Idete reported *'increase'* of soil fertility, 18% of M'baya's respondents perceived *'increase'* of fertility in their farms. Despite the type of mixed cropping system practiced in M'baya having potentials of maintaining soil fertility, most likely the proportion of respondents were among the few good farmers who observe agronomic advices carefully. For instance, soil fertility can be promoted or maintained for substantial period of time if leguminous crops are mixed with other crops and if crop residues remain in the field after harvest. This has been discussed in Section 5.4.3 as counterfactual implications in M'baya. Appendix 5.27 shows the analysis of loss of soil fertility reported in M'baya village and that this is associated with reduced mixed cropping practices. Many affected farmers reported that farmlands affected by the SONGAS pipeline are not as productive as before and thus count them as lost lands.

Table 5.8: Respondents' perceptions after introduction of projects in village cases

Variable	Category	Percentages of respondents (%)			Pearson Chi-square ($\chi 2$)	*p*-Value
		M'baya *(N=60)*	Idete *(N=60)*	Totals *(N=120)*		
Changes in land availability **(Production/Provision functions)**	Increased	20	7	13	6.830 (df=2)	0.033
	Decreased	78	85	82		
	Unchanged	2	8	5		
Changes in soil fertility **(Support and regulation functions)**	Increased	18	0	9	16.047 (df=2)	0.000
	Decreased	60	88	74		
	Unchanged	22	12	17		
Changes in traditional knowledge and innovation systems **(Cultural and information functions)**	Increased	46	27	36	6.703 (df=2)	0.035
	Decreased	27	49	38		
	Unchanged	27	24	26		
Changes in natural forests and woodlands **(Habitat and carrier functions)**	Increased	7	43	25	24.949 (df=2)	0.000
	Decreased	90	48	69		
	Unchanged	3	9	6		

Source: Verification Survey, 2007

In Idete, farmers use fallow and shifting cultivation to maintain soil fertility. This practice is currently limited by land shortage caused by demographic, conservation and development

factors (Appendix 5.28). However, a large area of village land has been acquired by the Prisons department (over 6,000 ha), Udzungwa national park (over 5,000 ha), KVTC project (over 4,000 ha), MIFURA and other individual farmers (over 600 ha). Generally, villagers in Idete tend to see the Teak project developer as the main cause of the problem as it was the most recent case of land acquisition in their village.

5.3.3: Changes in traditional knowledge and innovation systems

Perceptions of changes in traditional knowledge and innovation systems was significantly different (*p=0.035)* between the village cases (Table 5.8). M'baya's respondents 46%, 27% and 27% again perceived changes in traditional knowledge and innovation systems respectively to have *'increased'*, *'decreased'* and remained *'unchanged'*. In Idete, respective proportions of respondents were 27%, 49% and 24%.

Despite unsatisfactory performance of traditional knowledge systems, respondents confirmed its existence and importance in their main livelihood activities. More information is discussed in Section 5.2.2*(iv)*. Most respondents in M'baya have informal education and hence perceive the underway efforts of promoting and supporting formal education in their village and ward comprehends their informal knowledge and innovation. The majority of respondents in Idete perceived the disassociation from their land as a big loss as far as traditional skills and knowledge are concerned. For example, one of the household cases in Idete (*Mzee Washamba Washamba* in Appendix 5.13) asked *"In this state of almost landlessness, how can I teach my children the skills and innovative principles of doing special tasks that I have been carrying out in my farm which has been taken away?"* Mzee *Washamba* (80 years old) who migrated from Ruvuma region lost his farmland (1.4 ha) to the teak project. He had been cultivating this land since 1970 and he claimed the land was unique and specially chosen and was acquired through bush clearing. According to him, its landscape posed several challenges that required him and his children to adopt practices such as pit[18] and ridge cultivation to ensure that their farm retained sufficient moisture throughout the year in order to allow dry season farming.

[18] Pit cultivation also known as *ngoro* is commonly practiced on hilly lands in *Ruvuma* region (Southern Tanzania). The practice avoids soil erosion and conserves soil moisture and nutrients for long periods of time. But it is labour intensive and requires specialized skills.

5.3.4: Changes in natural forests and woodlands

Generally, 83 (69%) out of 120 respondents across both village cases felt carrier and habitat functions of the natural environment were deteriorating in their communities. Compared to Idete's respondents (48%), M'baya had significantly *($p<0.001$)* and extremely higher proportion of respondents (90%) who reported *"decreased"* status of natural forests and woodlands. It was noted that 43% and 7% respondents at Idete and M'baya respectively, perceived the status was at *"increase"*.

The high level of deterioration of natural forests and woods is more obvious in M'baya. However this was not related to SONGAS project but consequences of urbanisation of the processes in Dar es Salaam city and Mkuranga town. For decades now, over 90% of urban population had been relying on woodfuel for cooking and their demand for energy have impacted negatively to the nearby natural forests including M'baya. It was also reported that charcoal makers have cleared off all big trees and they have recently resorted into big mango trees and shrubs.

Mixed perceptions in Idete that natural forests and woodlands were at increase and decrease are very interesting and both perceptions make sense especially when linked to discussions held with household cases, key informants and focus group participants. The increased quality can be explained by key informants' and focus group discussion participants' views that destructive activities on natural resources base (e.g. outbreaks of bush fires, illegal hunting of wildlife and logging) have significantly been reduced by the efforts led by KVTC project. Household cases and other respondents acknowledged the above efforts but criticised the idea of replacing native tree species by teak trees (plantations). They thought that the latter have negative implications to the natural environment such as loss of native trees species that have been replaced by teak trees; declining bee colonies due to the reduced *miombo* woodland forests which provided most of their nectar; application of herbicides affect other vegetations and; destruction of watersheds (water sources).

Local people's perceptions on deterioration of natural environment were found to be consistent with many research findings done in the area. Kilombero valley is a home to many wildlife including an endemic and threatened puku or southern kob, *Adenota vardoni* (ODA, 1992). The study by Jenkins *et al.* (2002) found that the loss of *miombo* forests have

significantly affected larger species of antelopes such as sable *(Hipppotragus niger)* and waterbuck *(Kobus ellipsiprymnus)* and recommended further studies be undertaken to determine levels of habitat use by antelopes in and around maturing teak plantations. Bowkett *et al.* (2007) concluded that little is known about habitats, abundance and distribution of many species of wildlife such as African forest antelopes and duikers and noted that increasing human activities in Kilombero valley threaten these wildlife. To ensure sustainable livelihoods and development in Kilombero valley, Kangalawe and Liwenga (2005) and Harrison (2006) called for integrated efforts to address land use conflicts among local communities, conservation and agriculture sectors including sugarcane and teak plantations.

5.4 Benefits and costs of project cases

Development projects usually have well intended stated goals and objectives. However, projects often make some people benefit and others lose. Respondents were asked to mention and rank benefits and costs attributable to activities of project cases. Knowing the reality that individuals are likely to perceive benefits and costs differently (Gregory *et al.*, 1991 and Kideghesho and Mtoni, 2008a), a suggested way of aggregating their feelings using numerical magnitude as (shown in Section 3.5.2) is possible.

5.4.1: Benefits and costs in M'baya village

Respondents of the verification survey in M'baya identified the following benefits and costs, as associated with SONGAS project.

i) Benefits

Respondents' ranking in M'baya village appreciated the first three benefits accrued from the gas project as improved community services (TS=149); transmission of electricity line (TS=72) and; new houses or improved homes (TS=9) (Table 5.9).

Table 5.9: Benefits and costs of the SONGAS project perceived by residents of M'baya

	Benefits and costs	Number of household and scores (N=60)						Total Score (TS)
		1st Rank		*2nd Rank*		*3rd Rank*		
		Count	Score	Count	Score	Count	Score	
Benefits (gains)	Improved basic community services	46	138	5	10	1	1	149
	Transmission of electricity within the village	5	15	28	56	1	1	72
	Acquired new house or improved home	2	6	1	2	1	1	9
	Cash/money from compensation	2	6	0	0	1	1	7
	Temporary employment	0	0	1	2	3	3	4
Costs (Losses)	Increased land shortage and decline of soil fertility problems	28	−84	17	−34	16	−16	−134
	Reduced income from perennial crops	20	−60	27	−54	16	−16	−130
	Hazards and risks associated to gas	5	−15	7	−14	10	−10	−39
	Relocation disturbances	6	−18	3	−6	3	−3	−27

Source: Verification Survey, 2007

Legend: *Weight allocation: (1st Rank = 3); (2nd Rank = 2); and (3rd Rank = 1).*
Score = Number of respondents (HHs) times weight allocated to each rank.

Basic community services

The benefits accrued under this category included support to improve education, health and water supply facilities in the village. SONGAS has been funding the improvement of classrooms, desks, furniture and teachers' houses in M'baya primary school and recently the developer has donated 49 million TZS for that enabled the construction of *Tambani* Ward secondary school located in M'baya (Photo 5.2). SONGAS has been supporting the village dispensary (i.e. improvement of buildings, facilities and health campaigns) in terms of quality services delivery so that it gets upgraded to the health centre status. Respondents however felt that the developer has been reluctant if not slow in fulfilling this promise. The village also got a shallow borehole for clean water supply. All respondents were dissatisfied with the location, specifications and workmanship of the borehole (Appendix 5.29). Villagers blame both their village leaders and the project developer, for failing to keep a close supervision to the contractor's work.

Photo 5.2: Part of the construction of *Tambani* Ward secondary school located at M'baya and supported by SONGAS project.

Transmission of electricity

The gas project developer also promised to distribute electricity in M'baya village and free installation of electricity to 50 homes. Again, the implementation of this promise faced two big challenges viz. (i) the contractor for the construction of the transmission line destroyed other farmers' crops (photo 5.3) without informing them. The District Commissioner of Mkuranga district suspended the construction of the transmission line and resolution of compensation claims were still going on and, (ii) the distribution of the 50 application forms for free installation of electricity caused misunderstandings between villagers and their village leaders, as many felt that those who got the application forms were favoured. However, this benefit scheme involved a number of mistakes including lack of involvement of villagers in setting the criteria for selecting the beneficiaries. In addition, they wanted to know why only 50 and not all, the affected parties in particular.

Photo 5.3: Coconut and fruit trees cut down by contractor without informing the owners at M'baya village.

New house and improved home

The Majority of M'baya's affected parties used their compensation to improve the walls and roofing of their houses and a few bought or constructed new houses.

ii) Costs

Table 5.9 shows ranking of the first three big losses encountered as a result of the project. These were land shortage and declining soil fertility (TS= −134); reduced income from perennial crops (TS= −130) and; gas hazards and risks (TS= −39).

Land shortage and declining soil fertility

Sections 5.2.2*(ii)*, *(iii)* and 5.3.1 and 5.3.2 describe the losses associated with this cost.

Reduced income from perennial crops

Loss of income earned from permanent crops is discussed in 5.2.3*(i)*. Focusing on coconut as an example, one of the household cases in M'baya *(Mr. Kisikisi)* clearly outlined how loss of profit and other benefits associated with consumption of coconut products are realised (Appendix 5.4). His arguments make sense and logically shows the compensation paid (TZS. 25,000/= per coconut tree) only covered the costs for seeding materials and perhaps a care for the first 3 years. Based on the fact that coconut trees take 6-9 years to reach maturity, *Mr.*

Kisikisi posed the question where is compensation for loss of income he used to earn every year (TZS. 20000/=)

Gas hazards and risks

Respondents claimed to have known about the hazards and risk associated with their community lives after seeing the caution signposts erected along the way-leave (Photo 5.4). The majority respondents, especially those living close to the gas pipeline worry much about safety in regard to health risks and fire hazards likely to occur in case of gas leakage. Household cases interviewed in M'baya expressed much worries and fears that disturb their psychological peace of mind. They also perceived that risks and hazards potentially affect (reduce) values of properties. This is inline with conceptualisation of Payne *et al.* (1987); McClelland *et al.* (1990) and Gregory *et al.* (1991) who noted that fears and worries are typical examples that can cause loss of welfare which needs to be compensated for.

Photo 5.4: One of the signposts by SONGAS project at M'baya displaying a warning message that "DANGER the gas pipeline passes underneath"

5.4.2: Benefits and costs in Idete village

Benefits and costs associated with KVTC project were identified and ranked by respondents who participated in the verification survey at Idete village as follows;

i) Benefits

Table 5.10 shows that benefits gained in Idete from KVTC project included improved basic community services and humanitarian aids as first (TS=158); temporary employment as second (TS=39) and; increased revenue to the village government as third (TS=28).

Table 5.10: Benefits and costs to people of Idete as influenced by the teak project

	Benefits and costs	Number of household and scores (N=60)						Total Score (TS)
		1st Rank		*2nd Rank*		*3rd Rank*		
		Count	**Score**	**Count**	**Score**	**Count**	**Score**	
Benefits (gains)	Improved basic community services and humanitarian aids	43	129	12	24	5	5	158
	Temporary employment	3	9	10	20	10	10	39
	Increased revenue of the village government	5	15	4	8	5	5	28
	Increased awareness on HIV/AIDS & environmental management issues	2	6	8	16	4	4	26
	Acquired new/improved home	2	6	5	10	6	6	22
	Missing (No benefits/No more than that)take out	*5*		*21*		*30*		
Costs (Losses)	Land shortage and loss of fertile arable lands	39	−117	14	−28	17	−17	−162
	Loss of natural forests and destruction of water sources	14	−42	13	−26	8	−8	−76
	Reduced income from agricultural and horticultural crops	5	−15	15	−30	13	−13	−58
	Increased crop predatory	1	−3	8	−16	5	−5	−24
	Inadequate/no compensation and Relocation disturbances	1	−3	7	−14	2	−2	−19
	Missing (No costs/No more than that)	0		3		15		

Source: Verification Survey, 2007

Legend: *Weight allocation: (1st Rank = 3); (2nd Rank = 2); and (3rd Rank = 1).*
Score = Number of respondents (HHs) times weight allocated to each rank.

Improved basic community services and humanitarian aids

So far the teak project through KVTC has supported Idete village in a number of service-based activities such as construction of earth roads, village market, nurse's house, and classrooms in both primary and secondary schools (Photo 5.5). It has also provided the village with food during the food shortage in 2004/05 and continuously provides orphans with food, clothes and school needs. KVTC has special and unique arrangements in place, where funds are channelled to all villages including Idete through 'social fund' and 'annual bonus of contracts to foster community based services and development (Appendix 4.4).

Photo 5.5: Part of the classrooms of Idete Ward secondary school located at Idete village and partly supported by KVTC teak project.

Like M'baya, respondents of Idete complained with regard to the implementation of beneficial activities or the use of money received through social fund and annual bonus of contracts (Appendix 4.4). These included (i) villagers are not involved in the identification of needs and prioritisation of activities for funding, planning and implementation; (ii) the eight contracts were prepared by one side (the project developer); (iii) amount set as social fund is too little compared to land taken; (iv) the process of approving activity proposal and making money available to the village authority takes a lot of time of village leaders (KVTC bureaucracy) and; (v) road construction destroyed crops and properties without information nor compensation. All of the above complaints reveal a problem associated with lack of involvement of host community members in various important issues such as planning and implementation of their development activities.

Temporary employment

KVTC has provided preferential employment to host communities including Idete through the eight contracts, in which villagers work under supervision of their village government leaders. According to many, this arrangement has helped them significantly, especially during the dry season when their farm activities have decreased. However, respondents disliked the following in regard to the arrangement, (i) delays in paying their wages in which it takes 5 – 8 months to get their wage after completion of an assignment; (ii) wages have remained

unrevised since 2003 and; (iii) KVTC's decision of introducing a new system of using contractors denies host villagers the preference to work, as contractors bring labourers from elsewhere. All these issues are related to inefficiency of the system that is jointly made-up by KVTC's staff, Village leaders and concerned labours.

Increased revenue to the village government

According to the eight contracts between KVTC and Village government authority, the former is entitled of annual bonus that caters for administrative and supervisory charges and is disbursed when implementation of all specified activities is done according to all eight contracts. Otherwise, reduction policy applies. Village leaders found the arrangement good but they were unhappy with delays in issuing payments. They also wanted rates to be reviewed in order to reflect the actual expenses incurred by village government and contractors in carrying out the contracted tasks.

ii) Costs

Table 6.10 indicates the way losses were ranked in Idete. Land shortage and loss of fertile arable lands was ranked first (TS= −162), loss of natural forests and destruction of water sources ranked second (TS= −76) and reduced income from agricultural and horticultural produces ranked third (TS= −58). All these costs have been discussed in Sections 5.2.2*(ii)*, *(iii)* and 5.3.1; 5.2.3*(i)* and 5.3.4.

5.4.3: Counterfactual analysis of gains and losses in the village cases

Compensation payments were made to the villagers in M'baya and Idete in recognition of the losses incurred as a consequence of the development projects. The counterfactual analysis against which compensation payments can be set is the situation that would have prevailed in the absence of the development projects. This could take a variety of forms namely, (i) a continuation of the pre development situation, (ii) some change involving either an improvement or deterioration in social, economic and environmental conditions. In principle, compensation payments should recognise the change in welfare of the affected parties that is attributable to project development compared to the *'without'* project development situation. The main basis for compensation in the studied villages namely, (i) the performance of agriculture and, (ii) the provision of community services such as education, were used as the basis for counterfactual analyses. In addition, the land rights and trends of both the

demographic and distribution factors in the two village cases, the analyses predicted different future situations that would have occurred in each village if the project did not happen.

At M'baya, villagers had more rights to their farmlands they and hence entitlement to compensation. Their future incomes from their farmlands, permanent crops in particular would have been as higher as compared to what happened after the project. The farming system in M'baya village as presented in Section 5.1.2*(vi)* and 5.2.3*(i)* is dominated by mixed cropping where semi-permanent and permanent crops such as coconut, cashew nut and fruit trees. If this cropping system continued without project interference, agricultural based future incomes of the affected households would have been higher than now because they could have kept improving their mixed cropping of permanent, semi-permanent and annual crops constantly using modern farming techniques. For instance, affected parties could have earned more income from improved varieties of both the permanent and semi-permanent crops grown in their mixed farming system in M'baya. This might have been a case for more compensation for those negatively affected because losses were higher than under the current situation.

Unlike M'baya village, affected parties in Idete were regarded as squatters because the majority of the villagers migrated from neighbouring regions (Section 5.2.1*(iv)*). The counterfactual analysis indicates that if KVTC project did not happen, conditions facing land occupants and the performance of faming could have deteriorated over time (Table 5.10). The reported trends of migration of farmers looking for fertile farmlands and livestock herders looking for pasture and water would have possibly increased land use disputes over the land now occupied by the teak project. This is because Idete village has no village land use plan in place to help regulate the rival land uses. Without the KVTC project in Idete, the population pressures would have mounted and sentiments between farmers and herders might have resulted into serious conflicts like in *Kilosa* district and *Ihefu* wetlands in *Mbarali* district (Benjaminsen, *et al.*, 2009). This could have generally reduced agricultural production and yields on marginal soils, as the soil fertility and land arability could have deteriorated.

In addition, it should be noted that in the north, Idete village borders *Udzungwa* national park and a number of forest reserves. If migration of farmers and herders was left to continue, the resource use conflicts could mount and exert more pressure on the existing protected areas. This could prompt the government to relocate an entire community of Idete in order to

resolve the resource use conflicts and promote conservation activities. Perhaps, this could have been an end of Idete village. It is apparent that the affected parties in Idete village received reduced compensation payments in recognition of their limited entitlement and possibly uncertain future discussed above.

5.5 Key messages

The following are the key messages arising from the review of compensation outcomes at both household and community levels in relation to the studied project cases.

Compensation implications on rural people's livelihoods

Project developers consider periods of land occupancy by households and possession of permanent crops or trees on land as important indicators of both property rights and compensation entitlements.

Both studied village cases depend on agricultural crop production for their livelihoods. Agricultural production of all types of crops was declining and mainly caused by land shortage, decline in soil fertility, change in farming system, change of land use, and crop predation. Land shortage was reported by household respondents as a big issue of concern and its manifestations include small household acreage, labour redundancy, increasing land renting-in from other villages, persistent food shortage, decreasing income per capita and increased land disputes. Impairment of rural livelihood caused by development projects increases with *"severity of land loss"* which is the ratio of the land occupied or used after to the land occupied or used before the project.

Social capital and people's livelihoods

Social capital was identified to be important in bringing people together, especially during problems or when a society faces challenges such as hosting a development project, relocation and compensation schemes. However, social cohesion and trust components of social capital were declining among community members in the studied village cases due to modernisation, growing rural poverty and development projects. Cultural, knowledge and information flow systems in both village cases are embedded on people's livelihood activities and are linked to sacred places, landscapes and farming systems. Lack of land use planning in the studied villages also contributed to land disputes and impairment of their livelihoods.

Compensation and gender

Gender equality in both development and compensation processes was highlighted by the majority household cases, as it improves many aspects of planning, decision-making, implementation and monitoring. Specific to compensation, gender equality was mentioned to have potentials for promotion of wise use of compensation payments (money), sharing benefit, safety, security and participation at both household and community levels.

Ecosystem functions

Respondents identified production, regulation, information and habitats as ecosystem functions of benefit to them. With the exception of information, the other three ecosystem functions were perceived to face a decrease or deterioration largely influenced by development projects. Land shortage, decline of soil fertility and deteriorating natural forests were specific adverse outcomes threaten livelihoods of the affected parties and host communities. Planning and implementation of compensation schemes that are done through involving the affected parties and host communities have great potentials of improving compensation outcomes including positive aspects of the project and minimising disruptions on people's livelihoods and ecosystem functions.

Benefits and costs of development projects

Despite the reported pitfalls of delivering the promised benefits to the host communities, the general analysis of gains and losses at community level showed resultant benefits. This seems to suggest that provision of supports to community based services such as education is perhaps an effective way of compensating for the community-based losses and part of individual household losses in developing economies. However, written agreements between the project developers and host communities in relation to provision of benefit or any support are necessary.

Counterfactual analysis of compensation entitlements and payments

The counterfactual analysis indicates that the affected parties and other community members at M'baya deserved more compensation as their future incomes from their permanent crops would have been as higher as compared to what happened after the project. At Idete, the rivalry land uses (i.e. crop husbandry and animal husbandry) would have led the community to complicated conflicts and low farm productivity and hence low compensation.

Chapter 6 ASSESSMENT OF LOSSES AND COMPENSATION PAYMENTS

This chapter presents the quantitative results of the household verification survey conducted in M'baya and Idete villages in relation to compensation schemes by SONGAS and KVTC project cases respectively. Among other aspects (as reported in chapter 5), the survey explored components and elements of losses encountered by the affected parties and compensation payments received. Compensation payments received by respondents are compared with their perceived losses of household incomes and calculated total losses from the survey data (Figure 6.1). The chapter also presents variables that correlate with different types of losses which were further analysed using multiple linear regressions to help explain the variations in observed losses.

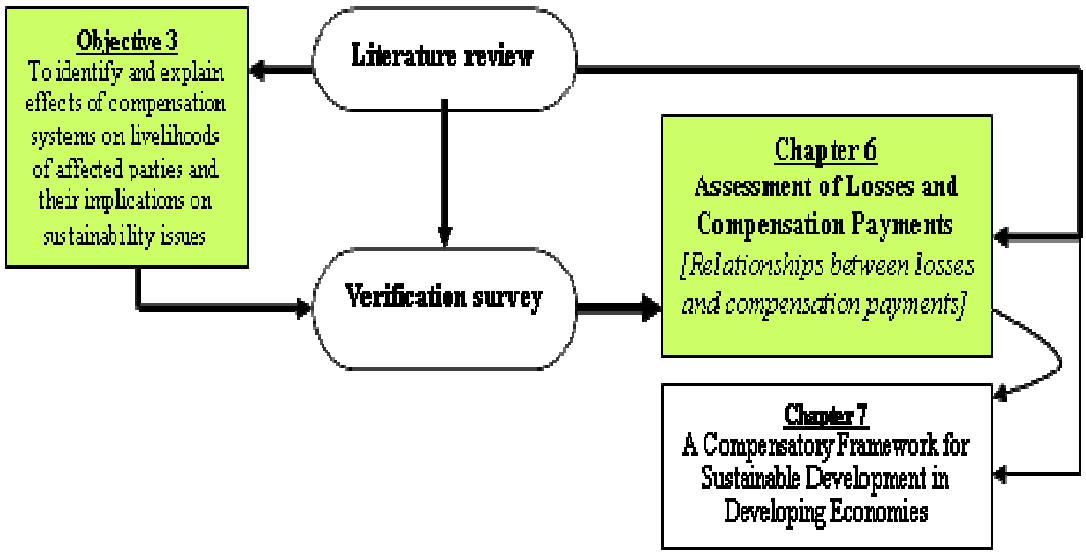


Figure 6.1: Methods for assessing losses and compensation payments

6.1 Stocks of assets and flows in the affected households

A total of 120 households were interviewed during the verification survey in order to determine factors and components of losses encountered during compensation in the studied villages. Table 6.1 below displays descriptive statistics for the selected household assets and flows of services in the affected households (affected parties) related to both losses and compensation payments. With the exception of distance to rented farmland, income of annual crops and land lost in M'baya village has noticeably larger mean values in all reported

variables compared to Idete village. These statistics have been used in the discussion of results in different sections of this chapter.

Table 6.1: Descriptive statistics for household assets and flows related to losses and actual compensation received in the studied village cases

Household assets/flows	*M'baya*			*Idete*			*Overall*	
	N	Mean ±SE	SD	N	Mean ±SE	SD	Mean ±SE	SD
Age of household head (years)***	60	58.1±1.7	13.2	60	45.9±1.9	15.1	52.0±1.4	15.4
Household size (Number of family members)**	60	7.4±0.4	3.1	60	5.7±0.3	2.3	6.6±0.3	2.9
Household labour per ha (Number/ha)	60	1.8±0.4	2.8‡	60	1.4±0.2	1.2	1.6±0.2	2.2‡
Land occupied/used (ha/hh)*	57	2.9±0.3	2.5	56	1.9±0.3	1.9	2.4±0.2	2.2
Distance to rented land (km)**	6	1.1±0.3	0.8	21	3.5±1.4	6.6‡	3.0±1.1	5.9‡
Income of annual crops (**10^6** TZS/hh[19])***	22	0.3±0.1	0.3	54	1.7±0.2	1.4	1.3±0.2	1.3
Income of s/permanent crops (**10^6** TZS/hh)	33	0.3±0.1	0.3	24	0.5±0.1	0.4	0.4±0.1	0.4
Income of permanent crops (**10^6** TZS/hh)***	35	1.1±0.3	1.7‡	6	0.3±0.1	0.2	0.9±0.2	1.4‡
Land occupancy (years)***	38	39.3±3.7	23.1	55	18.4±1.6	11.8	27±2.1	20.1
Land lost (ha/hh)***	38	0.9±0.1	0.7	55	1.8±0.2	1.3	1.5±0.1	1.2
Perceived hh loss of income (**10^6** TZS/hh)**	38	7.9±1.7	10.2‡	55	3.5±0.4	2.9	5.3±0.8	7.2‡
Intangible losses (Weighted Number/hh)*	60	7.4±0.3	2.5	60	10.4±0.4	2.8	8.9±0.3	3.1
Perceived benefits (Weighted Number/hh)**	60	6.9±0.4	3.1	60	7.9±0.5	3.7	7.4±0.3	3.5
Calculated total loss (**10^6** TZS/hh)**	38	8.8±1.9	11.9‡	55	9.8±1.1	8.1	9.4±1.0	9.8‡
Actual compensation paid (**10^6** TZS/hh)***	30	2.0±0.4	2.2‡	13	0.3±0.1	0.3	1.5±0.3	2.0‡

*** *p< 0.001*
** *p<0.01*
* *p<0.05*
‡Standard deviation (SD) is greater than the mean value-indicating volatile conditions surround the measured parameter
Source: Household Verification Survey (2007).

6.2 Comparison of compensation payments and losses

This section compares the actual amount of compensation received by the affected parties in the village cases with both the perceived losses of household incomes by respondents and calculated total household losses in order to explore relationships between the three parameters. It is worth noting that the major source of household incomes in both village cases is agricultural crops as presented in section 5.2.3*(ii)*. Crop losses were initially estimated based on size of household farmlands lost to development projects (i.e. SONGAS in M'baya and KVTC in Idete). In discussion with respondents, estimation of crop yields (tonnes) per area (hectare) lost and then multiplied by area of farmland affected was USED to estimate losses of their household incomes. And finally, both the perceived losses of household annual incomes *(PLHIs)* and calculated total household losses were presented in

[19] During fieldwork (April – July 2007) exchange rates were: 1GBP = 2300 TZS and 1USD = 1200 TZS

terms of Tanzanian Shillings per household (TZS/hh). This facilitated the comparison of losses incurred by households with the compensation received.

Losses per hectare of land and per household are equally important in the process of estimation of losses. Valuation of crops is considerably easier if approached using average annual yields and areas affected. Then, compensation for crops can be determined according to the market or equivalent value of the lost crops. Other losses need to be accounted for, such as loss or damage to affected structures using either market prices or replacement costs. Losses can be summed up together to provide a basis for compensation payments to individuals or households.

Two different methods were used to analyse compensation payments and losses encountered by the affected parties. Graphs were used to compare actual compensation received with both the perceived loss of household annual income and calculated total household loss. The *equivalence line* in each graph was obtained by matching vertical and horizontal scales into *"one-to-one"* relationship to show whether the losses match compensation payments. The estimates of regression line of fit were used to establish relationships between compensation payments and losses. The relationships between variables were established using simple linear regression analysis (equation 6.1).

$$y = a + bx \quad \text{(6.1)}$$

Where:

y = *dependent variable (criterion)*
a = *constant (intercept)*
x =*independent variables (predictor)*
b = *Coefficients of predictor*

An attempt was made to remove outliers that appeared not to belong to the two samples in order to improve the fraction of the variations in dependent variable explained by predictor variables. Estimates of perceived losses of household annual incomes and reported crop harvests of each respondent were examined with respect to the areas of their lost farmlands eventually compared with standard crop productivity data for the rain-fed subsistence agriculture, obtained from the Ministry of Agriculture and other secondary sources. This helped to identify 8 cases (27%) out of 30 of M'baya and 3 cases (23%) out 13 of Idete as extreme cases that were considered as outliers. When these cases were removed from their

respective samples, the percentages of variation accounted in all predictions increased. Appendix 6.1 presents figures (6.2*b*, 6.3*b*, 6.4*b*, 6.5*b*, 6.6*b* and 6.7*b*) of improved prediction sets (lines of fit) that can be compared with their respective figures 6.2*a*, 6.3*a*, 6.4*a*, 6.5*a*, 6.6*a* and 6.7*a* that predict lines of fit through treating all cases in each village case.

However, the proportion of cases removed in each sample was high, which from the research point of view might not really be outliers but cases with valuable information. Therefore, the reported findings were obtained from the analyses including all cases, as there may well be important information contained in such extreme cases that is also worth interpretation. This is however an important methodological point to be considered in future studies in order to obtain rich information and better results through involving a number of extreme cases, if possible and, to have more analysis options. This suggestion is consistent with Flyvbjerg's (2001) conclusion that atypical and extreme cases often reveal valuable information, as they involve unique factors and sometimes more variables and basic mechanisms in their situations compared with typical or average cases.

6.2.1: Perceived losses of household annual income

During interviews with household cases, losses of land and income flow were identified as the main losses encountered following project operations in their villages. Respondents of the verification survey were then asked to estimate their perceived losses of income flows at household level *(PLHIs)*. Present values of future annuity of *PLHIs* at 15% discount rate of interest were calculated in each case, as explained in section 3.5.3. Figures 6.2*a* and 6.3*a* compare the amounts of compensation paid with the perceived losses of income by households in M'baya and Idete villages respectively.

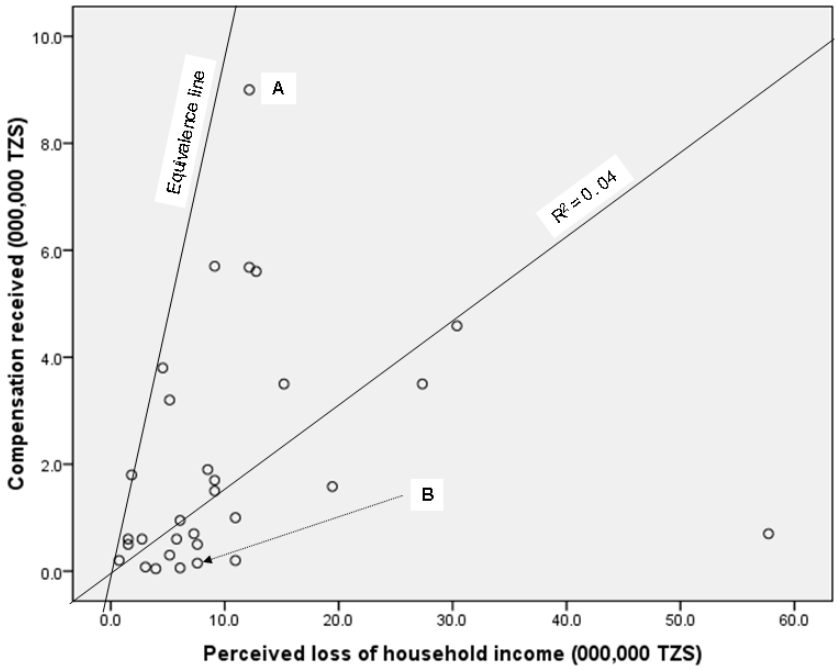


Figure 6.2*a*: Perceived loss of household annual income and compensation received in M'baya village-paid by SONGAS project in 1997

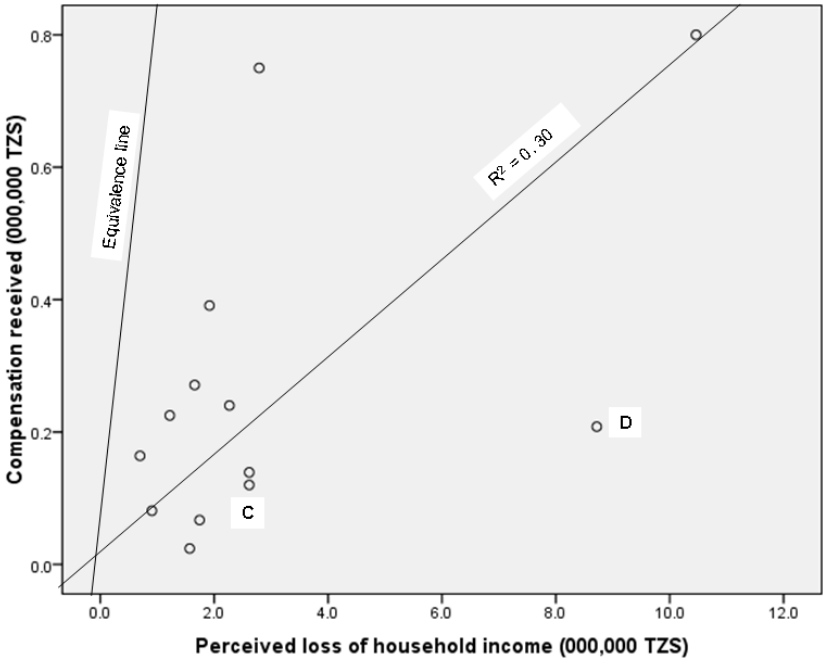


Figure 6.3*a*: Perceived loss of household annual income and compensation received in Idete village-paid by KVTC project in 2006

At M'baya, 38 out 60 respondents of the verification survey were compensated by SONGAS project, of which 30 were willing to report the amounts of compensation they received. Figure 6.2 shows that only the *PLHIs* for three (3) households matched with the compensation they received and all three were among the minimum income loss perceivers at M'baya. The perceived losses of income for the other 27 affected households (90%) were under the *equivalence line*, indicating their perceived losses of incomes were not fully compensated. On the other hand, the teak (KVTC) project compensated a total of 14 households in Idete, of which 13 participated in the verification survey. The *PLHIs* for all 13 households were under the *equivalence line*, of which eleven (11) clustered close to the line and two (2) were located very far from the line because of their relatively higher *PLHIs* (Figure 6.3).

Table 6.2: Estimations of regression lines for the actual compensation received in the studied village cases.

Case		Predictor variables	Unstandardised Coefficients		Standardised Coefficients (Beta 'β')	*t*	R^2
			B	*SE*			
M'baya	***All cases***	Constant	1600000	560000		2.826**	
		Perceived loss of hh income (TZS/hh)	0.04	0.04	0.202	2.092	**0.04**
	Improved *(reduced cases)*	Constant	-160000	715000		-0.223	
		Perceived loss of hh income (TZS/hh)	0.32	0.11	0.575	2.812*	0.33
	All cases	Constant	1300000	480000		2.661*	
		Calculated hh total loss (TZS/hh)	0.08	0.03	0.436	2.561*	**0.19**
	Improved *(reduced cases)*	Constant	-120000	394000		-0.304	
		Calculated hh total loss (TZS/hh)	0.42	0.07	0.816	5.655***	0.67
Idete	***All cases***	Constant	134000	86000		1.558	
		Perceived loss of hh income (TZS/hh)	0.04	0.02	0.545	2.156*	**0.30**
	Improved *(reduced cases)*	Constant	93000	87000		1.068	
		Perceived loss of hh income (TZS/hh)	0.07	0.02	0.737	3.087*	0.54
	All cases	Constant	14000	70000		0.199	
		Calculated hh total loss (TZS/hh)	0.02	0.00	0.806	4.504**	**0.65**
	Improved *(reduced cases)*	Constant	20000	49000		0.401	
		Calculated hh total loss (TZS/hh)	0.04	0.01	0.932	7.290***	0.87

****p< 0.001*
*** p<0.01*
** p<0.05*
Source: Household Verification Survey (2007).

Table 6.2 shows that the linear relationship between the *PLHIs* and actual compensation received was not significant in M'baya, but was significant in Idete *(p<0.05)*. The importance of people's perceptions varied widely in accounting for the results. The *PLHIs* explained only

30% *(R^2=0.30)* of the variations observed in compensation received in Idete. However, the results indicate that for every *PLHIs* of 1 TZS an affected party or household at Idete received only 4 cents of TZS as compensation. The compensation paid at the rate of 4% was very low and did not offset the perceived loss of household incomes, leaving aside other losses. This confirms undercompensation the affected parties reported and discussed in the previous chapters. The study recognises the possibility that respondents exaggerate their estimates of perceived loss of household incomes to gain further personal compensation or at the community level. Such bias can be avoided through using standard data from secondary sources (such as crop or land productivity and market information) and to identify and omit observations with extreme values (outliers). Omission of outlier cases may be appropriate when the analysis involves large samples. In small samples, however, it is best to include them in the analysis, simultaneously confirming and understanding the reasons for extreme values.

Despite the perceived undercompensation revealed above, actual compensation paid to the affected parties in both schemes showed a trend of increasing with the *PLHIs*. The B-coefficients in both village cases for *PLHIs* were significant (*$p<0.05$*). This is shown by the positive slopes of the lines of fit and this is an important result, as it depicts the relationship between the *PLHIs* and actual compensation paid. The loss of household annual income perceived by the affected parties in both village cases was an issue of considerable concern. Their perceptions of loss suggest how much they thought they should receive as compensation to reinstate previous conditions of welfare or utility. Thus, it appears that financial amounts received did not fully compensate for the perceived value of the losses incurred according to the indifference curve theory presented in Section 2.4.4. In their view, in most cases, there was under compensation and as a result a reduction in welfare. Compensation amounts are also dependent on whether affected parties have existing (rather than potential) entitlements. For instance, it was revealed that the affected parties in M'baya had more entitlement than those at Idete and that this was the main reason why the teak project did not fully compensate for income lost from farming as the squatters did not have full entitlement.

The indifference curve analyses for the two village cases show that the pioneer settlers in M'baya were assumed to have full entitlement to their land goods and services and therefore M'baya fits the category of WTA compensation provided by SONGAS project. Their

perceptions of losses in terms of how much they should be compensated to reinstate previous utility is measured using compensating variation as presented in Figure 2.6. Things were different at Idete, as the majority of the affected parties were assumed not to have full entitlement to the land's goods and services. The affected parties in Idete village were compensated for the loss of permanent but not annual crops. They were compelled to accept lower of compensation payments because they had limited entitlement.

6.2.2: Calculated total losses of households

The net future income flows from permanent and semi-permanent crops that were formerly cultivated on the lost land were discounted and aggregated to determine a present value sum. From the present value sum, the value of land was estimated using income capitalisation approach as per ADB$_{Asia}$[20] (2007) and summed with losses of structures (houses and farm huts) to obtain the calculated total household losses *(CTHLs)* as outlined in Section 3.5.3.

The value of each crop cultivated was measured using a combination of its relative proportion in a mixed cropped farm using a scale of (0, 0.25; 0.5; 0.75 & 1.0), number of times the crop is harvested in a year (i.e. 1, 2, 3…) and its average price per tonne (TZS/t) in the nearby market. Thereafter, crops were put into three groups (i.e. annual, semi-permanent and permanent/perennial crops) and the value for each category was worked out by summing up values of all crops falling in each group. Results showing incomes of rural households were strongly influenced by market prices of agricultural crops (Table 6.6). Crops such as coconut (for M'baya) and rice (for Idete) that are given higher importance by the affected parties need careful identification and maximum attention during compensation, valuation in particular.

Figures 6.4 and 6.5 compare compensation paid with calculated total household losses in M'baya and Idete villages respectively. This provides a sharp contrast with the previous section which was based on the perceived losses. At M'baya, two (2) households appeared to be overcompensated, 25 households were undercompensated and for three (3) households, their compensation payments matched with their calculated losses. Analysis of compensation payments with *CTHLs* at Idete shows that all 13 affected households were under the *equivalence line*. While seven (7) households clustered close to the *equivalence line*, 3 (3)

[20] ADB$_{Asia}$'s policy guidelines for compensation and valuation in resettlement schemes draw successful practices and challenges from Cambodia, China, India and other developed countries such Great Britain, German and Italy.

households were located sparsely and far from the *equivalence line* and the other three (3) formed a cluster in between the former two groups.

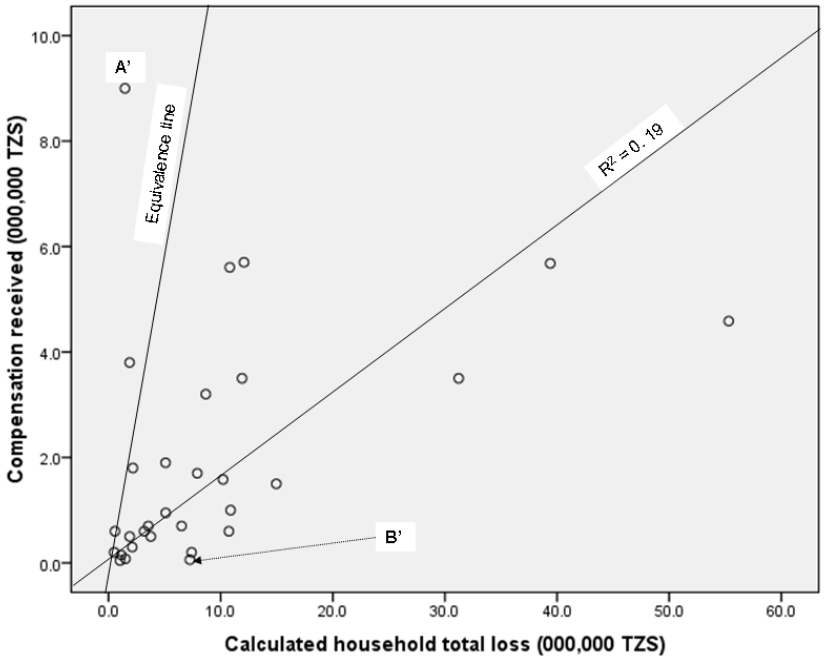


Figure 6.4a: Calculated total household loss and compensation received in M'baya village-paid by SONGAS project in 1997

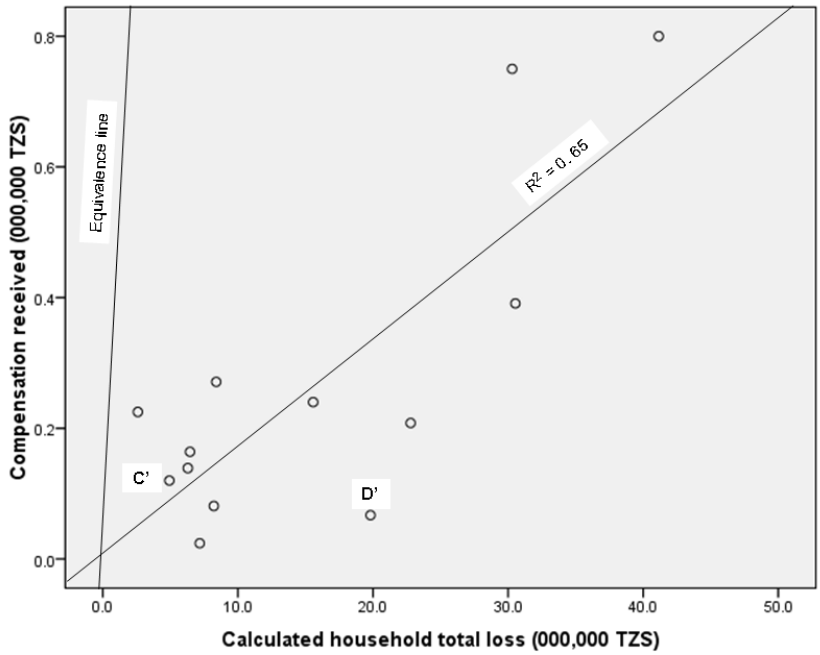


Figure 6.5*a*: Calculated total household loss and compensation received in Idete village-paid by KVTC project in 2006

Like in *PLHI* above, the actual compensation received by the affected parties in both villages increased with the calculated total household losses *(CTHLs)*. Table 6.2 shows that lines of fit for estimated linear relationship between *CTHLs* and actual compensation received in M'baya and Idete were significant *($p<0.05$)* and *($p<0.01$)* respectively. Idete's predicted line accounted for more variation *($R^2=0.65$)* observed in actual compensation received than that of M'baya's *($R^2=0.19$)*, and both were positive. The estimated coefficients indicated that for every *CTHLs* of 1 TZS/hh in M'baya and Idete villages, actual compensation payments increased by 8 and 2 cents respectively. In other words, the affected parties in M'baya and Idete villages received payments for their calculated losses at 8% and 2% compensation rates respectively.

Comparison of the actual compensation received with the *CTHLs* in both villages has indicated significant undercompensation for nearly all households. Two factors were identified as the main causes of undercompensation in both village cases. First, both project cases did not compensate for land losses at all. The actual compensation received covered losses related to permanent and semi-permanent crops only. SONGAS also compensated for structures while KVTC did not.

Second, losses associated with agricultural crops were not fully compensated for. The projects paid compensation for losses of permanent and semi-permanent crops in different ways. For example, M'baya paid compensation using crop rates that were three times the market values at that time (Innocent, 2004), yet the affected parties felt some losses were uncompensated. At Idete, in 2006, the project developer compensated the affected parties for their crop losses using government crop rates that were 14 years old. The major sources of undercompensation were associated with the failure to recognise the present value of the annual crops and cumulative future values of permanent and semi-permanent crops. Another concern was the use of outdated compensation rates. This was revealed in the discussion held with the Chief Government Valuer in May 2006. It was learned from the discussion that the crop applicable rates for Dar es Salaam and Coast regions by then were last updated in July 2002, and the other 19 regions in the country were still using the 1992 compensation rates.

Despite the affected parties in both villages being undercompensated, the results show that M'baya's affected parties received four times higher compensation than their counter parties

in Idete for every *CTHLs* of 1 TZS. This can be explained by two main factors. Crop production in M'baya is mainly permanent crops, while that of Idete is dominated by annual crops. Since in both compensation schemes annual crops were not compensated for, Idete's affected parties suffered more from uncompensated losses as compared to M'baya's affected parties. The second factor is based on the developer's consideration. While M'baya's affected parties were paid compensation using rates that were three times of the prevailing market values, the affected parties at Idete were regarded by the developers as squatters without formal entitlement to use the land. There is a possibility that their squatting did not give them rights to compensation for annual crops, but compensation received for permanent crops was paid based on recognition that they had made an investment. They were not compensated for land and annual cropping that they did not have an entitlement to.

In attempt to reduce undercompensation, the valuation guidelines by ADB$_{Africa}$ (2003) and ADB$_{Asia}$ (2007) put much emphasis on both the valuation approach and rates as important components of fair compensation. Both guidelines recommend compensation for permanent and semi-permanent crops to be based on cumulative future values of crops for their productive life. And if circumstances allow for the affected parties to be provided with replacement trees (crops), compensation therefore should also include future values lost, up until the time that replacement crops grow into full production. Regarding rates, the guidelines by ADB$_{Asia}$ (2007) recommend an average price of the three consecutive preceding years, obtained from the nearby market. According to household cases in M'baya (Appendices 5.3, 5.4, 5.5 & 5.6), the age and stage of permanent crops are important factors to be considered during valuation as well.

Photo 6.1: *Mr. Ustaadhi* (Appendix 5.6) of M'baya 3 village designated as **A** and **A'** in Figures 6.3 and 6.4 respectively received the highest amount of compensation than all affected respondents. He used compensation money to buy a farm house located on the land totalling to 6 ha. The farm also contains mature coconut trees, cashew-nut trees, cassava and pineapples.

Photo 6.2: *Mzee Msasa* (Appendix 5.5) marked as **B** and **B'** in Figures 6.3 and 6.4 respectively was the lowest earners of compensation of M'baya village. He bought used corrugated iron sheets and improved his old house. He worries about his future life, as he is now old (82 years old by June 2007), dependant and having no cocon*u*t farm.

Photo 6.3: *Mr. Oxygen* 'first from right' (Appendix 5.7) shown as **C** and **C'** in Figures 6.5 and 6.6 respectively was among the affected parties showed dissatisfaction with compensation paid for their losses at Idete village. He bought a plot of a quarter an acre on which he constructed a pole-and-mud house with grass thatch as shown in the Photo 6.3. This was the youngest family affected by KVTC project that participated in this study from Idete.

Photo 6.4: *Mr. Wageni* 'centre' (Appendix 5.8) marked as **D** and **D'** in Figures 6.5 and 6.6 respectively reported his dissatisfaction with compensation paid at Idete. He bought farmland and built a house (at the back) but unable to finish it. As a church leader he was supported by his church members and relatives to attain this state.

The revealed undercompensation in studied villages, Idete in particular, appeared to arise due to a number of factors (Section 4.4.2) including the failure to fully implement the existing legal framework for compensation matters in rural areas (Section 2.5.4). Despite the majority affected pioneer settlers in Idete to have assumed property entitlements through customary land occupancy, they lacked legal recognition because their property rights were not registered. Long-term land users in rural areas in Tanzania like those in Idete village lack formalised titles that are officially recognised by the government due to lack of registration or documentation of their rights. Such people who dominate rural areas are considered as squatters or encroachers with no entitlements to compensation. The current land laws in Tanzania recognise the presence of land occupants through customary systems of tenure but the same laws do not recognise their rights to compensation for the losses likely to be encountered due to development projects.

The challenge of *'assumed'* property entitlements, for example, those associated with pioneer settlers so called *'squatters'* should be dealt with using administrative measures. This should involve official documentation that register all particulars including names, size of land, date and mode of acquisition (inheritance, purchase or allocation) of all people occupying or using land through customary rights. For areas where no other claims of entitlements prevail, the outstanding occupants should also be provided with officially recognised papers to enhance security of their occupancy. This would potentially help to clarify both the property rights in rural areas and compensation eligibility in regard to affected parties. It would also potentially minimise compensation disputes and transaction costs involved. According to Coase theorem, this potentially sets a state where antecedent conditions could support mutually beneficial exchanges in accordance with the principles of Pareto-optimality.

6.2.3: Comparison of the perceived income loss and calculated total losses

Figures 6.6*a* and 6.7*a* compare the perceived losses of household incomes *(PLHIs)* with the calculated total household losses (*CTHLs)* in M'baya and Idete respectively, in order to identify possible relationships between the two variables. The figures also include the 45 degree line of equivalence along which the two estimates converge. The lines of fit for estimated linear relationship between *PLHIs* and *CTHLs* in both village cases were significant (Table 6.3). At M'baya a constant term and B-Coefficient were significant at *($p<0.01$)* and *($p<0.05$)* respectively, whereas in Idete both were significant at *($p<0.05$)*. Idete's predicted line explained more variation *($R^2=0.45$)* observed in perceived losses of

household incomes *(PLHIs)* as compared to M'baya's *(R^2=0.21)*. However, M'baya had a higher estimated coefficient than that of Idete and this indicated that for every increase of 1 TZS in *CTHLs*, the perceived losses of household incomes *(PLHIs)* in M'baya and Idete villages increased by 0.42 and 0.17 TZS respectively.

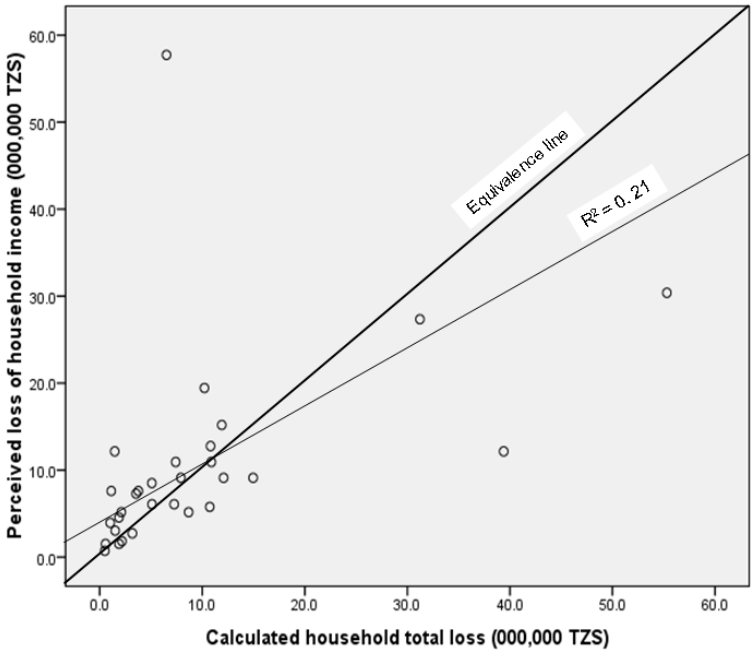


Figure 6.6*a*: Calculated total loss against perceive income loss in M'baya village

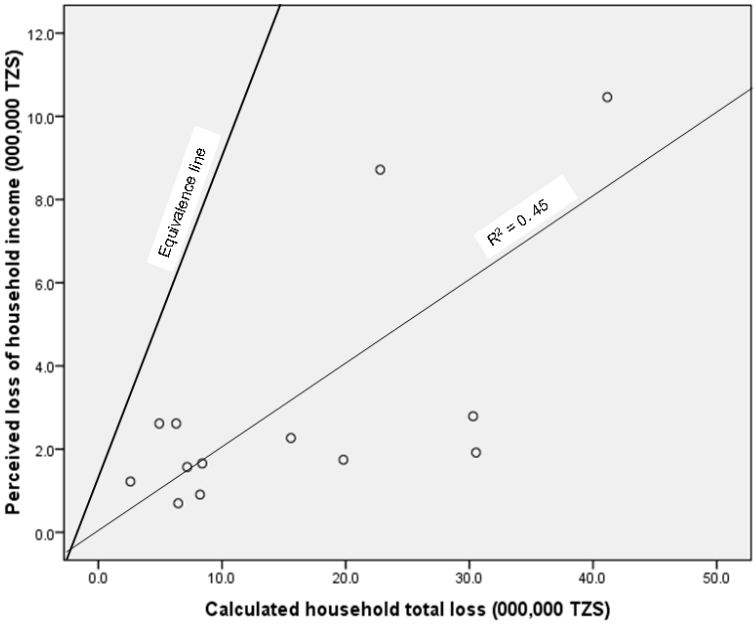


Figure 6.7*a*: Calculated total loss against perceive income loss in Idete village

Table 6.3: Estimations of lines of fit for the comparison of the perceived loss of household income with calculated household total loss as a predictor

Case	Model	Predictor variables	Unstandardised Coefficients		Standardised Coefficients (Beta 'β')	*t*	R^2
			B	*SE*			
M'baya	*All cases*	Constant	6600000	2400000		2.780**	
		Calculated household total loss (TZS)	0.42	0.16	0.456	2.714*	**0.21**
	Improved	Constant	120000	394000		0.304*	
		Calculated household total loss (TZS)	0.42	0.07	0.816	5.655***	0.56
Idete	*All cases*	Constant	420000	1080000		0.386*	
		Calculated household total loss (TZS)	0.17	0.06	0.671	3.004*	**0.45**
	Improved	Constant	230000	777000		0.296	
		Calculated household total loss (TZS)	0.37	0.09	0.834	4.272**	0.70

****p< 0.001*
*** p<0.01*
** p<0.05*
Source: Household Verification Survey (2007).

The lines of fit in Figures 6.6a and 6.7b show that in general, the calculated household total losses is a better predictor of the perceived loss of household annual income. However, it was interesting noting that perceived loss of household annual income and calculated household total losses are better matched in M'baya than in Idete. Calculated household total losses in Idete are much higher than perceived loss of household income. This suggests that respondents do not actually perceive a loss from annual cropping, as they don't think that are entitled to compensation for annual crops. Unlike to Idete, majority of the affected parties at M'baya think forward as they considered even loss of future incomes from their permanent crops.

6.2.4: Losses at community level

Section 5.4 discusses both the benefits and costs as ranked by the respondents of the verification survey (Tables 5.9 and 5.10). Interviews with householders also identified, among others things, losses that people suffered as a community. Pearce (1999) noted from the World Bank funded-projects that resettled affected parties resulted in costs associated with social conflicts at the community scale. These can compromise the intended benefits of a project and make compensation schemes unworkable. The losses faced by M'baya community included land shortage, decline of soil fertility, and hazards and risks associated with the gas pipeline. The Idete community experienced land shortage, decline of soil fertility, frequent food shortages, loss of access to natural resources and loss of water sources.

It is also worth noting that all the adverse changes of ecosystem functions and services identified and discussed in section 5.3 are a part of the community losses as well.

According to Zaman (2002) and Mwalyosi (2004), there has been a tendency for project developers and authorities to either overlook or deliberately ignore losses affecting communities in their totality. Cernea and Guggenhein (1993) and Thabane (2000) argue that investors have been opting not to compensate for community losses because they are considered to be attributable to individuals. They often involve losses of public goods, borne by individuals as members of communities. This is an example of the tragedy of the commons, inflicted on a community by a third party from outside the community. Thabane (2000) found it easier and more effective to compensate for community losses when the types of losses have been confirmed and community members are involved in deciding on appropriate compensatory measures. According to Knetsch (1990); Gregory *et al.* (1991), in-kind compensation has been predominantly used to offset potential direct and indirect effects, including risks and hazards of projects. Kunreuther and Easterling (1996) describe inkind compensation payments or awards that include preferential employment and financial or material supports for community based development activities and services provided by projects.

Table 6.4 shows different forms of in-kind compensation and the estimated values (TZS/hh) which the village cases had received up to June 2007. M'baya and Idete received in-kind compensations worth 131.5 millions and 42.5 millions TZS respectively. Details of supports received in each village case are explained in section 5.4

Table 6.4: Estimated inkind compensation received by village cases

Facility/service/parameter	In-kind compensation (000 000 TZS)	
	M'baya	*Idete*
Community water supply facility (borehole)	3.5	–
Electrification project (including electrical installation of 50 house)	50.0	–
Support to primary school (desks and office furniture)	1.5	–
Support to the construction of the Ward secondary school	50.0	4.0
Health and environmental awareness campaigns	16.0	6.5
Social funds for community services (2003 – 2006)	–	15.0
Annual contractual bonus funds (2003 – 2006)	–	2.5
Income from preferential employment (2003 – 2006)	–	10.00
Other supports (food, education materials for orphans, etc.)	11.5	4.5
Total value of inkind compensation	**131.5**	**42.5**
Inkind compensation per household*	**0.17**	**0.05**

**Numbers of households at M'baya and Idete by 2007 were 764 and 882 respectively*
Source: KVTC (2006); URT (2000) & Focus Group Discussions (2007).

The discussion in section 5.4.3 supports the notion that in-kind compensation has potential to distribute benefits equitably among community members. As per discussion in section 4.4.3*(ii) & (iii)*, it is possible for the project developers to creatively develop further the current in-kind supports into a number of cost-effective ways of sharing project benefits with host communities. Simultaneously, this can help to improve relationships between developers and host communities. However, the majority of household cases in both village cases showed the need of engaging their respective developers in dialogues in order to find (i) ways to minimise losses incurred by the individual households and the host community (ii) appropriate compensation payments to individual households and a host community as a whole. Such negotiations would ensure that losses encountered by the affected parties and communities are minimised and the remnant losses are compensated for.

6.3 Factors correlated with losses incurred by the affected parties

Compensation schemes, as they have been widely adopted in the context of development, seek to redistribute benefits and costs between the gainers and losers. However, it is a challenge on how best to determine the losses suffered by losers. The legal framework for compensation in Tanzania (Section 2.5.4 and Appendix 2.2) provided basic theoretical information from which the relevant components or categories of losses incurred by the affected parties were identified as follows:-

i. Loss of land (both quantitatively and qualitatively),

ii. Loss of income (mainly related to agricultural crops),
iii. loss of structures (mainly houses and facilities) and,
iv. intangible losses (which among others include loss of access to and use of natural resources; lack of peace of mind due to fears and worries caused by the perceived risks and hazards).

Correlation analysis was carried out for variables (such as household size, size of land lost by affected households, values of annual and permanent crops, household workforce, amount of compensation received, …) considered possibly to have association with the above-mentioned components of losses. The variables involved were part of the information collected from in-depth household cases, interviews of key informants and focus group discussions. It is however worth noting that there were few respondents (7 in M'baya) and (3 in Idete) who were compensated for losses of their structures and buildings and these numbers did not support correlation analysis. It is worth noting again that about 38 affected parties in Idete claimed to have lost their farmlands and farm-based homes without compensation.

6.3.1: Factors associated with loss of land in the village cases

Land loss expressed in terms of size and measured in hectares (ha) per household (hh) was positively correlated with the distance (km) from home to where the rented land was located ***"RL-Distance"*** *(0.601**; where ** denotes p<0.01)*. Land loss was also correlated with the number of total male members of the household ***"HH-Males"*** *(0.274**)* across the two village cases (Table 6.5). Appendix 6.4 shows total number of males in the household also correlated positively with household labour *(0.527**)* and perceived loss of household income *(0.390**)*. Thus, larger households tended to perceive greater loss, and this was associated with greater loss of land. Both project developers did not regard land loss a basis for compensation, because they did not recognise the claim.

Table 6.5: Variables correlated with the loss of land in the village cases

Type of factors	Variables/Factors	Pearson's Coefficient of Correlation (PCC)		
		M'baya	*Idete*	*Overall*
Demographic factors	Household size (N) ***"HH-Size"***	**0.443**** *(N=38)*	**0.450**** *(N=55)*	**0.248*** *(N=93)*
	Number of male members of the household (N) ***"HH-Males"***	**0.390*** *(N=38)*	**0.411**** *(N=55)*	**0.274**** *(N=93)*
Production Factors	Household workforce (labour) per ha (N/ha) ***"HH-Labour"***		**0.430**** *(N=55)*	
	Distance from home to the rented land (km) after compensation ***"RL-Distances"***		**0.596**** *(N=21)*	**0.601**** *(N=22)*
Distribution factors	Benefits perceived and ranked by household heads (arbitrary weight) ***"HH-Benefits"***	**−0.544**** *(N=38)*	**−0.537**** *(N=55)*	

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Source: Household Verification Survey (2007).

The results show that the distance from affected parties' homes to where land for rent was available increased with the size of land loss, meaning that where there were large areas of land for rent, this was very far from the homes of the affected parties. Typical examples were noted in Idete village where 21 affected households (respondents) rented lands from the neighbouring villages located at average distances of (3.5 ±1.4) km. (Table 6.1). Distance to farming land also was one of the factors used to describe land suitability in terms of production. The nearer the farm is located from home the more valuable it is, in terms of more time spent in production and on crop protection from both wildlife predation and theft. The findings are consistent to what Nombo and Niehof (2008) found that distant farming influenced by big sugar cane estates in the adjacent Kilombero valley contributes to lowering the resilience of rural livelihoods through affecting household food security and income status. Hediger (1999) has further argued that both the resiliencies of people's livelihoods and their ecosystems measure sustainability of their production systems.

Tables 5.9 and 5.10 present project-influenced benefits and costs as perceived by the respondents in M'baya and Idete villages respectively. During the analysis, relative weights (1 to 5) were allocated (as explained in Section 3.5.2) to the ranked perceived benefits such as support to improve education and water supply (Section 5.4) in order to gauge their relative impact. The perceived benefits correlated negatively with land loss in both villages, M'baya *(−0.544**)* and Idete *(−0.537**)*. The result shows that the effect of land loss felt in both villages tended to decrease with increase of perceived benefits such as preferential employment received from projects. The affected households in both villages acknowledged

that the perceived benefits provided, particularly the supports in terms of in-kind compensation, have helped their communities significantly in terms of education and health services. This confirms that rural people perceived lack of facilities and services to support their livelihoods and development. This provides an opportunity for the project developers to use potential benefit as an entry point to the host communities in order to engage in negotiating for their future state of affairs. However, at high transaction costs and asymmetry of information this can be regarded as 'blackmail' or buying off the affected parties and host communities. Rawles (2002) cautions that both compensation payments and benefits to the affected parties or host communities should be well planned and implemented in order to avoid them from being regarded as a bribe.

6.3.2: Factors associated with the perceived loss of household income

During the verification survey, respondents also estimated total annual flows lost per household following project operations in their area, as explained in Section 6.2.1. The estimated perceived loss of household annual income was measured in Tanzanian Shillings (TZS) per household (hh). Present values of future annuity of perceived losses of incomes were worked out as per Section 6.2.1. The area of land lost by each affected household, measured in hectares, correlated positively with perceived loss of household income in M'baya *(0.619**)* and Idete *(0.582**)* villages (Table 6.6).

Table 6.6: Variables correlated with the perceived loss of annual household income (TZS/household) in the village cases

Type of factors	Variables/Factors	Pearson's Coefficient of Correlation (PCC)		
		M'baya	*Idete*	*Overall*
Demographic factors	Household size (N/hh) ***"HH-Size"***	**0.520**** *(N=38)*	**0.367**** *(N=55)*	**0.483**** *(N=93)*
Production factors	Size of land lost by household (ha/hh) ***"HH-Land loss"***	**0.619**** *(N=38)*	**0.582**** *(N=55)*	**0.647**** *(N=93)*
	Time a household has worked on the lost land (years) ***"Land occupancy"***	**0.354**** *(N=38)*	**0.493**** *(N=55)*	**0.401**** *(N=93)*
	Distance from home to the land rented after compensation (km) ***"RL-Distances"***		**0.478**** *(N=21)*	**0.486*** *(N=22)*
	Value of *"annual crops"* (TZS/hh)		**0.620**** *(N=55)*	**0.577**** *(N=76)*
	Value of *"permanent crops"* (TZS/hh)	**0.782**** *(N=35)*		**0.750**** *(N=41)*
Distribution factors	Amount of compensation paid per household (TZS/hh) ***"Compensation"***	**0.432*** *(N=30)*	**0.792**** *(N=13)*	**0.448**** *(N=43)*

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Source: Household Verification Survey (2007).

The period of time (in years) for which the household has worked on the land lost (land occupancy) in M'baya and Idete showed positive correlations of *(0.354**)* and *(0.493**)* respectively with perceived loss of household income. Land occupancy shows population migration into new areas. Comparing average values of land occupancies of M'baya (39.3±3.7) and Idete (18.4±1.6) (Table 6.1), confirms why claims for property rights by the affected parties at Idete village were not considered, as their average land occupancy was less than twenty (20) years. Thus land occupancy has implication to compensation entitlements. An affected party can claim property rights after occupying land continuously for more than twenty years.

Distance from home to the location of alternative land obtained either by allocation (replacement), renting or purchase was positively correlated *(0.478**)* with perceived loss of annual household income in Idete (Table 6.6). The effects of this factor on agricultural production have been discussed in Sections 5.2.2*(iii)* and 6.3.1.

The value of each crop cultivated was measured using a combination of its relative proportion in a mixed cropped farm using a scale of (0, 0.25; 0.5; 0.75 & 1.0), number of times the crop is harvested in a year (i.e. 1, 2, 3 & 4) and its average price per tonne (TZS/t) in the nearby market. Thereafter, crops were put into three groups (i.e. annual, semi-permanent and permanent or perennial crops) and the value for each category was worked out by summing up values of all crops falling in the each group. Results showing incomes of rural households were strongly influenced by market prices of agricultural crops (Table 6.6). Crops such as coconut (for M'baya) and rice (for Idete) that are given higher importance by the affected parties need careful identification and maximum attention during compensation, valuation in particular.

6.3.3: Factors associated with perceived intangible losses

According to household cases, intangible losses are those that cannot easily be measured in monetary terms but their effects are felt and can be identified. These include loss of access to and use of natural resources; fears or worries, and perceived risks and hazards; lack of peace of mind and others of similar nature. These losses were ranked by respondents and given relative weights during the analysis (as explained in Section 3.5.2) in order to measure and relate them with other quantitative variables.

Table 6.7 indicates that intangible losses correlated with other characteristics of households such as the size and age composition of household members. Relative size of household workforce was measured by the number of household members (aged between 18 and 55 years) available to work on a land possessed by a household. At the village case level, the intangible losses only correlated positively with household workforce in Idete *(0.344**)*. Table 6.7 also shows that when villages were pooled together, intangible losses were negatively correlated with age of respondents measured in years *(–0.249**)*; land occupancy *(–0.278**)*; land size (ha) currently owned by household *(–0.210*)* and; perceived benefits provided by projects *(–0.255**)*. Some of these variables correlated to each other (Appendices 6.2, 6.3 and 6.4). For example, age of respondents had a positive associations with perceived benefits provided by projects *(0.386**)* and land occupancy *(0.428**)*. The coefficients of correlation ranging between 0.2 and 0.4 are categorised as weak correlations (Salkind, 2004). But Field (2005) recommends interpretation be carried out for statistically significant coefficients, as these may provide meaningful and useful information.

Table 6.7: Variables correlated with perceived intangible losses in the studied villages

Type of factors	Variables/Factors	Pearson's Coefficient of Correlation (PCC)		
		M'baya	*Idete*	*Overall*
		PCC	PCC	PCC
Demographic factors	Age of the household head (years) ***"HHH-Age"***			**–0.249**** *(N=120)*
Production factors	Household workforce (labour) (N/hh) ***"HH-Labour"***		**0.344**** *(N=60)*	
	Time a household worked on the lost land (years) ***"Land occupancy"***			**–0.278**** *(N=93)*
	Land currently owned by household (ha/hh) ***"HH-Landholding"***			**–0.210*** *(N=113)*
Distribution factors	Benefits perceived and ranked by household heads (weighted Number/hh) "HH-Benefits"			**–0.255**** *(N=120)*

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Source: Household Verification Survey (2007).

The variables of age of respondent and years of land occupancy reflect knowledge and experience a respondent has with respect to his/her life and environment. Increase in both variables is associated with lower intangible losses and in this case older farmers with long land occupancy seemed able to sustain shocks caused by compensation more readily perhaps than young farmers. This is evidently true, as the young farmers at their active age are normally ambitious and tend to engage themselves in many productive activities such as

farming, bee keeping, charcoal making, crafting and many others. For example, when their access to natural resources is restricted, they are likely to encounter significant losses associated to psychological effects. If not counselled and supported, they can easily encounter other severe health losses such as depression as they discover their future options have been reduced. They are likely to fall into a vulnerable group. These views were expressed by several household cases in Idete (Appendices 5.7; 5.8; 5.12 and 5.14). For example, household case shown in Photo 6.5, his house has a message written after many people lost their farms to advise young people not to fear losses because life is full of ups and downs, but options exist as well.

Photo 6.5: One of the uncompensated households in Idete advising young people *"not to fear losses, because life is full of ups and downs, but options exist as well"*

Affected elderly people also become a vulnerable group, when they have nobody to depend on and especially when they realise that they have lost their assets such as land and/or homes that they relied on for most of their life. Appendix 5.12 illustrates a household case at the age of 85 which was among the uncompensated people in Idete, but he had the benefit of being cared for by his sons. These results raise an important question of livelihood vulnerability in various social groups in relation to compensation.

One of the strategies to help social groups vulnerable to compensation that has arisen from the correlation analysis is to increase the benefits and other supports provided to the host communities. Community members can have their local arrangements for utilising part of the

received support and directing them to reduce vulnerabilities. For example, part of the social or bonus funds that Idete village receives from KVTC annually can be used in providing necessary assistance according to needs, such as income or food support for affected old people or organising training and advisory services for affected young people.

Most of the land currently occupied or used by the affected parties is what remained after losing part of their land to the project. The correlation result shows that perceived intangible losses increase as land occupied before gets smaller. This is consistent with previous findings regarding land loss severity. The computed ratio of land lost to land occupied or used before (presented in Tables 5.4 and 5.6) measures severity of land loss and is discussed in section 5.2.2 *(iii)*). Considering Idete as an example, as land loss severity increases, land currently occupied or used decreases and household labour per ha increases as well and, this can lead to household labour redundancy. This suggests an important aspect for compensation planning that the baseline information should as much as possible include relevant information about possible losses including analysis of land loss severity. It also suggests that the household labour likely to become redundant due to land loss can be kept actively productive by providing affected households with another land elsewhere, but the distance factor needs to be taken into account. Alternatively, the potential utility of redundant household labour can be increased in many ways, for instance, providing them with training in order to engage them in other possible kinds of income generation such as preferential employment offered to Idete's villagers through KVTC contracts (Appendix 4.4).

6.4 Regression analysis of variables associated with perceived losses

All factors or variables identified to have significant correlation with land loss, household income loss and intangible losses (see appendices 6.2, 6.3 and 6.4 for correlation matrices) were used in regression models. Prior to running the multiple linear regression analysis (Equation. 6.2), predictor variables in each category for each case were examined for inter-correlation. For instance, if two predicators were found to correlate moderately or strongly (0.4 – 0.9) with each other, one was dropped from the regression analysis in order to reduce the multi-co-linearity effect (Field, 2005). Since this screening did not eliminate the multi-co-linearity effect completely, the results of the predicted regression models need careful interpretation. It is also worth noting that not all respondents responded to all questions, thus prediction of some regression models at village case level involved small samples. The multiple linear regression equation used was given by the following expression:

$$\mathcal{Y} = a + b_1\mathcal{X}_1 + b_2\mathcal{X}_2 + \ldots + b_n\mathcal{X}_n + \varepsilon \qquad (6.2)$$

Where:

$\mathcal{Y}$ = *dependent variable (criterion)*
a = *constant (intercept)*
$\mathcal{X}_1\ \mathcal{X}_2$ *to* $\mathcal{X}_n$ = *1st, 2nd to nth independent variables (predictors)*
b_1, b_2 *to* b_n = *Coefficients of 1st, 2nd to nth predictors*
ε = *error term (residual) i.e. the difference between the predicted and actual value*

6.4.1: Relationships between predictor variables and loss of land by households

The weak correlations observed between land loss and most of the variables (Table 6.5) did not support regression analysis of predicting household land losses in both village cases. Perhaps, this effect was partly contributed by the fact that land is a typical institutional issue whose allocation is influenced by policy-legal and market factors. These observations however are consistent with the ADB_{Asia}'s (2007) conclusion that it is practically impossible to determine a fair value of land using mathematical expressions. Like other commodities in the market, demand and supply of land vary over time and place. The size and quality of land affect its market value as well. In theory, the market value of land is determined by a price reached between a willing seller and a willing buyer in a perfect[21] market, where the price reflects the present value of future capital gains from the land, discounted at the rate adjusted using commercial interest and inflation rates over a relevant period of time. For imperfect or inactive markets that are commonly found in developing economies, ADB_{Asia} (2007) suggest indirect quantification methods such as the income approach, which is based on capitalization of income.

6.4.2: Relationships between predictor variables and perceived loss of income

The variables listed in Table 6.6 were used to estimate regression models of perceived loss of household annual income (TZS/hh) in village cases. Table 6.8 shows that three predictor variables were able to explain 92% *($R^2=0.92$)* of the variability in the perceived household loss of annual income (TZS/hh) across village cases *($N=120$)*. The predictor variables with their relative weights (β-values) in the overall regression model include size of land loss (ha) (β=0.635), the value of annual crops (β=0.624) and value of permanent crops (β=0.379).

[21] The market is said to be perfect when it has many potential buyers and sellers and its market forces operate freely.

The results in Table 6.8 show that the value of permanent crops (TZS/hh) and size of land loss (ha) explained 83% *(R^2=0.83)* of the observed variability in the perceived household loss of annual income per hectare in M'baya. The value of permanent crops is a stronger predictor variable (β=0.688) than size of land loss (β=0.478) for M'baya. Regression model for Idete (Table 6.8) showed different results, whereby three predictor variables explained up to 92% *(R^2=0.92)* of the observed variability in perceived loss of household annual income per hectare. The value of annual crops was the strongest predictor variable (β=0.806), followed by size of land loss (β=0.417) and the distance from home to the farmlands rented after compensation (β=0.297).

Table 6.8: Regression models for perceived loss of household annual income (TZS/hh).

Case	Model	Predictor variables	Unstandardised Coefficients		Standardised Coefficients (Beta 'β')	*t*	R^2
			B (10^6)	*SE* (10^6)			
M'baya	**1.**	Constant	0.19	0.13		1.445	0.61
		Value of permanent crops by household (TZS/hh)	0.66	0.09	0.782	7.209***	
	2	Constant	-0.41	0.13		-3.251**	**0.83**
		Value of permanent crops by household (TZS/hh)	0.58	0.06	0.688	9.293***	
		Size of household land loss (ha/hh)	0.71	0.11	0.478	6.464***	
Idete	**1.**	Constant	0.33	0.32		1.022	0.51
		Value of annual crops by household (TZS/hh)	1.07	0.25	0.712	4.296***	
	2.	Constant	-0.77	0.23		-3.295**	0.87
		Value of annual crops by household (TZS/hh)	1.22	0.13	0.806	9.040***	
		Size of household land loss (ha/hh)	0.67	0.10	0.609	6.825***	
	3.	Constant	-0.63	0.19		-3.259**	**0.92**
		Value of annual crops by household (TZS/hh)	1.22	0.11	0.805	11.229***	
		Size of land loss (ha)	0.46	0.10	0.417	4.475***	
		Distance from household home to the land rented after compensation (km)	0.04	0.01	0.297	3.209**	
Overall	**1.**	Constant	0.19	0.44		0.440	0.47
		Size of household land loss (ha/hh)	1.02	0.23	0.686	4.419***	
	2.	Constant	-0.39	0.31		-1.257	0.78
		Size of household land loss (ha/hh)	0.92	0.16	0.614	5.905***	
		Value of annual crops by household (TZS/hh)	1.31	0.24	0.558	5.365***	
	3	Constant	-0.99	0.22		-4.456***	**0.92**
		Size of household land loss (ha/hh)	0.95	0.10	0.635	9.638***	
		Value of annual crops by household (TZS/hh)	1.47	0.16	0.624	9.341***	
		Value of permanent crops by household (TZS/hh)	0.59	0.10	0.379	5.697***	

****p< 0.001*
***p< 0.01*
** p<0.05*
Source: Household Verification Survey (2007).

It is very important to note that land loss appears in all regression models, signifying its importance in income matters for rural households. For example, considering land loss predictor variable based on final regression models for the two villages, if land loss in M'baya and Idete increases by 1 ha, it will respectively result into 0.7m and 0.5m (TZS/hh) increase of perceived loss of household incomes. The difference in increase of household loss of income in both villages caused by loss of 1 ha of land can largely be explained by the nature (types) of crops grown in the two villages and aspects of land renting. Unlike Idete, incomes in M'baya largely depend on permanent crops. It is therefore practically impossible to rent-in land for raising permanent crops. Despite costs involved in renting farmlands, the availability of land for renting in Idete's neighbouring villages has reduced the effects of land loss by allowing the affected parties to at least continue with agricultural production.

Land renting was positively associated *(0.448**)* with compensation received in Idete village, where land renting practice appeared to be more common than in M'baya village. However, the distance from a farmer's home to a rented farmland appeared to have negative implication on perceived loss of household annual incomes in Idete. The results in Table 6.8 show that an increase of 1 km distance from home to where rented land is located results in a corresponding increase in the perceived loss of household annual income of 0.04m (40,000/=) TZS. Causes of income loss due to distant farming have been discussed in Sections 5.2.2*(iii)* and 6.1.1. Harrison's (2006) survey that involved 29 villages in Kilombero valley found 41.2% households rented-in land within their villages and 19.1% rented land from neighbouring villages located 5–12 km from their homes. The latter group rented land more cheaply but were required to camp in their fields day and night in order to guard their crops against theft and damage caused by wildlife.

Another significant variation between the two villages is based on the influence the dominant category of cultivated crop has on the perceived loss of household income. Previous findings show that incomes in M'baya and Idete, respectively, depend on permanent and annual crops (see Table 6.1). But it is worth noting that annual crops (β=0.624) appear to be a more important predictor variable than perennial crops (β=0.379) in regression model no. 3 of an overall case (Table 6.8). This can partly be explained by the fact that in Idete annual crops have greater value than permanent crops and, this is largely influenced by land qualities. Some affected parties in Idete cultivated annuals in fertile valleylands that keep moisture

throughout the year, and this enabled them to grow multiple crops per year, for example rice (twice), maize (thrice) and horticultural crops (3-4 times) a year. This confirms the opinion of one of the household cases *(Mzee Rutuba)* interviewed at Idete, who stated in a jest that *"if the affected people were to fight against the project, that war was supposed to be named the war of valleylands and soil fertility"* (Appendix 5.9). This is consistent with Kangalawe's and Liwenga's (2005) findings that the livelihoods of people of Idete depend on wetland farming, where 83% of their food and 77% of their income come from the wetlands (valleylands).

The above regression results confirm that income losses of rural households are broadly land based but very specific to land attributes such as soil fertility and moisture content; land availability for owning or renting; distance from home to where alternative farmlands are located and; types, nature and values of crops cultivated on land. Strategies to minimise income losses should aim at minimising land loss as much as possible and incorporating measures that consider carefully other arising issues as listed above.

The amount of compensation paid to the affected parties in both village cases were highly correlated with demographic factors and perceived loss of household annual income (Appendices 6.2, 6.3 and 6.4). The linear regression analyses in Table 6.8 above were repeated while including compensation payments along with other predictor variables correlated with perceived loss of household annual income. The perceived loss of household annual income was assumed to be a dependent variable because it was established earlier in Section 5.2.3*(ii)* that compensation payments in both villages were mainly for the losses of agricultural crops. Agriculture was and still is the major source of income in the studied communities. The regression analyses were carried out using the *'enter'* method command as opposed to *'stepwise'* (used in Section 6.4.2) in order to have all predictor variables analysed. Table 6.9 shows that compensation paid was not significant in all regression models (i.e. $p=0.965$ for M'baya, $p=0.828$ for Idete and $p=0.754$ when both villages were pooled together as one sample).

Table 6.9: Regression models for perceived loss of household annual income (TZS/hh).

Case	Predictor variables	Unstandardised Coefficients		Standardised Coefficients (Beta 'β')	*t* (p-value)	R^2
		B (10^6)	*SE* (10^6)			
M'baya	Constant	-0.38	0.15		-2.482*	**0.84**
	Value of permanent crops by household (TZS/hh)	0.60	0.07	0.735	8.546***	
	Size of household land loss (ha/hh)	0.66	0.14	0.438	4.780***	
	Compensation received by household (TZS/hh)	-0.02×10^{-7}	0.41×10^{-7}	-0.004	-0.045 ***(p=0.965)***	
Idete	Constant	-0.21	0.42		-0.497 *(p=0.706)*	**0.99**
	Value of annual crops by household (TZS/hh)	1.16	0.12	0.829	9.614 *(p=0.066)*	
	Size of household land loss (ha/hh)	0.26	0.10	0.254	2.660 *(p=0.229)*	
	Distance from home to the land rented after compensation (km)	0.06	0.02	0.422	3.586 *(p=0.173)*	
	Compensation received by household (TZS/hh)	0.69×10^{-6}	2.5×10^{-6}	0.030	0.277 ***(p=0.828)***	
Overall	Constant	-0.98	0.28		-3.564**	**0.91**
	Size of household land loss (ha/hh)	0.96	0.11	0.650	9.029***	
	Value of annual crops by household (TZS/hh)	1.46	0.18	0.615	8.263***	
	Value of permanent crops by household (TZS/hh)	0.61	0.12	0.392	5.071***	
	Compensation received by household (TZS/hh)	-0.02×10^{-6}	0.07×10^{-6}	-0.025	-0.318 ***(p=0.754)***	

****p< 0.001*
***p< 0.01*
** p<0.05*
Source: Household Verification Survey (2007).

Comparing results in Tables 6.8 and 6.9, compensation paid explained very little of the observed variations in the perceived loss of household incomes in both village cases and even less so for the overall case because of a multi-co-linearity effect. Despite the chance that respondents adopted a strategic bias in estimating their perceived losses of household income, this finding indicates that possibilities exist where the processes to assess and calculate losses done by project developers may not cover all losses adequately. This is because the perceived loss of household income and actual compensation paid were not strongly correlated and that actual compensation is not a good predictor of perceived loss of household income. However, the analyses in Sections 6.2.1, 6.2.2 and 6.2.3 confirm that actual loss is a better predictor of perceived loss of household annual income than actual compensation. Furthermore, as discussed earlier, differences between actual losses and compensation paid (and hence also between perceived and actual compensation) may also be due to reduced entitlements to full compensation. This is confirmed by the comparisons of the village cases in relation to the

above-discussed differences (i.e. Figure 6.2*a* against Figure 6.3*a* and Figure 6.4*a* against Figure 6.5*a*) which were greater in Idete than M'baya.

6.4.3: Relationships between variables and perceived intangible losses"

An attempt was made to construct a regression model of the perceived intangible losses in the overall case using predictor variables listed in Table 6.7. However, no variables were statistically able to explain variations in the perceived intangible losses across village cases. Partly this is influenced by the nature of the intangible losses, which is related to psychological health and therefore call for special approaches in measuring them, as their cause may have a long history back related to the affected person. Gregory *et al.* (1991) found the perceived intangible losses are conceptually distinct and they often interact with other losses and result in severe effects on human welfare. Sebenius *et al.* (2005) specifically explained that losses due to welfare disruption, psycho-cultural stress and social disarticulation cause serious inherited risks to the affected parties of becoming successively poorer.

Based on the findings previously reported from household cases at Idete (Section 6.3.3), the perceived intangible losses should not be overlooked or underrated, especially when the affected parties are young to middle aged people. These insights however, call for specific studies to be undertaken in order to clearly determine their linkages to household production systems and establish ways of estimating or quantify losses affecting this particular group.

6.5 Key messages

The following are major issues which emerged when different types of losses encountered by households or communities were compared with compensation payments received in the context of development projects.

Potential sources of losses

Land is a central and critical factor of rural production, and loss of land affects significantly income flows of rural households and potential household labour redundancy. Losses associated with land were both quantitatively (i.e. size of land) and qualitatively associated with topography, distance from home, type of soil and soil fertility. Intangible losses that can be felt and identified but cannot easily be measured in monetary terms can cause vulnerability to various social groups including young and elderly people.

Compensation payments and undercompensation

Property rights associated with long-term occupiers or users of land in most of rural areas are not recognised and hence are easily assumed to be '*squatters'* or '*encroachers'*. This affects compensation entitlements of many rural people and generally leads to undercompensation, complicated compensation disputes and potential high transaction costs. Moreover, information on farm inputs (costs) and outputs (incomes), prices and other important data are lacking and this affects the estimation of compensation payments. There is very limited information on agricultural production and incomes in most rural households in developing countries such that deriving reliable estimates is problematic. Reliable estimates of the earning capacity of land as a basis for compensation loss of income are not available unless special attempts are made to collect information.

Compensation through reinstating initial utility of the affected parties

Depending on the party that has an entitlement and whether the affected parties have the land services at the moment, it is possible to determine who compensates who using indifference curve theory that directs compensation payments towards maintaining satisfaction of the affected parties in their original utility function. This provides a possible alternative approach towards prediction of losses and determination of compensation payments the affected parties deserve.

Chapter 7 A COMPENSATORY FRAMEWORK FOR SUSTAINABLE DEVELOPMENT IN DEVELOPING ECONOMIES

This chapter presents and discusses various contextual factors deduced from previous chapters (Figure 7.1) to propose a framework for compensation as a basis for guidance on procedural and practical matters of compensation. The chapter presents a proposed framework in terms of a researched definition, values, principles, procedure, guidelines and criteria of compensation that promote sustainable development in the developing economy context. The chapter also presents "a self-critique" of the proposed framework, hypothetically examined against various design criteria. Finally, it critically evaluates relevance and potentials of the Coase Theorem in understanding project-influenced compensation in developing nations.

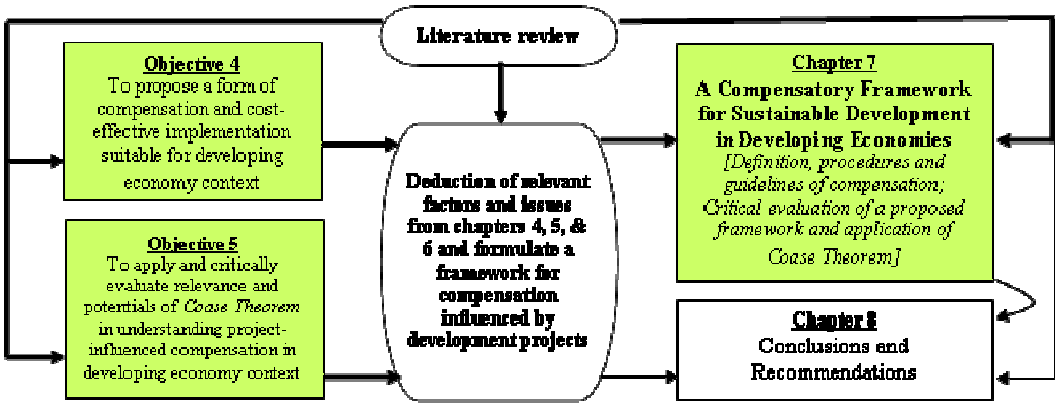


Figure 7.1: Deduction of contextual factors for compensatory framework guidelines

7.1 Defining fair compensation in the context of development projects

A definition of project-influenced compensation was derived from the following key points of the findings of this research and reads as follows:

> *A fair compensation practice in the context of development projects can be defined as one comprised of mitigation measures that equitably redistribute benefits and costs of a project between the gainers and losers and also addresses disputes and concerns of social justice and fairness through the negotiation process.*

Points from the preceding analysis that are relevant here include:

- Section 5.2.2 discusses land as a critical factor of rural livelihoods and loss of land impairs livelihoods of the affected parties, increases land disputes and pressure on ecosystem functions. Compensation therefore should be a measure to maintain

welfare of the affected parties. Compensation should also be a potential strategy for addressing disputes and issues of concerns fairly.

- In contrast to the current conventional 'one-payment' monetary compensation, Sections 4.4.3*(ii)* and 6.2.4 indicate that benefits-costs sharing schemes between the developer and affected parties and host communities taking a variety of forms have great potential to promote sustainability in all aspects. Such schemes can enhance intragenerational and intergenerational equity and have potential to reduce intrusion of elites attracted by monetary interests and subsequent reductions of disputes and transaction costs during compensation process.
- As discussed in Section 4.4.1*(ii),* compensation entitlements are linked to property rights and Section 6.3.2 indicates that unclear property rights leads to loss of rights to compensation or undercompensation. Therefore clear property rights promote good compensation practices.
- Section 4.3 has demonstrated that the majority of the compensation stakeholders have great interests in compensation and possibilities exist for the project developers and affected parties to negotiate compensation payments. These suggest that compensation should be a process that involves all key stakeholders, affected parties and host communities in particular. Adoption of negotiation approach would in turn promote participation of affected parties and host communities.

7.2 Factors describing characteristics of fair compensation practices

Characteristics of fair compensation practices are explained in terms of factors that make up values, guiding principles, procedures and support mechanisms of fair compensation practices. These factors are deduced from previous results.

7.2.1: Values of fair compensation practices

Values are set of principles or preferences that people or organisations use to guide their behaviour as they seek to achieve desirable outcomes (Aiken, 2002). Where outcome-based values are embedded in the process they help people to build relationships in order to unite around a common goal (Phillips, 2006), have clear focus on their priorities and acquire consistency throughout the process (Sagiv and Schwartz, 2007). For a successful compensation process, four core values have been identified and are suggested as follows (Figure 7.2).

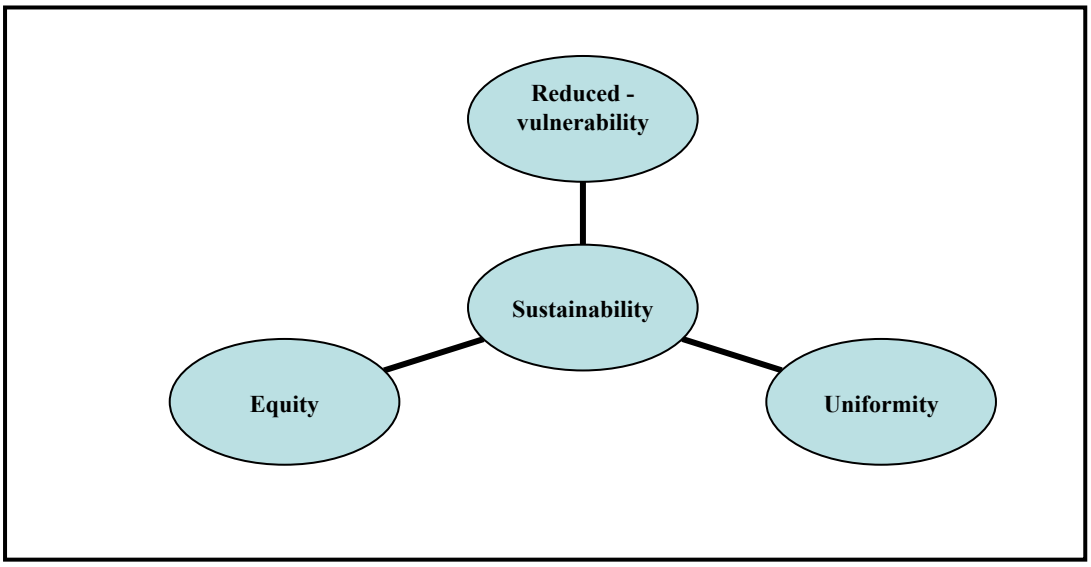


Figure 7.2: Proposed core values for fair compensation practices

i) Reduced vulnerability

Development projects in developing nations aim to improve people's well-being, yet such projects impact negatively on some portion of the population. This typically occurs because the projects need land to operate on and, projects are likely to impair production activities, flows of services and other benefits. Sections 5.4.1 and 6.3.3 discussed the likelihood of development projects to cause hazards, risks and other intangible losses. It is worth noting that all these can negatively affect the affected parties or host communities socially, culturally, economically or psychologically and make them vulnerable to food insecurity, poverty and health problems. The compensation process therefore should be designed to reduce risks, hazards and the vulnerability of various social groups.

ii) Uniformity

Among other aspects, Section 4.4.2*(i)* discussed the inconsistency in treating and handling compensation claims of the affected parties. This has negative consequences in building trust and relationships between the project developers and community members for the common goals of sustainability. In this case, the affected parties or host communities should be handled and treated equally according to the legal framework and administrative procedures and guidelines for compensation.

iii) Equity

Under the current practices of compensation, both the project developer (compensation payer) and affected parties and host communities (compensation beneficiaries) tend to forget the welfare of the future generations (Sections 5.2.2; 5.2.5; 5.3 & 5.4). Compensation should aim at addressing disputes and concerns of social justice within the community and also ensuring that project benefits and costs are equitably distributed between project developers and affected parties and host communities. This has to be done at project level. On the other hand, community leaders should make sure that all community members get equal access to and enjoy from project benefits that are channelled to the community through in-kind support and other assistances. Both the project developer and community members should join efforts to ensure that benefits and costs are fairly distributed between the present and future generations.

iv) Sustainability

The current development and compensation processes cause gradual deterioration of livelihood assets of the affected parties (Section 5.2) and, ecosystem functions and services (Section 5.3). There was a perception that development projects were not performing at their full potential towards achieving their goals and objectives due to lack of involving key stakeholders (Section 4.4.2*(iii)*). Apart from ensuring continuity of livelihoods in host communities and ecosystem functions and services, both the project developers and host community members should jointly promote continuity of all positive outcomes of development projects and compensation schemes.

7.2.2: Guiding principles of fair compensation

There is majority agreement on an overall principle of compensation that livelihoods of the affected parties should not be worse-off as a result of development projects (Magyari-Beck, 2002; ADB$_{Africa}$, 2003; ADB$_{Asia}$, 2007). However, its achievement depends on the following specific factors identified in this study and presented below as principles:

i) Participation

The current regimes of compensation in Tanzania are largely dominated by elites and intruders attracted by their own interests (Section 4.4.2*(iii)*). This has caused asymmetry of information during compensation process (Sections 4.3.1, 4.3.2 & 4.4.2*(iii)*) and significantly

reduced participation of the affected parties and host communities. Two things need to be done in order to promote participation of the marginalised affected parties and host communities in compensation processes. Firstly, compensation process should involve experts or actors with critical roles to the process. Secondly, the government organisations responsible for coordination of development projects and compensation matters should be charged with responsibilities of disseminating project and compensation scheme information. Other key stakeholders can also help in this respect. Information dissemination should not remain entirely the responsibility of project developers and their consultants as stated in many policy and legal documents such as Environmental Impact Assessment procedures and guidelines (NEMC, 1997).

ii) Transparency

Transparency promotes both trust and good relationships among stakeholders (Friedman and Miles, 2006). As reported in Section 4.4.2*(iii)*, lack of transparency in the current development and compensation processes in Tanzania has been a big limiting factor in information flows and the communication process. Development and compensation processes should facilitate dialogue and forums where key stakeholders interact and decide in an open manner and project developers and government actors should know that not all relevant information is 'confidential'. Thus, neither unnecessary information nor confidentiality should be entertained in compensation processes.

iii) Negotiation

Section 25 of the Regulations to implement the Village Land Act, 1999 as presented in Section 2.5.4.1 lists seven possible options of forms of compensation that may be considered by the affected parties and project developers. The seventh item *"and other forms of compensation as may be agreed between the claimant and the developer"* emphasises the need and importance of the two sides to engage in dialogue in order to explore other suitable type(s) of compensation. Essentially, the above legal requirement provides an opportunity for the affected parties and host communities and project developers to negotiate.

A negotiation process involves voluntary participation of two parties without intervention by a third party (Ewert *et al.*, 2004) and its success depends on the consensus or mutual agreement reached and compromise carried by each party (Kunreuther and Easterling, 1996). According to Hackl *et al*. (2007), a negotiation process is successful if its outcomes deliver

acceptable solutions to the problem where both sides experience maximum benefits and minimum costs. This is consistent with the Pareto optimality criterion which was developed further by Hicks and Kaldor into the compensation principle (Section 2.4.2). Essentially, the concept of this principle emphasises the need for those who gain from the change could compensate those who lose because of the same change.

iv) Cost-effectiveness

Section 4.4.4 has shown that conflict of interests, resolution of complaints, intermediary parties and agents (intruders) and, unclear property rights are sources of compensation disputes. These factors contribute to high transaction costs during compensation processes. Experience in the resolution of compensation disputes by one civil society organisation in Tanzania (Legal Environmental Action Team Tanzania 'LEAT') indicated that cost implication of handling and resolving compensation disputes is low in negotiation process and very high in litigation process (Section 4.3.4*(ii)*). Based on LEAT's experience, cost-effective ways that promote reconciliation among potentially disputing parties during the negotiation phase are required, rather than creating subsequent conflicts and disputes which are more expensive to resolve.

7.2.3: Procedure of a proposed compensation framework

Among others, Section 4.4.2 discusses various aspects of administration, planning, valuation, implementation and monitoring of compensation schemes with the view of suggesting possible ways of improving compensation practices. The suggested improvements to the compensation process are presented in the conceptual and analytical framework of this study (Figure 2.9; Section 2.6). These include the following key stages: Initial notification, Formal declaration, Baseline survey, Valuation, Negotiation, Implementation (i.e. compensation payments) and Monitoring (Figure 7.3).

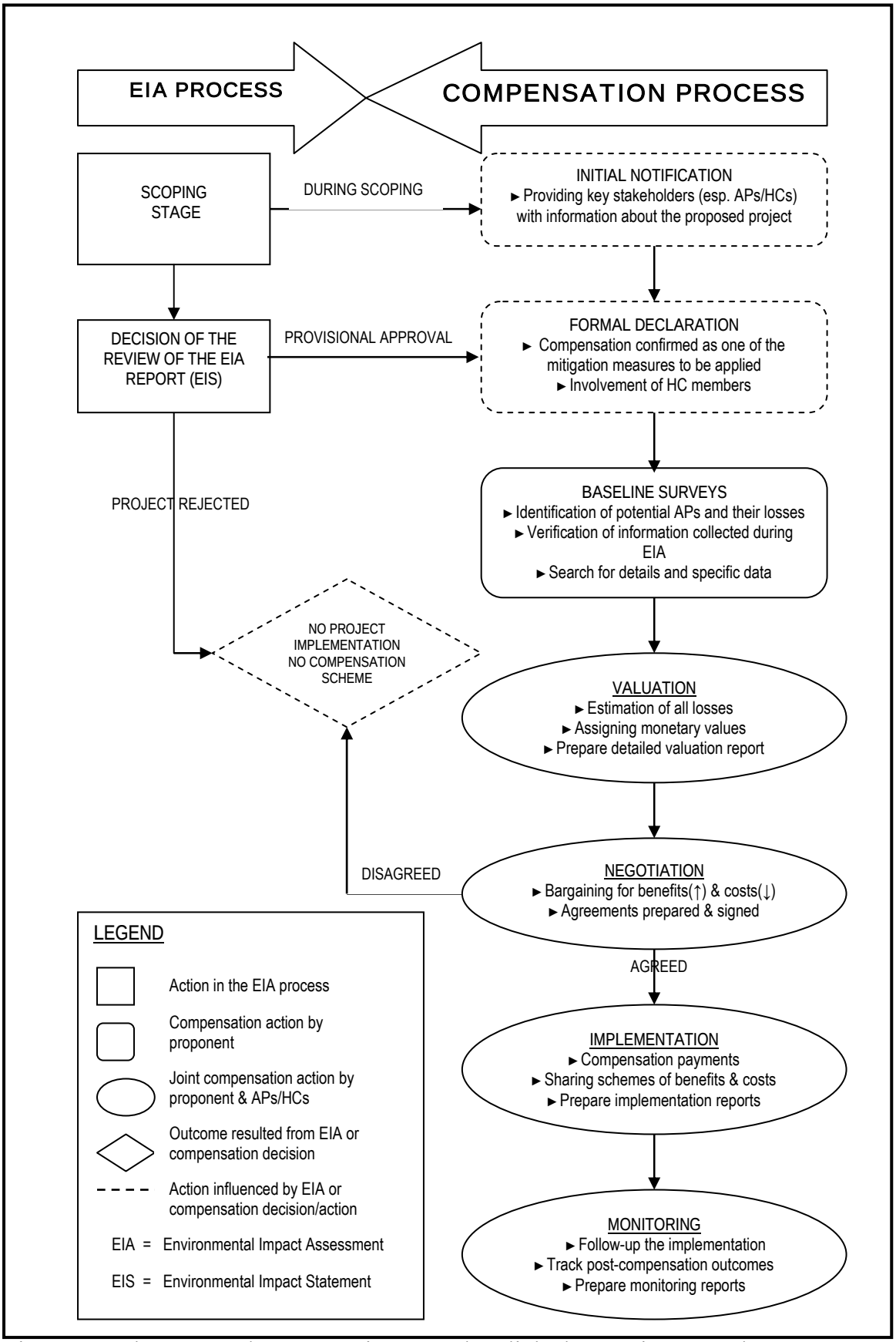


Figure 7.3: The proposed compensation procedure linked to Environmental Impact Assessment (EIA) process in order to benefit from information generated by EIA studies

i) Initial notification and formal declaration

Section 4.4.2*(iii)* indicates that late or lack of communication about project proposals and compensation schemes to host communities is an issue of great concern to host communities. According to ADB$_{Africa}$ (2003) early and formal declaration of an intention to develop in a certain area is necessary since it clears doubts the affected parties might have. Early consultation with host communities is critical. Currently in Tanzania, it is a legal requirement that project information should be disseminated by the developer during early stages of environmental impact assessment (URT, 2004), but this is often done too late.

In order to reduce costs, project developers can use the same early stages of environmental impact assessment to serve host communities with initial notification and formal declaration of expected compensation scheme. Public meetings have been proven to be a simple, formal and cost-effective way of consulting, informing and collecting opinions from potentially affected parties.

ii) Baseline surveys

Section 4.4.2*(ii)* discusses factors that affect planning process of the compensation schemes in Tanzania including lack of important information on affected parties and their natural environment. Several measures should be taken to improve the planning of compensation schemes such as increasing applied research into livelihoods, rural development and compensation systems. Following the discussion in Section 4.4.2*(vi)*, monitoring and evaluation of compensation schemes would help to enrich baseline data. Environmental impact assessment systems in Tanzania require environmental impact assessment studies to generate information on affected environment including people's livelihood activities, future scenarios and dynamics of socio-economic, socio-cultural aspects (URT, 2004). Compensation schemes in Tanzania can use and build on baseline information developed during environmental impact assessment studies. Additionally, social impact assessment can provide rich and targeted information for compensation schemes.

The cost benefit analysis of development projects can also inform assessment of compensation gains and losses and, possible ways of distribution. However, Cernea (2008) cautions that the analysis of distribution of benefits and costs required in compensation

schemes should clearly reveal proportions and patterns of allocation of all benefits and costs by different categories of stakeholders.

iii) Valuation

Undervaluation caused by low or outdated rates of compensation and inconsistencies in applying compensation rules and criteria, as discussed in Sections 4.4.2*(iv)* and 6.2.2, were reported to be the most widespread problems during valuation processes in Tanzania. According to Sebenius *et al.* (2005) and Cernea (2008) valuation in which the losses encountered by affected parties are identified and given monetary values is the most troubled compensation stage in developing nations. Resolving valuation problems in relation to undervaluation and inconsistence can potentially minimise compensation disputes. Measures of minimising these problems should involve use of up-to-date compensation rates in valuation and, this calls for frequent review of compensation rates for all crops, land, structures and other losses with respect to market conditions in different areas. It should also involve use of competent valuers who can make use the right methods and techniques to identify and assess losses. Involvement of affected parties and host communities in the identification of their losses and joint setting of criteria for carrying out the rest of valuation tasks would also help to reduce complaints and subsequent low transaction costs during compensation process.

iv) Negotiation

Section 7.2.2*(ii)* shows that parties involved in disputes can potentially achieve solutions based on negotiated mutual agreement. Sections 4.3.2*(ii)* shows that project developers make use of both the Village and Ward leaders to help organise meetings, coordinate valuation and in the resolution of disputes in compensation processes at grassroots level. Despite the findings in Sections 4.3.2*(ii)*; *(iii)*, 5.2.5 and 5.4 which have shown some weaknesses of both Village and Ward based leaders in ensuring the rights of the affected parties, it was also revealed further that villagers entrust their elected leaders more than the appointed and recruited ones. Therefore, the elected leaders, the Village Chairperson and the Ward Councillor at village and ward levels respectively, could work together to organise and lead the affected parties and host communities in the negotiation processes. This can be done through involvement of all the affected parties in a series of meetings in order to raise, discuss and shortlist the main issues of concern that need attention during negotiation.

Among other issues, Section 4.4.2*(iii)* argues that one of the possible hindrances of negotiation is when the affected parties oppose project proposals and compensation schemes from a position of ignorance. It is therefore suggested that an objective assessment of distributional impacts (i.e. benefits and costs) of a proposed project before it begins and before negotiation engagement begins. This could take place during baseline surveys and valuation stages before the negotiation stage as proposed in Figure 7.3. Section 6.2.4 however discusses the household cases viewpoint that negotiation is expected to focus on (i) ways to minimise losses incurred by the individual households and the host community (ii) appropriate compensation payments to individual households and, (iii) appropriate compensation payments to a host community as a whole. This is a suitable framework for the Village Chairperson and the Ward Councillor to use during both the identification and assembly of different interests from the affected parties and make sure all issues of concern are well focused for the negotiations. In order to reduce risks associated with compensation such as landlessness, elderly people failing to re-establish in new settlements, the representatives should ensure that all community based losses are compensated through community based services as discussed in Section 6.2.4. Section 6.3.3 presents the community based compensation in terms of services such as education, health and water in rural areas can provide a safety net for both the *'hidden'* and *'vulnerable'* groups in the community.

The affected parties and host communities need to be informed on various issues pertaining to project proposals, compensation schemes, negotiation and related laws. For instance, they should know well in advance that mutual agreement in negotiation is normally attained through compromise (Section 4.3.2 *(i)*). The aforementioned compromise should be reached through recognition of changes in the overall welfare of the affected parties and host communities that are attributable to a development project compared to the 'without project situation. Each negotiating side should be flexible enough to forsake some rights in order to gain other benefits. They should also know that negotiation has potential for improving involvement of the affected parties and host communities which is currently limited to *'information-giving'* and *'consultation'*. Furthermore, negotiation has potential for improving relationships and building-up of trust between the project developers and affected parties and host communities through working together and supports rendered to each other. As argued in Section 4.4.4, this will sensitise and influence the affected parties and other host community members to render their cooperation during both the meetings and negotiations.

This is supported by Harris (2002) and Hackl *et al.* (2007) through their argument that self-organised parties and coordinated issues of concern during negotiation could potentially help to reduce transaction costs and improve efficiency of the process.

The literatures identify *free-riding* and *holdout* incentives as potential problems associated with large number of affected parties and such problems are likely to affect the bargaining process (Webster, 1998; Hackl *et al.,* 2007; Miceli and Sirmans, 2007 and Cadigan *et al*., 2009). There is a need to keep the number of parties participating in the negotiation reasonable in order to reduce the above-foreseeable problems and enhance efficiency of negotiation process. The affected parties and host communities may choose knowledgeable representatives whom they trust to negotiate on their behalf. Since Section 6.2 presents losses at both the household and community levels, there should be representatives chosen from the affected parties and community at large. This would ensure that interests of both the affected parties as individuals or households and those of the community are adequately represented during negotiation. For example, Section 6.2.4 presents loss of access to and deterioration of ecosystem functions as one of the community based losses likely to affect people's welfare in both the present and future generations. Based on the same reason, it is suggested for this framework that the representatives from the rest of the host community among other issues should make sure that all community losses including intergenerational equity issues (if any) are adequately considered during negotiation. See Section 7.3.3 for more discussion on shared, intragenerational and intergenerational equity issues. In addition, both categories of representatives (i.e. from the affected and non-affected parties) in the community should inform the affected parties and host communities on the progress of negotiation from time to time.

Sometimes during negotiations there might be circumstances in which either a developer is unwilling to pay compensation demanded or the affected parties and host communities are unwilling to accept compensation offered. The negotiating sides should work out to identify and reconsider aspects of disagreement and renegotiate. When all possible means of obtaining efficient solutions from negotiation have been exhausted, it would be time for seeking other solutions although this might result in higher transaction costs. According to the discussions in Section 4.4.4 and Box 4.1, mediation is next to negotiation in dealing with compensation disputes in least possible cost. Based on aspects of costs involved and efficiency, the compensation laws in Tanzania (URT, 1967, 1999a and 1999b) and in many

other developing countries (ADB*Africa*, 2003 and ADB*Asia*, 2007) prefer the use of mediation measures over litigation in resolving compensation disputes. Otherwise, for project proposals of public interests, as presented in Section 2.2.1, the government is likely to implement the compulsory acquisition order to deal with any incentives the affected parties might have, such as *'hold out problem'*. Parallel to compulsory acquisition order, the government should make sure that developers pay compensation that at least reinstates the original conditions of welfare or utility satisfaction of the affected parties with justifiable entitlements (Section 6.2.1).

Sections 4.4.3 presents the findings that most respondents preferred monetary compensation over benefit sharing schemes and in-kind payments. Appendix 4.6 shows that benefit sharing schemes have potential to distribute benefits across the entire community for long periods of time compared to compensation paid in cash. In addition, community based compensation in terms of services such as education, health and water in rural areas can provide a safety net for both the *'hidden'* and *'vulnerable'* groups in the community (Section 6.3.3). However, respondents feared benefit sharing schemes as the schemes might not benefit the individual affected parties or households. Since losses encountered by individual affected parties or households and community at large are distinct, it is therefore suggested that individual or household based losses be compensated through monetary payments as preferred in Section 4.4.3*(i)*. Depending on the negotiation outcomes, all community-based losses should be compensated either through benefit sharing schemes or in-kind payments as per Sections 4.4.3*(ii)*, *(iii)* and 6.2.4. But it worth noting that despite the fact that most community based compensation is in-kind, the same may also be used to compensate individual losses. Compensation through in-kind payment such as preferential employment could be applied to prevent risks associated with those who have no compensation entitlements through land. This would help them share new benefits and offset some losses encountered because of a development project.

v) Implementation

Section 4.4.3*(v)* discusses issues relating to coordination, support mechanisms and compensation payments as components of the implementation stage of a compensation scheme. The following weaknesses or shortcomings exist in the current implementation of compensation and impair the performances in the above-mentioned components:

- The compensation process currently coordinated at the national level is not cost-effective and has become a huge burden to local authorities as far as financial and human resources are concerned. The capacity of local government authorities at district level should be enhanced in order to coordinate compensation matters in their areas.
- Currently, compensation schemes have not provided advisory services for the affected parties and host communities. Resolution of compensation disputes is largely done through costly court processes and many compensation disputes remain unresolved to-date. Project developers should among others establish independent, accessible and affordable dispute resolution unit to act as a third party in settling compensation disputes. For the same purposes of minimising disputes, developers can also establish special teams to advise affected parties on various issues including handling and wise use of their compensation payments. Depending on the size of compensation schemes and nature of shared benefits, a project developer can jointly develop specific guidelines for contractors commissioned to manage compensation schemes.
- Apart from delays in disbursing compensation payments, Section 4.4.3 shows that many project developers over-relied on cash compensation which has many risks such as loss through theft and misuse. Other forms of compensation should be considered as discussed in Sections 4.4.3*(ii)* & *(iii)*. However, implementation of any type of compensation payments depends on the negotiation outcomes between the affected parties and host communities as presented in Section 7.2.3*(iv)* above.

vi) Monitoring

The current compensation regime does not require monitoring of implementation of compensation schemes and their post-compensation outcomes (Section 4.4.3*(vi)*). Very few World Bank funded projects had a monitoring component as an integral part of their environmental monitoring plans. During discussions held with different project officials, some claimed to do monitoring of compensation schemes along with other project monitoring schedules. However, only one monitoring report from one project was seen. Monitoring of compensation schemes should be compulsory and project developers should separate compensation monitoring from project and environmental monitoring schedules. This would promote systematic monitoring to ensure that expected compensation outcomes happen as planned and lessons learned from previous experiences are documented.

7.3 Critical evaluation of the proposed framework

This critique systematically evaluates a proposed framework against the following design criteria (i.e. effectiveness, efficiency, equity, sustainability, administrative feasibility and political acceptability) suggested earlier in the conceptual framework of this study (Figure 2.7). This critical evaluation therefore serves as "an application of a framework" in order to identify gaps from both practical and policy point of views.

7.3.1: Effectiveness

From a management point of view, effectiveness relates to getting things done and is associated with both the process and end results (Chambers, 2009). As per definition of compensation suggested in Section 7.1, an overall desired outcome of a proposed framework is sustainable development, in which well-being of the affected parties and host communities, project welfare and environmental safeguard are achieved. In this case, three distinct perspectives (i.e. household and community; project and; ecology or environment) can be used to measure changes that are happening and their effectiveness following implementation of a compensation scheme. Normally, measuring effectiveness involves the past history, current trends and expectations about the future. However, measuring effectiveness of some qualitative parameters related to the expected compensation outcomes depends on satisfaction levels of compensation beneficiaries. Qualified experts are needed to facilitate and guide planning processes including identification of qualitative indicators for various expected outcomes. Alternatively, checklists for generic qualitative indicators can be generated to provide guidance.

This framework to address issues of social justice, fairness, equity and sustain rural livelihoods in host communities depends not only on the participation of the affected parties and host communities but also whether local people, particularly rural are equipped with necessary information and other specific knowledge to help them negotiate and choose the best options available. However, Mwalyosi (2004) found that local communities in Tanzania were least empowered in demanding fair compensation. Facilitation is therefore needed to at least help affected parties and host communities to mobilise themselves and organise needs and preferences for optimal gains.

In light of the requirements of expertise discussed above, it is probably an optimistic expectation that multidisciplinary teams of experts can be found in developing nations such as Tanzania. Pryor (2006) reported that most of the political-economic systems adopted by many developing countries do not favour effective use of their highly trained personnel and no sign of recovery from this problem was seen in countries in the Sub-Saharan Region. This skills shortage is likely to reduce the effectiveness of a proposed compensation framework.

7.3.2: Efficiency

According to Krishnamurthy (2008), efficiency concerns achieving outcomes at the right time and whether the best means were used. Efficiency can be measured in terms of both quantitative and qualitative outputs against time. It is therefore important that the compensation process gives value for money, and that a proposed framework can deliver compensation in the most cost-effective way, avoid compensatory failures associated with undercompensation, overcompensation, unnecessary delays and excessive operational costs.

Firstly, a great challenge that is likely to face a proposed framework is posed by unstable markets and economic systems found in developing nations, such that the rewards for developers and affected parties alike are subject of considerable uncertainty and volatility. In this context, it is difficult to determine the efficiency of compensation schemes. Both the market valuations and the basis for compensation, become highly subjective and uncertain. Some may think the governments could help. However, recent studies by Kee *et al.* (2007), Shilpi and Umali-Deininger (2008) and Galles (2008) concluded that states in many developing world have little power to improve the performance and efficiency of their liberalised markets.

Secondly, it appears that neither developers nor affected parties appreciate the potential efficiency gains from a negotiated approach to compensation that starts early and delivers mutually advantageous outcomes, with less long running disputes and reduced transaction costs. Various studies, for example, Clark (1995), Hughes (1998), ADB$_{Africa}$ (2003), Mwalyosi (2004) and ADB$_{Asia}$ (2007) report that despite stakeholder participation in development being promoted and advocated for many decades, practices in compensation processes show that involvement of stakeholders, affected parties in particular is limited to information giving and consultation. What appears to be beneficial for one affected party may not maximise the welfare gain of all parties taken together, nor consider the welfare of future

generations. A careful holistic planning and implementation of activities of project, business, including compensation schemes is required in order to have welfare efficient compensation outcomes.

7.3.3: Equity

Equity in the context of development projects and compensation is concerned with the distribution of benefits and costs (i) between projects and the affected parties and host communities (shared equity); (ii) among the affected parties and host communities members (intragenerational equity) and; (iii) between the present and future generations (intergenerational equity). Equity issues are difficult to address because their recognition and implementation depend on ethical and moral considerations such as a preference of having psychological satisfaction now by sparing tangible benefits for others, including future generations. However, this can be done in different ways depending on how distinctions are drawn between concepts of right and wrong, adhering to conventionally accepted standards of conduct in the society.

Shared equity hypothesises a state where the affected parties and host communities are provided with opportunity to participate in project design, planning, implementation, monitoring and in sharing benefits and costs. This arrangement promotes the affected parties and host communities to have a direct say in development and share of benefits. This approach is increasingly evident in a number of developed as well as developing countries as discussed in Section 4.4.3*(ii)* (Van Wicklin, 1998 and Égré *et al.*, 2008). In Tanzania, KVTC project is currently sharing benefits with more than nine village communities including the case study village of Idete (Appendix 4.4). There is scope to develop partnership arrangements to use compensation funds (Sections 7.2.1*(ii)*), but the policy-legal frameworks to support such joint ventures are rarely in place.

Intragenerational equity issues in many rural communities are largely regulated by traditional based institutions which are becoming weaker due to many reasons including policy interventions and modernisation (Kideghesho and Mtoni, 2008b). For example, at a household level, any attempts to pay compensation or distribute benefits to the affected household members through the joint names of both spouses as opposed to the household heads (in most cases males) contravenes socio-cultural values (norms) in many African communities. Traditions in many communities in developing countries including Tanzania

favour some social groups and disadvantage others. For example, considering ownership of land and other household assets, men are favoured over women, elder sons get disproportionate larger shares than younger ones and a husband's extended family members command more rights than a wife's (Yngstrom, 2002; Brown, *et al.,* 2003; Tsikata, 2003; Tripp, 2004). Such socio-cultural factors collectively pose a big challenge as far as intragenerational equity is concerned at household and community level. However, although a compensation regime works within existing institutional frameworks and arrangements, it might use different approaches such as education and health services at community level to benefit different members of households. Moreover, advisory services (Sections 4.4.3*(v)* & 7.2.3*(v)*) can also help in providing guidance to monetary compensation beneficiaries to spend their money for the benefit of all household members.

Intergenerational equity is the most challenging as it deals with the rights of future generations to benefit from an existing endowment. The responsibility of ensuring this type of equity lies between many stakeholders, and as a consequence it is often neglected. Efforts to promote intergenerational equity often conflict with the interests and preferences of stakeholders with strong influence. However, according to the proposed framework for compensation, the wellbeing of future generations is entrusted to a joint custody of the project developers, host communities and their neighbouring communities where they are expected to forge partnership for managing local resources in order to sustain both the present and future livelihoods. Such partnerships have potential to protect and enhance ecosystem goods and services, investing benefits accrued from projects in favour of tomorrow's generations.

7.3.4: Sustainability

Sustainable development is not only a matter of integrity of economic and ecological systems, but also of socio-cultural and equity issues (Hediger, 1997 and McLeod, 2000). Sustainable development is concerned with co-management of critical issues of development and environment dynamics as an attempt to maintain people's livelihoods and project welfare in an adaptive process. This requires capability of key stakeholders of forging partnerships of working together and integrating social, economic, cultural, ecological, institutional and technological matters along with adequate consideration for basic needs and wants of today and tomorrow's generations. Much of this has been discussed above in Section 7.3.3.

Carefully designed benefit sharing schemes such as preferential employment and alternative income generating activities can support and help to sustain livelihoods of the affected parties and host communities. Also supports provided to improve and promote both primary and secondary education and; campaigns to raise awareness on community health and environmental conservation have continuous multi beneficial impacts to the host communities and project as well. According to Trembath (2008), the benefits that are tailored to the needs and values of host communities are well received by host communities and help to build-up trust among community members from one generation to another. Evidence of this approach to benefit sharing was observed in the case of the KVTC project. Successes in achieving sustainability also depend on whether preferences of host communities are adequately considered and their relevant experiences are taped and integrated with the implementation of benefit sharing schemes.

7.3.5: Administrative feasibility

As revealed and discussed earlier (Sections 4.4.3*(iii)* & 4.4.4), a number of organisations and institutions are involved in the compensation process. This study confirmed that losses faced by the affected parties and host communities in rural areas are mainly land related (Section 6.6) and a considerable strength that compensation matters in Tanzania are currently coordinated by the Ministry of Lands. However, it was further revealed that while most of the coordination activities of compensation processes are done at district local authorities, they involve representatives from different national-level sector ministries (Sections 4.3.3; 4.4.2*(i)* & 4.4.3*(v)*). This creates conflict of interest among different government actors in relation to compensation matters and results in disputes, fragmented approaches and high transaction costs (Section 4.4.4).

Another critical issue that surrounds a proposed framework is the distribution of roles and powers between the central and local governments. While local government authorities do most of the coordination tasks of compensation processes, many decisions are made at central and intermediary government levels (Sections 4.3.3; 4.4.2*(i)* & 4.4.3*(v)*). Unless there are changes in participatory approaches and actions taken to empower local people at local levels in rural areas in particular, stakeholder involvement and participation of affected parties and host communities in negotiation will remain limited. These issues go beyond that of compensation itself. They raise questions about the fundamental approach to development, the extent of participation in development, and the extent to which beneficiary and host

communities 'negotiate' about the project development as a whole, rather than only the arrangements for compensation.

7.3.6: Political acceptability

Decisions about whether a proposed project should proceed, or what compensation a project developer should pay sometimes become a political issue especially, when high rank decision makers have vested interests in the proposed projects. This can happen in two ways: First, the conflicts of interest among politicians are likely to impede the smooth operation of compensation processes and their outcomes. Burdge and Vanclay (1996) and Pearce and Swanson (2008) found political struggles can divide people in communities and impede development plans and processes. For example, direct involvement of political parties in trying to resolve resource use and compensation disputes between host communities and mining projects in Northern Tanzania has brought more confusion, hostility, sabotage and events of breach of peace. Differences in political ideologies and interests complicate any effort intended to resolve these problems. This study, however, calls for careful feasibility and environmental impact assessment studies as the only means to early identification of any likelihood occurrence of political conflict of interests in regard to both the proposed project and earmarked project areas. This would lead to the suggestion of effective mitigation measures. According to Pearce and Swanson (2008), project developers find geographical areas of high political tensions risky and 'unhealthy' for their investments. Thus avoidance of these locations is a cost-effective mitigation measure.

Secondly, in Tanzania like in many developing countries, the government is the main developer. This poses a big threat to any policy proposals that can lead to a reduction of government revenues. In such circumstances, it is very unlikely to have both the government and other project developers supporting a framework for fair and full compensation. This implies a development bias, possibly some collusion with developers, and possibly also some preference for circumspect about property rights (Dixit and Olson, 2000).

7.4 Critical evaluation of applying Coase Theorem in developing economy

The Coase Theorem sets out a framework for understanding the interaction between developers and affected parties as they seek to achieve mutually satisfactory, welfare maximising outcomes through a process of negotiation. However, a number of conditions

particular to developing countries and evident in this case study of Tanzania, challenge its applicability in practice. These are discussed below.

7.4.1: Aspects of property rights

Property rights are an essential aspect of Coase theorem, as they lead to disputing sides to bargain in order to achieve outcomes that are consistent with the efficient allocation of a disputed resource. This happens only if property rights are clearly defined. The results (Table 4.2) of assessment done on property rights in the studied case of rural Tanzania in Section 4.4.1*(ii)* have indicated an overall low level achievement in the four conditions for efficient allocation of resource by Tietenberg's (1996) criteria, namely the requirements of universality, exclusivity, transferability and enforceability. Therefore, it can be argued that currently property rights in rural Tanzania are insecure from involuntary seizure and encroachment. Thus, rural dwellers that occupy and use land through customary land rights have weak entitlements for compensation, as distribution of benefits from relocation ultimately depends on who holds the property rights and their relative power (Anderson, 2004).

However, the lack of clarity shows some prospects towards improvement, as rural land occupiers and users are constantly demanding for recognition and formal registration of their farmlands. They are also demanding clear and permanent boundaries separating their village lands from other state owned lands. This indicates that the on-going land reforms in Tanzania and many other developing countries are moving towards increased private ownership of land for which benefits and costs of owning and using land are clearly specified. The award of private entitlements may require, however, that aspects of *'public good'* contained in traditional property regimes are maintained or indeed enhanced, such as for example, conservation of land and water resources.

7.4.2: Aspects of transaction costs and negotiation process

Coase (1960) argues that provided transaction costs of bargaining process are not prohibitively high, a state of market will be developed and if negotiated terms would mutually be agreed upon, then mutually beneficial exchanges take place and a Pareto-optimal condition is attained. In the case of Tanzanian compensation system, its transaction costs can be divided into two main groups namely those related to the negotiation process and to the implementation of its recommendations. According to Berglund and Johansson (2004) and

Weigl (2008), transaction costs in negotiation process include the costs of identifying and bringing parties together and performing negotiation. Despite the compensation legal framework in Tanzania providing an opportunity for affected parties and project developers to negotiate, the current compensation system and practices do not include negotiation process. Most likely enforcers and project developers have not been practising negotiation during compensation, because they fear transaction costs. The findings of this study (Section 4.4.4) have shown that transaction costs in the Tanzanian compensation system are high due to conflict of interests, handling of complaints and appeals, the large number of parties involved in compensation process, unclear property rights and resultant litigation and court processes. There is scope to reduce transaction costs by addressing these sources of excessive costs.

Based on many benefits discussed in Section 7.2.2*(iii)* and 7.2.3*(iv)*, this study has recommended that the negotiation process be an important step of compensation procedure in Tanzania. However, it was observed that transaction costs increase with the number of negotiating parties and currently threaten the negotiation process. Moreover, Sections 4.3.1, 4.3.2 and 4.4.2*(iii)* pointed out that asymmetry of information can limit the potential applicability of Coase theorem in developing countries. Special measures are required to deal with these factors in order to minimise transaction costs by restricting the number of parties involved (as per Section 7.2.3*(iv)* the affected parties and host communities may choose a reasonable number of knowledgeable representatives) and providing improved access to information and support. Apart from suggested measures to discourage unnecessary confidentiality, special efforts are also required to inform host community members and representatives of the affected parties before engaging in negotiation process. The elected Village and Ward leaders in collaboration with experienced development facilitators should conduct sensitisation and training of the affected parties, host community members and most important their representatives. If possible, facilitators should be used in running negotiation processes. The use of qualified and experienced facilitators necessarily involves costs. Hennart (2006) notes that the aim of dealing with transaction costs is not to avoid them completely but to minimise unnecessary costs. However, care should be taken to make sure transaction costs incurred by each side should not exceed the expected benefits from negotiation outcomes.

7.5 Key messages

The key messages from this chapter include the following points.

Defining fair compensation

A fair compensation practice in the context of development projects should deal with losers and gainers, existing and possible future entitlements, distribution of project benefits and costs, risks and uncertainties, resolution of disputes and, concerns of social justice and equity. Although compensation focuses on losses associated with existing entitlements, it should in many cases consider opportunities for sharing the potential benefits of development. All these should be done through a facilitated negotiation process aiming at building relationships between losers and gainers towards achieving a common goal for sustainable development. A particular challenge in many developing countries, and this case study, is that entitlements to benefits are not clearly defined, either because they involve customary *'user'* rather *'ownership'* rights, or and more critically, they may involve assumed *'squatter'* rights which have little customary or legal status. Indeed, compensating opportunistically acquired squatter rights may create a moral hazard.

A proposed compensation framework

A proposed compensation framework is designed to ensure continuity of rural livelihoods in host communities, ecosystem functions and services and, positive outcomes of development projects and compensation schemes. This is done through addressing all issues in regard to equitable distribution of benefits and costs at household and community levels without forgetting welfare of future generations using negotiation process between project losers and gainers as a major principle. A proposed compensation framework can be linked to other project appraisal systems such as cost benefit analysis, environmental impact assessment and social impact assessment.

Application of Coase theorem in developing economies

It is concluded that despite some challenges associated with property rights in particular, the Coase theorem can provide a good framework for studying and understanding project-influenced compensation in a developing economy context such as Tanzania. The Coasian bargaining or negotiation process also emphasises the importance of measures to maintain the efficiency and minimise the costs of the negotiation process.

Chapter 8 CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusions drawn from the main research findings with respect to the study objectives presented in chapter one. The chapter also discusses various recommendations for the key stakeholders of development and compensation processes in Tanzania and suggests further research studies in areas of compensation, development and rural livelihoods.

8.1 Brief description about the study

This research explores the potential use of compensation for promoting the sustainability of development projects, rural livelihoods and development at large in the context of developing economy, namely Tanzania. The study sought to understand the existing compensation regimes in their geographical settings using a conceptual and analytical framework that integrated the *Coase* theorem, concepts of ecosystem functions and sustainable livelihoods. The study objectives focused on issues relating to key stakeholders' interests in and influence over development and compensation processes in Tanzania; compensation systems and their implications on both livelihoods of the affected parties and sustainable development; cost-effective ways of compensating the affected parties and; applicability of *Coase* theorem, its relevance and potentials in understanding project-influenced compensation in a developing economy context. Tanzania was used as the country case from which two project cases (The KVTC teak project and SONGAS gas pipeline project) were studied. Exploratory visits and key informants interviews provided initial insights into project impacts and compensation regimes. Focus group discussions, in-depth household cases and, households', project developers' and service providers' surveys were triangulated to provide the qualitative and quantitative information required to meet the study objectives.

8.2 Conclusions

Conclusions are presented according to the order of study objectives.

The first objective was to identify and describe key stakeholders, their interests in and influence on compensation issues in Tanzania.

Development projects are deemed worthwhile if overall welfare is enhanced and, in principle, those who gain could compensate those who lose. In this respect, compensation is an important measure or method of redistribution of benefits and costs between the gainers and losers in the context of development projects. The conceptual framework for this study (Figure 2.9) synthesises literature information and shows that compensation is a process that involves a number of issues such as characteristics of different stakeholders; livelihood assets and ecosystem functions; policy, legal and procedural aspects and; market conditions. It is also worth noting that compensation payments can take different forms such as monetary, in-kind and benefit sharing schemes (Chapter 4).

In regard to compensation stakeholders, the study has identified the National Environment Management Council (National environmental agency), District Commissioner's Office, project developers, and consultants as key stakeholders with both great interests in and strong influence on compensation issues in Tanzania. While the influence of Environmental Agency and District Commissioner's Office (as Government authorities) are legally based, those of the project developers and consultants are important because of their roles in development and compensation processes in Tanzania. It was demonstrated that investment and technical guidance provided by project developers and consultants respectively are currently recognised by national policies as important inputs for socio-economic development at both the national and rural community levels. On the other hand, the study revealed that the local stakeholders (i.e. host communities, affected parties, Village and Ward Government Authorities) had great interests but low influence on compensation, partly caused by asymmetry of information in relation to projects and development issues.

The survey of service providers that involved the Government organisations, consultants, contractors, researchers and actors from the civil society organisations revealed that an asymmetry of information problem exists in the processes of development and compensation in Tanzania. It was further revealed that the current policy-legal frameworks contribute to this

problem, as they emphasise that dissemination of project and compensation information is solely a responsibility of project developers. Lack of information about development projects and their compensation schemes limits many key stakeholders from participating in compensation processes. It was also further revealed that powers of influence of many important stakeholders, affected parties and host communities were reduced in particular over compensation issues such as eligibility for and entitlements in relation to pioneered customary land rights. The affected parties and host communities experienced the same effect in relation to the determination of amount of compensation payment and type of payment (whether monetary or in-kind) that suits their livelihood systems. Since this study also aimed to investigate possibilities of applying the Coase theorem in developing economy countries, asymmetry of information was found to be one of the limitations to the Coasian bargaining process that involves two parties (i.e. project developer as one side and affected parties and host community another side).

The second objective was to identify and explain compensation systems commonly used in Tanzania and determine their potential suitability for sustainable development.

Analysis of information collected from exploratory interviews and discussions with service providers, project officials and various project and policy documents helped to identify compensation systems in Tanzania. Currently, the compensation systems in Tanzania were found to involve three main stages namely, identification of affected parties and communities, valuation of losses and delivery of compensation payments.

One positive aspect for the Tanzanian compensation systems is the recognition of project-influenced compensation as a land based issue. Land legislation (i.e. Land Acquisition Act No.43 of 1967, Land Act No.4 and Village Land Act No.5, both of 1999) were identified during the exploratory visits to the study area as the main legislation that regulate compensation influenced by development projects in Tanzania. The Chief Government Valuer housed within the Ministry responsible for land issues is the overall National coordinator of compensation processes in Tanzania. The study found that the legal basis for compensation is reasonably comprehensive in principle, but seems to be not applied in practice. Perceptions of service providers and project developers collected during the surveys revealed that the Tanzanian compensation systems have the following shortcomings:-

- One of the fundamental objectives of the National Land Policy, on which land laws are based on, is to pay full, fair and prompt compensation to the affected parties (URT, 1999a). However, no clear compensation procedure and guidelines are in place to highlight and guide practices step by step in order to achieve the stated compensation payments. This suggest that poor planning, haphazard implementation and lack of monitoring of compensation schemes in Tanzania are caused by lack of clear compensatory framework in terms of values, principles, procedures, guidelines and checklists.

- Responses from both the project developers and service providers show that unclear property rights is one of the sources of both compensation disputes and unnecessary transaction costs. This also causes problems associated with compensation entitlements such as undercompensation or not qualifying for compensation. This is an important message. It appears to suggest that if customary land tenure rights in rural areas become secure, this would clarify compensation entitlements and reduce both disputes and transaction costs during compensation systems.

- Perceptions from service providers and project officials indicated that compensation processes in Tanzania have both high involvement of many unwanted parties and low involvement of affected parties and host communities. The unwanted parties included government actors with no critical roles in the compensation process and intermediary elites (intruders). Unwanted parties are attracted by monetary and other short term interests and have been the major sources of compensation disputes. The current practices show that involvement of affected parties and host communities is limited to information giving and consultation, participation is largely affected by lack of communication (i.e. relevant information), lack of transparency and intermediary intruders.

- Responses from both the service providers and exploratory interviewees show that valuation is the most disputed stage of the compensation process. Substantial shortcomings are caused by many factors that lead to undervaluation and inconsistence. Application of low and outdated compensation rates and failure to consider some values or qualities of affected assets such as cumulative future values

lost for the productive life of permanent crops provide evidence of undervaluation. Inconsistencies in valuation occur when affected parties are unlawfully treated differently due to incompetence, negligence and manipulation of valuation inventories during computation of compensation.

- Despite the fact that many individual affected parties prefer monetary compensation, both the project developers and service providers indicated that monetary compensation provides little benefits compared to in-kind supports and have recently started benefit sharing schemes. They showed clearly that compensation paid in the form of in-kind supports or through benefit sharing schemes has wide impact at both household and community levels compared to monetary payments. While many projects were reported to pay monetary compensation to individual affected households and in-kind supports to the affected communities, only one project (Kilombero Valley Teak Company) was found practising benefit sharing in Tanzania. However, many recent research findings on compensation and rural livelihoods (McLeod, 2000; Cernea, 2008; Égré *et al.*, 2008; Nakayama and Furuyashiki, 2008; Trembath, 2008) support 'benefit sharing schemes'. In contrast to the current conventional 'one-payment' monetary compensation, the study revealed that 'benefit sharing schemes', taking a variety of forms have built in aspects of continuity and have potential to enhance equity. The same schemes can also reduce intrusion of elites and subsequent compensation disputes.

The third objective was to identify and explain effects of the existing compensation systems on livelihoods of affected parties and their implications on sustainability issues.

In the context of development projects, the effects of the current compensation systems on livelihoods of the affected parties and sustainability were assessed through comparison of conditions of household livelihood assets and incomes before and after the compensation using the conceptual and analytical framework developed for this study (Figure 2.9). As a matter of fact rural livelihoods in developing economy largely depend on agriculture (Chapter 2). Thus, the assessment of changes in agricultural production system as part of ecosystem functions focused on land services and goods, including agricultural based income flow. Information collected from household cases and other qualitative interviews were used to explain and discuss the identified changes and provided for some evidence. The effects of

compensation schemes in both village cases were however, mainly land, household income, social, environmental and psychological based.

Effects to individual affected parties

Respondents of household cases and verification surveys (Chapters 5 and 6) demonstrated that the affected parties in both studied village cases face many problems in relation to livelihoods. However, the biggest impact has been on decrease of household incomes caused by loss of farmlands. Land shortage due to high demand relative to its availability was partly influenced by development projects and was reported to be an issue of great concern. Land shortage manifestations in the villages studied include small household acreage, labour redundancy, decline of soil fertility, changes in farming systems, changes of land use, growing of farmland renting-in from nearby villages, persistent food shortage, decreasing income per capita and, increased land disputes. All these have in turn contributed to a decrease of agricultural productivity at household level in the studied villages. In this study, land loss was measured by an indicator named *'land loss severity ratio'* which was worked out from the ratio of the land occupied or used by a household after and before the project (Chapter 5). Impairment of livelihoods in the village cases increased as *'land loss severity ratio'* decreases, indicating that households have small acreage now compared to times before the projects. Comparing village cases using severity of land loss as an indicator, Idete village suffered over five times more compared to M'baya village. The type and nature of development projects determine the magnitude and extent of impacts caused on people's livelihoods. For instance, the teak plantation is a land-take project and had major land loss effects on people's livelihoods at Idete compared to the gas pipeline project that required a strip of land from M'baya. After construction, the pipeline way-leave was returned, subject to conditions, for reuse by the affected parties to farm non-permanent crops (Chapter 6).

Other compensation effects to individual affected households were associated with undercompensation (Chapter 6). When the actual compensation paid was compared with both the perceived household income loss and calculated household total loss, for each case, it was confirmed that the affected parties in studied villages were undercompensated. The undercompensation was caused by undervaluation and inconsistency during valuation as established in Chapter 4. For example, in both village cases, the size and quality of farmlands lost by the affected parties because of the projects were not considered during valuation and hence were not taken into account in the course of determining compensation payments

(Chapter 6). In addition to that and specific to agricultural based households, undercompensation was partly caused by failure to consider future income flows from both permanent and semi-permanent crops.

The conceptual and analytical framework for this study (Figure 2.9) suggests that several policy, legal and market based instruments can be used to shape compensation processes in order to have efficient outcomes. This is an important message, as it shows policy gaps in addressing losses encountered by farmers and the need for market based techniques and approaches in valuating farm-based losses. This is where frequent market surveys are needed to generate information on farm inputs (costs) and outputs (incomes), prices and other important data for estimation of compensation payments. Surveys could also focus on finding ways to promote record keeping of agricultural production at household level in developing countries in order to support smooth application of different methods such as income approach in estimating agricultural based losses.

There is a clear link between compensation entitlements and property rights. Property rights in rural areas are not clearly defined. This affects compensation entitlements of affected parties and specifically leads to undercompensation. For instance, many of the Idete's affected parties did not qualify for compensation because their pioneer occupancy and use of land was neither registered nor documented. Their *'assumed'* property entitlements were associated with squatting and were compelled to accept lower compensation payments as they had no recognised entitlement. This is another important message that land tenure reforms are necessary in order to increase tenure security of customary land rights and promote clarity in property rights. The reforms could also establish minimum land occupancy period for easy determination of compensation entitlements.

Effects on host communities

The study findings (Chapter 6) revealed that compensation as currently practised has negative implications not only to individual households but also to the community at large. Focus group discussions in both village cases indicated that spill over effects that affect the entire communities were for example, manifested in a deterioration of ecosystem functions. The agricultural production systems suffer from decline of soil fertility which is part of supporting and regulation ecosystem functions. A land shortage problem due to high demand relative to its availability has prevented shifting cultivation and limited long fallows from taking place

and subsequently affected natural restoration of soil fertility in both farming communities. Furthermore, the impact of land-take project deprived community members at Idete access to and right of use some common resources, as for example, many horticultural farmers lost access to and rights to use water sources located within disputed valleylands. This reduced their production of both annual and semi-permanent crops more than four times.

The effects of projects and associated compensation schemes were also felt at community level through deterioration of social capital. Social capital is an important livelihood asset in bringing people together, especially during problems or when a society faces challenges such as hosting a development project, relocation or compensation. Household cases in both village cases revealed that social cohesion and trust components of social capital were declining among community members. One of the identified factors causing decline of social cohesion and trust was development projects (Chapter 5). Projects interfere with sacred places, landscapes and farming systems that link people's socio-cultural, knowledge and information flow systems to their livelihood activities. Consequently, the disrupted social cohesion contributed to the increase of land disputes and impairments of traditional land use plans in both village cases.

Both qualitative and quantitative findings suggest that projects and their compensation schemes can have multiplicative effects. Loss of land caused a series of effects such as, labour redundancy, loss of incomes, rise of land rents, relocation of farms away from their residences, poor homes and, intangible losses. Household cases at Idete village indicated that intangible losses were those that can not easily be measured in money terms but their effects are felt and can be identified, for example, lack of peace of mind, risks and hazards had significant negative impact to both individual household and community levels. This phenomenon was established to negatively affect many social groups differently. For instance, affected elderly people can easily become vulnerable, when they have nobody to depend on and especially when they realise that they have lost their assets like land and homes that they relied on for most of their life. This increases social dependence at household and community levels.

The study findings indicated male dominance in compensation processes in both village cases (Chapter 5). Household cases linked gender relations to many aspects of both development and compensation processes such as planning, decision-making, implementation and

monitoring. In specific to compensation, gender equality was emphasised to have potentials for promotion of wise use of compensation payments (money) and safety in keeping and handling not only compensation money but all household resources. In addition, it was highlighted that promotion of gender equality can help in promoting overall participation at both household and community levels.

The fourth objective was to propose a form of compensation and its cost-effective implementation suitable for a developing economy context.

Defining 'fair compensation' practice

This study has critically reviewed the concepts and theories of compensation in the development project context (Chapter 2) showing the lack of a clear definition of 'fair compensation'. The review prompted the need of deriving an explicit research-based definition for a form of compensation that suits a developing economy context. Therefore, various identified aspects of compensation from both the literature and findings of this study (Chapters 4, 5 and 6) were considered as important issues that need to be addressed by a fair compensation practice. Briefly, these issues included compensation entitlements as linked to property rights; losers and gainers; interests of stakeholders to participate and negotiation; distribution of benefits and costs; intragenerational and intergenerational equity; intrusion of elites; continuity of livelihoods of affected parties and welfare of host community; resolution of disputes; reduction of transaction costs and; social and environmental problems.

Considering all the issues mentioned above, it was demonstrated that compensation is more related to issues of social, economic and distribution of benefits and costs than environmental issues. However, the study recognises the importance of the environmental dimension in sustainability. Some of the issues in relation to deterioration of ecosystem functions such as decline of soil fertility caused by land shortage have been mentioned to be addressed through partnership between project developers and affected parties and host communities in order to ensure quality and quantity of resources are maintained.

In the contexts of development projects and rural settings in developing economies, a 'fair compensation scheme or practice' is essentially defined in terms of its ability to address issues of distribution of project benefits and costs, disputes and concerns of social justice between losers and gainers through a facilitated negotiation process. Facilitation is necessary

because of the existing asymmetry of information between the negotiating sides and low levels of awareness and understanding among the rural people, which impair efficiencies of negotiation process and its outcomes. It is also envisaged that through a negotiation process, avenues for forging new relationships and partnerships can be explored and formed for losers and gainers to work together towards achieving common goals such as promotion of sustainability.

The proposed compensation framework

The purpose of this study was partly to propose a framework for compensating people impacted by development projects in the context of a developing economy. The conceptual framework for this study (Figure 2.9) provided the base for the proposed compensatory framework. Factors deduced from the findings of this research, that have relevance to the main issues outlined in the above definition of a 'fair compensation' were pulled out to describe various characteristics of the proposed compensatory framework. The proposed framework consists of the outcome-based and process-embedded core values, guiding principles and key procedural steps to ensure that compensation schemes are comprehensively planned and implemented in a cost-effective manner. Early notification of key stakeholders, affected parties in particular; negotiation between project developer and affected parties; monitoring of process and outcomes and; integration of other project appraisal systems such as cost benefit analysis, social and environmental impact assessments are all important features that would enable the proposed framework to enhance compensation performance in Tanzania. The features mentioned above have potentials to lead the key stakeholders towards increased information dissemination, avoidance or minimisation of both disputes and unnecessary transaction costs.

Lack of attention to post-compensation outcomes in the current compensation regimes suggests the need to incorporate core values (i.e. uniformity, reduced vulnerability, equity and sustainability) to describe basic desired qualities of compensatory outcomes. The presence of different approaches and many intermediary actors and elite intruders to compensation processes called for the need of having principles to describe specific aspects that direct and guide the process towards achieving the desired outcomes. Lack of planning and monitoring in the current compensation systems, and based on the importance of these two stages necessitated the need to suggest procedural steps to follow in order to avoid haphazard practices in compensation processes. The proposed procedure, in particular the

monitoring stage would help to link planning and implementation of compensation schemes and reveal practical lessons for future improvements of compensation practices. Therefore, core values, guiding principles and the procedure collectively describe a proposed compensation framework that aims to ensure continuity of rural livelihoods in host communities and positive outcomes of development projects and compensation schemes.

The proposed framework must allow flexibility in compensation processes, as it can be linked to other project appraisal systems such as Cost Benefit Analysis, Environmental Impact Assessment and Social Impact Assessment for the purposes of obtaining useful information in a cost-effective way. It is worth noting that a negotiation stage that brings the developer and affected parties and host community sides together is a critical stage of the proposed framework, because it has great potential for ensuring and improving involvement of affected parties. Other important potentials of negotiation include reduction of disputes in cost-effectiveness and enhancement of relationships between project developers and affected parties and host communities.

Critical evaluation of a proposed compensation framework

Another part of the purpose of this study was to provide a critical evaluation of a proposed compensatory framework against design criteria, namely: effectiveness, efficiency, equity, sustainability, administrative feasibility and political acceptability (Figure 2.9). A systematic critical evaluation of a proposed compensatory framework to predict its performance and identify gaps from both practical and policy point of views. Lessons learned included:-

- The overall purpose of any proposed compensation framework is the promotion of sustainable development in which its effectiveness depends on the facilitated negotiation process and its outcomes. The availability of qualified and experienced multidisciplinary and interdisciplinary experts in developing countries poses a great challenge to the proposed compensatory framework.

- The proposed compensatory framework can deliver compensation in a cost-effective way, avoid compensatory failures such as undercompensation and overcompensation and also avoid excessive operational costs. However, unstable market conditions and economic systems in developing nations pose a great challenge.

- The promotion of equity (i.e. shared or rent, intragenerational and intergenerational) depends on the type or form of compensation payments. Benefit sharing schemes operated in different forms have relatively higher potential than monetary and in-kind payments in supporting equity. While lack of formal support by policy legal frameworks affects the shared or rent equity, socio-cultural aspects challenge intragenerational equity in many developing countries particularly in Sub-Saharan Africa. Lack of both ethical and moral considerations such as a preference to have psychological satisfaction now by sparing some tangible benefits for future generations threatens intergenerational equity.

- The sustainability of compensation outcomes depend on the ability of stakeholders, affected parties and host communities and project developers in particular to bargain and form partnerships to manage available resources rationally and to ensure all three forms of equity outlined above. Challenges likely to impair equity threaten sustainability as well.

- The success of the proposed compensatory framework depends on the way coordination tasks are distributed between the national and local government authorities. Otherwise, conflicts of interest can increase and threaten compensatory processes through increased transaction costs.

- It is difficult but possible to separate development issues from political ideologies and interests, especially when a project involves relocating the affected parties and paying compensation. A big threat is when governments are main developers as is in most developing nations, bias can make governments render no or little support to the proposed framework.

The fifth objective was to apply and critically evaluate relevance and potentials of Coase Theorem in understanding project-influenced compensation in a developing economy context.

The ambiguous ownership of lands between the State, Villages and Villagers has made it difficult for the current property rights regime in Tanzania to fully support an application of *Coase* theorem in looking for optimal solution in compensation. The customary property rights in rural areas currently face problems in relation to recognition since are not formally registered, encroachment (boundaries with state owned lands are neither permanent nor clearly defined) and benefits and entitlements are not clearly specified.

High transaction costs in the current compensation processes in Tanzania are another factor that can limit application of *Coase* theorem in many developing countries. The surveys that involved service providers and project developers indicated high transaction costs caused by conflicts of interest, complaint resolution and intermediary parties in compensation processes are unnecessary costs that can significantly be reduced if not to be avoided completely. Furthermore, it was revealed that an asymmetry of information caused by lack of transparency (among project developers and government actors) and ignorance (among affected parties) on project and development issues is another factor likely to limit applicability of *Coase* theorem in developing countries. Information generation and dissemination are costly and if transaction costs associated with project and compensation information are not controlled, *Coasian* bargaining in particular can be prevented from happening.

Based on the potential positive aspects of negotiated solutions, *Coase* theorem can be useful in developing economy context. It can be claimed that the seminal *Coase* theorem gives compensation insights that broaden compensation knowledge and therefore can help in framing the compensation challenge in the development project context. It can be argued that even if the solution is not optimal, bargaining or negotiation process has great potential that can either minimise or completely avoid worst compensation effects from taking place. The concepts of bargaining as a process can potentially be applied to promote involvement of affected parties and host communities in compensation process, resolve compensation disputes at low transaction costs and improve relationships between project developers and affected parties and host communities.

8.3 Recommendations

The following recommendations are made with respect to the above concluding remarks. These recommendations suggest actions the study found can contribute towards addressing project-influenced compensation challenges in a developing economy context. Actions are therefore divided into three main groups namely implications for policy interventions, compensation practices and further research.

8.3.1: Implications for policy interventions

The study recognises the importance of policy guidance especially in setting an enabling environment for compensation practices that promote sustainable rural livelihoods and economic development.

i) Recommendations on the process to empower affected parties and host communities

This study has revealed that compensation disputes are largely influenced by marginalisation of the affected parties and host communities caused by lack of recognition, involvement, relevant information and their low capability of understanding technical aspects. It was also noted that in the period of 1995 - 2005, most of the government sectoral policies were reviewed to attract development projects from abroad and within the country. The number of projects kept growing from year to year with adverse effects on livelihoods of rural people.

Policy makers are therefore advised to raise issues of rural livelihoods and sustainability to the top of the political agenda in order to balance with economic development. This should go in parallel with establishment of a special strategy to empower resource-disadvantaged rural people in order to minimise marginalisation. There are many old *Swahili* proverbs[22] that clearly demonstrate that those with power normally act against any move geared to reduce their power, hence, *'power struggles'*. The Government is therefore advised to use different measures that focus on enhancing levels of rural people's general awareness and knowledge on various development issues. One of the general measures should be to promote establishment of *'simple information centres'* at ward level if not village level and equip them with popular versions of policies and laws, newspapers, booklets, leaflets and magazines on all categories of development information.

[22] *"Usimwamshe aliyelala, ukimwamsha utalala wewe"; "Mjinga akielevuka mjanja yu-mashakani"*

Another simple but powerful measure for empowering the marginalised groups specifically in compensation processes is the *'negotiation'* process between the project developer and affected parties and host communities. The study has demonstrated potentials the negotiation has in improving involvement of affected parties and it is therefore recommended for the policy framework to adapt it and stipulate clearly that negotiation is the only way the concerned parties can use in order to arrive at mutual compensation agreements. In the case of Tanzania, a number of conditions should be met for the negotiation process and efficient compensation outcomes to happen. These conditions include, (i) promotion of information dissemination and communication systems, (ii) provision of competent facilitators to help the affected parties and host communities in rural area before and during negotiation process, (iii) limiting the number of experts to only those with critical roles to the process and, (iv) keeping transaction costs as low as possible through establishing control of all factors likely to cause unnecessary costs.

ii) Recommendations on security of customary land rights

Land was found to be central to both the people's livelihoods and losses encountered during compensation schemes. Both income and intangible losses of the rural people increase with the size of farmland lost to the project. It was revealed that both village cases like many villages and districts in Tanzania have no land use plans in place. This was contributed by lack of clear boundaries separating lands between villages, districts and between village lands and general or public lands and, between village lands and protected lands. For example, in Idete village, the respondents complained about boundaries of forest reserves, Udzungwa national park, Idete Prisons and public lands not being permanent. The Ministry of Lands through the National Land Use Plan Commission should facilitate village land surveys and preparation of both village and district land use plans. This is important since it will secure tenure rights of customary land occupants and reduce land disputes that have been causing bloodshed in some rural parts in the country. It is worth noting that further recognition of customary land rights through registration and clearly specifying duties and benefits would clarify compensation entitlements, reduce disputes and transaction costs during compensation.

iii) Recommendations on the coordination of the compensation processes

In Tanzania, environmental management issues have received great attention, particularly through policy recognition, enactment of Environmental Management Act, of 2004 and the

institutionalisation of environmental impact assessment. The environmental impact assessment framework in Tanzania, among others uses social impact assessment and cost benefit analysis as tools to generate important information required in the project appraisal process. However, the overall enforcement of Environmental Management Act has not been effective so far (Pallangyo, 2007). Low environmental management performance has been caused by a number of factors including shortage of financial resources, lack of qualified experts and weak coordination between the national and local levels. The same factors were found to affect the coordination of compensation processes as well. Local authorities are assigned to carry out most of the coordination tasks using their small (tight) budgets and unqualified staff. This led into poor performances, increased disputes, redoing some of the tasks and hence more costs. The study found that if compensation framework or processes are to be linked to other project appraisal systems such as cost benefit analysis, environmental and social impact assessments, there are great possibilities for the government and project developers to benefit from cutting down the costs involved in information generation, communication and overall coordination of project appraisal systems including compensation processes.

It is therefore recommended that the Government (i) review the current set-up of the coordination of both the compensation matters and other project appraisal systems with the view of linking their key common stages and formally decentralise coordination from the national to local authority levels and, (ii) take efforts to strengthen local government authorities in terms of financial resources and expertise to enable them continue with the coordination of most of the project appraisal processes at the grassroots level. The suggested reforms can enhance performance of compensation, development and environmental protection through increased efficiency and effectiveness.

iv) Recommendations on policy-legal matters of compensation

The study has demonstrated the way losses in rural areas are connected to land, main crops grown and applicable farming systems. Both the criteria and approaches used in the valuation of land and all types of crops based on market prices do not capture or estimate the value lost properly, as undervaluation and inconsistence dominate valuation process. For example, the current estimations of losses of both permanent and semi-permanent crops do not consider cumulative future values of crops for their productive life. It is recommended that the government should review the current compensation guidelines and valuation criteria and

approaches and make them specific and suitable for rural livelihoods. This should include putting emphasis on making sure the affected parties are provided with alternative farmlands nearby in order to allow them to continue earning their livelihood through agriculture that still contributes more than 80% of the country's GDP[23]. This is important as it would ensure development projects do not cause landlessness in rural areas and compromise national efforts to reduce poverty and achieve the Millennium Development Goals.

8.3.2: Implications for compensation practices

The following are suggestions of actions for different key stakeholders to take in order to improve compensation practices in Tanzania.

i) Recommendations for the affected parties and host communities

The research findings have shown that the affected parties, host communities and their village and ward government leaders belong to the marginalised group of stakeholders. The main cause of this marginalisation is asymmetry of information that manifests itself in terms of lack of both awareness and general knowledge regarding development issues. Promotion of reading culture among community members is needed. If every Ward in Tanzania has managed to construct a secondary school using people's efforts and resources mobilised locally, it is possible for villages to construct a simple information centre (size of one classroom) in order to raise awareness and knowledge of villagers on various development issues. If villages have such facilities, it is easier for their information centres to receive donations of different documents from different development partners including the government. Potentially, this would promote rural people to use their spare and leisure time in reading and in turn this would facilitate empowerment process to achieve its desired goals as quick as possible.

ii) Recommendations for project developers

The study has shown that compensation involves resolving disputes and distribution of benefits and costs between gainers and losers. More importantly, compensation is about building new working relationships among stakeholders towards achieving sustainable goals. Project developers currently assisting host communities through in-kind supports, can explore more avenues for improving further their relationships with affected host communities. For

[23] GDP stands for gross domestic product

new projects, the project developers are advised to learn from existing projects (e.g. Kilombero Valley Teak Company) the way they channel in-kind supports to communities and the impacts have been made so far. Lessons drawn from existing projects could help them to improve theirs. Developers are also advised to explore possibilities of paying some of the losses such as intangible and community-based losses using different forms of benefit sharing schemes. The benefit sharing schemes commit both sides into a negotiated formal partnership (in terms of agreement) of respecting mutual interests of each other and, also equitably share not only benefits but costs as well. The study has shown that benefit sharing schemes if well planned can potentially promote intergenerational and intragenerational equity, minimise intrusions of elite people and strengthen relationships between host communities and project developers.

iii) Recommendations for service providers

Initially, the study described the key stakeholders in three categories namely affected parties, project developers and service providers. The service providers group included stakeholders with a range of expertise from local and central governments, consulting firms, freelance, academic and research institutions and, civil society organisations. In addition, the study described various methods and techniques that can possibly help to determine amount of compensation the affected parties deserve and which can reinstate their previous conditions of welfare. It was therefore further confirmed that if experts use effectively the available methods and techniques to increase efficiency and clarity of disputed issues, this would in turn, improve performance of compensation practices and outcomes. For instance, the study recommends that determination of compensation payments to the affected parties and host communities should also consider the counterfactual scenarios that would have occurred if the project did not take place. In principle, compensation payments should recognise the change in welfare of the affected parties and host communities that is attributable to project development compared with the *'without'* project situation. In addition, experts can use indifference curve theory to clarify perceptions of losses the affected parties might have with expectations for the amount they should receive as minimum compensation in order to at least maintain their original utility.

iv) Recommendations for civil society organisations

The study confirmed that the majority of civil society organisations such as non-governmental organisations have roles to play in improving performance of compensation in

Tanzania. However, it was further revealed that most of the civil society organisations are controlled by groups of urban based elites and very few were found to actively deal with compensation issues. Despite the fact that most civil society organisations have shown low interests in and low influence over development and compensation matters, one civil society organisation in particular helped to resolve compensation disputes through negotiated reconciliation. It is therefore suggested that the civil society organisations should (i) become constituency-based (preferably rural communities) and respond to people's needs; (ii) be accountable to community members; (iii) operate in a participatory and transparent way and; (iv) be focused on major issues affecting communities reflecting their particular knowledge and expertise. If the recommended reforms are done, the civil society organisations can play many roles in the promotion of sustainable development including the crucial role of mediating compensation disputes in a way that maintains good relationships and promotes partnerships between the affected parties and host communities and project developers. This will potentially influence the government to rebuild trust and possibly give to civil society organisations a greater delegated responsibility in the compensation processes.

v) Recommendations on dissemination of information

During the fieldwork, it was noted that the majority of respondents in both studied villages, experts, key informants and the visited district officials showed interests of receiving a copy of the report of this study. The very important message put across by their requests was about dissemination of research findings and recommendations in particular. Therefore, there is need for the project developers and service providers to cooperate and make sure that all relevant information generated reaches all key stakeholders, the intended users in particular. The best information dissemination methods should be designed and at least include translation of information into simpler, non-technical language for decision makers to understand. Other service providers such as the civil society organisations have good experience of preparing popular versions to suit information needs of the local community members. It would be of much help if this is also done to reach the rural people.

8.3.3: Implications for further research

From the discussions, conclusions and recommendations of this study, the study has identified several issues that appear to influence compensation systems in developing nations and are worthy of further research.

i) Land prices and rental charges

To establish factors that determine the sale prices and rental charges of the main categories of rural lands.

ii) Vulnerability caused by compensation

To investigate further the dynamics of compensation-influenced vulnerability among various social groups such as old people, youth, women and children, and establish circumstances and conditions in which vulnerability increases or decreases.

iii) Use of compensation monies

To explore the use of compensation money and assess impacts at household and community levels

iv) Empowering the marginalised for compensation process

To determine cost-effective ways of empowering the marginalised affected parties and host communities living in different contexts.

v) Types of benefit-sharing schemes

To explore cost-effectiveness of different possible types or forms of benefit-sharing schemes that can be used to compensate the affected host communities.

vi) Risk assessment of a proposed compensatory framework

To carry out risk assessment of a proposed compensatory framework on people's livelihoods in the host communities, project welfare, ecosystem functions and sustainability aspects.

8.4 Closing statement

This study sought to understand the existing compensation regimes in developing country economy context. The study critically applied the *Coase* theorem, ecosystem functions and concepts of sustainable livelihoods in order to frame the *'compensation challenge'* in the context of development projects. The study findings are not only relevant for Tanzania, but the wider developing world. Many developing countries face similar challenges with respect to compensating those who might be negatively affected by developments which serve the greater

REFERENCES

Abuodha, J.O.D. (2002) Environmental Impact Assessment of the Proposed Titanium Mining Project in Kwale District, Kenya. *Marine Georesources and Geotechnology*, Vol. 20. pp.199-207.

Acemoglu, D. (2003) Why Not a Political Coase Theorem?: Social Conflict, Commitment and Politics. *Journal of Comparative Economics*, Vol. 31, No.4, pp. 620-652

ADB*Africa* (2003) *Involuntary Resettlement Policy*. African Development Bank.

ADB*Africa*/OECD (2006) African Economic Outlook 2005 – 2006. pp. 475 – 489. (http://www.oecd.org/dev/publications/africanoutlook: 7/11/2008: 1215).

ADB*Asia* (2007) *Compensation and Valuation in Resettlement: Cambodia, People's Republic of China and India*. Capacity Building for Resettlement Risk Management. Rural Development Institute, Asian Development Bank. 70pp.

Adewale, O. (1989) Oil Spill Compensation Claims in Nigeria: Principles, Guidelines and Criteria. *Journal of African Law*, Vol. 33, No.1. pp. 91 – 104.

Adger, W.N., Fairbrass, J., Jordan, A., Paavola, J., Rosendo, S and Seyfang, G. (2003) Governance of Sustainability: Towards a 'Thick' Analysis of Environmental Decision-making. *Environment and Planning*, Vol. 35, pp. 1095 – 1110.

Admirer (1994) Plain-English Review of Coasian Theory. In Medema, S. (ed) *Ronald H. Coase*. St. Martin's Press, New York. pp.63 – 94.

AICC (2001) *Mining Minerals Sustainable Development Southern Africa: Involuntary Resettlement.* Research Topic 3 – Mining and Society. Sonnernberg, D. & Münster, F. (eds), African Institute of Corporate Citizenship, South Africa. 74pp.

Aiken, M. (2002) What Strategies do Value-based Organisations Adopt to Resist Incursions on Their Organisational Values from Public or Private Sector Markets?: Dilemmas Facing Public Sector. Research Paper, *Dilemmas Conference: 6th International Research Conference*, 4-6th Sept 2002, Commonwealth Club, Northumberland, London. 14pp.

Allen, W. and Kilvington, M. (2003) *Stakeholder Analysis*. (http://www.landcareresearch.co.nz/research/social/stakeholder.asp: 30/10/2008: 2325).

Anderson, T.L. (2004) Donning Coase-Coloured Glasses: A Property Rights View of Natural Resource Economics. *The Australian Journal of Agricultural and Resource Economics,* Vol. 35, pp 445-462.

Ashley, C. and Carney, D. (1999) *Sustainable Livelihoods: Lessons From Early Experience*. DFID Issues, London. 55pp.

Atkinson, G. and Hamilton, K. (2003) Savings, Growth and the Resource Curse Hypothesis. *World development*, Vol. 31, No.11, pp 1793-1807.

Ayres, R.U.; Bergh, J.C.J.M. van den and Gowdy, J.M. (1998) *Viewpoint: Weak Versus Strong Sustainability*. Discussion paper TI, 98-103/3. pp.16, Tinbergen Institute, Amsterdam. www.hdl.handle.net/1871/9295 (21/09/06: 1615)

BADIL (1999) The Impact of Return on Compensation for Palestinian Refugees. Working Paper Prepared for the Workshop on the *Issue of Compensation for Palestinian Refugees*, 14-15 July, 1999, Ottawa, Canada. pp.9. www.badil.org/Publications/Monographs/Return.Compensation.pdf (01/02/06: 1350)

Barrow**,** E. and Murphree**,** M**. (**2001) Community Conservation: From Concept to Practice. In Hulme, D. and Murphree, M. (eds.) *African Wildlife and Livelihoods: the Promise and Performance of Community Conservation*. Oxford, UK. pp 24-37.

Baya, B. T., Swai, C. A. L. and Mato, R. R. A. M. (1996), *Environmental Impact Assessment Study on Solid Waste for Five Project Towns: Arusha, Moshi, Tanga, Morogoro & Iringa.* Vol. II (Moshi Municipality). Prepared for USRP/PMO/URT. pp. 24-26.

Beardshaw, J., Brewster, D., Cormack, P. and Ross, A. (1998) *Economics: A Student Guide,* 4th edition. Addison Wesley Longman, UK. 712pp.

Boardman, A.E., Greenberg, D.H., Vining, A.R. and Weimer, D.L. (2006) Cost Benefit Analysis: Concepts and Practice, Third Edition. Pearson Prentice Hall, New Jersey. 560pp.

Butler, M.R. and Garnett, R.F. (2003) Teaching the Coase Theorem: Are We Getting It Right? *Atlantic Economic Journal*, Vol. 31, No.2. pp. 133-146.

Bell, S. and Morse, S. (2003) *Measuring Sustainability: Learning From Doing*. Earthscan Publications Ltd, London. 190pp.

Benjaminsen, T.A., Maganga, F.P. and Abdallah, J.M. (2009) The Killings: Political Ecology of a Farmer – Herder Conflict in Tanzania. *Development and Change*, Vol. 40, No.3. pp. 423-445.

Berglund, C. and Johansson, T. (2004) Jamaican Deforestation and Bauxite Mining: The Role of Negotiations for Sustainable Resource Use. *Minerals and Energy* Vol. 19, No.3, pp.2-14.

Bish, R.L. (1998) First-Nation Government and Non-Native Taxpayers: Harmonising Relationships. pp12. www.rbish.ca/NonNativeTaxpayers.pdf (27/02/06: 1135)

Bishop, R.C. (2003) Where to From Here? In Champ, P.A., Boyle, K.J. and Brown, T.C. (eds) (2003), *A Primer on Non-market Valuation: The Economics of Non-Market Goods and Services.* Kluwer Academic Publishers, Dordrecht, The Netherlands. 576pp.

Blaikie, N. (2000) *Designing Social Research*. Blackwell Publishers Inc. Malden, USA. 352pp.

Booth, V., Chapman, K. and Walmsley, B. (2003) Tanzania: Country Report. In Southern African Institute for Environmental Assessment (SAIEA). *Environmental Impact Assessment in Southern Africa.* Windhoek, SAIEA, pp. 243 – 265.

Bowkett, A.E., Rovero, F. and Marshall, A.R. (2007) The Use of Camera-Trap Data to Model Habitat Use by Antelope Species in Udzungwa Mountain Forests, Tanzania. *African Journal of Ecology*, Vol. 46, No.4. pp 479 – 487.

Bromley, D.W. (1991) *Environment and Economy: Property Rights and Public Policy*. Blackwell, Oxford.

Brown, A., Laliberte, K. & Tubbs, E (2003) *Advocating Social Change and Development: Analysis of the Capacity of Local Women's Organisations in Tanzania,* 41pp. www.gwu.edu/~oid/women_tanzania.doc (09/02/06: 0055)

Buitelaar, E. (2004) A Transaction Cost Analysis of the Land Development Process. *Urban Studies*. Vol. 41, No.13, pp.2539 - 2553.

Burdge, R.J. and Vanclay, F. (1996) Social Impact Assessment: A Contribution to the State of the Art Series. *Impact Assessment*, Vol. 14, pp. 59 – 86.

CA (1994) *Attorney General Chambers v. Lohai Aknonaay and Joseph Lohai*, Civil Appeal No.31, Court of Appeal of Tanzania, Arusha.

Cadigan, J., Schmitt, P., Shupp, R. and Swope, K. (2009) An Experimental Study of the Holdout Problem in a Multilateral Bargaining Game. *Southern Economic Journal*. Vol. 76, No.2, pp. 444-457.

Campbell, B.M., Luckert, M., Mukamuri, B., and Gambiza, J. (2000) Economic Comparison of Livestock Production in Communal Grazing Lands in Zimbabwe. *Ecological Economics.* Vol. 33, pp.413-438.

Canter, L.W. (1996) Environmental Impact Assessment, ISE Revised Edition, McGraw-Hill Education. 660pp.

Canterbury, E.R. and Marvasti, A. (1992) The Coase Theorem as a Negative Externality. *Journal of Economic Issues*. Vol.26, No.4, pp.1179-1189.

Carney, D. (1998) *Sustainable Livelihoods: What Contribution Can we Make?* DFID Issues, London. 213pp.

CEEST (1997) *Socio-economic Assessment of Songosongo Pipeline Way-leave*. Prepared for OCELOT & TRANSCANADA PIPELINE (OCT) on Songosongo Gas to Electricity Project. pp. 21-23.

Cerin, P. (2006) Introducing Value Chain Stewardship (VCS): International Environmental Agreements. *Politics, Law and Economics,* Vol. 6, No.1, pp. 39-61.

Cernea, M.M. (1999) *Development's Painful Social Costs: The Development Dilemma*. Mac Millan, London.

Cernea, M.M. (2003) For a New Economics of Resettlement: A Sociological Critique of the Compensation Principle. *International Social Science Journal*, No. 175. pp.1-27.

Cernea, M.M. (2005) 'Restriction of Access' is Displacement: A Broader Concept and Policy. *Forced Migration Review*, Vol. 23, pp. 48-49.

Cernea, M.M. (2006) Re-examining 'Displacement': A Redefinition of Concepts in Development and Conservation Policies. *Social Change*, Vol. 36, No.1, pp. 8-35.

Cernea, M.M. (2008) Compensation and Investment in resettlement: Theory, Practice, Pitfalls and Needed Policy Reforms. Cernea, M.M. and Mathur, H.M. (eds) (2008) *Can Compensation Prevent Impoverishment?: Reforming Resettlement Through Investments and Benefit-Sharing.* Oxford University Press. pp. 14-98.

Cernea, M.M. and Guggenheim, S.E. (1993) *Anthropological Approaches to Resettlement: Policy, Practice and Theory*. Questia Trusted Research. 408pp.

Cernea, M.M. and Schmidt-Soltau, K. (2006) Poverty Risks and National Parks: Policy Issues in Conservation and Resettlement. *World Development,* Vol. 34, No. 10. pp. 1808 – 1830.

Chamani, R.H. (2003), Increased Investments in Tanzania Airports for Enhancing the Capacity of the Country in the Global Competitiveness for Poverty Alleviation. A paper presented at the *Investors' Forum for the Tanzania Airports Authority,* April 2003, Royal Palm Hotel, Dar-es-Salaam, Tanzania. 16pp. www.tzonline.org/pdf/inreasedinvestmentsintanzaniaairports.pdf (11/11/05: 0925).

Chambers (1997) *The 21st Century Dictionary*. Revised edition. Chambers Harrap Publishers Ltd, UK. 1664pp.

Chambers, R. and Conway, G.R. (1992) *Sustainable Rural Livelihoods: Practical Concepts for the 21st Century,* Institute of Development Studies, Discussion Paper No.296. Cambridge, UK.

Chambers, W.B. (2009) The Reform of International Environmental Governance: An Agenda for the Commonwealth. In Common Secretariat (2009) *Reform of International Institutions: Towards a Commonwealth Agenda*, Economic Paper No.85. pp. 51 - 68.

Chapman, D. (1999) *Environmental Economics: Theory, Application, and Policy*. First edition, Addison Wesley. 415pp.

Clark, J. (1995) The State, Popular Participation and the Voluntary Sector. *World Development,* Vol. 23, No. 4, pp. 593 – 601

Claro, E. (2002) *Counterbalancing Environmental Losses: Different Compensation Mechanisms and their Performance in Siting a Sanitary Landfill*.

Coase, R.H. (1960) The Problem of Social Cost. *The Journal of Law and Economics*. Vol.III, pp.1-44.

Coase, R.H. (1981) The Coase Theorem and Empty Core: A Comment. *The Journal of Law and Economics*. Vol. 24, pp.183-187.

Coase, R.H. (1988) *The Firm, the Market and the Law.* University of Chicago Press. pp.175.

Coase, R.H. (1992) Ronald H. Coase's Nobel Prize Lecture. www.almaz.com/nobel/economics/1991a.html: (12/02/06: 0940).

Coghlan, D. and Brannick, T. (2007) *Doing Action Research in Your Own Organisation*. 2nd Edition. SAGE Publications, London. 157pp.

Corrêa, S.B.M., Castro, I. A. and Saad, S.M.I. (2008) Probiotic Potential and Sensory Propoerties of Coconut Flan Supplemented with *Lactobacillus paracasei* and *Bifidobacterium lactis*. *International Journal of Food Science and Technology*. Vol. 43. pp. 1560 – 1568.

Costanza, R., D'Arge, R., De Groot, R.S., Faber, S., … (1997) The Value of the World's Ecosystem Services and Natural Capital. *Ecological Economics*. Vol. 25, pp. 3-15.

De Groot, R.S., Wilson, M.A. and Boumans, R.M.J. (2002) A Typology for the Classification, Description and Valuation of Ecosystem Functions, Goods and Services. *Ecological Economics,* Vol. 41, pp. 393-408.

De Soto, H. (2001) *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, Black Swan, 276pp.

DFID (2003) *Tools for Development: A Handbook for Those Engaged in Development Activity.* Version 15.1, 142pp.

Dhesi, A.S. (2000) Social capital and community Development. *Community Development Journal.* Vol. 35, No.3, pp.199-214.

Dixit, A. and Olson, M. (2000) Does Voluntary Participation Undermine the Coase Theorem? *Journal of Public Economics,* Vol. 76, pp. 309-335.

Eden, C. and Ackermann, F. (1998) *Making Strategy: The Journey of Strategic Management.* SAGE Publications, London.

Égré, D., Roquet, V. and Durocher, C. (2008) Benefit Sharing to Supplement Compensation in Resource Extractive Activities: The Case of Dams. In Cernea, M.M. and Mathur, H. M. (Eds.), *Can Compensation Prevent Impoverishment?: Reforming Resettlement Through Investments and Benefit-Sharing.* Oxford University Press, pp. 317 – 356.

Eiran, E., Kaufmann, C., Sher, G., Lustick, I. & Greenberg, J. (2005). Political Dimensions of the Israeli Settlements Issue: Historic Opportunities and Challenges. *Negotiation Journal* Vol. **21**, No.2, pp. 193-207.

Eisenhardt, K. (1989) Building theory from case study research, *Academy of Management Review*, Vol. 14, No.4. pp. 532 - 550.

Ekins, P. (2000) *Economic Growth and Environmental Sustainability: The Prospects for Green Growth.* Routledge, London. 374pp.

El-Ghonemy, M.R. (1990) *The Political Economy of Rural Poverty: Case of Land Reform.* Routledge, 337pp.

Elias, A.A., Cavana, R.Y. and Jackson, L.S. (2002) Stakeholder Analysis for R&D Project Management, *R&D Management* Vol. 32, No.4, pp. 301 – 310.

Elibariki, M. (2007) *The Impact of Foreign Direct Investment on Agricultural Productivity and Poverty Reduction in Tanzania.* MPRA paper No. 3671 (http://mpra.ub.uni-muenchen.de/3671/ : 7/11/2008: 1420).

Elliott-Teague, G.L. (2006) NGO *Participation in Policy Change in Tanzania: An Analysis of Interest Groups*. Paper presented at the Annual MPSA Conference, 20-23 April 2006. All Academic Research (http://www.allacademic.com/pages/p140179-1.php: 13/04/2009: 1330).

Ellis, F. and Mdoe, N. (2003) Livelihoods and Rural Poverty Reduction in Tanzania. *World Development* Vol. 31, No.8, pp. 1367–1384.

Ellis, S. (1996) Africa and the Cold War: New Patterns of Government and Politics. *Development and Change.* Vol. 27, pp.1-28.

Emerton, L. (1996) *Valuing the Environment: Case Studies From Kenya*. African Wildlife Foundation. Signal Press Ltd. Nairobi, Kenya. 45pp.

Ensminger, J. (1996) Culture and Property Rights, In Hanna, S.S., Folke, C. and Mäler, K.G. (eds) *Rights to Nature: Ecological, Economic, Cultural and Political Principles of Institutions for the Environment*. Island Press, Washington, DC. pp. 179-204.

Ewert, A.W., Baker, D.C. and Bissix, G.C. (2004), *Integrated Resource and Environmental Management: The Human Dimension*, CABI Publishing, UK. 290pp.

FAO (2002) Agriculture and Rural Poverty. In *World Agriculture: Towards 2010.* FAO Corporate Document Depository, Originated by Office of Director General. http://www.fao.org/docrep/v4200e/V4200E0z.htm (24/12/08: 2015).

FAO (2004) Cattle Under Coconuts. In *Pasture-Cattle-Coconut Systems.* FAO Corporate Document Depository, Originated by Regional Office for Asia and the Pacific. http://www.fao.org/docrep/005/af298e/af298E01.htm (24/05/08: 1310).

Farber, S.C., Costanza, R. and Wilson, M.A. (2002) Economic and Ecological Concepts for Valuing Ecosystem Services. *Ecological Economics*. Vol. 41, pp.375–392.

Field, A. (2005) *Discovering Statistics Using SPSS*, 2nd edition, SAGE, London. 779pp.

Field, B.C. and Field, M.K. (2006) *Environmental Economics: An Introduction.* 4th editon, McGraw-Hill/Irwin. New York. 503pp.

Fife, B. (2006) Coconut Oil and Health. In Adkins, S.W. Foale, M. and Samosir, Y.M.S. (eds.) 2006. *Coconut Revival: New Possibilities for the 'Tree of Life'*. Proceedings of the International Coconut Forum, Cairns, Australia, 22-24 November 2005. ACIAR Proceedings No. 125. pp. 49 – 56.

Fine, B. (2001) *Social capital versus social theory*. London and New York, Rout ledge.

Finholt, K. and Fyksen, B.I. (2001) *Findings From a Minor Field Study on Information and Compensation Procedures in the Bujagali Hydropower Project, Uganda.* www.fivas.org/prosjekt/ost_afr/ (01/02/06: 1315)

Flyvbjerg, B. (2001) *Making Social Science Matter: Why Social Inquiry Fails and How it Can Succeed Again.* Cambridge University Press, UK. 204 pp.

Friedman, A.L. and Miles, S. (2006) *Stakeholders: Theory and Practice*. Oxford University Press, USA. 330pp.

Furubotn, E.G. and Richter, R. (1991) The New Institutional Economics: An Assessment. In E.G. Furubotn and R. Richter (eds) *The New Institutional Economics: A Collection of Articles from the Journal of Institutional and Theoretical Economics*. pp.1-32, Tübingen-Mohr.

Galles, G. (2008) *Misunderstanding Efficiency* (http://www.thefreemanonline.org/featured/misunderstanding_-efficiency/ 08/04/2009: 1015).

Garrod, G. and Willis, K.G. (2001), *Economic Valuation of the Environment:* Methods and Case Studies. Edward Elgar Publishing Ltd. Chelternham, UK. 384pp.

Gawler, M. (2005) *Quick Guide to Stakeholder Analysis*. (http://www.artemis-services.com :30/10/2008: 2315).

Gilpin, A. (2000) *Environmental Economics*: A Critical Overview. John Wiley & Sons, Ltd. 334pp.

Gitonga, A. (2002) Valuation Issues in Compensation and Resettlement Action Plans: The Case of Kwale Titanium Minerals Project in Kenya. *FIG XXII International Congress on Special Valuation Problems II,* TS9.4, Washington, D.C. USA, April 26 2002.

Glasow, P.A. (2005). *Fundamentals of Survey Research Methodology*. MITRE, Washington, USA.

Godoy, R. (1992) Some Organising Principles in the Valuation of Tropical Forests. *Forest Ecology and Management.* Vol. 50. pp.171-180.

GoI (2005) *Final Compensatory Framework and Procedural Guidelines for Participatory Irrigation Project in Indonesia*. Government of Indonesia-Ministry of Home Affairs. 21pp.

Gregory, R., Kunreuther, H., Easterling, D. and Richards, K. (1991) Incentive Policies to Site Hazardous Facilities. *Risk Analysis* Vol. 11. pp. 667 – 675.

Gunathilake, K.D.P.P. and Abeyrathne, Y.M.R.K. (2008) Incorporation of Coconut Flour into Wheat Flour Noodles and Evaluation of its Rheological, Nutritional and Sensory Characteristics. *Journal of Food Processing and Preservation*, Vol. 32. pp. 131 – 142.

Hackl, F., Halla, M. and Pruckner, G.J. (2007) Local Compensation Payments for Agri-environmental Externalities: A Panel Data Analysis of Bargaining Outcomes. *European Review of Agricultural Economics*, Vol.34, No.3, pp. 295-320.

Hagman, D.G. (1978) Compassable Regulation, in *Windfalls for Wipeouts: Land Value Capture and Compensation*. D.G. Hagman and D.J. Mysczynski (eds.), pp.256-307. Planners Press.

Hanemann, W.M. (1991) Willingness to Pay and Willingness to Accept: How Much Can They Differ? *American Economic Review*. Vol. 81, pp.635-647.

Hanley, N. and Spash, C.L. (1998) *Cost-Benefit Analysis and the Environment*. Edward Elgar Publishing Ltd. Chelternham, UK. 278pp.

Hanna, S.S., Folke, C. and Mäler, K.G. (1996) Property Rights and the Natural Environment, In Hanna, S.S., Folke, C. and Mäler, K.G. (eds) *Rights to Nature: Ecological, Economic, Cultural and Political Principles of Institutions for the Environment*. Island Press, Washington, DC. pp. 1-10.

Harrison, E. (2006) *Socio-economic Baseline Survey of Villages Adjacent to the Vidunda Catchment Area, Bordering Udzungwa Mountains National Park.* Kilimanyika/WWF-Tanzania Programme/ NORAD. 64pp.

Harris, S.D. (2002) Coase's Paradox and the Efficiency of Permanent Strike Replacements. *Washington University Law Quarterly*. Vol. 80, pp. 1185.

Hediger, W. (1997) Towards an Ecological Economics of Sustainable Development. *Sustainable Development*. Vol. 5, pp. 109 – 109.

Hediger, W. (1999) Reconciling "Weak" and "Strong" Sustainability. *International Journal of Social Economics*. Vol. 26, No. 7/8/9, pp. 1120 – 1143.

Hediger, W. (2006) Weak and Strong Sustainability, Environmental Conservation and Economic Growth. *Natural Resource Modelling*. Vol. 19, No.3. pp.359-

Helstad, K. (2006) *Managing Timber Procurement in Nordic Purchasing Sawmills*. PhD Thesis, Växjö University Press, Sweden, 69pp.

Hennart, J.F. (2006) A Transaction Costs Theory of Equity Joint Ventures. *Strategic Management Journal*, Vol. 9, No. 4, pp. 361 – 374.

Hernandez, A. (2003) *Mining Cadastre in Tanzania.* Working Paper TS23.4, Paris, France. 13pp. www.fig.net/figtree/pub/fig_2003/TS_23/TS23_4_Hernandez.pdf (31/08/06: 1150).

Hindmarch, C., Harris, J. and Morris, J. (2006) Growth and Sustainability: Integrating Ecosystem Services into Economics. *Ecoservices.* Vol. 53, No.3, pp.135-142.

Hirschey, M. (2003) Organization Structure and Corporate Governance: A Survey. *Advances in Financial Economics*, Vol. 8, pp.65-112.

Hitchcock, L. and V. Shauri. (1999) *Wildlife Corridors and Buffer Zones in Tanzania: Political Willpower and Wildlife Management in Tanzania*. Lawyers' Environmental Action Team (LEAT) Policy Brief No. 2. Dar es Salaam. www.leat.or.tz/publications/wildlife.corridors/wildlife.corridors.doc: (09/02/06: 0155).

Hoehn, J. and Randall, A. (1989) A Satisfactory Benefit-Cost Indicator From Contingent Valuation. *Journal of Environmental Economics and Management*. Vol. 14, No.3, pp.226-247.

Hoffman, E. and Spitzer, M.L. (1986) Experimental Tests of the Coase Theorem with Larger Bargaining Groups. *The Journal of Legal Studies*. Vol. 15, No.1, pp.149-171.

Hoffman, E. and Spitzer, M.L. (1993) Willingness to Pay Against Willingness to Accept: Legal and Economic Implications. *Washington University Law Quarterly*. Vol. 71, pp. 59-114.

Hughes, R. (1998) *Environmental Impact Assessment and Stakeholder Involvement.* Environmental Planning Issue No. 11, IIED Publication, London. 11pp.

IIED & HNWCP (1997) Local Level Assessment of the Economic Importance of Wild Resources in the Hadejia-Nguru Wetlands, Nigeria. *Sustainable Agricultural Programme.* Research Series 3.

Innocent, F. (2004) *Post-Compensation Analysis on the Affected Communities*: Case of Songosongo Gas to Electricity Project. BSc. Dissertation, FoS/SUA, Morogoro, Tanzania. 23pp. (Unpublished).

Jenkins, R.K.B., Corti, G.R., Fanning, E. and Roettcher, K. (2002) Management Implications of Antelope Habitat Use in the Kilombero Valley, Tanzania. *Oryx*, Vol.36, No.2. pp. 161 – 169.

Johnson, F., Dundas, C.C.F. and Richards, C.G. (1971) *Zamani Mpaka Siku Hizi: Yaani Habari za Tanganyika Tangu Zamani za Kale Mpaka Siku Hizi*. East African Literature Bureau, Nairobi. 135pp.

Kakuru, D. M. (2006) *The Combat for Gender Equality in Education: Rural Livelihood Pathways in the Context of HIV/AIDS.* AWLAE series No.4, Wageningen University, Wageningen Academic Publishers. 221pp.

Kangalawe, R.Y.M. and Liwenga, E.T. (2005) Livelihoods in the Wetlands of Kilombero Valley in Tanzania: Opportunities and Challenges to Integrated Water Resource Management. *Physics and Chemistry of the Earth*, Vol. 30, pp. 968 – 975.

Kariuki, S.M. (2004) *Can Negotiated Land Reforms Deliver? A Case of Kenya's, South Africa's and Zimbabwe's Land Reform Policy Debates*. African Studies Centre Working Paper no. 59/2004, Leiden, The Netherlands.

Kee, H., Olarreaga, M. and Silva, P. (2007) Market Access for Sale. *Journal of Development Economics*. Vol. 82, pp. 79 – 94.

Kideghesho, J.R. and Mtoni, P.E. (2008a) Who Compensates for Wildlife Conservation in Serengeti? *Journal of International Biodiversity Science and Management*, Vol.4, pp.112-125.

Kideghesho, J.R. and Mtoni, P.E. (2008b) The Potentials for Co-management Approaches in Western Serengeti, Tanzania, *Tropical Conservation Science,* Vol. 1, no.4, pp. 334-358.

Kim, C.H. and Kim, K.H. (2002) Compensation for Regulatory Takings in the Virtual Absence of Constitutional Provision: The case of Korea. *Journal of Housing Economics.* Vol. 11, pp.108-124.

Kirby, D.K. (2001) *Literature Review on the Economic Valuation of Different Forms of Land-Use in Tanzania*. Report Prepared for NRSP Project R7857. 20pp.

Kironde, J.M.L. (2004) *Current Changes in Customary/Traditional Land Delivery Systems in Sub-Saharan African Cities: The Case of Dar es Salaam City*. 32pp.

Knack, S. (1999) *Social Capital, Growth and Poverty: A Survey of Gross-Country Evidence*. The World Bank Social Capital Initiative Working Paper, No 7.

Knack, S. (2002) Social Capital and the Quality of Government: Evidence from the States. *American Journal of Political Science*, Vol. 46, No. 4, pp. 772–785.

Knetsch, (1990) Environmental Policy Implications of Disparities Between Willingness to Pay and Compensation Demanded Measures of Values. *Journal of Environmental Economics and Management*. Vol. 18, pp. 227 – 237.

Knetsch, J.L. and Sinden, J.A. (1984) Willingness to Pay and Compensation Demended: Experimental Evidence of an Unexpected Disparity in Measure of Value. *Quarterly Journal Economics*, Vol. 99, pp. 507-521.

Kombe, W.J. and Kreibich, V. (2001) Informal Land Management in Tanzania and the Misconception about its Illegality. A paper presented at the ESF/N-Aerus Annual Workshop on *"Coping with Informality and Illegality in Human Settlements in Developing Countries"*. 23-26 May 2001, Leuven & Brussels.

Krishnamurthy, S. (2008) *Academic Dictionary of Economics.* 17th Edition. Academic (India) Publishers, New Delhi. 425pp.

Kunreuther, H. and Easterling, D. (1996) The Role of Compensation in Siting Hazardous Facilities. *Journal of Policy Analysis and Management*, Vol.15, No.4, pp.601-622.

KVTC (2006) *Taarifa Fupi Juu ya Kampuni ya Mitiki Katika Bonde La Kilombero.* Ifakara, Morogoro. 36pp.

Lai, L.W.C. (1994) The Economics of Land-Use Zoning: A Literature Review and Analysis of the Work of Coase. *Town Planning Review*, Vol.65, pp.77-98.

Levine, A. (2007) Staying Afloat: State Agencies, Local Communities and International Involvement in Marine Protected Area Management in Zanzibar, Tanzania. *Conservation and Society*, Vol. 5, No. 4, pp. 562 – 585.

Levy, D.S. and Friedman, D.D. (1994) The Revenge of the Redwoods: Reconsidering Property Rights and the Economic Allocation of Natural Resources. *University of Chicago Law Review*. Vol. 61, pp.493-526.

Lindenberge, M.M. and Crosby, B.L. (1981) *Managing Development: The Political Dimension.* Kumarian Press, West Hartford CT.

Lissu, T.A. (1999) *Environmental Impact Assessment of Foreign Investment Projects: A Study of the Law, Policy and Governmental Decision-Making in Tanzania.* LEAT, http://www.leat.or.tz/publications/foreign.investment: (21/04/2009:2230)

Little, P.D. (2003) *Somalia: Economy Without State*. African Issues, Indiana University Press. 206pp.

Lovett, J., Quinn, C., Kiwasila, H.,…(2001) *Overview of Common Pool Resource Management in Semi-Arid Tanzania*, Report Prepared for NRSP Project R7857, Annex A., Dar es Salaam.

Luckham, R. (1998) Popular Versus Liberal Democracy in Nicaragua and Tanzania. *Democratisation,* Vol. 5, No. 3, pp. 92-126.

Ludwig, D. (2000) Limitations of Economic Valuation of Ecosystems. *Ecosystems,* Vol.3. pp.31-35.

MacDaniels, T.L. and Trousdale, W. (2005) Resource Compensation and Negotiation Support in an Aboriginal Context: Using Community-based Multi-Attribute Analysis to Evaluate Non-Market Losses. *Ecological Economics*. Vol.55, pp.173-186.

Magyari-Beck, I. (2002) *A Market Model of Creativity. In: Evolutions of Institutions and The Knowledge Economy.* Conference Proceedings, October 3-5, 2002. University of Debrecen. Debrecen, Hungary.

Mahanty, S. (2002) Conservation and Development Interventions as Networks: The Case of the India Ecodevelopment Project, Karnataka. *World Development*, Vol. 30, No. 8. pp. 1369 – 1386.

Mahapatra, L.K. (1999) Testing the Risks and Reconstruction Model on India's Resettlement Experiences. In Cernea, M.M. (ed.). *The Economics of Involuntary Resettlement: Questions and Challenges – Directions in Development,* The World Bank, Washington DC. pp. 189-230.

Marshall, C. and Rossman, G.B. (2006) *Designing Qualitative Research*. 4th Edition.

Mascarenhas, A. (2005) Poverty, Environment and Livelihoods Along the Gradients of the Usambaras in Tanzania. In Kikula, I., Kipokola, J., Shivji, I., Semboja, J and Tarimo, B. (eds.) *Researching Poverty in Tanzania: Problems, Policies and Perspectives.* REPOA (1994-2004). Mkuki na Nyota Publishers, Dar es Salaam. pp 391 – 444.

Mathur, H. M. (2008) Mining Coal Undermining People: Compensation Policies and Practices Coal India. In Cernea, M.M. and Mathur, H. M. (Eds.), *Can Compensation Prevent Impoverishment?: Reforming Resettlement Through Investments and Benefit-Sharing.* Oxford University Press, pp 260 – 285.

Mbiba, B. (1999) Security of Tenure, Development Victims, and the Limits of Environmental Impact Assessment in Zimbabwe's Communal Lands. *Development in Practice*. Vol.9, No.3, pp. 316-322.

McClelland, G., Schulze, W. and Hurd, B. (1990) The Effect of Risk Beliefs on Property Values: A Case Study of a Hazardous Waste Site. *Risk Analysis*, Vol. 10, pp. 485 – 498.

McGovern, F.E. (1995) An Analysis of Mass Torts for Judges. *Texas Legal Review*. Vol. 73. 1821, 1822.

McLeod, H. (2000) Compensation for Landowners Affected by Mineral Development: The Fijian Experience. *Resource Policy*, Vol. 26, pp. 115 – 125.

McNiff, J. and Whitehead, J. (2006) All You Need to Know About Action Research. SAGE Publications, London. 274pp.

Medema, S.G. and Samuels, W.J. (1997) Ronald Coase and Coasian Economics: Some Questions, Conjectures and Implications. In Samuels, W.J., Madema, S.G. and Schimid, A.A. (Eds.) *In the Economy as a Process of Valuation.* pp. 72-128, Edward Elgar, Cheltenham.

Medema, S.G. and Zerbe, R.O. (Jr) (1999) The Coase Theorem. pp. 836-892.

Meier, G. M. (2002) Culture, Social Capital, and Management in a Developing Economy, *Zagreb International Review of Economics & Business*, Vol. 5, No. 1, pp.1–15.

Meter, K. (1999) *Neighbourhood Sustainability Indicators Guidebook*. Crossroads Resource Center, Minneapolis.

Miceli, T.J. and Sirmans, C.F. (2007) The Holdout Problem, Urban Sprawl and Eminent Domain. *Journal of Economics and Law*.

Miles, B.M. and Huberman (1994) *Qualitative Data Analysis: An Expanded Sourcebook*, 2nd edition, SAGE, London.

Miles, J. and Shevlin, M. (2001) *Applying Regression and Correlation: A Guide for Students and Researchers*, SAGE, London.

Millenium *Ecosystem Assessment, MA (2005) Concepts of Ecosystems Value and Valuation* Approaches. www.millenniumassessment.org/en/index.aspx (08/02/2006: 1118)

Mishan, E.J. (1993) Economists Versus the Greens: An Exposition and a Critique. *The Political Quarterly* Vol. 64, No. 2, pp. 222-242.

Mishan, E.J. and Quay, E. (2007) *Cost Benefit Analysis*, Fifth edition. Routledge Taylor and Francis Group, London. 316pp.

Morris, P. and Therivel, R. (2001) *Methods of Environmental Impact Assessment*. 2nd Edition. Spon Press/Taylor and Francis Group, London. 419pp.

Morris, J., Angus, A., Cook, M., Harris J. and White, S. (2006) *Promoting Ecosystems Policy*. Draft VI. (Unpublished). Institute of Water and Environment, Cranfield University. 40pp.

Moyo, S. (2005) *Land Question and Land Reform in Southern Africa*. A Paper Presented at a South Africa Land Summit, 28 July – 1st August 2005, Soweto, South Africa.

Mtoni, P.E. (1999) *Involve Them or Lose Both: Local Communities Surrounding Serengeti National Park in Bunda and Serengeti Districts in Relation to Wildlife Conservation.* MSc. Dissertation, NLH. 136pp. (Unpublished).

Mullings, C. (1985) *Group Interviewing.* Crus guide no. 10. Centre for Research on User Studies, Sheffield, UK. 15pp.

Mutemba, S. (1996) Public Participation in Environmental Assessment in Bank-supported Projects in Sub-Saharan Africa. In Goodland, R., Mercier, J.R. and Muntemba, S. (Eds.). *Proceedings of the World Bank EA Workshop*, Durban, SA, June 25, 1995.

Mwalyosi, R.B.B. (2004) *Impact Assessment and the Mining Industry: Perspective From Tanzania.* International Association of Impact Assessment (IAIA) Conference, April 2004, Vancouver, Canada. 12pp.

Mwalyosi, R.B.B. and Hughes, R. (1998) *The Performance of EIA in Tanzania: An Assessment.* IIED Environmental Planning Issues No. 14, 95pp.

Nakayama, M. (1998) Post-Project Review of Environmental Impact Assessment for Saguling Dam for Involuntary Resettlemrnt. *Water Resources Development*, Vol. 14, No.2. pp. 217 – 229.

Neefjes, K. (2000) Environments and Livelihoods: Strategies for Sustainability. Development Guidelines, An Oxfam Publication. Redwood Books, Trowbridge, GB. 277pp.

NEMC (1997) *Environmental Impact Assessment: Procedures and Guidelines.* Volumes 1-5. National Environment Management Council, Dar es Salaam.

NEMC (2004) *Environmental Impact Assessment Training Manual in Tanzania*. Revised Version, National Environment Management Council, Dar es Salaam. 180pp.

Neuman, W.L. (2003) *Social Research Methods: Qualitative and Quantitative Approaches*. 5th edition, Allyn and Bacon, Boston, USA. 558pp.

Nombo, C.I. (2007) *When AIDS Meets Poverty: Implications for Social capital in A Village in Tanzania.* AWLAE Series No.5. Wageningen Academic Publishers, The Netherlands. 277pp.

Nombo, C.I. and Niehof, A. (2008) Resilience of HIV/AIDS Affected Households in a Village in Tanzania: Does Social Capital Help? *Medische Antropologie*, Vol.20, No.2. pp. 241 – 258.

North, D.C. (1990a) A Transaction Cost Theory of Politics. *Journal of Theoretical Politics*, Vol. 2, pp.355-367.

North, D.C. (1990b) *Institutions, Institutional Change and Economic Performance*. Cambridge MA: Cambridge University Press.

O'Brien, T. (2007) *Development Results in Middle-Income Countries: An Evaluation of World Bank's Support.* Illustrated edition. World Bank Publications. 160 pp.

ODA (1991) *Kilombero Valley Hardwood Project-Tanzania: Feasibility Study Main Report*, Vol.1. CDC, London. 33pp.

ODA (1992) *An Assessment of the Environmental Impact of the Kilombero Valley Hardwood Project-Tanzania: CDC Proposal*. Nairobi, EA. 177pp.

ODA (1995) Guidance Note on How to do Stakeholder Analysis of Aid Projects and Programmes. Social Development Dept. (http://www.euforic.org/gb/stake1.htm: 30/10/2008; 2215)

Olson, M. (1982) 'The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities' (Yale University Press, New Haven).

Oppenheim, A.N. (2003) *Questionnaire Design, Interviewing and Attitude Measurement*. New Edition. Continuum, New York. 303pp.

Orindi, V. and Huggins, C. (2005) The Dynamic Relationship Between Property Rights, Water Resource Management and Poverty in Lake Victoria Basin. International Workshop on *African Water Laws: Plural Legislative Frameworks for Rural Water Management in Africa,* 26-28 January 2005, Johannesburg, South Africa.

Ostrom, E. (2003) *Governing the Commons*: The Evolution of Institutions for Collective Action. Cambridge University Press. UK. 280pp.

Pallangyo, D.M. (2007) Environmental Law in Tanzania: How far Have We Gone?, *Law, Environment and Development Journal (LEAD)*, Vol. 3, No.1, pp. 28-39.

Palmer, R. (1996) *The Threat to People's Land in Southern Africa: The Current Crisis*, Oxford: Oxfam, UK.

Palmer, R. (2002) Contested Territory: Land in Southern Africa – The Case of Namibia. *Journal Namibia Scientific Society (Windhoek)*. Vol.50, 10pp.

Pass, C., Lowes, B. and Davies, L. (1988), *Dictionary of Economics*, Collins Reference. Collins, Glasgow, UK. 557pp.

Patterson, M., Humphreys, D. and Pettiford, L. (2003) Conceptualizing Global Environmental Governance: From Interstate Regimes to Counter Hegemonic Struggles. *Global Environmental Politics*, Vol. 3, pp. 1 – 10.

Pauwels, W. (1978), The Possible Perverse Behaviour of the Compensating Variation as a Welfare Ranking. *Journal of Economics*, Vol. 38, No.3-4, pp. 369-378.

Payne, B.A., Ollshansky, S.J. and Segel, T.E. (1987) The Effects on Property Values of Proximity to a Site Contaminated with Radioactive Waste. *Natural Resources Journal,* Vol. 27. pp. 581 – 590.

Pearce, D.W. and Swanson, T. (2008) The Economic Evaluation of Projects Involving Forced Population Displacements. In Cernea, M.M. and Mathur, H. M. (Eds.), *Can Compensation Prevent Impoverishment?: Reforming Resettlement Through Investments and Benefit-Sharing.* Oxford University Press, pp 99 – 120.

Pearce, D.W. and Turner, R.K. (1990) *Economics of Natural Resources and the Environment*. Harvester Wheat-sheaf, Hempstead, UK. 378pp.

Pearce, D.W., Barbier and Markandya, A. (1990) *Sustainable Development: Economics and Environment in the Third Word*, Earthscan Publication Ltd., UK, 217pp.

Peters, C.M.,Gentry, A.H. and Mendelsohn, R.O. (1989) Valuation of Amazonian Rainforest. *Nature.* Vol. 339, pp.655- 656.

Phillips, D. (2006) Relationships are the Core Values for Organisations: A Practitioner Perspective. *Corporate Communication: An International Journal*. Vol. 11, No. 1, pp. 34 – 42.

Portes, A. (1998) Social Capital: Its Origins and Applications in Modern Sociology. *Annual Review of Sociology*. Vol. 22, pp.1-24.

Portes, A. and Landolt, P. (1996) The downside of social capital. *The American Prospects*. Vol. 26, pp.18-22.

Posner, R.A. (1993) Ronald Coase and Methodology. *Journal of Economic Perspectives*, Vol. 7, No.4. pp. 195-210.

Pryor, F.L. (2006) Economic Systems of Developing Nations. *Comparative Economic Studies,* Vol. 48, pp. 77 – 99.

Putzel, J. (1997) Accounting for the 'dark side' of social capital: reading Robert Putnam on democracy. *Journal of international Development*. Vol. 9, No.7, pp.939-949.

Rao, P. (2000) *Sustainable Development: Economics and Policy*, Blackwell Publishers, UK., 88pp.

Rawles, K. (2002) *Compensation in Radioactive Waste Management: Ethical Issues in the Treatment of Host Communities.* A Paper for UK Nirex Ltd. 33pp. www.nirex.co.uk (30/01/06: 1140).

Reed, M.S., Graves, A., Dandy, N. Posthumus, H., ….(2009) Who's in and Why? A Typology of Stakeholder Analysis Methods for Natural Resource Management. *Journal of Environmental Management*, Vol. 90. pp. 1933 – 1949.

Rhoads, T.A. and Shogren, J.F. (1999), On Coasean Bargaining with Transaction Costs, *Applied Economics Letters*, Vol. 6, pp.779-783.

Robinson, J. (2004) Squaring the Circle: Some Thoughts on the Idea of Sustainable Development. *Ecological Economics* Vol. 48, No.4, pp.369-384.

Robson, C. (2002) *Real World Research,* 2nd Edition, Blackwell Publishers, Oxford, UK, 599pp.

Rutasitara, L. (2005) Economic Policy and Rural Poverty in Tanzania: Survey of Three Regions. In Kikula, I., Kipokola, J., Shivji, I., Semboja, J and Tarimo, B. (eds.) *Researching Poverty in Tanzania: Problems, Policies and Perspectives.* REPOA (1994-2004). Mkuki na Nyota Publishers, Dar es Salaam. pp. 9 – 109.

SADC (1996) *SADC Policy and Strategies for Environment and Sustainable Development*, SADC-ELMS, Maseru. SAGE Publications Inc., Thousand Oaks, Califonia. 280pp.

Sagiv, L. and Schwartz, S.H. (2007) Cultural Values in Organisations: Insights for Europe. *European Journal of International Management.* Vol. 1 (3), pp. 176–190.

SAIEA (2003) *Environmental Impact Assessment in Southern Africa*. SAIEA, John Meinert Printing, Windhoek. 352pp.

Saku, J.C. (2002) Modern Land Agreements and Northern Canadian Aboriginal Communities *World Development.* Vol. 30, No.1, pp.141-151.

Salkind, N.J. (2004) *Statistics for People Who (Think They) Hate Statistics*. 2nd Ed., SAGE Publications, California. 403pp.

Schmid, A.A. (2004) *Conflict and Cooperation*: Institutional and Behavioural Economics. Blackwell Publishing Ltd. 342pp.

Schofield, W. (2006) Survey Sampling. In Sapsford, R. and Jupp, V. (eds) Data *Collection and Analysis*. 2nd Edition. SAGE, London. 332pp.

Schwindt, R. (1992) *Report of the Commission into Compensation for the Taking of Resource Interests*. Resource Compensation Commission. Queen's Printer, British Columbia.

Scitovsky, T. (1976) *The Joyless Economy: An Enquiry into Human Satisfaction and Consumer Dissatisfaction.* Oxford, Oxford University Press.

Scitovsky, T. (1997) *Mi siklott félre nálunk Amerikában?* (What Ails the United States of America) Társadalom és Gazdaság, 1997. 3. pp. 134-150.

Scoones, I. (1998) *Sustainable Rural Livelihoods: A Framework for Analysis.* Institute of Development Studies, Working Paper No.72. Brighton, UK.

Scoones, I. (2009) Livelihoods Perspectives and Rural Development. *Journal of Peasant Studies,* Vol. 36, No. 1. 26pp.

Scoone, I., Melnyk, M. and Pretty, J.N. (1992) *The Hidden Harvest: Wild Foods and Agricultural Systems*. Sustainable Agricultural Programme. IIED, London.

Seashore, S.E. (1975) Defining and Measuring the Quality of Working Life. In Davis, L.E. and Cherns, A.B. (eds.) *The Quality of Working Life: Problems, Prospects and the State of the Art*, Vol. 1. The Free Press, New York. pp. 105 – 118.

Sebenius, J.K., Eiran, E., Feinberg, K.R., Cernea, M. and McGovern, F. (2005) Compensation Schemes and Dispute Resolution Mechanisms: Beyond the Obvious. *Negotiation Journal* .Vol. **21** No.2, pp. 231-244.

Sharon, L.L. (1999) *Sampling: Design and Analysis*. Duxburg Press, Bonn.

Shilpi, F.J. and Umali-Deininger, D. (2008) Market Facilities and Agricultural Marketing: Evidence from Tamil Nadu, India. *Agricultural Economics* Vol. 39, No. 3, pp. 281-94.

Shivji, I.G. (1998) Not Yet Democracy: Reforming Land Tenure in Tanzania. IIED/HAKIARDHI, 132. pp.

Shivji, I.G. (2004) Reflections on NGOs in Tanzania: What we are, What we are not and, What we Ought to be. Development in Practice, Vol. 14, No.5, pp. 689 – 695

Shogren, J.F., Shinn, Moffett. R. and Margolis, M. (2002) Coasean Bargaining with Non-convexities. *Applied Economics Letters*, Vol. 9, pp.971-977.

Shogren, J.F., Shinn, S., Hayes, D. and Kliebenstien, J. (1992) *Experimental Evidence on the Divergence Between Measures of Value*. Mimeo, Economics Department of Economics, Iowa State University.

Simbua, E.F. (2006) *The Economic Sustainability of Smallholder Tea Production Systems in Tanzania.* PhD Thesis, IWE, Cranfield Univeristy at Silsoe. 267pp.

Stigler, G.J. (1966) *The Theory of Price.* 3rd Edition, Macmillan, New York.

Stigler, G.J. and Pashigian, B.P. (1989) *Can Price Uncertainty Explain Why and When Product are Sold on Sale.* Working Paper No. 57

Söderbaum, P. (2009) Making Actors, Paradigms and Ideologies Visible in Governance for Sustainability. *Sustainable Development*, Vol. 17, pp. 70 – 81.

Sonnenberg, D. and Münster, F. (2001) *Mining Minerals Sustainable Development Southern Africa: Mining and Society – Involuntary Resettlement.* African Institute of Corporate Citizenship, South Africa. 74pp.

Stake, R.E. (2005) Qualitative Case Studies. In Denzin, N.K. and Lincoln, Y.S. (eds) (2005). *The SAGE Handbook of Qualitative Research*, 3rd Edition. SAGE, California, USA. 1210pp.

Stone, S. and Harris, C. (1984a) *Designing a User Study: General Research Design.* Crus guide no. 1, Centre for Research on User Studies, Sheffield, UK. 20pp.

Stone, S. and Harris, C. (1984b) *Analysing Data.* Crus guide no.3. Centre for Research on User Studies, Sheffield, UK. 26pp.

Tamondong, S.D. (2008) Can Improved Resettlement Reduce Poverty. In Cernea, M.M. and Mathur, H. M. (Eds.), *Can Compensation Prevent Impoverishment?: Reforming Resettlement Through Investments and Benefit-Sharing.* Oxford University Press, pp. 394 – 417.

TANESCO (2004) *Final Draft Report of Physical Verification and Assessment of Compensation Value: Detailed Valuation and Resettlement Action Plan for Wayleave Village Electrification Scheme (WVES) Project*, Part III, Utete-Chumbi Corridor, Dar es Salaam.

Thabane, M. (2000) Shifts From Old to New Social and Ecological Environments in the Lesotho Highlands Water Scheme: Relocating Residents of Mohale Dam Area. *Journal of Southern African Studies*, Vol. 26, No.4, pp 633 – 654.

TIC (2009) World Investment Report 2009: Tanzania Investment Report for 2008. *WAIPA Regional Workshop for Africa on "Promoting and Retaining Investment in Times of Economic Crisis",* 1-3 April 2009, Dar es Salaam, Tanzania, UNCTAD/WAIPA http://www.waipa.org/emailings/emailing_04-09.html: (30/04/2009: 0930).

Tietenberg, T.H. (1996) *Environmental and Natural Resource Economics*. 4th edition, Happer Collins College Publishers, New York, USA.

Tietenberg, T.H. (2003) *Environmental and Natural Resource Economics*. 6th edition, Addson Wesley, New York, USA. 646pp.

Trembath, B.P. (2008) Beyond Compensation: Sharing of Rents Arising From Hydropower Projects. Cernea, M.M. and Mathur, H.M. (eds.) (2008) *Can Compensation Prevent*

Impoverishment?: Reforming Resettlement Through Investments and Benefit-Sharing. Oxford University Press. pp. 14-98.

Tripp, A.M. (2004) Women's Movements, Customary Law and Land Rights in Africa: The Case of Uganda. *The Online Journal for African Studies*, Vol. 7, No. 4, pp. 1 – 19. http://www.africa.ufl.edu/asq/v7/v7il.htm: (09/04/2009: 1830)

Tsikata, D. (2003) Securing Women's Interests within Land Tenure Reforms: Recent Debates in Tanzania. *Journal of Agrarian Change*, Vol. 3, Nos. 1 & 2, pp. 149 – 183.

Turner, R.K. (1988) Wetland Conservation: Economics and Ethics in Collard, D., Pearce, D. and Ulph, D. (eds) *Economics, Growth and Sustainable Environments*, Macmillan Press Ltd. London. 205pp.

Turner, R.K. (1993) Sustainability: Principles and Practices in Turner, R.K. (ed) *Sustainable Environmental Economics and Management. Belhaven Press, London*. pp.3-36.

Turner, R.K., Paavola, J., Cooper, P., Farber, S., Jessamy, V., & Georgiou, S. (2003) Valuing Nature: Lessons Learned and Future Research Direction. *Ecological Economics*, Vol. 46, pp. 493-510.

UNCTAD (2002) *World Investment Reports 1995 – 2001*.

UNCTAD (2006) Developing Countries are Beginning to Promote Outward FDI, *UNCTAD Investment Brief*, No.4, www.unctad.org/wir (22/03/2007: 2338).

UNEP (2004) *Environmental Impact Assessment and Strategic Environmental Assessment: Towards an Integrated Approach.* UNEP Resource Manual, 163pp. www.unep.ch/etu/publications/textONUBr.pdf (30/01/06: 1100).

UNEP/SMAP (2006) UNEP-MAP-SMAP III Project: *Project Implementation Manual.* UNEP/SMAP/WB, 100pp.

Ungaro, D. (2005) Ecological Democracy: The Environment and the Crisis of the Liberal Institutions. *International Review of Sociology*, Vol. 15, No.2, pp.293-303.

URT (1989) Tanzania Forestry Action Plan 1990/91 – 2007/08. Ministry of Lands, Natural Resources and Tourism. Sept 1989, Dar es Salaam.

URT (1967) *The Land Acquisition Act No. 47 of 1967*. Government Printer, Dar es Salaam, Tanzania. 18pp.

URT (1997a) *The Tanzania Investment Act No. 26 of 1997*. Government Printer, Dar es Salaam, Tanzania.

URT (1997b) *Songosongo Gas-to-Electricity Project: Resettlement Programme and Plan*.

URT (1999a) *The Land Act No. 4 of 1999*. Government Printer, Dar es Salaam, Tanzania. 507pp.

URT (1999b) *The Village Land Act No. 5 of 1999*. Government Printer, Dar es Salaam, Tanzania. 285pp.

URT (2000) *Songosongo Gas-to-Electricity Project: Resettlement Plan Addendum*, Vol.2. 46pp.

URT (2001) Village Land Regulations (L. N. No.86 of 2001), *Government Gazette* of 4th May 2001, Supplement No.16, Gazette No.18, pp. 695-774.

URT (2002), *The 2002/03 Tanzania Participatory Poverty Assessment: Site Report for Iwungilo Village, Njombe District, Iringa.* Released by the ESRF, President's Office-Planning and Privatisation. Dar es Salaam.

URT (2003a), *Dar es Salaam Water Supply and Sanitation Project: Policy Framework for Resettlement of Project Affected Families*. Dar es Salaam Water and Sewerage Authority, (DAWASA). 19pp.

URT (2003b) *Participatory Agricultural Development and Empowerment Project (PADEP): Resettlement Policy Framework*. Ministry of Agriculture and Food Security, Dar es Salaam. 30pp.

URT (2004a) *Tanzania Social Action Fund (TASAF): Resettlement Policy Framework II for TASAF Projects*. President's Office, Dar es Salaam. 69pp.

URT (2004b) *Environmental Management Act No. 20 of 2004*. The Vice President's Office. Government's Printer, Dar es Salaam, Tanzania.

URT (2005a) *Wayleave Village Electrification Scheme (WVES) Project: Compensation Action Plan.* TANESCO, RP58, Vol.3, Final Report, IRA/UDSM. 85pp.

URT (2005b) *Distribution and Transmission Rehabilitation Project (Dar es Salaam, Moshi and Arusha): Resettlement Action Plan*. TANESCO, RP58, Vol.7, Main Report & Appendices. 55pp.

URT (2005c) *The Constitution of the United Republic of Tanzania of 1997.* Incorporated Amendments up to 20th June 2005. Ministry of Justice and Constitution Affairs, Mpiga Chapa Mkuu wa Serikali, Dar es Salaam. 130pp.

URT (2005e), *Environmental Assessment Regulations,* Government Printer, Dar es Salaam. 42pp.

URT (2006), *Agricultural Sector Development Programme (ASDP): Resettlement Policy Framework*. Ministry of Agriculture and Food Security, Dar es Salaam. 46pp.

URT (2008a) National Social Security Fund: Retirement Benefits, http://www.nssf.or.tz/retirement.php (24/12/2008: 1030).

URT (2008b) *United Republic of Tanzania: The Economic Survey 2007*. Ministry of Finance and Economic Affairs, Dar Es Salaam, Tanzania, 208 pp. http://www.tanzania.go.tz: (07/11/2008: 1525).

Van Wicklin III, W.A. (1998) Sharing Project Benefits to Improve Resettlers' Livelihoods. In Cernea, M.M. (Ed.) *The Economics of Involuntary Resettlement: Questions and Challenges*, The World Bank, Washington, D.C. pp. 231 – 256.

Varian, H.R. (1996) *Intermediate Microeconomics: A Modern Approach*, 4th edition. Norton & Company Inc., New York. 650pp.

WCED (1987) *Our Common Future*, Brundtland, G.H. (ed.), (1987), "The World Commission on Environment and Development", Oxford, Oxford University Press. 400pp.

Webster, C.J. (1998) Public Choice: Pigouvian and Coasian Planning Theory. *Urban Studies*, Vol.35, pp.53-75.

Weigl, T. (2008) *Strategy, Structure and Performance in a Transitional Economy: An Insitutional Perspective on Configurations in Russia*. First edition. Gabler, 384pp.

Willging, T.E. (1999), *Mass Torts Problems & Proposals*. A report to the Mass Torts Working Group, Federal Judicial Center, USA. 129pp.

Wily, L.A. (2000) Land Tenure Reform and the Balance of Power in Eastern and Southern Africa. *Natural Resources Perspectives*, No.58. ODI/DFID. 4pp.

Wily, L.A. (2003), *Community-Based Land Tenure Management: Questions and Answers About Tanzania's New Village Land Act, 1999.* Issue paper No.120, IIED, UK. 59pp.

Wood, C. (2003) *Environmental Impact Assessment: A Comparative Review*. 2nd Edition, Prentice Hall, Malaysia. 432pp.

WWF (1992), Reed, D. (ed.) *Structural Adjustment and Environment* Earthscan Ltd, London. 209pp.

AICC (2001) *Mining Minerals Sustainable Development Southern Africa: Involuntary Resettlement.* Research Topic 3 – Mining and Society. Sonnernberg, D. & Münster, F. (eds.), African Institute of Corporate Citizenship, South Africa. 74pp.

WWF (1992) Reed, D. (ed.) *Structural Adjustment and Environment* Earthscan Ltd, London. 209pp.

Yin, R.K. (2003a) *Case Study Research: Design and Methods*. 3rd edition. Applied Social Research methods Series, Vol. 34. SAGE Publication, Thousand Oak, USA. 181pp.

Yin, R.K. (2003b) *Applications of Case Study Research*. 2nd edition. Applied Social Research methods Series, Vol. 5. SAGE Publication, Thousand Oak, USA. 173pp.

Yngstrom, I. (2002) Women, Wives and Land Rights in Africa: Situating Gender Beyond the Household in the Debate Over Land Policy and Changing Tenure Systems. *Oxford Development Studies*. Vol. 30, No. 1, pp. 21 – 40).

Zaman, M. (2002) Resettlement and Development in Indonesia. *Journal of Contemporary Asia*, Vol. 32, No. 2. pp. 255 – 266.

Zerbe, R.O. (Jr) (1998) Is Benefit-Cost Analysis Legal? Three Rules. *Journal of Policy Analysis and Management*. Vol. 17, pp.

Zhao, J. and Kling, C.L. (2004) Willingness to Pay, Compensating Variation and the Cost of Commitment. *Economic Inquiry*, Vol. 42, No.3. pp. 503 - 517.

Zhi, H. (1995) Risk Management for Overseas Construction Projects. *International Journal of Project Management*, Vol. 13, No. 4, pp. 231 – 237.

Zuindeau, B. (2006) Spatial Approach to Sustainable Development: Challenges of Equity and Efficacy. *Regional Studies*, Vol. 40, No. 5, pp. 459 – 470.

APPENDICES

Appendix 2.1: Glossary

Affected parties: Victims of development activities whom suffer from different losses including loss of land, land resources, home, means of livelihood, employment, business, some communal functions, infrastructures, access to economic assets.

Benefit assurance: Compensation benefit that involves a guarantee of direct or indirect advantages such as employment to the affected community members.

Coase theorem: States that the socially efficient allocation of resources will be obtained regardless of the allocation of property rights, assuming zero transactions costs and no wealth effects.

Collective choice theory: Argues that individuals are willing to work together to make choices collectively regarding the use of natural resources and other 'public goods' that people hold in common, or as a group, based on the expected utility of their options. They are willing to give up some individual freedoms in pursuit of actions which serve both the collective and, within this, the private good.

Compensating variation: – is a measure of the largest sum an individual is willing to pay for a good (or removal of a bad) in order to reach his/her initial utility.

Compensation criteria: A set of terms and conditions of which compensation eligibility, claims and entitlements can be assessed, evaluated, judged and confirmed during valuation processes.

Compensation efficiency: Is a state where both the affected and the externality-causer achieve the desired compensational results without wastage of resources (i.e. effort, money and time).

Compensation entitlements: are rights established and recognized by compensation law or an agreement between responsible parties.

Compensation framework: A set of ideas, beliefs or rules that provide the general guidance to compensation processes in order to avoid negative impacts to stakeholders and their environment.

Compensation payment: Compensation package paid/given to the affected parties.

Compensation performance: Generalised experience of accomplishing compensation tasks based on the knowledge, technology and control mechanisms available in a society.

Compensation procedure: The course of actions, steps, methods and principles intended to facilitate achievement of the desired results in a compensation process.

Compensation programme: The planned response or developed scheme that offers compensation to the parties suffered of losses because of proposed development activities.

Compensation recipients: Can be individuals, households, organisations, groups or communities that receive compensation payments.

Compensation source: The source of different elements, materials or/and money provided to the affected parties as compensation for the losses encountered.

Economic system: Comprises the configuration of institutions and organisations that specify property relations within a given society that channel and influence the distribution of goods and services.

Ecosystem function: The way natural processes work directly or indirectly to provide goods and services that meet the needs of living organisms.

Ecosystem services: A framework for analysing the benefits that society derives, directly or indirectly, from ecological systems. Services, sometimes referred to as functions, underpin uses and values.

Environment: Humans, individuals of other species, ecosystems and processes all together.

Equivalent variation: Is a measure of the smallest sum an individual will accept to forego a good or accept a bad.

Externality: As perceived by neo-classical economics is unintended cost borne by one party without compensation or benefit enjoyed without payment due to the action of another independent party.

Financial capital: It includes financial resources in savings, money supplied in regular remittances and pension schemes.

Free-riding: This is a state where some members of the group may not want to fully participate in resolving the problem at hand but like the benefits.

Functions: Properties or processes within ecosystems, for instance production of biomass; climate regulation; provision of habitats; a setting for recreation.

Good-will-economic incentives: Compensation benefits in terms of development projects, charitable contributions meant to help the affected people to develop economical potentials.

Human capital: This is people, their knowledge, skills, health status and labour, that give ability to pursue different livelihood strategies.

Human well-being: Peace of mind and happiness, now and in the future.

Income effect: Is a highlight on how consumption changes as influenced by change in purchasing power of the consumer.

Inferior good: Is a good that decreases in demand when consumer income rises

Institutions: Rules and conventions that facilitate co-ordination among people regarding their behaviour, including formal and informal systems, elements of social capital and policy frameworks. **Or** the mechanisms of social structures governing the behaviours of two or more individuals with the purpose of making and enforcing of rules related to human behaviours.

Land resources: Land and all other natural resources available on and in the land.

Marginal rate of substitution (MRS): is the amount of one good (endowment such as land) that has to be given up if the consumer is to obtain one extra unit of the other good (project benefits)

Market value: Is the price an asset would fetch in the market if it were sold immediately.

Natural capital: Comprises all naturally occurrence materials including renewable and non-renewable resources, air, water, nutrient cycles, biodiversity and land.

Non-market value: Intangible values associated with ecosystem services that cannot be transacted in the market.

Normal good: Is the for which consumers' demand increases when their income increase

Perfect market competition: A hypothetical economic model that assumes neither the producers nor consumers have control of prices of goods and services in the market.

Physical capital: This is sometimes called produced or manmade capital. It comprises the basic infrastructures such as roads, railways, bridges, ports, factories, machinery, telephone networks, satellites and so forth.

Principle: A set of moral rules guiding and showing a better way of doing things and achieve the desired results.

Property rights: A claim to a benefit stream that the State will protect through assigning duties to others who are likely to interfere it. It is therefore relationship between people with regard to things they claim to own.

Public good: Goods and services which, once produced, can be consumed by everyone in society. Consumption by one individual does not diminish the ability of another to consume the same good.

Rent (economic/resource): It is a surplus value after all costs and normal returns have been accounted for. But when referring to rent in natural resources such as coastal space or minerals, it is commonly called **resource rent**.

Scoping: Is both a consultative and an interactive process during Environmental Impact Assessment (EIA) where a proponent engages key stakeholders to discuss the project proposal in order to identify issues of concerns and boundaries of the EIA studies.

Social capital: This refers to as relations and networks formed by individuals or groups available in a society. Comprises aspects of social organisation e.g. norms of behaviour, interaction, trust, reciprocity and institutions.

Stakeholder: Is an individual, group, community or organisation with an interest to a policy goal, project or particular issue such as compensation scheme, either as a result of being affected by it or being able to influence it positively/negatively.

Stakeholder analysis: Is a process that identifies individuals, groups and organisations that are affected by or can affect social, economic and natural aspects of a phenomenon (decision or action).

Substitution effect: Is when the consumer switches consumption patterns due to the price change alone, remains on the same indifference curve but different budget line.

Tanzania: Union of Mainland Tanzania (Tanzania) and Tanzania Isles (Zanzibar). In this study Tanzania refers to Mainland Tanzania.

Transaction costs: The costs of completing a transaction above the cost of the good or service being exchanged.

Uses: Anthropogenic use and non-use of ecosystem services.

Values: Stakeholder values and preferences associated with use and non-use of eco-system services.

Value judgement: People's subjective decision of what is good or bad based on ethical considerations such as fairness rather than strict economic rationale.

Values of the process: Are desirable importance embedded in the process and practices that help people to focus on the expected outcome(s) from the beginning to an end of the process.

Appendix 2.2: Legal compensation entitlements in Tanzania

Compensation entitlement category	*Compensation entitlements*	*Eligibility*	*How is it worked out*
Loss of land	Loss of land	Ownership/occupation of land	Market value or cost of acquiring or getting the subject land
Loss of structures	Loss of assets/properties	Ownership of land and immovable assets	Sales actual market costs adjusted based on condition, amenities, quality, age, location, type and other market factors
Loss of income	Loss of crops	Grown annual and perennial crops	Crop counting and application of crop compensation rates in place
	Loss of profit	Legally recognised business	Monthly net profit of the business carried out on the land evidenced by audited accounts where necessary and multiplied by 36 months to arrive at the payable amount
Intangible losses	Disturbance allowance	Ownership/occupation of land	Calculated by multiplying value of the land by average interest rate offered by commercial banks on fixed deposits for 12 months at the time of loss of interest in land
Other losses	Accommodation allowance	Ownership/occupation of land	Market rent for the subject building multiplied by 36 months to arrive at payable amount
	Transport allowance	Relocation of home	Actual costs of transporting 12 tonnes of luggage by rail or road (whichever is cheaper) within 20km from the point of displacement

Appendices 3.1 – 3.3: Questionnaires

Appendix 3.1: Questionnaire for the survey of project developers

1: Name of the project:……

2: What is the nature of your main activity? *(Mark 'X' in the provided box)*

☐: Agricultural production
☐: Forestry conservation and production
☐: Wildlife conservation and tourism
☐: Energy production
☐: Mining
☐: Industrial production/Commercial business
☐: Infrastructure e.g. roads, communication, etc.
☐: Others *(specify)*

3: What positive and negative impacts were caused by your project activities? *(Based on their order of significance list 3 positive and 3 negative impacts)*

Positive impacts (Benefits)	***Negative impacts (Costs)***
……	……

4: Did the project compensate the affected people during its inception?

☐: Yes ☐: No

5: <u>If YES</u>, what claims were raised for compensation by the affected people and what were actual (compensated for)?

Claimed for compensation	***Compensated***
……	……

6: What do you think is your levels of interests in and influence on compensation matters in Tanzania? What are the levels of interests in and influence on compensation process of other key stakeholders whom you know? *(use the provided scale)*

Name of Stakeholder	**Possible aspects that contribute into the costs of planning and implementation of compensation process**	**Higher (4)**	**High (3)**	**Low (2)**	**Lower (1)**
You as a developer	What do you think is your interest in compensation process?				
	What do you think is your influence over compensation process?				
……	What do you think is the level of interests in compensation process of this stakeholder?				
……	How does this stakeholder influence over compensation process?				

7: What do you think is appropriate type(s) of compensation that is likely to improve and maintain living conditions of the affected rural people? *(Use the provided boxes to rank the 1st, 2nd & 3rd based on their suitability)*

Type or form of compensation	***Advantages***	***Disadvantages***
☐: Monetary compensation		
☐: In-kind payments		
☐: Shareholder (benefit sharing)		
☐: **Others** (specify)……		

8: What factors do you think affect developers' willingness to pay (WTP) compensation? *(Choose 3 factors and rank the 1st, 2nd & 3rd based on their negative influence to WTP compensation)*

Factor	***Give brief explanation for your 1st, 2nd & 3rd ranks.***
☐: Lack of clear compensation procedure and criteria ☐: Lack of clear entitlement to land, assets & compensation ☐: Unnecessarily bureaucracy ☐: High expectations and unjustifiable claims from the affected people ☐: High costs involved in the planning, implementation and monitoring of compensation schemes ☐: Lack of formal compensation agreements ☐: Others *(specify)* ……	***1st rank:*** ***2nd rank:*** ***3rd rank:***

9: What could be done in order to reduce the effects caused by the above-ranked factors? ….……

10: Based on your experience what are the possible sources of disputes during compensation processes in Tanzania? *(Choose 3 and rank the 1st, 2nd & 3rd based on their dispute-influence)*

Factor	***Give brief explanation for your 1st, 2nd & 3rd ranks.***
☐: Lack of clear compensation procedures and criteria ☐: Lack of clear entitlements to land, assets & compensation ☐: Lack of formal compensation agreements ☐: Lack of participation and involvement of key stakeholders, affected people in particular ☐: Lack of cooperation among key stakeholders ☐: Lack of information and feedback-giving ☐: High expectations and unjustifiable claims from the affected people ☐: Influence of traditional and cultural values ☐: Others *(specify)* ……..	***1st rank:*** ***2nd rank:*** ***3rd rank:***

11: What measures do you think the developers could take in order to minimise compensation disputes?

12: What measures do you think other parties (e.g. government, CSOs, financiers, donors, etc.) could take in order to minimise compensation disputes?……

13: Do you agree that bargain (negotiation) process between the developer and affected community has potentials in reducing compensation disputes?

☐: Yes	***8.4.1*** **If** Yes **or** No**, give reasons:** ……. ……..… ……..…
☐: No	
☐: No idea	

14: How do the following aspects contribute into the costs of planning and implementation of compensation scheme? *(Rate each aspect by marking 'X' in one of the provided scale levels 'higher to lower')*

Compens-ation stages	Possible aspects that contribute into the costs of planning and implementation of compensation process	Higher	High	Moderate	Low	Lower	Don't Know
Planning stage	☐ Exploration (feasibility study)						
	☐ Type of land ownership						
	☐ Conflicts of interests						
	☐ Types of assets and land resources involved						
	☐ Number of parties involved						
	☐ Information search						
	☐ Methods and approaches to compensation						
	☐ Consultancy fees & middlemen charges						
	☐ Stakeholder participation						
	☐ Structure of the plan (legal requirements)						
	☐ Structure of the plan (administrative						
Implementation stage	☐ Type of compensation demanded						
	☐ Developer's willingness to pay compensation						
	☐ Affected people's willingness to accept						
	☐ Conflicts of interests						
	☐ Negotiation processes						
	☐ Number of parties involved during negotiation						
	☐ Consultancy fees & middlemen charges						
	☐ Structure of the contract, (detailed & flexibility)						
	☐ Complains and appeals						
	☐ Litigation (court) processes						
	☐ Repeated actions to reduce uncertainties						
Post-compensation stage	☐ Policing, follow-ups and enforcement						
	☐ Conflicts of interests						
	☐ Monitoring programme						
	☐ Number of parties/actors involved in						
	☐ Feedback mechanisms						
	☐ Intermediations (repeated actions to reduce						

15: Based on your experience identify up to 5 aspects (from *Qn. 13* above) which you think contribute most into unnecessarily costs during compensation process? *(Use the boxes provided in Qn 13 to rank them 1st, 2nd, 3rd, 4th & 5th based on their contribution)*

16: What measures do you think are effective in minimising or avoiding unnecessarily costs as identified in *Qn. 14* above?……

Thank you for your cooperation

Appendix 3.2: Questionnaire for the survey of service providers

1: Name of the organisation:……

2: What is the nature of your main activities? *(Mark 'X' in the provided box)*

☐: Enforcement
☐: Advisory services
☐: Public services
☐: Research and education
☐: Conservation
☐: Others *(specify)*

3: What do you think is your levels of interests in and influence on compensation matters in Tanzania? What are the levels of interests in and influence on compensation process of other key stakeholders whom you know? *(use the provided scale)*

Name of Stakeholder	Possible aspects that contribute into the costs of planning and implementation of compensation process	Higher (4)	High (3)	Low (2)	Lower (1)
You as a service provider	What do you think is your interest in compensation process?				
	What do you think is your influence over compensation process?				
……	What do you think is the level of interests in compensation process of this stakeholder?				
	How does this stakeholder influence over compensation process?				

4: Which group of stakeholders benefit most from development projects established in rural areas in Tanzania? *(Choose 3 stakeholders and use the provided boxes to rank them 1st, 2nd & 3rd based on who gains most. Explain how and what impact do these benefits have in their livelihoods)*

Stakeholders	*Rank*	*Impacts on people's livelihoods*
☐: Project developer ☐: Central government ☐: Local governments (district and village authorities) ☐: Local communities (village where the project is located) ☐: Nearby local communities ☐: Experts, consulting firms and freelance consultants (service providers) ☐: Non-Governmental Organisations (NGOs) ☐: Others *(specify)* ……	***1st rank:***	
	2nd rank:	
	3rd rank:	

5: Which stakeholders normally lose because of the development projects? *(Choose 3 stakeholders and use the provided boxes to rank them 1st, 2nd & 3rd based on who suffers most. Also explain how and which risks are likely to occur)*

Stakeholders	*Rank*	*Risks likely to occur due to the losses suffered (if any)*

☐: Project developer ☐: Central government ☐: Local governments (district and village authorities) ☐: Local communities (village where the project is located) ☐: Nearby local communities ☐: Experts, consulting firms and freelance consultants (service providers) ☐: Non-Governmental Organisations (NGOs) ☐: Others *(specify)* ……	***1st rank:***	
	2nd rank:	
	3rd rank:	

6: What could be done in order to minimise the chances of occurrence for the above-listed risks? ……

7: Do the affected stakeholders get adequate compensation for the losses encountered?

☐: Yes ☐: No ☐: Don't know

8: What do you think is appropriate type(s) of compensation that is likely to improve and maintain living conditions of the affected rural people? *(Use the provided boxes to rank the 1st, 2nd & 3rd based on their suitability)*

Type or form of compensation	***Advantages***	***Disadvantages***
☐: Monetary compensation		
☐: In-kind payments		
☐: Shareholder (benefit sharing)		
☐: **Others** (specify)……		

9: What factors do you think affect developers' willingness to pay (WTP) compensation? *(Choose 3 factors and rank the 1st, 2nd & 3rd based on their negative influence to WTP compensation)*

Factor	***Give brief explanation for your 1st, 2nd & 3rd ranks.***
☐: Lack of clear compensation procedure and criteria	***1st rank:***
☐: Lack of clear entitlement to land, assets & compensation	***2nd rank:***
☐: Unnecessarily bureaucracy ☐: High expectations and unjustifiable claims from the affected people ☐: High costs involved in the planning, implementation and monitoring of compensation schemes ☐: Lack of formal compensation agreements ☐: Others *(specify)* ……	***3rd rank:***

10: What could be done in order to reduce the effects caused by the above-ranked factors?……

11: Based on your experience what are the possible sources of disputes during compensation processes in Tanzania? *(Choose 3 and rank the 1st, 2nd & 3rd based on their dispute-influence)*

Factor	*Give brief explanation for your 1st, 2nd & 3rd ranks.*
☐: Lack of clear compensation procedures and criteria ☐: Lack of clear entitlements to land, assets & compensation ☐: Lack of formal compensation agreements	***1st rank:***
☐: Lack of participation and involvement of key stakeholders, affected people in particular ☐: Lack of cooperation among key stakeholders ☐: Lack of information and feedback-giving	***2nd rank:***
☐: High expectations and unjustifiable claims from the affected people ☐: Influence of traditional and cultural values ☐: Others *(specify)* ……..	***3rd rank:***

12: What measures do you think the service providers could take in order to minimise compensation disputes? …….. ……

13: What measures do you think the developers could take in order to minimise compensation disputes?……

14: What measures do you think other parties (e.g. Government, CSOs, financiers, donors, etc.) could take in order to minimise compensation disputes?……

15: Do you agree that bargain (negotiation) process between the developer and any affected groups has potentials in reducing compensation disputes?

☐: Yes	***8.4.2*** **If** Yes **or** No**, give reasons:** …… …… …… ……
☐: No	
☐: Don't know	

16: How do the following aspects contribute into the costs of planning and implementation of compensation scheme? *(Rate each aspect by marking 'X' in one of the provided scale levels 'higher to lower')*

Compens-ation stages	Possible aspects that contribute into the costs of planning and implementation of compensation process	Higher	High	Moderate	Low	Lower	Don't Know
Planning stage	☐ Exploration (feasibility study)						
	☐ Type of land ownership						
	☐ Conflicts of interests						
	☐ Types of assets and land resources involved						
	☐ Number of parties involved						
	☐ Information search						
	☐ Methods and approaches to compensation						
	☐ Consultancy fees & middlemen charges						
	☐ Stakeholder participation						
	☐ Structure of the plan (legal requirements)						
	☐ Structure of the plan (administrative						
Implementation stage	☐ Type of compensation demanded						
	☐ Developer's willingness to pay compensation						
	☐ Affected people's willingness to accept						
	☐ Conflicts of interests						
	☐ Negotiation processes						
	☐ Number of parties involved during negotiation						
	☐ Consultancy fees & middlemen charges						
	☐ Structure of the contract, (detailed & flexibility)						
	☐ Complains and appeals						
	☐ Litigation (court) processes						
	☐ Repeated actions to reduce uncertainties						
Post-compensation stage	☐ Policing, follow-ups and enforcement						
	☐ Conflicts of interests						
	☐ Monitoring programme						
	☐ Number of parties/actors involved in						
	☐ Feedback mechanisms						
	☐ Intermediations (repeated actions to reduce						

17: Based on your experience identify up to 5 aspects (from *Qn. 16* above) which you think contribute most into unnecessarily costs during compensation process? *(Use the boxes provided in Qn 13 to rank them 1st, 2nd, 3rd, 4th & 5th based on their contribution)*

18: What measures do you think are effective in minimising or avoiding unnecessarily costs as identified in *Qn. 17* above?……

19: Which criteria do you think would help to distribute fairly the benefits and costs of development projects among concerned stakeholders?……

Thank you for your cooperation

Appendix 3.3: Household questionnaire for the verification survey

1.0: Identification information:

Village:…… Questionnaire No.:..... Numerator: ……..……..

2.0: Particulars of household head:

2.1: Sex?

2☐: Male 1☐: Female

2.2: How old are you? […….]

3☐: Elder person (>55 years) 2☐: Adult person (36-55 years) 1☐: Young person (18-35 years)

2.3: What is your highest education level attained?

4☐: Informal 3☐: Primary 2☐: Secondary 1☐: Other *(specify)* …….

2.4: How many people in your household depend on your farms for livelihood? […..], their gender and ages?

Age groups(years)	*Children (<5)*	*Children (5-17)*	*Youth (18-35)*	*Adults (36-55)*	*Elders (>55)*
Male					
Female					

2.5: How long have you lived in this village? […….]

3☐: Long (>15 years) 2☐: Moderate (6-15 years) 1☐: Short period (≤5 years)

2.6: How many hectares do you currently farm? […….]

Type of land farmed and lost because of the project	*Size (ha)*	*Distance from home (km)*	*Crops grown*			
			Type of crops	*Proportion in mixed farm (0; 0.25; 0.5; 075 & 1.0)*	*No. of harvests in a year (1, 2, ...)*	*Market value (TZS/ton)*
Owned farmland						
Rented-in farmland						
Rented-out farmland						

3.0: Benefits and costs of development projects:

3.1: What gains have you got from KVTC (teak)/SONGAS (gas) project? *(Rank the first important three)*

☐: Good fertile land ☐: Community services (health, education, water, road, etc.)

☐: Improved house ☐: Support to orphans and during food shortage

☐: Temporary employment ☐: Environmental and HIV/AIDS awareness campaigns

☐: Increased village revenue ☐: **Others** (*specify*)……..

3.2: What losses have you encountered from KVTC/SONGAS project? *(Rank the first important three)*

☐: Land shortage at household or/and community level ☐: Relocation and disturbances

☐: Loss of fertile land ☐: Loss of natural forests/native tree species

☐: Decreased production of annual crops (food) ☐: Destruction of water sources

☐: Loss of permanent crops (income) ☐: **Others** (*specify*)…….

3.3: Comparing the times before and after the project what are the changes on the following? (Increase/decrease/unchanged)

Goods and services	↑,↓,→	*Goods and services*	↑,↓,→
Land (availability)		Skills and innovation	
Land quality (soil fertility)		Employment	
Food production		Labour	
Cash crops		Education services	
Natural resources *(specify)*……		Medical services	

3.4: Are you as a household better-off or worse-off?

3☐: YES 2☐: NO 1☐: Don't know

3.5: If YES or NO explain ……

4.0: Compensation payments:

4.1: How much land did you lose because of the KVTC/SONGAS project (ha)?……

4.2: For how long were you farming the lost land?…… **What types of crops were you farming?**

Land size (ha)	*Crop farmed*	*Proportion in mixed cropping (0.25; 0.5; 0.75 or 1)*	*Raised how many times in one farming year*	*Harvest estimation per acre/year/month/week*	*Crop market value (TZS)*

4.3: Did you receive compensation?

2☐: YES 1☐: NO

4.4: If YES, how much did you receive? (TZS) ……, For what item/loss?……

4.5: At that time, did you find this appropriate amount/quantity of compensation?

3☐: YES 2☐: NO 1☐: I don't know

4.6: If <u>YES</u> (*Explain*)……

4.7: After some while, did you find the paid compensation appropriate amount?

3☐: YES 2☐: NO 1☐: I don't know

4.8: If <u>YES</u> (*Explain*)……

4.9: If NO what caused it? (Mention)

☐: Low compensation rates
☐: No compensation paid for other items (e.g. land, annual crops, …)
☐: Undercounting of affected items/assets
☐: No recognition of relocation expenses and inconveniences
☐: No recognition of quality difference
☐: **Others** (*specify)*……

4.10: If you did not receive compensation (i.e. NO in Qn 4.3 above), What were the reasons?

☐: Unclear property rights
☐: my farm had no permanent crops
☐: my farm was under fallow period
☐: **Others** (specify*)*……

4.11: What is your view, are there losses which remain uncompensated?……

4.12: What type/form of compensation would you prefer most?

Type or form of compensation	*Advantages*	*Disadvantages*
☐: Monetary compensation		
☐: Shareholder (benefit sharing)		
☐: In-kind payments		
☐: **Others** (specify)……		

5.0: Compensation process:

5.1: What is your view about the process of compensation (the way was carried out)?

Event/stage of compensation	*5*	*4*	*3*	*2*	*1*
Informed about the proposal of Teak/Gas project					
Informed about compensation process before valuation process					
Able to be present when losses and compensation were estimated					
Participation of Village government (Committee) in valuation					
Opportunity to participate in village meetings to discuss compensation and project matters					
Opportunity to participate in entire process of compensation					
Opportunity to negotiate compensation payments					
Opportunity to give views					
Taking into consideration the views of affected parties					
Giving feedbacks during compensation process					

5.2: What is your view about implementation of compensation (the way was carried out)?

Event/stage of compensation	*5*	*4*	*3*	*2*	*1*
Information on compensation decisions before payments					
Paying compensation on time (within 6 month after valuation)					
Special training/advice on wise use of compensation, relocation, etc.					
Assistance in obtaining alternative land					
Assistance of relocation					
Monitoring of post-compensation outcomes					

5.3: If obtained compensation what did you do with it? How? *(main expenses & their proportion (%))*

Expenses	***Proportion (%)***	*Expenses*	***Proportion (%)***
☐: Buying alternative land/plot		☐: Paying off debt	
☐: New or/improving home/house		☐: Savings	
☐: Education		☐: Leisure/social activities	
☐ Home/personal consumption		☐: ***Others (specify)***……	

5.4: How are unaffected households doing?……

6.0: Benefit sharing:

6.1: Are you aware of any benefit arrangements such as social fund or special contracts between your village and project developer?

3☐: YES 2☐: NO 1☐: I don't know

6.2: If YES what benefits do you get from the Teak/Gas project?

Item/Service	***5***	***4***	***3***	***2***	***1***
☐: Education					
☐: Health					
☐: ***Others (specify):*** ……					

6.3: If no explain why so?……

6.4: To what extent do you think the arrangements enable the communities to benefit from teak/gas projects?

5	***4***	***3***	***2***	***1***

6.5: Does the Social Fund/Contracts attract your household members? *(for Idete respondents only)*

3☐: YES 2☐: NO 1☐: I don't know

6.6: If YES, how do your household members participate and benefit from social funds?……

6.7: If YES, how do your household members participate and benefit from contracts?

Contracts	***Activity done and benefit obtained***
☐: Protection project land	
☐: Cleaning and maintenance of land boundaries	
☐: Protection of teak plantations from fires	
☐: Protection of natural forests from firs	
☐: Avoiding logging for timber purposes	
☐: Fight against wildlife poaching (illegal hunting of wildlife)	
☐: Preparation of monthly reports	

6.8: If NO, why so?…….

6.9: What are positive and negative aspects of the above-mentioned contracts?

Positive aspects	*Negative aspects*
1.	1.
2.	2.
3.	3.

6.10: Do you think that the balance of payments to individuals in the form of compensation and the payments to the community as social fund/contracts are in the right balance?

3☐: YES 2☐: NO 1☐: I don't know

6.11: If YES/NO, explain……

6.12: What should be done in order to enhance benefits and reduce costs in benefit sharing schemes? (For both M'baya & Idete respondents) ……..

Thanks for your time and information

Appendices 4.1 – 4.3: Stakeholder analysis and other exploratory information

Appendix 4.1: Synthesised characteristics of stakeholders in development and compensation processes in Tanzania

Stakeholder	*Key roles*	*Key interests*	*Resource inputs*	*Capacity gaps*	*Importance**	*Influence*
Project developers	• Initiate and finance project • Involvement stakeholders	• Achieve targets • Avoid liability (costs) • Pay less compensation	• Investment capital • Experience in development	• Sustainability issues • Participatory approaches	4	4
Affected parties and Host communities	• Host development projects • Share local knowledge and experiences in their local areas and environment.	• Development and benefits • Improved livelihoods • Compensated adequately • Employment (jobs)	• Land • Natural resources • Labour • Security	• Poverty • Technical information • Leadership	4	1
Village government authorities (Village Executive Officer 'VEO' & Village Chairman 'VC')	• Identification & verification of the APs and their losses • Facilitate valuation and compensation payments	• Improved community services • Village revenue • Take directives from higher authorities	• Village land • Natural resources • Area experience • Support/facilitation • Security	• Technical information • Confidence • Office resources	4	2
Ward government authorities (Ward Executive Officer 'WEO' & Ward Councillor 'WC')	• Identification & verification of the APs and their losses • Facilitate valuation and compensation payments	• Community interests fulfilled • Ensure all APs got their compensation	• Area experience • Support/facilitation • Security	• Technical information • Confidence • Office resources	4	2
District Commissioner's Office 'DCO' (District Commissioner 'DC' & Others)	• Ensure participation of APs/HCs • Overseeing the compensation process	• Increased investments • Local people's interests • All laws, regulations & rules observed.	• Guidance • Support during coordination • Security	• Participatory approaches • Sustainability issues	4	3
Civil Society Organisations (NGOs & CBOs)	• Sensitisation of APs/HCs on their rights of compensation • Help to mediate disputes	• Local people's well-being • Human rights • Consultancy works/Income	• Support/facilitation • Knowledge/skills	• Government support • Resources • inter/multidisciplinarity	2	2
Consultants/Experts	• Provide technical advice • Offer facilitation services	• Successes of the project • Good s/holder relationships • Future employment/income	• Knowledge, skills & expertise • Experience	• Professional credibility • Baseline information • Resources	3	3
National Environment Mgt Council (NEMC)	• Enforcement of EMA including compensation • Provide information to guide PDs and SPs	• Sustainability • Public interests • Institutionalisation of EIA & other env'ntal mgt tools	• Baseline information • Technical skills, support & services • Coordination skills	• EMA enforcement • Research staff for baseline data creation • Research/Office resources	4	4
Chief Government Valuer (CGV)	• Enforcement of land laws • Overseeing compensation processes in the country	• Increase of investments • Land laws & rules observed • Compensation processes without disputes	• Coordination skills • Support & services • Land related data	• Sustainability issues • Effectiveness of land law enforcement • Resources	2	4
Contractors	• carry out tasks on behalf of the PDs	• Profit maximisation • Finishing tasks in time	• Expertise & Skills • Experience	• Participatory approaches • Agreements/contracts skills	2	2

Source: Project developers' & Service providers' Surveys, 2007

Scales used: (1=Very low); (2=Low); (3=High); (4=Very high): *Importance = Interest

Appendix 4.2: List of visited projects/service providers' office during exploratory visits

A: Government-based offices

1) Division of Energy (Dar Es Salaam)
2) Division of Wildlife (Dar Es Salaam)
3) Division of Forestry (Dar Es Salaam)
4) Ministry of Lands and Settlement Development (Dar Es Salaam)
5) Ministry of Agriculture and Food Security (Dar Es Salaam)
6) Ministry of Legislation and Constitutional Affairs (Dar Es Salaam)
7) Ministry of Infrastructures (Dar Es Salaam)
8) National Environment Management Council (Dar Es Salaam)
9) National Land Use Planning Commission (Dar Es Salaam)
10) Planning Commission (Dar Es Salaam)

B: Development/Conservation Projects:

1) Kilombero Valley Teak Company Ltd (Ifakara, Morogoro)
2) Urban Sector Rehabilitation projects (Morogoro)
3) Sustainable Morogoro Programme (Morogoro)
4) Uluguru Mountain Biodiversity Conservation Project (Morogoro)
5) Songosongo Gas to Electricity Project (Dar Es Salaam)
6) Participatory Agricultural Development and Empowerment Project (Dar Es Salaam)
7) Agricultural Sector Development Programme (Dar Es Salaam)
8) Tanzania Social Action Fund (Dar Es Salaam)
9) Liquefied Petroleum Gas Storage Tanks Project (Dar Es Salaam)
10) Tanpower Resource Company Ltd. (Dar Es Salaam)
11) Bongoyo Ecological Camp Project (Dar Es Salaam)
12) Sustainable Iringa Project (Iringa)
13) Marmot Gramito Mines Co. Ltd. (Mbeya)

C: Civil Society Organisations:

1) Legal Environmental Action Team (Dar Es Salaam)
2) Wildlife Conservation Society of Tanzania (Dar Es Salaam)
3) Tanzania Council for Social Development (Dar Es Salaam)
4) Haki Ardhi (Dar Es Salaam)
5) Participatory Ecological Land Use Management (Dodoma)

D: Consulting Firms:

1) Environmental Resources Services (Dar Es Salaam)
2) Institute of Resource Assessment – University of Dar es Salaam (Dar Es Salaam)

E: Freelance Consultants:

1) Ms. N. Pallangyo (Dar Es Salaam)
2) Mr. J. Shilungushella (Dar Es Salaam)

Appendix 4.3: List of Sectoral policies reviewed in the period 1995 – 2005 in Tanzania

1. Environmental Policy (1997)
2. Forestry and Bee Keeping Policy (1997)
3. Fisheries Policy (1997)
4. Energy Sector Policy (2000)
5. Wildlife Policy (1998)
6. Water Resources Management Policy (2000)
7. Housing and Settlement Policy (2000)
8. Land Policy (1995)
9. Minerals Policy (1997)
10. Investment Policy (1995)
11. Tourism Sector Policy (1999)
12. Trade and Industries Policy (1999)
13. Infrastructure Policy (2001)
14. Non-Governmental Organisations (NGOs) Policy (2001)
15. Local Government Reforms Programme (1999)
16. Poverty Reduction Strategy Paper (2000)
17. Agricultural Policy (1996)
18. Population Policy (2000)
19. Agricultural Sector Development Programme (2003)
20. National Development Vision - 2025 (2000)

Appendices 4.4 – 4.5: Description of studied project cases

Appendix 4.4: Description of teak project case study (KVTC)

Introduction

Kilombero Valley Teak Company (KVTC) operates a big project that grows teak *(tectona grandis)* in the southern parts of Tanzania. According to KVTC (2006), the project has acquired land under lease arrangement term of 99 years from Kilombero district (4,749ha) and Ulanga district (23,383ha). Currently, the project involves two (2) villages in Kilombero district and seven (7) in Ulanga district with the prospects of involving other four (4) more villages from the later district in the near future (Mtoni, 2007). In order to promote conservation of natural forests, KVTC's plan is to have teak planted on the area not exceeding 25% of the total land acquired from each village. KVTC also promotes both the conservation of native species of hardwood outside their acquired lands and teak growing by individual villagers on their lands.

The feasibility study for the project was undertaken in 1991 was preceded by the reconnaissance study undertaken in 1990 by a special team formed jointly by Overseas Development Administration (ODA) and CDC (CDC, 1991). Thereafter, a number of visits and surveys by both foreign and local experts were conducted in Kilombero valley to verify various aspects in regard to vegetations and soils (*Ibid.*). Further to that in 1992 Environmental Impact Assessment (EIA) was carried out. Among the main issues put forward by the EIA report included flood risks, land use conflicts, effects to wildlife and inadequate and incorrect project information the villagers had (ODA, 1992). However land acquisition by the project was finalised in 1992 and implementation began in 1993.

Project developer and financiers

KVTC is a private sector venture largely (73%) funded by the government of United Kingdom through the Commonwealth Development Cooperation (CDC) and, the remaining 27% is financed by the Finish government through FINNFUND (KVTC, 2006). Implementation of teak project is done by the KVTC, a subsidiary of Tanganyika Wattle Company (TANWAT) based in Njombe, Iringa region. TANWAT is solely owned and operated by CDC and has been operative in Southern highlands of Tanzania for 40 years now (CDC, 1991). The CDC's commitment to and experience in high value hardwood plantations go back to 1979 when co-financed with World Bank a huge reforestation of 70,000ha in Côte d'Ivore (*Ibid.*).

Project benefits and costs

According to CDC (1991) and ODA (1992), the expected benefits of teak project included to:-

- Establish a new quality crop (teak logs) produced in a sustainable way for export,
- Realise the economic potentials of the buffer zone of the Udzungwa Mountains National Park between Ifakara and Ruipa river,
- Supply of telephone poles for both the local and regional markets,
- Protect, enrich and manage natural forests in a sustainable manner,
- Promote and support teak outgrowers in villages in Kilombero and Ulanga districts,
- Increase revenue sources of villages and districts,
- Provide employment opportunities to both skilled and unskilled labour and,

- Provide and support spin-off benefits such as improved roads, schools, dispensaries and other infrastructures.

Potential costs of the project as predicted by EIA report included (i) villagers facing land loss and shortage as teak would need fertile land equally needed for agricultural production, (ii) increased land disputes, (iii) decrease/loss of wildlife such as puku (southern kob, *Adenota vardoni*), the species that are inhabiting flood plains of shorter grasses, (iv) increased risks of food surface run-offs, soil erosion and floods and, (v) disruption of risk aversion strategy incorporated in farming system practised in Kilombero valley where rice and maize are cultivated in different areas with different moisture contents (ODA, 1992).

Compensation scheme by teak project

KVTC paid cash compensation to 3 affected parties in Namawala village and 14 affected parties in Idete village. Apart from the record of who was paid how much and who was not paid (without reason(s) been provided), cash compensation paid to individual affected parties did not involve planning nor thorough documentation. According to the interviews held with project staff and key informants, to large extent the project avoided villagers' lands in order to minimise compensation. KVTC's compensation approach is totally focused on communities as whole rather than individual affected parties. KVTC established a unique compensation procedure to happen in Tanzania, where special "Social Funds" (SF) and "Annual Bonus of Contracts" (ABC) are passed to villages for their planned development activities and other community needs respectively. Project officials did not want these funds to be regarded as compensation as no village deserved compensation when the project acquired land and also that compensation is "one pay-off" event. However this idea contradicts with many authors of compensation issues (Gregory, 1991; Kunreuther & Easterling, 1996; Van Wicklin, 1998; Cernea, 2005; Égré et al., 2008 and; Trembath, 2008) who support it as one type of compensation. Essentially this is benefit sharing which shows potentials of cushioning the APs/HCs over long period of time.

With Social Funds the project entered into special agreement with village governments that the project channels money to each village for approved community services and development activities. The amount allocated annually to each village depends on the total village land (ha) planted teak by KVTC and, it is a condition that an activity the funds are asked for has to be approved by village council and detailed in terms of sub-activities, actors and budget. Further to that KVTC has also entered service contracts with all 9 villages. Service contracts are intended to reward villages with funds named "Annual Bonus of Contracts" (ABC). Unlike to Social Funds, villages are freely to use (in any community need) the remaining funds from ABC *(if any)* after taking away all operation costs of their services rendered to contracts can be used for any need arising in their communities. The eight (8) contracts and their financial terms during the time of data collection were as per below table:

List of contracts and their financial terms Idete village entered with KVTC

	Contract	*Financial terms/conditions of contracts entered*	*Annual Bonus (TZS)*
1	Land clearance for teak planting	- KVTC pays USD. 80 (96,000/= TZS) per ha - All valuable hardwoods should be spared - Villagers can make use of all cleared wood stuff	-
2	Protecting project acquired land	- Intended removal of beacons reduces ABC by 75% - Damaging caused to teak trees reduces ABC by 75% - Trespassing in teak plantations reduces ABC by 50% - Accidental removal/damage of a beacon (replacement costs)	150,000
3	Protection and clearing borders of project lands	- Clearance width is 3m and Idete's border is 22km long - KVTC pays TZS. 34,000/= per km. - Clearance is done twice a year (in February and May)	100,000
4	Keeping fire out of teak plantation	- Any fire incidence reduces the ABC by 40% - Fire affecting ≥30 ha of teak plantation - ABC by 80%	300,000
5	Keeping fire out of natural forests	- Fire in buffer zone or corridor reduces ABC by 10% - Extra bonus for a village that will fight fire in natural forests	300,000
6	Avoiding illegal timber logging	- Timber logging/charcoal making reduces ABC by 75% - Firewood collection/debarking reduces ABC by 25%	300,000
7	Avoiding illegal wildlife hunting (poaching)	- Animal killing or discovery of snares ABC by 75% - Fishing using illegal methods reduces ABC by 25%	150,000
8	Reporting	- Any faked monthly report reduces the ABC by 50% - Any missing monthly report reduces the ABC by 10% - For not reporting cases to police reduces ABC by 10%	100,000

Source (KVTC, 2006)

Future plans

The teak project has two (2) main plans for the future viz. (i) to expand teak plantations, production of non-timber forestry products and conservation activities of natural forests to local communities and (ii) improve further the sustainability of benefits currently provided to villages for the benefits of both the present and future generations.

Appendix 4.5: Brief description of gas project case study (SONGAS)

Introduction

Songosongo-gas-to-electricity (SONGAS) project extracts natural gas from Songosongo island and transports it through a 232km pipeline to Dar es Salaam where 115MW of electricity is generated using gas turbines (TPDC, 2006). The pipeline way-leave traverses through 25 villages located in Lindi, Coast and Dar es Salaam regions (URT, 1997). Its feasibility studies were undertaken in two phases (i.e. 1991 and 1994). The Environmental Impact Assessment (EIA) studies that began in 1996, ended in 2001 paving way for construction to commence in 2003 and commercial operation started in mid 2004. However, the project suffered considerable delays in its implementation following financial problems (TPDC, 2006).

Project developer and financiers

According to TPDC (2006), in 1995, the government of Tanzania (GoT), TransCanada Pipeline Ltd (TCPL), Tanzania Electrical Supply Company (TANESCO) and Tanzania Petroleum Development Corporation (TPDC) jointly created SONGAS Ltd to implement the project. Initially, the main project sponsors were AES Sirroco (USA), Pan African Energy Tanzania (PAT; formerly known as Ocelot International Inc). The current investors however include AES Sirroco, PAT, TANESCO, TPDC, Commonwealth Development Cooperation (CDC) and Tanzania Development Finance Company Ltd (TDFL). The World Bank (WB) and European Investment Bank (EIB) funded the project through the government of Tanzania (GoT).

The project ownership and implementation is a bit complex. TPDC and PAT own all Songosongo gas reserves involved in the project. While PAT operates gas fields and processing facilities in Songosongo Island, TANESCO owns and operates facilities for generation and distribution of electricity. The GoT through the Ministry of Energy and Minerals (MEM) is responsible for monitoring of both the project implementation and environmental aspects. GoT also coordinates the roles played by TPDC and TANESCO in the entire SONGAS project.

Project benefits and costs

According to TPDC (2006), SONGAS project has the following benefits to the Tanzanian community are to:-

- Meet the growing demand for electricity using domestic-based natural resources,
- Reduce country's dependence on imported mineral oil for electricity generation,
- Provide an alternate, lower cost and reliable source of power
- Create employment opportunities for both skilled and unskilled labour,
- Promote use of natural gas in industries as source of energy and chemical feedstock,
- Develop infrastructure to promote further explorations of both gas and oil,
- Provide gas, electric power and associated economic benefits to local communities in Songosongo island and those living along the pipeline route,
- Promote private investments in energy sector and in turn contribute to government revenue through royalties, taxes and fees,

According to URT (2000) SONGAS project acquired land totalling to 12.3 km^2 for the "right-of-way" (way-leave) from both rural (91.2%) and urban (8.8%) areas. Whilst the way-leave in rural is 187km long and 60m wide, in urban areas is 36km long and 30m wide. In total, the way-leave has affected 2945 households of which 2790 lived in rural areas and 155

households were in urban suburbs of Dar es Salaam city. All (155) affected urban households were compensated and resettled within Dar es Salaam (URT, 2000). According to URT (1997), 176 out of 2790 affected households in rural areas required to establish new homes, of which 66 households had remained with enough land to construct their houses, 77 households had land elsewhere and 33 households needed land. SONGAS bought the 33 households plots for house construction within their villages. For example in Mwanambaya village, the project provided 7 households with alternative plots to re-establish their new homes.

Compensation scheme of SONGAS project

Since the largest funding for SONGAS project came from World Bank (WB), the project prepared its compensation scheme based on WB's Operational Directive 4.30 framework. From the Tanzanian legal framework, the project's compensation scheme carefully observed the Land Acquisition Act No. 47 of 1967, where both "granted and deemed customary rights of occupancy were considered during compensation (URT, 2000). Compensation processes started in August 1997 and continued until January 1998. By early May 1998, SONGAS had compensated 87% of the affected parties and from there the way-leave acquisition operations including compensation issues were handed over to TPDC for finalisation (*Ibid.)*.

Despite inadequate involvement of the affected parties, SONGAS project is one of the WB-funded projects that prepared a well structured compensation plan with adequate documentation and record keeping. According to URT (2000), the process of acquiring the way-leave and resettling the affected parties was carried out in five phases as outlined below:-

(i) *Planning phase*: involves planning and preparation of field procedures for land acquisition, resettlement and compensation processes. It also included validation and correction of data provided by consultants.

(ii) *Field operation phase*: This involved three field teams namely "Front end team", "Payment team" and "Logistics team". Collectively, the teams were responsible for identification of the affected parties, carry out valuation and pay compensation.

(iii) *Finalisation and dispute resolution phase*: This dealt with processing of the legal documentation from the village level to the national level for SONGAS to acquire "the certificate of occupancy" of the way-leave land.

(iv) *Infrastructure development phase*: SONGAS on behalf of the GoT developed and managed construction of various infrastructures in areas where urban affected households were provided with alternative plots.

(v) *Acquisition of way-leave phase:* Submission of a formal request for SONGAS to acquire the way-leave and obtain all necessary legal permissions and licences to construct the gas pipeline.

However, the findings of this study show that the above plan had low level of involvement of affected parties in many aspects starting from planning, through implementation to monitoring.

Future plans

The future plans of SONGAS project include (i) to explore more reserves of natural gas along the coast of Indian ocean in Tanzania and Zanzibar; (ii) to encourage big electricity consumers (industries) to generate their own electricity using natural gas; (iii) to expand

production of natural gas in order to meet electricity exportation to neighbouring countries including those in the great lakes region.

Appendix 4.6: Reported advantages and disadvantages of forms of compensation

Form/type of compensation	*Advantages*	*Disadvantages*
Monetary payments	• Simple to administer • Easier to use/spend for all needs you have such as land • Flexibility in planning • Can be invested easily anywhere	• Attracts many elite intruders in compensation process • Has many risks e.g. loss, misuse and safety issues • Difficult to handle and manage in rural areas
Benefit sharing schemes	• Improve quality of life such as education, health and infrastructures • Provide equal chances to all community members to benefit • Care for both present and future generations • Incorporate features of continuity thus promotion of sustainability • Build relationships between project developers and affected communities • Promote partnerships and spirit of working together • Improve involvement of affected parties and communities • Can provide employment	• Incorporate high risk of mismanagement if schemes are operated by communities alone • Do not avoid loss of land to individual affected household • Individual affected parties/households can easily be overshadowed and cause undercompensation • Smooth and efficient operation of benefit sharing schemes needs both national policy and legal back up. • Costs of training local community members are inevitable and high
In-kind payments	• Quite useful for both affected individuals and communities • Can benefit many if not all household/community members • Can take different forms depending on needs of affected parties	• Can not address all needs someone has • Constantly supplied thus need plans and management

Appendices 5.1 – 5.2: Description of village cases

Appendix 5.1: Brief description of Mwanambaya village case study

Mwanambaya village abbreviated as M'baya in this study is found in Tambani Ward, Mkuranga District, Coast Region and is located along *Kilwa* road, 40km south of Dar es Salaam, the capital city of Tanzania (Figure 3.2). People's settlements are surrounded by home gardens cropped with coconuts, cashew nuts and fruit trees, mostly mangoes and oranges. The history of M'baya goes back to the German rule, when the area was called *Kiloweko*. M'baya village was named after a goat keeper (*Mr. Omary Kisigalile*) who fled away from his relatives looking for more grazing space for his goats and he was then nick-named *'Mwana-mbaya',* meaning *'a bad boy'*. In 1974, when the settlement was formally recognised as an Ujamaa village, was officially known as *Mwanambaya*. Administratively, the village is divided in seven (7) zones and each is led by the chairperson.

During the time of this study (2007), M'baya village had a population of 2,984 people found in 764 households, out of which 100 households are female-headed. The village composes about six (6) ethnic groups namely *Zaramo, Matumbi, Ndengereko, Ngindo, Gogo, Mwela and Nyamwezi*. The village has one primary school and one Ward secondary school which is still under construction and is located in M'baya village. The village also has a public dispensary. Unlike many public services M'baya's primary school is well-equipped with teachers, books and furniture and dispensary has drugs, equipments and both permanent and volunteer medical staff.

People in M'baya are farmers that cultivate coconut, cashew nuts, pineapples, passions, oranges, cassava and legumes in mixed cropping farming system. Villagers depend on coconut, cashew nuts, pineapples and oranges for income and cassava and legumes for food supply. However, some M'baya villagers have diversified their livelihood activities to include small off-farm and income generation activities such as kiosks, food vending and village/home based market, commonly known as *'genge'*. The main constraints faced by M'baya villagers include, (i) Little emphasis on the importance of education among villagers (ii) shortage of land for agriculture, (iii) lack of reliable market for agricultural crops and, (iv) pests that attack coconut and cashew nut trees.

The village leaders emphasized that the developer of SONGAS project followed all important regulations in introducing the project at the grassroots level. It was highlighted that SONGAS had two distinct phases in M'baya. The first phase happened in 1995 and involved paying compensation for the losses caused by the wayleave. The second phase in 2005 was related to the implementation of benefits that were promised in the first phase, particularly the distribution of electricity and a deep borehole. According to village leaders, the second phase was so disputed, as the contractors hired to deliver benefits to M'baya village did not approach the community properly.

Appendix 5.2: Brief description of Idete village case study

Idete village in Idete Ward, Kilombero District, Morogoro Region started 1969 with five households that had purposes of living and farming together. The number of households kept increasing constantly and by 1973 the village had a big number of children that necessitated an establishment of a primary school. Following villagisation policies, the village bulged in 1974 and in 1975 the village was formally registered with 250 households and currently the village has 882 and the village has been ruled by 8 chairpersons since its inception. During villagisation people were strategically moved to new settlements along the TAZARA[24] railway for security purpose as well.

Idete is highly diverse in terms of ethnic composition, as it has more than 14 ethnic groups, where the main ones include the *Ngoni, Hehe, Ngindo, Ndamba, Pogoro, Sukuma* and *Waha* people. Majority of the population at Idete is made up by migration of *Hehe, Ngoni* and *Sukuma* people from Iringa, Ruvuma and Shinyanga regions respectively. People at Idete are involved in several production activities such agriculture (i.e. rice, maize, cassava, banana and horticultural crops), livestock keeping (mainly pigs and local children), fishing in river Kilombero and selling of agricultural/farm products and fishes. Mixed farming agriculture dominated by rice and horticultural crops make the mainstay for people's livelihoods at Idete village. Rice is an important crop grown for both food and cash purposes. It was noted from the discussion that women groups had income generating activities such as milling machine and diary cattle keeping. However, both projects are currently not operative due to differences in political ideologies. Both projects started as initiatives of the women organization of the ruling party (UWT[25]).

In regard to community/public services, the village has three primary schools and one Ward secondary school located at Idete village. The financial supports from KVTC and TASAF[26] have helped the village to accomplish eight (8) classrooms and headmaster's house in the secondary school project. During the time of this research, the school had hundreds of students in forms one and two levels. However, the school had shortage of teachers and books. Idete village also has constructed the market (with 10 selling spaces/tables, office, storeroom and several surrounding small kiosks) and dispensary that provides primary health care to people of Idete and those from the neighbouring villages that have no dispensaries. The number of people served by this dispensary is overwhelmingly larger than the health staff, drugs and other facilities available. The village is connected to the district headquarters (Ifakara town) with a 22km earth road which is passable with difficulties during long rainy season between February and May every year. But for long travels and transportation of luggage to places along TAZARA rail line, people of Idete enjoys affordable services offered by TAZARA.

It was learned that the developer of teak project (KVTC) involved most the district and higher authorities at national level in acquiring land at Idete. Involvement of villagers was done at a very low level and this has led to complicated land disputes. Administratively, Idete village has seven (7) zones and *Ndundu* zone contains a great number of the affected households. Majority of the households that suffered from loss of land had a long history with their farmlands, as many have been occupying and using their farmlands since 1984. The village leaders claimed that the criteria applied in the identification of affected parties,

[24] TAZARA = Tanzania Zambia Railway
[25] UWT = Umoja wa Wanawake wa Chama cha Mapinduzi
[26] TASAF = Tanzania Social Action Fund

compensation entitlements and estimation of compensation payments were not understood at all, as were neither made open to villagers nor their government. This happened because compensation process involved largely the district authorities and project officials.

According to village leaders the teak project is viewed in two different faces. Majority of villagers, especially the affected households view the KVTC project to have caused a lot of problems associated to land and food shortages in Idete and this group could have liked the project to stop and quit. The other group sees the project as beneficial to the community and has potentials for promoting further social/community services and development if important aspects get improved in both developers' and village government's sides. It was learned that the developer uses different arrangements including Social Funds and Special Contracts to pass some benefits to host communities. Host communities through their village government authorities are required to carry out need assessment, prepare mini project proposals and present the budget to KVTC for funding through earmarked Social Fund. Contract money are provided after the village through its villagers have accomplished special assignments such as protection of natural forests and teak plantations from fire, fight against illegal hunting of wildlife, preparation of monthly reports and so many others.

Benefits gained from teak plantation (project) include (i) KVTC contributions to basic community services such as education and health, (ii) support to orphans, (iii) awareness campaigns on HIV/AIDS and environmental conservation, (iv) food supply during times of food shortages and, supply of seedlings of both teak and selected native trees of commercial importance. Losses caused by the project as identified by the village leaders included land shortage, decline of soil fertility, increased drought and destruction of watersheds.

Appendices 5.3 – 5.14: Interviewed household cases

Appendix 5.3: Compensated household case *(Mzee Omega)* in M'baya

Mzee Omega (58) heads a household of eight (8) family members and his household has lived at M'baya since 1983. His household depends on agricultural activities for a living. The household cultivates coconut, fruit trees, cassava, legumes and pineapples. Before SONGAS project the household occupied 4 acres (1.6ha) but now (after the project) the household has remained with 1.5 acres (0.06ha). *Mzee Omega* and his wife make a very exceptional household case compared to all other households interviewed as cases. Both have both inward and outward thinking and are very careful at balancing issues such as their personal interests as a household and those of the community; project interests as compared to those of the community.

Mzee Omega commended the developer of SONGAS project for early communication of both the project proposal and compensation plans before the ground surveys and valuation exercise. Although important information such as compensation rates were not known to the affected parties, majority were informed about valuation process and hence participated in showing boundaries of their farms and counting affected crops and assets. He also reported that one of the unanswered questions during compensation process was about why land was not compensated for while by that time land was selling at TZS 400,000/= (173.91 GBP). *Mzee Omega's* household lost most of his coconut trees for the gas pipeline wayleave. The household was paid TZS 540,000/= (234.78 GBP) as compensation for their coconut, banana and cassava. They used compensation money to renovate their house, buying school needs of their children and a small proportion was spent for personal/home general expenses.

Apart from compensation money to affected individual households, *Mzee Omega* reported benefits at community level accrued from SONGAS project as, education support directed to the primary and secondary schools; electrical distribution in M'baya village and free installation to 50 households and; drilling water borehole. SONGAS wanted the villagers to start their efforts and then the project would come in and help in taking it further. It was sadly noted by *Mzee Omega* that no documentation was kept by village leaders which was a big blunder, as it is a matter of fact that office bearers can change at anytime. He went on explaining that community benefits are important and necessary, as for example education support brings together the affected and non-affected community members to share benefits and promotes spirits of collective responsibilities as a community. *Mzee Omega* and his wife however expressed some shortcomings appeared during the process of delivering the promised benefits. They mentioned about contractors commissioned to deliver (implement) benefits did not do their job according to the developer's promise. They cited the water borehole constructed is a shallow instead of a deep one, its workmanship is poor and its location has made it less useful. The couple also explained the way electrical distribution further destroyed their crops and other farmers as well without informing them (Photo 5.3). They suggested that all promised benefits should be in the form of formal agreement/contract and a clear plan should be established jointly by both the project developer and affected parties/community. An emphasis was put on both sides to avoid unnecessary conditions that can jeopardise project or community welfare and they should also fulfil their obligations according to the contract.

Finally, *Mzee Omega* expressed a big lesson he learned from the whole issue of SONGAS project that women can equally do things like men, as his wife supervised everything in

relation to SONGAS compensation process while he was hospitalised. She kept him informed about the progress and on top of that she put enormous efforts during the improvement of their house.

Emerging Issues

- Land is a central to all other losses encountered.
- Main crop such as coconut is highly linked to people's livelihoods and their losses encountered.
- Large proportion of compensation money was spent in improving houses.
- Ignorance increases losses
- Women involvement in development matters has great potentials of great successes at both household and community levels.
- Importance of formal agreement for both compensation matters and benefit promises.
- Need for striking a balance between project's and people's welfares

Appendix 5.4: Compensated household case *(Mr. Kisikisi)*, M'baya

Mr. *Kisikisi* has been living in M'baya village since his birth (about 51 years ago) and he heads a family of 6 people. His household largely depends on farming activities and to small extent it also runs small income generating activities such as a small shop (kiosk) and sales of farm-based produces *(genge)*. Mr. *Kisikisi's* household lost 4 acres (1.6 hectares) of farmland that contained coconut, mango, cashew nuts and orange trees to SONGAS project and received a compensation of TZS 0.7 million (304.35 GBP). He utilized the compensation money to improve his house by roofing it with corrugated iron sheets. He also bought a bicycle, radio and clothes.

Despite the fact that all affected parties got compensated, Mr. *Kisikisi* mentioned about the complaints that came out following the majority of affected parties were not satisfied with the way compensation calculations were done i.e.:

- Affected parties were not well informed about the process, and the amount of land (e.g. 60 m passage that was taken by the way-leave) was not clear in particular.
- Crops such as cassava, legumes, pineapples and other annual crops were grouped together and its compensation was paid based on land size.
- Some affected parties missed the valuation of their assets as information was not made available well in advance.

Mr. *Kisikisi* acknowledges SONGAS' support in education facilities in for both the primary school in M'baya village and a secondary school construction in Tambani ward. He supported his argument that education is the only way of helping all people in the community and its outcomes have great continuity potentials. He confidently commented that if such trends of valuing and supporting education continue, the future of their children and grandchildren would certainly be bright. He also valued the potential benefits that are likely to be realised from the electricity service when its development is finalised. He stressed his point by giving mentioning few examples of benefits such as better living conditions. Electricity would promote small to medium income generating activities and provide employment to many youth, artisanal workers in particular. He however, questioned the approach used by SONGAS in delivering the promised benefits to affected communities.

Talking about general costs face because of the SONGAS project, Mr. *Kisikisi* expressed 3 major ones as it follows below:

1. Loss of constant flow of profit from permanent crops, coconut in particular. Comparing compensation amount paid for loss of each mature coconut tree [TZS 25,000/= (10.87 GBP)] and an average annual income that was generated by the same coconut tree [TZS 20,000/= (8.70 GBP)], Mr. *Kisikisi*, classified the rate used as unjust. This is absolute loss bearing the fact that a coconut tree takes 6-9 years to reach maturity, he added. Assuming that an amount of compensation paid per coconut tree covers for purchase of planting material and caring for seedling to reach maturity, each affected farmer suffers a big loss for the period of 6-9 years.
2. The society continues facing a huge loss of social values such as social cohesion that is embedded in mango trees/fruits. In the past minority who had no mango trees were allowed to gather mango fruits that have fallen on the ground from anybody's mango tree(s). This traditional system allowed a gatherer to carry any amount of mangoes his/her hands could hold at once (i.e. no bags/vessels) free of charge and this went without asking. The community by then had a slogan that states *"Ya nini kugombana kwa ajili ya embe, embe tunda la msimu"* (Why destruct your social relations while

mango is a seasonal fruit?). This brought people (i.e. individuals/families) closer to each other. According to Mr. *Kisikisi,* SONGAS project has significantly reduced the mango-based social arrangement as it destroyed more than 150 mango trees of *dodo* species (*maginifera indica*) in M'baya village. He went on claiming that over the past 10 years period, attitude of M'baya people towards this mango-based social arrangement have changed to the worse. From his point of view he identified the SONGAS project and compensation paid to the affected parties as a leading factor in weakening social cohesion and subsequently disruption of social relations between one household and another. Some reached a point of telling the mango gatherers should eat papers (compensation money). However, Mr. *Kisikisi* also mentioned other factors that affect the mango-based social relations. These include:

- Urbanisation is constantly turning everything including into a market commodity. Majority of mango owners are currently restricting people from having few mangoes because of money.
- Other mango owners have replaced the *dodo* specie by new shorter varieties that do not suit the mango-based social arrangement.

In regard to compensation process by SONGAS project, Mr. *Kisikisi* had the following issues to express:

- **A process:** Compensation needs careful planning and adequate preparation. He wanted all stakeholders to know one fact related to compensation that compensation has no fixed rate or amount for a certain asset or foregone services. Instead, Mr. *Kisikisi* had a suggestion that compensation amount be determined through negotiation between the developer and the affected parties and their agreed terms be kept in records.
- **Lack of participation:** The affected parties came to know the amounts of their compensation on the very day they were provided with their cheques.
- **Under-compensation**: Compensation offered to the affected parties was not reflecting the exact value of replacing a destroyed asset or restoring a forgone service. Hidden costs (losses) exist which also need to be compensated.
- **Divide and rule**: Few elite affected parties were singled out the big group and got paid well as compared to the rest.

In concluding Mr. *Kisikisi* wrapped up by putting more emphasis on:

- Education: knowledge on how government and its administrative procedures work, especially when it comes an aspect of involving rural people in sensitive processes such as compensation.
- Gender relations: when spending compensation money at household level, it is wise to make sure all grown-up members of the family are involved in planning, decision-making and even benefit sharing.

Emerging Issues

- Here large proportion (>80%) of compensation money was spent in improving the home and People in rural areas like to live in good and quality houses.
- Support to education ensures equal benefit to every community member and has great sustainable potentials because of continuity of its outcomes.
- Some assets/features represent important socio-cultural values such as big mango trees of *dodo* type (*maginifera indica*) used to cement social relations among community members in communities in Coast region.
- Affected parties were not satisfied with the way valuation and calculations of compensation were conducted.
- Compensation rates applied for paying losses of mature coconut trees were low and outdated.
- Gender relations in regard to involvement and sharing of benefits at household level, community level.

Appendix 5.5: Compensated household case *(Mzee Msasa)* in M'baya

Mzee Msasa is 82 years old and heads a household of five (5) people. He is practices both crop and animal product. His household lost 2 acres (0.8ha) of farmland that contained coconut and orange trees and other annual crops. *Mzee Msasa* is one of the affected parties who were compensated by SONGAS developer in 1997.

According to *Mzee Msasa* all villagers in M'baya were well informed about the SONGAS proposal before aerial survey. The affected parties including him had 3 meetings with project officials (also attended by village leaders) to discuss both the project and compensation. *Mzee Msasa* received cash TZS 200,000/= (86.96 GBP) as a compensation for losses encountered through losing coconut and orange trees. Despite of many affected parties seemed to be satisfied with compensation paid some important stages such as valuation of losses and compensation computation did not involve the affected parties. Later on most of the affected parties realised that were undercompensated after they started relocating their homes and activities. *Mzee Msasa* spent his compensation money to buy used corrugated iron sheets and improved his old house as pictured in Photo 6.4.

According to *Mzee Msasa,* M'baya's affected parties faced and are still facing big loss in relation to land loss and permanent crops such as coconut and cashew nut trees. Land was not compensated and there was no consideration of future flow of income from permanent crops. He associated these losses with ignorance of affected parties and lack of information relevant to compensation rates and criteria used. *Mzee Msasa* gave an example of his loss was big with respect to his age of 82, as he worries much about his future life. Since he has no coconut farm and in this way he has been forced to become a dependant. *Mzee Msasa* claimed that coconut crop is so important for people's living style in the Coast. He outlined some benefits of coconut crop that included treatment of some diseases such as skin disease and diabetes. He claimed that coconut juice increases longevity. *Mzee Msasa* continued with his explanation on big losses caused by compensation in relation to expenditure. He claimed that many affected parties wasted their compensation as they did not involve their wives and the rest of their family members in deciding wise use of their money. He argued based on his example that his wife had a big contribution in supervision and monitoring.

Emerging Issues

- Land is a central to all other losses encountered.
- Main crop such as coconut is highly linked to people's livelihoods and their losses encountered.
- Large proportion of compensation money was spent in improving houses.
- People's ignorance multiplied and increases their losses
- Women have special roles, especially monitoring of wise use of compensation.

Appendix 5.6: Compensated household case *(Mr. Ustaadhi)* in M'baya

Mr. Ustaadhi is an ordinary farmer in M'baya village and he is 51 years old. He is among the affected parties who were compensated by SONGAS gas project 1997. His household (with a total of 8 members) received TZS 8 million (3478.26 GBP) as a compensation encountered after losing land (approx. 1.6 hectares) and different types of crops. Apart from farming, some family members are also involved in income generating activities such as buying and selling fruits and other farm produces. In his community, *Mr. Ustaadhi* serves as a religious leader and a member of school improvement committee.

Mr. Ustaadhi is very much concerned about education backwardness of M'baya community. He links some of the problems people currently face to SONGAS project. He further links losses encountered by the affected parties to both people's ignorance and their low level of education. *Mr. Ustaadhi* claimed that because of the same reasons the affected parties did not realise they were under compensated. Focusing on his experience, he gave an example of one of major losses he encountered in relation to compensation. After receiving his compensation he quickly rushed into buy an alternative land of 2 hectares *("kwa sababu fidia imetokana na umiliki wa ardhi basi ni lazima itumike kwa mambo yanayoendana na umiliki wa ardhi"* Since the paid compensation received was because he owned land, it should be spent wisely in land-related matters). He unfortunately realised later that the land he bought is relatively not suitable for agriculture as compared to his former land. He claimed to have tried to fertilize it using crop residues, poultry and animal droppings but in vein. He expressed this as a big loss emanating from compensation. He openly admits himself to have little knowledge and experience in both identifying and categorising land based on its suitability.

He claimed the M'baya village to have benefited only from SONGAS' education support as this has helped their village to improve quality of education in terms of increasing classrooms and desks. He specifically went on appreciating the recently donated TZS 49million (21304.35 GBP) by SONGAS to help the *Tambani* ward in the construction of secondary school. *Mr. Ustaadhi* however, seriously questioned to why the promises were fulfilled after both the village and district governments did a number of several follow-ups.

According to *Mr. Ustaadhi*, compensation-specific costs include losses due to:

- Uncompensated land,
- Socio-cultural values (i.e. loss of inheritance to future generations).
- Uncompensated efforts invested in coconut farms from the beginning
- Discontinuation of constantly flows of farm-based profit emanating from permanent crops in particular such as coconut.

Mr. Ustaadhi, had been repeatedly emphasizing the fact he believes in that development of a certain location has largely to be influenced by its dwellers' attitudes. He explicitly mentioned a need for people to change the ill-development notions and acquire positive attitude towards the following important aspects:

- Education: unlike to other region in Tanzania, the Coast region has been disvaluing education for decades now. For instance at some stages of SONGAS compensation process, most of the affected parties did not know where they were coming from, they were and they were heading to because of low level of education.
- Gender issues: culturally, the Coast region like many societies in the World, women are not given room in decision-making process. Citing few examples, *Mr. Ustaadhi*

pointed out that many affected parties lost/wasted their compensation for not involving their wives in planning for and using it.

Emerging Issues

- Land rights is a basic factor for affected parties to qualify for compensation rights. Yet it is ignored during valuation
- Large proportion of compensation money was spent in buying alternative land and house.
- Obvious incurred costs before compensation in achieving various capitals/assets and loss of profit encountered soon after compensation are both invisible during valuation.
- Education (i.e. awareness, information, knowledge and technology) broadens understanding which avoids losses and promotes development **(K_h).**
- Gender relations at household and society levels carry both social and cultural values and have great positive/negative influence to compensation outcomes at household level.
- Costs and benefits can be directly and indirectly influenced by either nature of the project itself or its compensation scheme.

Appendix 5.7: Compensated household case *(Mr. Oxygen/Mbogamboga)*, Idete

Mr. Oxygen commonly known as *Mr. Mbogamboga* in Idete village is a young farmer (28 years old) heading a young family of three including him. For the past five years he has been cultivating horticultural crops such as vegetables, tomato, spices, banana and sugar canes on the land of 1.5 acres (0.6 ha) that he lost to the teak project. He had an average income flow of 2500/= TZS a day earned from sales of his horticultural harvests. Using irrigation water from the well he dug in his farm was able to cultivate horticultural crops 3-4 times a year. According to him he was nicknamed *Mr. Mbogamboga* (literally meaning Mr. Vegetables) as he was the leading supplier of vegetables and spices within and outside the village. His customers included the market traders from *Ifakara*, the district administrative town located 22 km from Idete. Despite the caused loss of income, *Mr. Mbogamboga* reported deterioration of health conditions of his family members as the results of poor nutrition caused lack of vegetables and other food items.

Mr. Mbogamboga was among the fourteen households that received cash compensation from KVTC (teak project) in 2006. He received 139,000/= TZS (60.34 GBP) as a blanket compensation for his losses and he claimed to know nothing about its breakdown todate. *Mr. Oxygen* viewed the compensation payment received as something given to justify eviction from their fertile farmlands. He used the compensation money to buy a quarter an acre plot, poles, and built mud and grass thatched shelter for his family. He was totally dissatisfied with compensation received. He compared the loss of his fertile valleyland that had permanent natural water supply with compensation paid and equated it with paralysis disease that incapacitate someone in terms of development works. He went on explaining that he is somehow confused and since 2006 his wife and him never went back into production and have been working for food in others fields and largely depending on assistance from relatives.

He claimed to know very little about benefits accrued from the teak project. He only mentioned employment and the teak project is the source of revenue to the village government, district and national authorities as major benefits. Employment is provided through eight (8) contractors such as SHIKIKA, MTEWELE and NYAKI. Despite little wage paid per piecework a day (TZS 1500-2000) by the contractors, it has been helpful especially for the times after crop harvest. In some cases, villagers have not preferred to work for small wages but contractors have also decided to hire causal labourers from outside the non-host communities. At the village level this money has been assisting construction of the Ward secondary school. In concluding benefit issues from the project, *Mr. Oxygen* expressed his worries on the future of their villagers as far as land issues are concerned and the promised employment that seems to favour most those from the non-host village communities.

Emerging Issues

- Service based loss (vegetable supply) experienced at an individual/household level has spill over effects in the entire community.
- Losses cause confusion and can cause psychological and mental health effects
- Compensation paid was so little, unrealistic and unjustifiable.
- Large proportion of compensation money was spent in buying alternative land/plot
- Contractors affect the flow of benefits into the host communities if their operations are not closely monitored

Appendix 5.8: Compensated household case *(Mr. Wageni)*, Idete

Mr. Wageni (58) has eight (8) family members that include him, his wife, their children and grand children. His household has lived in the village since 1979. *Mr. Wageni* is a leader of one of the Christian churches in the village. His household practices typical subsistence farming where their most of the agricultural produces are consumed at household level. Before the project, the household has been cultivating rice, maize, vegetables, tomato, banana and sugar canes on the land of seven acres (2.8ha), occupied since 1992. According to *Mr. Wageni*, his land was very fertile, located about 60m from River Idete that facilitated irrigation and production throughout the year. Within his farm also *Mr. Wageni* had 14 bee hives located at peripherals of his farmland. He had an income flow ranging between 1000 - 2500/= TZS from his daily sales of his farm harvests, mainly horticultural crops, sugar canes and banana.

In 2006, *Mr. Wageni* received 66,000/= TZS (28.70 GBP) as compensation payment from KVTC for all his losses encountered because of the teak project. *Mr. Wageni* claimed to have known nothing in relation to criteria used to arrive at that amount he was paid. He went on explaining that compensation paid by KVTC was processed within very short time (in 2 weeks time) leaving many (both the compensated and uncompensated) with a lot of questions but did not know where to go for a help. He also mentioned that their village leaders were not active enough during compensation process following their low influence and dominance by district authorities. *Mr. Wageni* indicated that was totally dissatisfied with amount of compensation paid to him and the way entire exercise of compensation was carried out. *Mr. Wageni* used his little compensation money to buy 3 corrugated sheets and he paid the remaining money (6000/= TZS) to the village government as application fee for land that he never got todate. Both the church members and relatives assisted him to obtain another farmland and build a unfinished house.

Mr. Wageni reported benefits of KVTC's teak project to include improved quality of education in terms school buildings/classrooms, furniture and books. KVTC joined the Plan International to start a primary school that has lowered student-teacher ratio has in all three primary schools and in turn this has provided teachers with more time in preparation of their subject teaching plans. Part time employment in relation to teak plantations was mentioned as very helpful to many households, especially the youth group. However, the contractors operating between the developer and labourers (host communities) were reported to exercise discrimination in terms of gender, wage payments and securing a place. The huge negative impact as per *Mr. Wageni* is the loss of agricultural lands for the present and future generation. Other losses influenced by the teak project were mentioned as loss of income generation opportunities such as bee hive project; increased food insecurity due to decreased food production and poor nutritious food items and; excessive loss of natural vegetation and destruction of water sources.

Emerging Issues

- Not all losses were compensated
- Village leaders and affected parties are disadvantaged in terms of information and capability to defend their rights or to question whatever felt is wrong.
- Large proportion of compensation money was spent in establishing home
- Contractors affect the flow of benefits into the host communities if their operations are not closely monitored.

Appendix 5.9: Compensated household case *(Mr. Rutuba)*, Idete

Mzee Rutuba at his early 70s has two wives and a total of 10 household members. *Mzee Rutuba* and his household entered Idete 1985. He migrated from Ruvuma looking for fertile lands where he could have farmed naturally (without applying artificial fertilizers) and ended establishing his settlement at Idete village. In 1987 he was given 8 acres (3.2 ha) by a friend (the *Kiluwila* family) who occupied a very large land in *Ndundu* area since 1970s. On this land, *Mzee Rutuba* cultivated rice, maize, banana, sugar canes and fruit trees and his household used to earn TZS 3000/= - 5000/= from their daily sales of his farm harvests.

Mzee Rutuba participated in counting agricultural crops that were involved in compensation paid by KVTC's developer and ended up receiving TZS 390,000/= (170.00 GBP) as compensation payment for a loss of one (1) palm, three (3) orange and five (5) mango trees. He expressed his dissatisfaction with the amount paid, as no compensation was received for 3.2 ha of his farmland and 2 traditional houses. *Mzee Rutuba* emphasized that this compensation process did not involve the affected parties and was not open enough to affected communities. He equated the process that was like a person being punished without knowing his/her mistakes. He also condemned some villagers who heard about KVTC was about to start teak plantations in *Ndundu* area and quickly invaded some areas for compensation speculations, as this brought a lot of chaos and disputes. in According to *Mzee Rutuba*, compensation process left the affected people (including himself) with a number of questions such as why the affected parties were not informed well in advance before relocation; their land ownership was not recognised; were not provided with alternative farming lands and; why the government and developer are not following interested in knowing difficulties the affected households undergo following relocation. *Mzee Rutuba* used his compensation money to buy 10 corrugated sheets and 3000 burnt bricks that he used to improve his house in the other home where his first wife resides.

According to *Mzee Rutuba* gains experienced because of the teak project include their support in the construction of both primary and secondary schools. This support has significantly reduced villagers' contributions as frequently been demanded by village authorities. According to *Mzee Rutuba* the teak project has also helped to construct the road joining *Ndundu* zone and the village headquarters, although the developer has never completed the construction of the promised two bridges and 1 culvert. He was also very happy with the project developer's initiatives of supporting farmers interested in planting teak and other natural trees to raise them in their farms. This has somehow reduced a big demand for poles in the community.

Mzee Rutuba reported the loss of their fertile valley land was central to all other losses they are currently facing. He gave an example that *"if people of Idete were to fight a war against the teak project, it could have been appropriate to name it the war of valleylands and soil fertility"*. Other negative impacts included the loss of agricultural lands for semi-permanent and permanent crops. Other losses influenced by the teak project were mentioned as loss of income generation opportunities such as bee hive project; increased food insecurity due to decreased food production and poor nutritious food items and; excessive loss of natural vegetation and destruction of water sources.

Emerging Issues

- Information asymmetry and lack of involvement of affected parties
- Customary land rights of the affected parties not recognised
- Land/compensation speculation is a potential source of compensation disputes
- Loss of agricultural high productive (fertile) valleylands
- Loss of production of semi-permanent and permanent crops due to land shortage
- House construction/improvement was a priority allocated large proportion of compensation money
- Lack of monitoring of post-compensation outcomes

Appendix 5.10: Compensated household case *(Mr. Ling'ang'a)*, Idete

Mr. Ling'ang'a (42) is married and his household has a total of 7 people. He has been living at Idete since 1975 when they moved together with his parents during villagisation. Like other cases, *Mr. Ling'ang'a* is a farmer who lost his 2 acres farmland (0.8ha). On this land, *Ling'ang'a* has been cultivating banana, sugar canes, vegetables and rice and he was harvesting twice a year, as the soil was capable of keeping the good amount of moisture throughout the year. On the same land, he had a house, orange and mango trees. Despite other many losses, *Mr. Ling'ang'a* claimed a loss of average daily income flow of 4000/= TZS from sales of sugar canes and banana.

Mr. Ling'ang'a was among the households received cash compensation from KVTC (teak project) and he received 270,000/= TZS (117.40 GBP). According to *Ling'ang'a's* interest, he wanted to know exactly how the losses were counted and valuated, especially the way banana stems which contains a lot of banana plants of different ages. But no one was available to respond to their questions from the project or government authorities. *Mr. Ling'ang'a* spent almost all his compensation in buying 4 acres (1.6ha) of alternative farmlands in the neighbouring village. Connected to this, he expressed problems associated with distant farming such as theft and crop predation by wildlife such baboons and monkeys are very high especially for the farms located close to natural forests.

The gains that Idete villagers have benefited from the teak project are their support in construction of both primary and secondary school. He expressed his personal views that he was so pleased with KVTC's support, as education is an important social/community service. Losses caused to Idete villagers include loss of land, for future generations in particular. He was so worried with the KVTC's plan of expanding their teak plantations, especially when he considered the land availability for his children and grand children. He also associated the teak plantation and the 2006/07 drought that has caused River Idete to dry out, something they never happened to see before. Another serious concern of *Mr. Ling'ang'a* was a socio-cultural issue, as the developer did not consider or take initiatives of resolving burial sites (graves) the affected partied had on their farmlands.

Emerging Issues

- Agricultural production and watershed systems have been adversely affected and both effects affect entire community.
- Socio-cultural effects associated with burial sites (graves).
- Support of KVTC in education is very important means for promotion of community development and is a potential method for compensating all community members equally and in a sustainable way
- Compensation process did not involve affected parties and was not open
- Used almost all his compensation payment to buy another farmland in the neighbouring village.

Appendix 5.11: Uncompensated household case *(Mama Mjasirimali)*, Idete

Mama Mjasirimali is 33 years old and heads a household of 8 people that have been depending on 1.5ha farmland they lost to the teak project in 2006. Since 1997, this household has been cultivating rice, maize, tomatoes and vegetables and had an average daily income of TZS 1200/= earned from sales of tomato and vegetables. The household used to harvest about 15 bags (15x70kg) of paddy rice and 7 bags (7x70kg) a year. As a livelihood coping strategy, she runs a mini kiosk at her home and providing food vending services to labourers working in teak plantations. She currently has a net income of more than TZS 3000/= per day.

Mama Mjasirimali's household is one of 43 uncompensated households at Idete village. *Mama Mjasirimali* claimed that people living in *Ndundu* zone kept on hearing informally that teak project is underway to start big plantations and by 2005/6 about 100 households were forcibly evicted. She highlighted that very few people received compensation leaving the majority uncompensated by reasons that villagers occupied and used KVTC's land illegally and many had no permanent crops, thus were not eligible for compensation. According to *Mama Mjasirimali* the affected parties deserved compensation payments at least for their annual crops and efforts spent in clearing natural forests.

Mama Mjasirimali claimed that if someone has to compare benefits and costs caused by teak project it is obvious that losses outweigh gains. She pointed out, the developer channels some funds for village development, but according to her this money has not helped the losers, instead village leaders have spending this money to satisfy their own interests and influential unaffected parties. The project dug the earth road that affected further the fruit trees at people's homesteads. She also complained about increased road accidents that involve domesticated animals such as chicken and dogs. The high mortality rate of chicken has multiplied losses encountered, she claimed. *Mama Mjasirimali* went further comparing impact done by teak and plan projects and said Plan International has influenced great changes in people's lives in Idete, as has assisted in construction of a new primary school and water borehole for people in *Ndundu* zone. *Mama Mjasirimali* claimed that the livelihoods of the affected households have been severely devastated especially loss of their farmlands, as both food production and household incomes have been reduced. She also cautioned that many households have no signs of recovery if there are no measures to be taken to resolve land shortage problem, they are currently facing.

Emerging Issues

- Information asymmetry and lack of involvement of affected parties
- Unclear land ownership (property rights)
- Villagers used KVTC's legally owned land unknowingly (encroachment)
- Food insecurity and loss of incomes
- Benefits not reaching the affected parties
- Income generating activities can provide alternative means of earning a living (livelihoods).
- Education and water supply are potential means of compensation for losses encountered at household level

Appendix 5.12: Uncompensated household case *(Mzee Siogopi Hasara)*, Idete

Mzee Siogopi Hasara is 85 years and is living with his wife at her early seventies. 70s has two wives and a total of 10 household members. The old couple has lived in Idete village for over 40 years. *Mzee Siogopi Hasara* obtained a farm of 4 acres (1.6ha) through clearing the virgin bush in one of the fertile valleylands. The couple has been cultivating rice, maize and banana with average income of TZS 2000 per day from sales of banana. The couple also used to earn annually an average of TZS 40,000/= (17.39 GBP) from renting out the farm to others for annual crops. *Mzee Siogopi Hasara* was not compensated for his farm, as he had no permanent crops in his farm.

In a desperate state, *Mzee Hasara* expressed his concern that when uncompensated affected parties including him asked for their compensation rights, the village leaders promised to make follow up on the matter but no response todate. Discussing about his compensation eligibility, *Mzee Siogopi Hasara* insisted that as there is no way someone can obtain free land as it used to be in the past, he therefore deserved compensation for his farmland. He went on saying *"anyway he do not want to trouble his old mind as his children take care of him and his wife"* and following that event of losing his farmland he wrote a notice on the wall of his house that states *" you don't have to fear about losses"* (Photo 6.5).

Mzee Siogopi Hasara was also aware of the support by teak project developer in education, where he commended it and found it a better way of helping communities. He also mentioned that if young people get educated, this passes knowledge from one generation to others and would minimise losses happening because of ignorance. The big loss caused by the project, according to *Mzee Hasara* is loss of their good agricultural lands. He expresses his concern of both the project and government not considering the conditions of affected parties like the old people. He went on explaining other concerns in association with restricted access to forests and other natural resources.

Emerging Issues

- Loss of land has multiplicative effect on farm-based livelihoods, as it leads into food insecurity, income loss, psychological effects and so many others.
- Roles of government authorities in both development and compensation should include caring for the affected vulnerable groups such as elderly people.
- Education is an important support for affected rural communities, as it promotes development among youth and from one generation to another.

Appendix 5.13: Uncompensated household case *(Mzee Washamba)*, Idete

Mzee Washamba is 80 years old and is living with his wife, his daughter and his grandson. The household has lived in Idete village since 1970 and during that time, he obtained a farmland of 3.5 acres (1.4ha) through bush clearing. In every year the couple has been cultivating rice on their land and harvesting average of 7 bags of (70kg each) paddy rice per acre.

Mzee Washamba did not receive compensation for the loss of his farmland because he had no crops on the farm by the time of relocation. According to *Mzee Washamba*, the first information they received about KVTC's teak project was just a notification that land is no longer theirs, as the government had allocated that land to an investor. He heard that the village government organised a meeting to discuss about the KVTC proposal and their land requirements but *Mzee Washamba* did not want to attend because he was busy working in his farm. He further explained that it was wastage of time to attend the meeting, as it was already decided by the higher government authorities that the affected people should relocate and give room for the project. *Mzee Washamba* claimed that both project and compensation processes lacked involvement and democracy. He pointed out two worse and unfair things happened in the KVTC's compensation process included (i) failure to recognise long land occupancy of affected parties and, (ii) failure to provide the affected parties with replacement of land. *Mzee Washamba* claimed that he is no longer cultivating rice due to land shortage and has no money for renting-in land and according to him majority of landowners charge between TZS 10000/= and 20000/= per acre per one farming season.

Mzee Washamba mentioned the road constructed by the developer of teak project as the only benefit he has been enjoying but he critically pointed out that essentially the road serves most the project than communities. He went on explaining negative consequences of road that vehicles of the teak project and contractors have been killing their tamed animals such as chicken, goats and dogs. When asked about social funds donated annually by the teak project developer, he responded that community based benefits can not offset losses encountered by individual households.

Emerging Issues

- Prearranged outcomes/decisions in meetings, involvement of affected parties
- Lack of recognition of long land occupancy
- Government influence in compensation issues
- Impacts of benefits need assessment and evaluation

Appendix 5.14: Uncompensated household case *(Mama Marimba)*, Idete

Mama Marimba is a widow and lives at *Ndundu* zone of Idete village. She is at her late fifties, living with her last two sons and four grandchildren from her two daughters who died of HIV/AIDS in 2001 and 2004. Her husband and she moved to Idete from Iringa region in 1977 and have been tilling the lost farm (of about 3ha) since early 1980s. They cultivated rice, maize, banana, sugar cane and cassava. Although she did not remember exactly their annual harvest for each crop, she claimed to have faced no food shortage and money for their other pressing needs such as school requirements of their children and drug prescriptions. *Mama Marimba* whose farm partly was planted annual crops and another part left under furrow did not get compensation. She bitterly complained, how comes a naturally affected household like hers is not even provided with an alternative farming land! She gets money for supporting her household from sales of local brew and vegetables raised in her home garden. As widow, she also gets little support (money, food or clothes) from a local church. She however complained about life hardships caused by loss of her farmlands.

Mama Marimba pointed out that despite all wrong deeds by KVTC's teak project she is happy especially with their support in education (school construction) and other infrastructures such as roads and market, as are critically important for development of every community member. She however, suggested that government should seek ways of supporting the affected parties, the vulnerable poor such as old people, widows and orphans. She emphasized on the government to particularly ensure that all affected parties in rural areas get land replacement to keep their livelihood activities going. She added landlessness welcomes food insecurity and multiplies poverty. She concluded by saying if people are well informed, respected and taken through step by step in both project and compensation processes, there would be nobody or very few people to oppose the project, thus local people should be involved in determining the fate of their livelihoods.

Emerging Issues

- Land is a critical asset that cushions rural livelihoods from food insecurity and absolute poverty
- Government authorities at both levels have critical roles to play in ensuring people's livelihoods (no landlessness) and development is maintained.
- Benefits channelled through community services such education have potentials of benefiting both the present and future generations.
- Income generating activities can only supplement basic means of rural livelihoods.
- Early involvement of affected parties/host communities in key steps of both project and compensation processes can strengthen relationships between the affected partied/host communities and the developer.

Appendices 5.15 – 5.21: Interviewed key informants

Appendix 5.15: Key informant interview with *Mama Mhamasishaji, M'baya*

Interview with Mama Mhamasishaji was held on 3rd July 2007 to explore more about the factors within the community that tend to influence participation positively and negatively. It was also meant to get to know about group dynamism in M'baya village.

Mama Mhamasishaji is 52 years old, married with 6 children. She is a famous town/village crier in M'baya and her neighbouring villages within *Tambani* ward. She realised she has a unique talent of commanding when she was attending paramilitary *(mgambo)* training in 1978. She is also involved in several campaigns of different nature (e.g. education, health and development) organised and funded by government and some by non-government organisations. *Mama Mhamasishaji* is highly gifted with great convincing power and she talks with strong persuasive language. Constantly, she has been acquiring knowledge in different life disciplines and skills in public sensitisation and facilitation from different forums she happened to attend. *Mama Mhamasishaji* participated in the compensation process of SONGAS project as she was fulfilling her obligation as a town crier, calling villagers to convene and attend meetings of SONGAS project. The discussion with *Mama Mhamasishaji* was held in the context of her job as a town crier of inviting people/villagers to attend public forums.

Mama Mhamasishaji mentioned that in order to have good attendance to meetings, a town crier has to briefly tell the villagers about the expected outputs of the meeting and should be something that interests them. Meetings with SONGAS on their compensation were well attended because the main agenda was money (i.e. who, how much, when). She claimed to have never seen such turn ups throughout her work as a town crier. However, attending is one thing and participation and giving contribution is another thing. Based on her assessment, she claimed the meetings had no active discussions because of the following barriers:

- Most of the meetings were dominated by the SONGAS team and leaders and were like information/feedback giving forums,
- Agendas were not availed to people well in advance before the meetings start.
- Compensation as a subject matter was new to villagers and this affected their participation during discussions, particularly when you consider differences in education,
- Equipment used in meetings were too sophisticated for rural environment. These must have intimidated villagers not contribute during discussions
- Based on cultural and religious values and economic status, group hierarchies in M'baya favour adult men over other groups. Adult men have rights to attend public matters such meetings and women are responsible for domestic chores.
- SONGAS team maintained rigidity and confidentiality in some matters. For instance the team was not ready to change or consider any suggestion from the affected parties.

According to *Mama Mhamasishaji*, potentials strengths in favour of participation in future exist and these include:

- Promotion of both primary and secondary school in village and ward levels would promote awareness and understanding of various issues among school children and their parents and subsequently build up of confidence and hence active participation.

- Few men who openly involved their wives (entire family) in spending their received compensation and many who did not are respectively good and bad examples of involvement at household level.

Emerging Issues

- Participation to village meetings depends on attendance which basically is determined by the way the meeting agenda interest the invitees. Compensation as main agenda has a self-incentive that attracts both affected parties and non-affected parties to its meetings. The challenges ahead include the following:
    1. how to attract the marginalised groups, women in particular,
    2. how to obtain representatives of both groups the affected parties and non- affected parties,
    3. how to handover the stick to the meeting delegates (a big challenge to both experts and leaders)
    4. how to facilitate the meeting to achieve good outcomes of compensation
- Education (i.e. awareness, information, knowledge and technology) broadens understanding which builds confidence and trust and in turn the trust lays down a strong foundation of active participation.
- Participation is both cultural and artistic behaviour in somebody's lifestyle and it can be shaped by external factors. Participation starts at the household level.

Appendix 5.16: Key informant interview with *Mr. Jujukisi, M'baya*

Interview with Mr. Jujukisi was held on 1st May 2007 to explore the way SONGAS project entered in Mwanambaya (M'baya) village, acquired land for its pipeline way-leave, planning and implementation of its compensation scheme. It was also meant to inform the study about the gains and losses encountered by both the affected parties and community at large. In addition, the interview sought to obtain important general and practical matters to focus on during the selection of household case studies in M'baya.

Mr Jujukisi is in his early 60s and he has been in *M'baya* since his birth. Currently, he is a honourable Councillor of *Tambani* ward. His late grandfather was the founder of *Mwanambaya* village and therefore *Jujukisi* has a rich history of the village. His grandfather was nicknamed *Mwanambaya* by his relatives and friends after he fled away from where his relatives lived (where headquarters of *Mkuranga* district is currently located). *Mwanambaya* literally means *"bad boy"*. He was called a bad boy as he did not want to live close to his relatives. But in the really sense, he decided to establish a new settlement somewhere he could have kept his goats without complaints of crop predatory from his neighbours. The name of the area he resided was also gradually changed from *Kiloweko* to *Mwanambaya*. A person's nickname became the village's name! Todate, *Kiloweko* represents one of the 7 zonal areas within *Mwanambaya* village.

Based on the historical background of M'baya and the fact that people have voted for him as their Chancellor, Mr. *Jujukisi* feels that has a big responsibility to work for people of M'baya and neighbouring villages that make up *Tambani* ward. Despite difficult challenges he sometimes face, he enjoys working for people's social welfare and development. As the ward chancellor he was also involved in compensation process to ensure all parties affected by the gas pipeline (way-leave) project get their rights. Even during this interview he was working on the compensation claims by villagers who were affected by the implementation of one of the promised benefits (i.e. electrical transmission line) by SONGAS.

In regard to the first experience of SONGAS project in the village, Mr. *Jujukisi* said that SONGAS came into the ears of M'baya villagers through rumour mongers after seeing an air survey plane frequently flying over their farmlands. A couple of months passed before the hired experts (SONGAS team) visited the village to introduce the project. The team identified all the affected parties in collaboration with the village leaders and ward officials. After a couple of months the prescribed list of assets and other types of losses to be compensated was made available to the affected parties without showing the applicable rates. Surprisingly, without informing what was following next, SONGAS sent a team of workers (contractor) to clear and mark the passage for the pipe wayleave. This triggered a lot of chaos and unrest situation in the village. The exercise was halted for weeks and continued after a series of meetings where the affected parties were informed about the amount of compensation allocated to everyone. From that day it took about 8 months for the affected parties to receive their compensation. SONGAS organised with the Postal Bank to visit the village and facilitate affected parties to open bank accounts in order to enable them bank their cheques right in the village.

According to *Jujukisi*, majority of the affected parties were satisfied with the amount of compensation paid to them, though few expressed their dissatisfaction. As far as the process of compensation was concerned, people were not happy with the following aspects (shortcomings):

- Despite the SONGAS team to work in a collaborative way with the village and ward governments, their decisions on important aspects such as losses to be compensated and applicable rates remained top secret. Similarly, involvement of Affected parties in the entire process was very minimal (purely top-down). However, the village leaders share blames for not playing a key role to organise villagers, affected parties in particular to participate in the process.
- The Affected parties who thought their losses were not adequately compensated received partial treatment. Two M'baya-based affected parties when expressed their dissatisfactions, were straightforward told to launch their complaints in the court of law, unlike to the 3 elite affected parties and renowned people who reside in Dar es Salaam city (40 km from M'baya) were given opportunity to negotiate and got paid more than what was indicated before. This left behind a number of unanswered questions among the affected parties based in M'baya. Many developed feelings that were undercompensated.

However, in general views of Mr. *Jujukisi*, compensation process by SONGAS in M'baya village ended well and all affected parties got their compensation. As he went on comparing it with the past government experiences of paying compensation elsewhere in Tanzania, Mr. *Jujukisi* credited SONGAS for paying reasonable amounts of compensation to the affected parties. This enabled a good number of affected parties to improve their homes through upgrading roofs and/or walls of their houses. However, the affected parties lacked sensitization on how better they could have used their compensation. Majority of the affected parties never owned such big amount of money before, and were therefore overwhelmed and ended up spending them unwisely. He embarked on giving an example where some Affected parties bought TV sets and after a short while they changed their taste to something else and sold the TV sets for lower prices (less than half purchase price). He sadly mentioned the death of one of the affected parties who was invaded and murdered by bandits in the night. The murderers were looking for money and valuable assets the deceased bought in the previous day.

He also pointed out both positive and negative aspects of the support SONGAS makes to community. From the beginning SONGAS promised to help M'baya community in education, electrification and water supplies projects. SONGAS donated TZS 49millions (21304.35 GBP) and 100 desks to the construction project of the ward-based secondary school (in 2007) and the village-based primary school (in 2006) respectively. Such support to community services has a big impact to people of M'baya in especially fostering forward their community development. It also creates and cements good relationship between the project and host villages. Mr. *Jujukisi* however, expressed a serious concern in regard to the implementation of some benefits. He had the following to tell:

1. SONGAS promised to provide electrical transmission line in M'baya and free installation of electricity to 50 homes so long as their wiring system is approved by the electrical distribution agency (TANESCO). The implementation of this promise/benefit faced 2 obstacles viz.
    - The contractor responsible for erecting electrical posts destroyed crops of villagers without following proper procedures (photo A). The project was suspended by the District Commissioner pending to the resolution of compensation claims and,
    - The way distribution of 50 application forms for free installation of electricity was done, it triggered enormous complaints from villagers, Affected parties in particular. He blamed the village leaders for not involving all villagers to set criteria of selecting the required 50 beneficiaries.

Photo A: Affected farmer starring at his damaged coconut and orange trees in M'baya

2. SONGAS also promised to drill a deep borehole to allow villagers, dispensary and primary school to access clean water services within shortest distance (< 1km) and in a convenient way (deep borehole should be installed with a pump). Contrary to that, the contractor hired by implementing agent (TANESCO) drilled a shallow borehole down the valley (cost saved was for the benefits of few), far from homes (about 2-3 km), dispensary and school (about 1.5-2.0 km). He added that workmanship embedded to the borehole is of poor quality (photo B). Once again this happened because of the weaknesses of village leaders. The big question here is what difference this borehole has made in the community?

Photo B: A "finished deep borehole" in M'baya-as one of the promised benefits by SONGAS project

3. The promise to improve and support the village-based dispensary so that it gets upgraded into a higher status (i.e. medical centre) is not yet fulfilled. But he further commented that

probably it is too early to judge that SONGAS has turned down. As these promises were not documented and signed as a formal agreement and owners and officials of SONGAS project keep on changing from time to time, there is a big worry of losing some of the promised benefits.

Mr. *Jujukisi* concluded by pointing out that developers are willing to compensate the affected parties/communities adequately and are keen to forge good partnerships with local communities in various development issues. However, the regulatory bodies and elite people who attach themselves in the compensation processes and pretend to guide and help developers in persuading local communities/organisations always undermine the welfare of the affected parties. He verified his conclusion by giving evidences that whatever promise/benefit that was implemented by the developer was successful, but those implemented by contractors under supervision of intermediary agents ended up not delivering the required results.

Emerging Issues

- Affected parties involvement was intermittent (they only gathered to be informed about outcomes, decisions made and what would follow next). Top-down.
- Partial treatment of Affected parties during compensation processes.
- Confusion to villagers as number of actors keeps on increasing. For instance developer (SONGAS), benefit implementing agencies e.g. TANESCO, contractors and smart individual opportunists.
- Lack of contractors' guidelines affect their performance
- Weaknesses among regulatory bodies including village leadership's, implementing agencies, etc. undermine Affected parties/communities' welfare in regard to compensation and benefit sharing.
- Something good if not done in proper time, at a proper place, and in the proper way it may turn into a bad and useless thing.
- Special training (seminars) to Affected parties on both how to keep safe and spend wisely their compensation has potentials of reducing risks of losing and misusing it. It would also reduce enhance security to Affected parties.
- Good people-project relationship adds into sustainability of people's livelihoods, project's activities, environmental aspects and economic development.

Appendix 5.17: Key informant interview with *Mzee Kizazikipya, M'baya*

Interview with Mr. Kizazikipya was held on 1st May 2007 to explore more about the way M'baya community has benefited from or/and lost to SONGAS project.

Mzee Kizazikipya does not know precisely his age. However, using various historical events, he suspects his age to be any figure between 72 and 75. *Mzee Kizazikipya* has been a political leader for many years, serving in different positions from hamlet to district levels. He declared a complete retirement from politics, leadership in particular in June 2007. He has decided to take a rest fro politics and spend most of the time in his coconut farm. But he will not hesitate to advise young leaders and politicians on how to make good leadership. He talked so boldly.

Mzee Kizazikipya did not wait for the question. Instead, he started by making an apology that him being a politician and a typical man from Coast region, he is privileged with talking. He first expressed his joy of retiring from politics ceremoniously (without been alleged of any sort of misconduct). He went on explaining that in the past era of single political party, both political and government leaders were committed in serving people, despite minimum level of popular participation in decision-making. He claimed the situation now with multiparty system is even more confusing as someone would have expected to see more democracy, increased participation in decision-making process and advancement in socio-economic welfare. According to his general assessment, almost everything diminishes as you go down to the village level from the national level. What is causing this deterioration seems to be a difficult question. However, smart politicians, leaders and experts always have prescribed answer (i.e. globalisation). He emotionally commented *"Indeed it is simple and short answer but I hate this monster called globalisation and, I hate it most when is used as a scapegoat reason for every failures and difficulties faced in the development process"*. He bitterly exclaimed *"with all experts and learned people the nation has can't we strategically position ourselves on safe places – which I suspect there are"*.

Responding to the principle question about benefits and costs the community of M'baya is experiencing with respect to SONGAS project, its compensation scheme in particular, he expressed the following remarks. SONGAS paid good amount of money to its Affected parties and most of them cherished with monetary compensation at the beginning, but gradually the Affected parties started realising the difference between the period before and after compensation. Despite getting good money (perhaps they never held before) not all lost values were compensated. He took an example of coconut as the main crop in M'baya and outlined its values from farmers'/local people's perspective.

- Food: coconut fruit provides cooking oil and is a unique additive used to flavour many dishes deliciously.
- Beverage: coconut juice *(dafu)* and brew *(tembo/mnazi)* refresh local people at affordable prices. Availability of both drinks is very convenient with local environment (i.e. available all weather, all seasons throughout the year).
- Employment: both young and adult people render their service as causal labourers during weeding and harvesting (*wakwezi* = climbers) and get paid. For weeding payment is always made in terms of cash while a harvester is paid 10% of all harvested coconut fruits (i.e. he takes 1 coconut fruit from every 10 fruits counted randomly).
- Social values: ownership of coconut farm *(kiunga)* regardless of its size puts someone in a better position to command respect at both the household and community levels. In other

words coconut crop to people living in the coastal strip is a symbol of wealth and, if someone has at least 100 coconut trees is regarded as a rich person.

- Cultural values: coconut farm to coastal people is the only valuable and inheritable asset that is passed to children (descendants).
- Medicinal values: despite the ill-notion that coconut juice and brew cause lymphatic diseases and laziness to people, but to the best his knowledge, *Mzee Kizazikipya* claimed the coconut juice and brew (if taken in small-moderate amount) help to clear dysfunctions in kidneys and blood systems. For decades, the same coconut stuff has cushioned coastal communities including M'baya from diabetes. He added that the locally processed coconut oil *(i.e mbata)* when externally applied it prevents and cures a number of skin diseases on babies, children and adults. While smiling, he also mentioned about a mature coconut fruit that has fallen itself from top the tree *(mdondo)* is highly needed by traditional healers in treating various diseases including fortune.
- Construction materials: coconut tree provides a highly valuable roofing material and more than 90% of rural coastal houses are roofed by coconut leaves. Similarly, luxurious, resting and entertainment places in urban areas and big/tourist hotels have at least one open building roofed with coconut leaves for purpose of increasing comfortability during hot sunny days. When coconut tree is yielding very small-sized coconut fruit (normally at the age >75 years) or hit by lightning or attacked by beetles has to be replaced and its stem gives good and strong poles. In recent days, people have started making quality furniture from coconut wood.
- Source of income: Most of the above-mentioned values can be exchanged easily in monetary value and subsequently enable the owner to earn good income.

It was not clear whether the computation of compensation considered the labour and time spent in raising a coconut tree to at least reach its maturity (13 – 18 years) and the loss of constant income someone used to accrue from every after 3 month harvests. Production time for coconut ranges between 75 – 80 years and can live up to 100 years. If one of the above criteria was adequately considered, compensation must have exceeded TZS 25000.00 (10.87 GBP), the amount SONGAS paid per coconut tree. *Mzee Kizazikipya* is confident that most of the above outlined values of a coconut crop were not considered by experts who did valuation of losses and subsequent computation of compensation.

In regard to the benefits received from SONGAS, especially supports to both primary and secondary schools, Mzee *Kizazikipya* expressed a sense of appreciation. He specifically pointed out that the support through education is a very good and effective way of distributing project benefits among community members. He however thought of the following aspects need attention:

- Benefit sharing was supposed to be a written and signed agreement by both parties (i.e. the developer and village government). Village has rights to share benefits and not to beg and/or position themselves or by whoever in the receiving end and keep on waiting for supports/aids to be provided in the form of handouts.
- Monitoring of the implementation of the promised benefits is not in place. As a result contractors hired by the developer to implement the benefits do things contrary to what was agreed upon between SONGAS and the village. He cited examples from M'baya, where villagers were not satisfied with the quality of the borehole. Both its hygiene and location still irritate people to-date. He also mentioned that the implementing agent (TANESCO) and its contractor diverted electrical transmission line searching for the shortest distance and causing serious damage to people's permanent crops. The verbal agreement the village reached with SONGAS was to use the same pipeline way-leave

(passage) for transmitting electricity to the beneficiary village. However, TANESCO decided to cut down transmitting costs by shifting some costs to the poor villagers (i.e. again loss of land and permanent crops).

Emerging Issues

- Lack of commitment and creativity among both political and government leaders undermine rural people's efforts towards development.
- Benefit sharing is highly undermined by selfishness among leaders and intermediary agents.
- Generally, levels of democracy, participation and development priorities decrease as from national level (urban areas) down to grassroots level (rural areas).
- Like coconut crop to M'baya people, there are some assets/capitals they mean everything to affected parties' livelihoods. A combination of different forms of compensation may provide helpful approach towards better outcomes.
- Affected parties know most about the importance, values and benefits constantly flowing from the assets they own or work with everyday. Their participation in shaping the criteria for valuation and assessment of their losses is necessary.
- In practice, it is not possible to exhaust all losses. The remaining uncompensated losses after active participation of affected parties in compensation process can be termed as *sacrifice by affected parties*.
- Supports to community in terms of social services and promotion of community development have potentials in offsetting the affected parties' sacrifice and community's losses.
- Joint planning, implementation and monitoring of compensation scheme and benefit sharing and minimise disputes and promote sustainability.
- Both individual households and the community as whole suffered from losses caused by the project. However, the effect is more severe on the former than the later.
- Sometime poverty among the affected parties is the main driver of their quick acceptance of little compensation offered which leads into a regret after a short while. This suggests importance of patience and negotiation.

Appendix 5.18: Key informant interview with *Mr Kazi, Idete*

Interview with Mr. Kazi was held on 18th May to investigate more about the way Idete community benefit from the Social Funds and Contracts the village has entered with KVTC project. Interview also explored the losses incurred by villagers as a result of the teak project.

Mr. *Kazi* was born in 1977 in Idete village and is married with 2 children. He is a secondary school form four leaver, knowledgeable young man and very critical to various issues happening around the village and other parts of the country as well. He is currently a rice farmer in his home village.

In discussing about both the KVTC project and the compensation paid to the affected parties in Idete, Mr. *Kazi* explained that KVTC did not come to Idete in one day or one night but it was a process led by very smart people ("whom they call themselves experts") from the district headquarters and other parts of the country. During meetings that were held to decide on the KVTC's request for land, villagers were not provided with opportunity to discuss whatever has been agreed upon between the village executive committee and KVTC. Rather were more on information giving and "rubber stamp sort of forums". In such meetings where foreign companies meet directly the rural poor people, both sensitisation and facilitation are necessary for bringing up the villagers to the common understanding of the agenda so that they can discuss and share their views with the rest of stakeholders.

He gave a further example from the nearby village of *Kisegesi*. KVTC rented-in an acre land for 3 years for the purpose of establishing teak nursery beds. In the course of raising their seedlings they left some seedlings to grow into big trees, something signalled to the villagers that in future KVTC might resist returning back the land to the village. At the end of their tenure, villagers wanted their land back. However, KVTC negotiated with the village and bought it for TZS. 4millions. He exclaimed, "an acre (0.4ha) of land selling at TZS 4millions! How much Idete village has lost from its 7000ha taken by the same KVTC?! He went on commenting that Idete village was too fast at accepting the project and subsequently lost their opportunity for negotiating for the best deal".

Mr. *Kazi* sees the Social Fund (SF) remittances to villages as something carefully designed to use the non-affected majority villagers to silence the affected minority ones from claiming their primary rights in regard to livelihoods and development. He termed it as "divide and rule strategy". He went on questioning "how can a village cherish at peanut benefits at the expense of its people's livelihoods?" His concerned was TZS. 2million the village receives annually from KVTC as SF for community services and development is too small compared to amount of land taken. Further to that, it is too little compared to the village needs in terms of social services and development. *Kazi* equated the situation with a grown-up person who needs sticky porridge *(ugali)* and instead is given porridge *(uji)*. He/she would not die but he/she will noticeably grow weak and weaker".

Additionally, he questioned the legitimacy of advocacy for exchange primary rights on land for compensation, the monster they don't know well. Most of the affected parties did not know or even have a crude idea of compensation consequences. They did not know while they do not know precisely about the grew older many of his

Emerging Issues

- Low level of both education and awareness among villagers, affected parties in particular bid disadvantage.
- Negotiation is possible and has potentials of giving efficient compensation outcomes
- Livelihood issues need careful and critical scrutiny and patience too.
- Credibility of village leadership and participation of villagers is highly questionable!
- Compensation of individual affected parties/households and community

Appendix 5.19: Key informant interview with *Mzee Sitaki, Idete*

Interview with Mzee Sitakisitaki held on 20th June 2007, focused on land issues such as acquisition process by the teak project, compensation, shortage, land disputes and possibility of resolving them.

Mzee Sitakisitaki moved to Idete and started his life there in 1979. He has a good record of historical events transpired in Idete during land transfer and acquisition processes. Currently, he works for KVTC as a field inspector responsible for guarding both farm boundaries and teak trees. He started by explaining that up to 1990, Idete had large areas of land lying idle and villagers enjoyed shifting cultivation freely. A big piece of land was firstly given to a company called MIFURA (1984) which later transformed rice farms into sugarcane plantation. This land now falls under jurisdiction of *Namawala* village government. Between 1984 and 1991, a number of rich farmers such as Mr. Mwakifuna were also allocated land for rice cultivation. In 1991/92 more than 7000ha was given to KVTC and in 1993 the village government leaders approved the request by Idete Prisons to expand its boundaries. Village leaders signed an agreement with the Idete Prisons officials neither with villagers' consent nor informing them.

The KVTC land acquisition started and involved people from bottom-up and avoided areas that were used by villagers. The process went through the following steps:

- **1990**: KVTC submitted their request for land to the village government formally in and the village executive committee (VEC) met and passed it to village general assembly (VGA) for further scrutiny and discussion.
- **1991**: The majority in the VGA unanimously approved the request and the affected parties were among the people who voluntarily and willingly participated in showing where the boundary should be casted. The affected parties quickly made their decision in favour of KVTC as the company showed no interest to the valleys, the land most of the affected parties valued much because of their good soil fertility and maintenance of moisture content through the year. Affected parties also anticipated compensation from KVTC as well.
- **1992:** Experts from Ministry of Lands and District Offices teamed up with the village leaders to survey and mark the KVTC allocated land.
- **1993:** The village government convened another VGA to verify the areas allocated to KVTC and officially hand it over to the developer.

In 1993, only 4 affected parties qualified for compensation as were having permanent crops but only 2 affected parties were compensated. It was not made clear to why the other 2 were not compensated. However, these 2 affected parties plus their relatives and friends whom they invited into the area were all (totalling to 12) in 2006 and requested to move out of KVTC land. KVTC hired the district valuer to estimate compensation for each affected parties and only permanent crops were involved in calculating the amount of compensation. Houses were of low quality thus were not considered. Most of these people are currently residing at *Ndundu* zone and few moved to neighbouring village. When they requested land allocation from the village government, they were told they have compensation money and should seek land for themselves within and outside the village. The village government was ready to find them land for the fee of TZS. 10000.00 (4.35 GBP) per acre, but none went for it.

In regard to affected parties' complaints that soon after compensation they were restricted from harvesting their crops and tilling the valley lands that KVTC promised from the beginning, Mzee *Sitakisitaki* had the following to say. KVTC did not direct that to happen but the causal labourers worked for different KVTC's contractors lobbed the affected parties' crops. As far as valley lands are concerned in 2005 KVTC established a system of allowing farmers to use the valleys free of charge by applying every year using special application forms obtained from KVTC or village government offices. He pointed out the misconceptions that surround this problem being the inefficiencies and limitations of this arrangement as outlined below:

1) affected parties not given priority of tilling their former valleys
2) availability and processing of application forms are not done in time,
3) village leaders are not paying adequate cooperation in this matter and,

Discussing land shortage, *Mzee Sitakisitaki* blamed both the village government leaders and villagers for not protecting their village land. He pinpointed the ignorance and personal interests as main drivers of land shortage in Idete. In terms of what should be done to reduce the problem, he suggested the following:-

1) In the northern part of the village across KVTC land (22km from the village) lays a very big strip of land that belongs to village. This exists between KVTC land, Iyovo forest reserve, Mr. Mtande's farm, Prison's farm and beacon no. 380. KVTC should think of adjusting its boundary to take this land and return its equivalent size of land it is holding now in its boundary with the village. This will allow farmers to regain some of the nearby valleys.
2) KVTC, village government and the former owner of the valley lands have a joint planning forum to improve the current arrangement of using this type of lands.
3) The village should recover land that was freely allocated to individuals and has not been used adequately and/or efficiently.

Emerging Issues

- Series of events and agreements are neither documented nor kept and are not known to many villagers of Idete.
- Leaders lack commitment to serve and help the people they lead
- KVTC has a responsibility for enacting guidelines to ensure its contractors conduct themselves properly while undertaking their assignments in the field.
- Since compensation done for 14 affected parties was paid in 2006, was supposed to follow the Village Land Act no. 5 of 1999. Losses of land, non-permanent crops, etc. deserved full compensation.
- Establish a kind of partnership between the project developer, villagers, and village government authority to manage the use of valleylands.

Appendix 5.20: Key informant interview with *Mzee King, Idete*

Interview with Mzee King held on 11th May 2007 aimed at exploring about different compensation schemes by different projects that happened in Idete village, with the view of focusing the study on the targeted project case study (KVTC project). It also informed the study the general and practical matters that facilitated the selection of household case studies and important issues to focus on.

Mzee King is 62 years old and a permanent resident of *Idete* village since 1978. He worked with different government parastatals for more than 20 years, before he retired on medical grounds. Although *Mzee King* has not been involved in compensation before, he witnessed 3 compensation schemes by different development projects in *Idete* namely, *Kihansi-Kidatu* power transmission line project (by TANESCO/SIEMENS); Church construction project (by Catholic Church) and Teak plantation project (by KVTC). The afore-mentioned projects were all discussed by comparing and contrasting them in order to have information that would enable to draw the boundary of this study, how to select household cases in particular. It was also meant also to explore how to learn from compensation experience and performance of the first 2 projects without disrupting the focus of studying KVTC as the project case study. Compensation schemes by all 3 projects had different approaches and the following were expressed by *Mzee King* as noticeable matters of concern.

According to *Mzee King,* compensation scheme which is open, transparent, participatory, and has no intermediary agents (persons) stands a better chance to satisfy its affected parties in terms of compensation rates and implementation. According to *Mzee King*, this was proved true by TANESCO/SIEMENS project. About 20 affected parties were compensated and most of them utilised their compensation money in obtaining new homes and improving their houses. No complaints were heard as the affected parties were allowed to cultivate rice, maize and other non-permanent crops on their former lands, now under the high voltage transmission line. Moreover, this project provides continuous benefits to the community by paying TZS. 50000.00 per electrical post per year to the village government of *Idete* for guarding the transmission infrastructures. *Idete* village guards a total of 12 electrical posts.

The Catholic Diocese of *Mahenge* asked its church members to volunteer into giving land for church construction project with the promise of compensating them. 6 church members gave part of their lands and the following happened. Out of 6, only one had a house constructed for him (as his compensation) using building materials remained from the main church construction. For the other 5 members, each received less than 50% of the promised cash compensation by instalments over couple of years. Some even reached a point of refusing to take little instalment payments. *Mzee King* went on explaining that complains exist that the Church has kept on extending the boundary inside the lands of its land donors. This however, has turned into a serious and complicated land dispute between the descendants of land donors and the Church leaders and members (the Church). As all the above agreements were done by word of mouth and no documented records were kept, the affected parties are losers.

According to *Mzee King*, since the introduction of KVTC project in 1990, signs of causing serious land problems were seen from different standpoints shown by their district leaders. However, the project used intermediary persons to convince village leaders and influential villagers using propaganda and promises of benefits of different natures which some have been realised and others have remained promises to-date. The project lobbied within the government machinery at both district and national levels in order to acquire land from the

village. *Mzee King* pointed out that during both processes of acquiring land and compensation, the project dealt most with village leaders with very minimum involvement of the affected parties. This left the majority (>75%) of affected parties uncompensated. Another serious concern came when the project drove village leaders into signing a number of contracts that are neither known to villagers nor to the affected parties. He added that benefits accrued from these contracts are too small compared to losses by individuals and a community at large. A good number of affected parties who could not secure land within the village decided to shift into the neighbouring villages.

He concluded by a serious concern that "if compensation means what I happened to see, it is therefore a robbery of people's land and resources. Hence it is a serious problem".

Emerging Issues

- Different approaches to compensation by different projects in the same village.
- Involvement of affected parties smoothen the compensation process and promotes
- Continuous community-based benefits have potentials for sustainability.
- Documentation of agreed bits and pieces made between parties was done.
- Compensation is a challenging problem.

Appendix 5.21: Key informant interview with *Mzee Mtafutaji, Idete*

Interview with Mzee Mtafutaji was held on 1st May 2007 to explore general issues pertaining to introduction of teak project in Kilombero valley, KVTC's land acquisition process, KVTC's compensation scheme, affected Parties, gains and losses by villagers. It also informed the study the general and practical matters that facilitated the selection of household case studies and important issues to focus on.

Mzee Mtafutaji is almost 60. He is a forester by profession and a civil servant working with the local government in Kilombero district. Despite his advanced age, *Mzee Mtafutaji* likes fieldwork as he is one of the 4 contractors commissioned by Kilombero Valley Teak Company Ltd (KVTC) to undertake some activities on behalf of the company. To KVTC, *Mzee Mtafutaji* has different and unique reputation compared to other contractors as he participated and guided the team that undertook feasibility studies in different places in the country including Kilombero valley in 1991. He also worked hand in hand with KVTC in the processes of land acquisition at the ministry level and in both districts of Kilombero and Ulanga.

As far as land acquisition is concerned, *Mzee Mtafutaji* pointed out that KVTC did not violate any laws in place by then. Despite of lobbying that was done at different levels of the government systems, KVTC went through the process of informing all villages about its request of land for the proposed teak plantations. After all most of lands fell under state ownership and only about 15% of total land acquired by KVTC in 1991 was in use by villagers and shifting cultivation dominated the farming practices in the area. He also mentioned the problems he spotted among village leaders and villagers were ignorance and lack of organisation towards understanding more about both the benefits and costs of the proposed project by then. According to his analysis local people were quickly overwhelmed by benefits promised by KVTC. He also recalled and mentioned some district leaders who were against the project but villagers did not support their ideas.

In regard to the distribution of project benefits and costs, *Mzee Mtafutaji* pointed out that KVTC's developer has been more than responsible and keen in helping village communities and not the affected individual households. From the beginning, KVTC had a thought that monetary compensation would not be helpful to the affected parties as compared to community services. KVTC therefore devised a mechanism of funding host villages in order to improve social services through special agreements that established social funds calculated based on the land size planted teak in each village.

Later on in 2005/06 when KVTC decided to compensate the affected parties in *Idete* and *Namawala* villages, few (<20) qualified for compensation and it was felt by many that compensation paid was little compared to the losses. When asked whether the paid compensation was adequate and fair, *Mzee Mtafutaji* exclaimed "how someone could get fair compensation in the situation where mechanisms and systems for guiding compensation processes were lacking". He went on mentioning specific two affected parties in *Idete* village who received large amount of money and though was adequate but after a lapse of time they realised was not, especially in the process of acquiring alternative land. From year 2000, KVTC has been requesting for more land from the same villages in both districts unsuccessfully. Some villages such as *Mavimba* need compensation to be paid first for their land previously taken, prior to the start of negotiation for the new request for land extension. *Mzee Mtafutaji* commented that slowly people are getting to know the long term effects of

the project such as land shortage and disputes in the village. Despite land disputes among individuals/households, he admitted existence of unresolved land conflicts between KVTC and other organisations (*Idete* Prison and Selous Game Reserve).

Operating as a KVTC contractor, *Mzee Mtafutaji* is responsible for maintaining roads, clearing pristine forests, planting teak, weeding, scaring destructive animals (baboons) and pruning young teak trees. When he started working, operations and things were running smoothly and invoices were paid promptly. He complained things to have changed (i.e. amount of work has increased while payment to have remained the same) and subsequently causing labourers' wage to go down. The most worst than all is the delay in effecting payments done by KVTC. He stressed this to have had serious negative impacts of causal labourers who expect their wages to be paid on daily basis. Frequent failures in paying labourers in time has demoralised them and now contractors have opted to bring new labourers from outside the project villages. He also suspected grudges might be building up among the resident youths against the non-residents who sell their labour cheaply.

Emerging Issues

- Land acquisition processes involved lobbying at all levels (i.e. village, district and central governments)
- In early stages seemed there were kind of discussions about the project but was dominated by ignorance (lack of information); overwhelmed by positive promises (wealth effect); were not well facilitated and; villagers were not organised.
- The 1050 ha (15%) of land (7000ha) taken by KVTC from Idete was under cultivation (shift cultivation) by villagers – deserved compensation.
- Community services versus individual monetary compensation (Good idea but unfair for the land losers!)
- Mechanisms and systems for guiding compensation process lacked and hence unfair compensation was implemented.
- Land shortage and subsequent disputes exist between KVTC and villagers, Idete Prisons and Selous game reserve.
- Reduced payment per piece of work and delayed payment are factors affecting KVTC-Contractors-Labourers relationships.

Appendices 5.22 – 5.26: Focus group discussions

Appendix 5.22: Focus group discussion with youth in M'baya village

Focus group discussion was held with six young people aged between 18 and 35 to explore from youth perspective the way Mwanambaya (M'baya) community has benefited and lessons learned from both compensation and benefit schemes by SONGAS project.

The youth group discussed positively about SONGAS project since the developer entered their village. They acknowledged efforts done by the project developer in information dissemination among villagers, consultation done with different leaders, compensation paid to the affected parties and fulfilment of benefits promised. However, they pointed out causes to shortcomings appeared during and after compensation as follows:-

- Some household faced delays in receiving their compensation payments as their farms obtained through inheritance were jointly owned by a number of family members and in many cases from different households. Such situations caused complicated ownership problems that needed time to resolve and involved different organs.
- Some household received little portion of compensation paid that was generally regarded as undercompensation. However in real sense was the matter about who had more rights in the jointly owned farms and therefore intra-household distribution of compensation.
- Some compensation beneficiaries lost their compensation money following lack of plans on how better they could have used their compensation. Some household heads did not want to involve their wives and other family members and ended up spending the money for needs that were not a priority of the household. In this regard, the youth participants also mentioned perhaps advisory services or seminars on "better ways of keeping, handling and using your compensation money" could have minimised this problems if were provided before compensation is paid.

Regarding benefits gained from the SONGAS project the youth at M'baya had discussed the following aspects:-

- Project developers should know that have a big role to play in improving community services so as to promote development in host communities. And governments in developing countries should put this point clear across all investors and project developers. As local people's resources are used in one way or another by their project activities and in some places local people's access to and right to use natural resources become limited, there is need for compensation be paid at community level and this should be through community services and development.
- According to participants, M'baya community could have benefited more from SONGAS project if villagers were organised and having a single say on various issues. Lack of cooperation among affected parties, community members and between villagers and their village leaders provided opportunities for elites/intruders to benefit from both compensation and benefit schemes.
- They also emphasized need of documenting all agreements such as promises, pledges, benefits and important decisions to minimise potential disputes and loss of benefits likely to happen because of changes of office bearers and project ownership. The suggestion also was discussed as potentially effective way of ensuring benefit implementation follows what was agreed upon by the concerned parties.

- They finally remarked that nature of impacts of projects should be known early and be evaluated in relation to the conditions available at the host community in order to avoid adverse implications on people's livelihoods, especially when the project causes local people to lose their farmlands. They insisted that whatever benefits gained from the project would turn into a net loss as land is a necessary livelihood asset for rural communities.

Emerging Issues

- Cultural values can complicate issues of ownership and compensation entitlements
- Involvement of household members in planning and setting household priorities leads into wise use of compensation payments.
- Joint actions by villagers and their leaders have potential successes in influencing higher level decisions in favour of community interests.
- Intermediary agencies as intruders, elites, implementing agency and contractors can potentially reduce compensation payments and other benefits meant for the affected parties/host communities if community members are not organised.
- Compensation payments at community level can possibly be done through community services and support to community-based development activities.
- Documentation of all important decisions and agreements has potentials of minimising compensation and other likely future disputes.
- Land remains as necessary rural livelihood asset thus careful decisions are required in exchanging it with compensation payments.

Appendix 5.23: Focus group discussion with people affected by TANESCO's electrical distribution project in M'baya village

Focus group discussion was held with some of the parties, affected by the implementation of electrical distribution scheme which was one of the benefits promised by the developer of SONGAS project in M'baya village.

The participants started by making a distinction between their compensation dispute and the compensation scheme by the developer of SONGAS project that was implemented between 1997 and 1999. They clearly pointed out that the on-going compensation dispute was caused by the implementation of one of the benefits promised by the developer of SONGAS project to M'baya community. The developer promised to provide 100 desks for M'baya primary school, installation of electrical transmission line in the village, construction of a deep borehole and improvement of the village-based dispensary services. Implementation of the installation of electrical transmission line across the village caused significant damage to villagers' crops and other properties. Things were worse when the affected parties learned that there were no signs of receiving compensation for the encountered losses.

According to participants, nothing was wrong with an electrical transmission line as important service to the community as a benefit, but its implementation ignored the affected people and their properties. No involvement of any sort was done, as the affected parties received no information before or even during crop clearances for passage of electrical transmission line. Both implementing agency (TANESCO) and the hired contractors did not involve village leaders. Participants' response to why the village government was not involved or consulted was because of lack of accountability among village leaders, as they have failed even to call for village meetings. They claimed that outsiders use the same weaknesses and lack of cooperation among villagers to perpetuate their interests.

The participants complained that the approach used was quite different from the one used by the developer (SONGAS project to acquire a way-leave for the gas pipeline and was going to impoverish them. The electrical transmission line affected 26 households that lost their crops such as coconut, orange and mango trees. The crops destructed largely contributed to their food security, household incomes and helped them to cater for school and health needs of their family members. Participants cautioned that compensation payments should take a number of factors into consideration. They gave an example from a permanent crop that a coconut tree can benefit a farmer and his descendants for a hundred years. Therefore, whatever compensation to be paid would not offset losses encountered.

It was reported that as the demand for compensation halted the implementation, the District Commissioner intervened and it was further learned that the district authorities also were neither informed nor involved. The four joint meetings chaired by the District Commissioner and attended by officials from SONGAS project, implementing agency (TANESCO), the contractor, district, ward and village leaders and the affected parties revealed/deliberated on the following:-

- SONGAS as a developer paid the money for both benefit implementation and compensation payments as it was done in the communities of Rufiji district.
- Both TANESCO and contractors approached wrongly the matter and TANESCO promised to pay compensation for the caused damage.

The damages were assessed but during the focus group discussion, the participants showed that the processes of preparing their compensation payments were taking so long without feedbacks. It was further noted that affected parties were desperately tired of waiting. When this discussion was going on, there were rumours that their compensation payments are ready and can be disbursed at any time.

Emerging Issues

- If benefits are not carefully implemented can trigger complicated disputes
- Intermediary agencies (i.e. implementing agency and contractors) have proved to be sources of disputes/conflicts
- Settlement of compensation disputes should include involvement of affected parties and community-based joint action.
- Village leaders have a vital role to play in both development and compensation issues.
- Communication that involves feedback giving reduces misunderstandings and conflicts among parties.
- Determination of fair compensation is very challenging as it needs to consider various aspects involved in losses encountered by affected parties.

Appendix 5.24: Focus group discussion with youth in Idete village

Focus group discussion with 6 young men and two young ladies aged between 18 and 35 to explore from youth perspective the way Idete community has benefited from both social and contractual funds provided by KVTC's teak project since 2003 todate.

Social fund and contractual payments paid annually by the developer of SONGAS project were both reported by the youth participants as the only dependable sources of revenue for Idete village. The Idete community has used the provided assistance to improve community-based services and also for development purposes. The following were discussed in regard to Social fund and Contractual payments.

Social Fund:
Social funds are paid based on the land area of planted teak by KVTC and on average basis Idete receives about TZS 3.8m in every year. The funds are used to improve community services such as education, health, road and other infrastructures. Participants pointed out that social funds have had big impact in improving education in particular construction of classrooms and provision of books and equipment in both primary and secondary schools in their village. However, based on huge losses (loss of land and soil fertility) encountered by Idete villagers, the youth group suggested social funds be increased in order to offset the losses.

Contractual payments:
Idete village leadership has entered eight service based contracts with the developer of KVTC teak project. The contracts include land clearance for teak planting; protection of project acquired land; protection and clearing borders of project lands; keeping fire out of teak plantation; keeping fire out of natural forests; fight against illegal timber logging; fight against illegal wildlife hunting (poaching) and; preparation of monthly reports. The developer pays the wages for all labourers involved in the implementation of all contracts through their village authority and on top of that the contractual bonus (TZS 1.4m) is paid to the village for development activities annually. The participants showed that contractual payments are good sources of revenue for both the village government and villagers at Idete as they benefit from bonus and wage payments respectively. The following were identified as shortfalls regarding the above mentioned contracts.

- Contracts were prepared by the developer's side only. One of the participants commented that contracts were brought to village authority like newspapers. The other party (the village leaders were not involved at all. Local govt regulations require the WEO/WC or Sub-district Secretary to assist villages in the process of entering in different agreements with parties. Surprisingly KVTC's developer did not follow these regulations and village authority did not either.
- Contracts have not been reviewed for many years now.

Other benefits:
The youth participants reported other benefits accrued from KVTC teak project include the following:

i. Employment has been providing both individuals and households with extra income earned during off-farm seasons. However contractors acting between KVTC and labourers have maximised their profit at the expense of the intended preferential employment gains. Contractors were also reported to have been causing problems to labourers as many have no capital for their operations. Instead contractors have been

depending on KVTC's payments to pay for all costs and this has been causing frequent delays in paying wages to labourers.

ii. Frequent support to schools in terms of food, school uniforms and writing materials has helped the orphan pupils to obtaining education.

iii. Both the seminars and bulletin called "*SIMCHEZO"* provided by KVTC have helped to raise awareness on environmental issues and campaigns against spread of HIV/AIDS disease.

In regard to distribution of benefits between the affected and non-affected community members, the participants claimed it to be difficult exercise, but pointed out that most of the above listed benefits are service oriented at community level, all community members have equal chance of benefiting. They however, mentioned some leadership weaknesses such excessive powers the village leaders have affect planning, implementation and monitoring of development activities funded by finances from both the social fund and contractual arrangements.

Emerging Issues

- Both social funds and contractual payments have potential ways of compensating community-based losses.
- Project gains channelled through community-based services have potentials for equitable distribution of benefits among community members.
- Benefits provided on annual basis to the affected parties/communities show an aspect of continuity and hence sustainability
- Examples of social funds and contractual payments (bonus) show that agreements in compensation schemes are necessary.
- Intermediary agencies acting between the developer and affected parties/communities such as contractors tend to reduce benefits intended for affected parties.

Appendix 5.25: Focus group discussion with people affected by TANESCO/SIMENS' electrical distribution project in Idete village

Focus group discussion was held with parties who were affected and compensated by TANESCO/SIMENS' electrical distribution project in Idete village. The discussion focused on the steps involved during compensation and the main issues and outcomes that came out following compensation.

The participants pointed out that both the land survey and clearance started without notification been served to the affected parties and many did not exactly know what was going on in relation to their affected farmlands and other assets. Participants also reported that they were surprised that for whatever questions they asked, both the project's and contractor's staff responded by mentioning "compensation" as a solution for all problems to be caused by the project.

The survey started 1997 and compensation was paid to the affected parties in December 1998. The participants reported lack of involvement as government leaders dominated the process. The district government authorities supervised an entire compensation process and compensation was paid using government rates. Compensation was paid for the losses of permanent crops, trees and structures. It was however reported that some affected parties did not receive payment notification letters and were not in the payment list on political grounds. This led the affected parties to receive little compensation (deliberate undercompensation) which were not equal to losses caused.

It was generally discussed that the affected parties faced unnecessary delays in receiving their compensation payments and they had to make several follow ups that ended up reducing their compensation amounts. Another form of undercompensation was experienced by affected parties who were completely relocated and whose their permanent crops were at their early stages of growth, as their losses were not properly estimated. Few affected parties who did not accept their compensation estimations were called for negotiation and finally all managed to secure good compensation payments. Most of the affected parties used their compensation payments to improve their homes/houses, some bought farmlands and some invested in farming activities.

According to participants, people affected by this project count themselves as losers in many respects including undercompensation. Comparing their experience and the nearby village (Mbingu village) said unlike to Idete, the government leaders in Mbingu village helped and supported their villagers and therefore received compensation payments that satisfied them. They claimed that during compensation process in Idete, majority of the affected parties did not know where to go for help.

Emerging Issues

- Developers and intermediary agencies (i.e. implementing agency and contractors) wrongly assume compensation as a remedy for all losses
- Excessive involvement of the central government authorities has negative effects on involvement of the affected parties in compensation processes.
- Village leaders have a big role to play in dealing with development and compensation issues.
- Negotiation has great potentials for conflict resolution in compensation.

Appendix 5.26: Focus group discussion with people affected by the Catholic Church project in Idete village

Discussion was held with a group of people at Idete village affected by the Catholic Church project to learn the way compensation scheme was planned and implemented and its implications.

The participants claimed that in September 2006, the church officials counted assets including crops for compensation that they never paid todate. The valuation did not involve village or district authority and there were no formal documentation of both losses encountered and compensation payments provided to few. Following an increase of tensions and disputes between the church officials and affected parties the village government leaders were brought in to resolve land and compensation disputes. The discussants claimed that the village authority did not do it by the reason that can not interfere with church affairs. Although it was learned from the discussion that the affected parties hesitated to take any further actions based on spiritual grounds, but it was further learned that many affected parties do neither know their rights nor where to go for help (further actions).

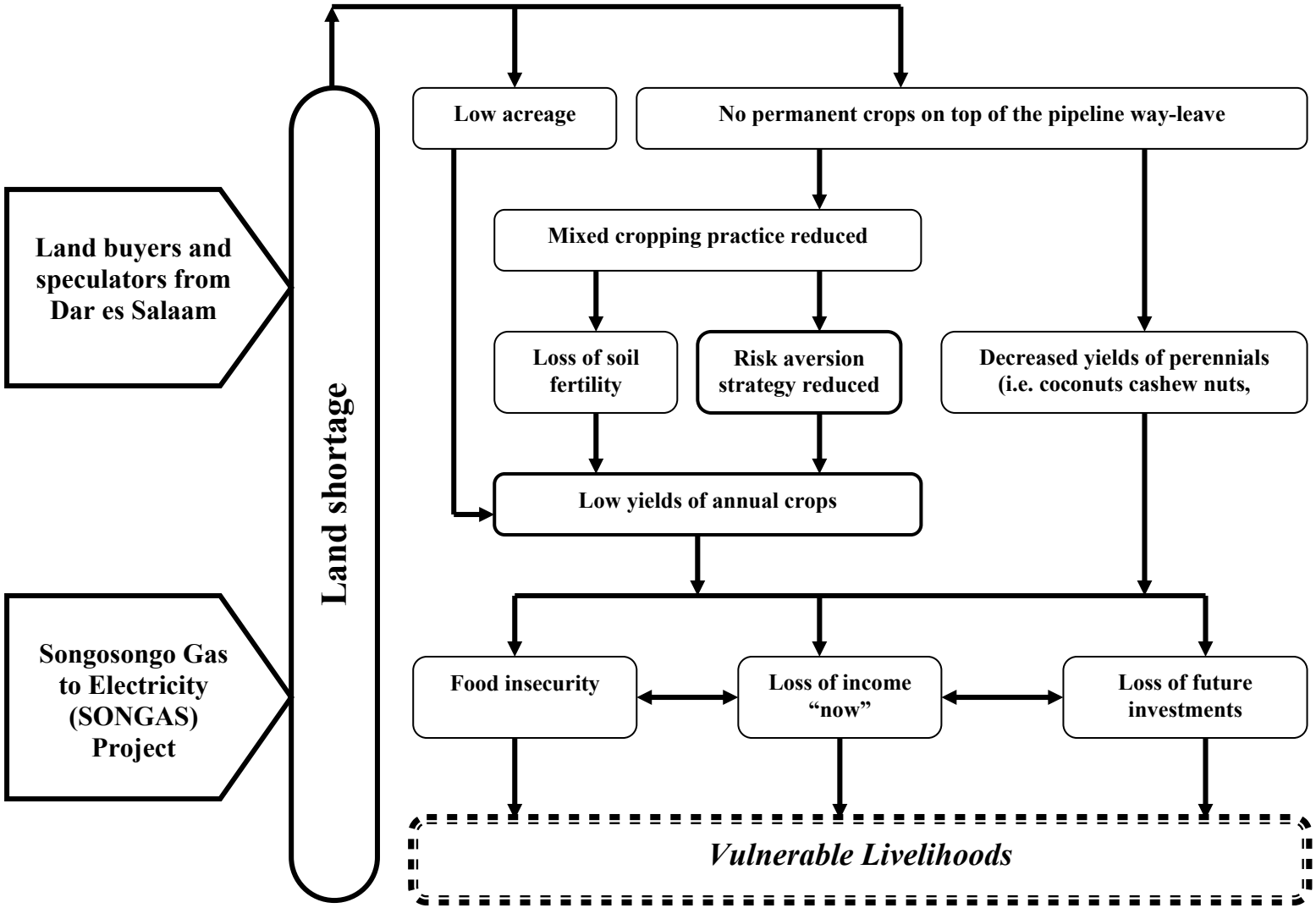
According to the participants, the affected parties received part of their compensation through different ways including their personal relationships with the church leaders. Payments were neither lump sum nor instalments but were done through demands. Few were asked to search for plots somewhere else and the church paid for them. Depending on the pressing need an affected party has, the priest in-charge used to pay TZS 5000/=; 10,000/= or 20,000/= as compensation for losses of fruit and other timber trees. It appeared that exact amount of compensation for each affected party was neither unknown nor set. It was determined by his/her needs and made available through difficult process full of bureaucracy. Some of the affected parties died without receiving their compensation payments. It was reported that one of the affected parties decided to go to court and hearing of his case is still continuing. One affected party resisted to relocate until he receives his compensation. He was the only one who received the highest monetary compensation (TZS 100,000/=) through instalments in a period more than a year.

Emerging Issues

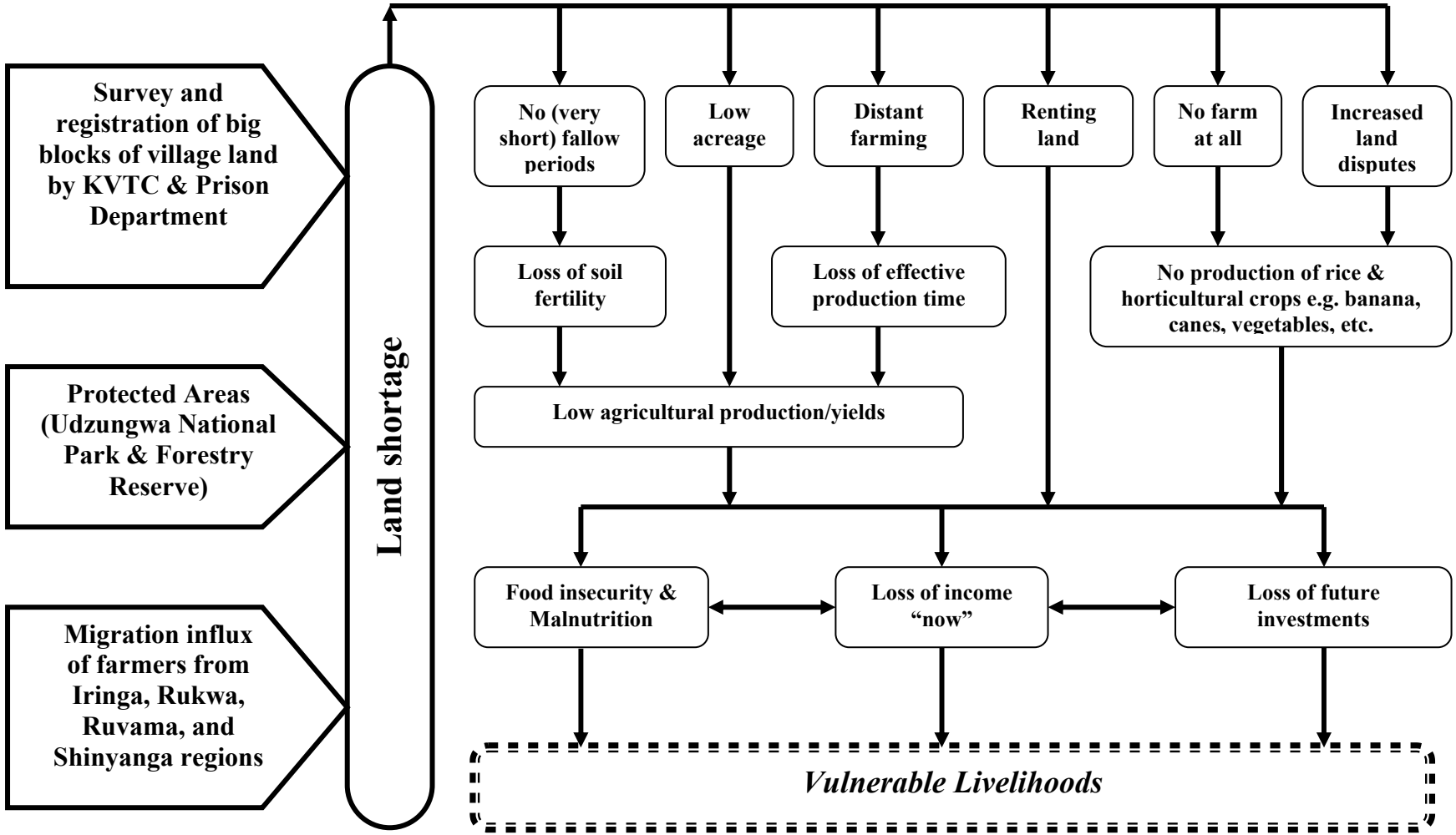
- Early planning is one of the necessary steps in compensation scheme preparation
- Documentation is a tool that avoids and helps in resolution of disputes in during compensation.
- Early involvement of affected parties and their village government leaders in all compensation processes is as important as it minimises disputes.
- Need for faith-based institutions/organisations to observe and adhere to both administrative and legal frameworks.

Appendices 5.27 – 5.29: Land and benefits information in the studied village cases

Appendix 5.27: Causes and consequences of land shortage at M'baya village



Appendix 5.28: Causes and consequences of land shortage at Idete village



Appendix 5.29: Photographs showing promised borehole and traditional well at M'baya

The *"zebra"* painted structure is the finished shallow water borehole that was promised as a deep borehole for M'baya villagers. The contractor located the borehole far from people's settlement (2-3 km), in the valley where the water table is high to save the costs on his/her side. Water fetchers, mostly women have found it difficult to climb uphill terrain with their buckets of water. They also explained that its location is unsafe for women to fetch water early in morning or late in the evenings, as are afraid of snakes and rape.

Despite of the location, many respondents complained about poor workmanship as it can be seen from the top view of the borehole. They claimed that the developer promised a deep borehole with an electrical pump installed inside it. But the contractor used curvets to make shallow water well, open for water fetchers to use a rope and bucket to fetch water. The borehole is not used frequently as it can be proved by one farmer who decided to sun dry his/her pieces of cassava as caught by the camera on the day of the visit.

For conveniences, most of the villagers prefer to use their old nearby traditional water wells (as shown in the photo) for washing and cleaning purposes. Cooking and drinking water is fetched from a deep boreholes drilled by the government which is located at the village dispensary.

Appendix 5.30: Checklist for interviews and discussions held with household cases

A: Visit One: (Discussion on development project, community and household matters)

1) What development projects currently operate in your village?
2) What can you generally say about these projects?
3) What specific things can you say about SONGAS gas project (for M'baya)/KVTC teak project (for Idete)?
4) What have been the ***"good and bad outcomes"*** and that happened as a result of gas/teak project?
   a) List the main good (benefits) and bad (costs) outcomes and rank them
   b) How important are they in your daily life (at household and community levels)?
   c) What are good indicators that show these outcomes do exist in your community?
   d) How are they distributed among community members? Who benefits/loses more than others?
   e) Is there any special consideration given to individuals/households affected by the project in terms of benefit maximisation or loss minimisation?
   f) What is the current status (increase/decrease) for the outcome ranked 1st, 2nd and 3rd? What reasons can be associated with their increase/decrease?
   g) What is your future prediction on the statuses of these outcomes?

B: Visit Two: (Discussion on matters related to affected households, compensation received and household/community well-being)

1) What can you generally say about the compensation scheme by gas/teak project?
2) What losses were you compensated for?
3) What type of compensation did you receive for your losses?
4) How this compensation was arrived at (process and decision)?
5) What came out as questions or big issues of concern in this compensation scheme?
6) What was the response to these questions/issues? Were you satisfied by these responses? If not, what did you do?
7) Did the compensation payment cover all your losses? If not, which losses do you think were not adequately compensated?
8) Considering other benefits the community/individual households receive, can you say the compensation was relatively reasonable? (Explain you answer)
9) Can you distinguish which benefits and losses are/were specific to individual households and community at large?
10) How best could the affected individuals, households and the community be compensated for losses encountered as a result of a development project?

C: <u>Visit Three:</u> (Analysis and discussion on changes happened on assets/stocks and service flows before and after compensation (during project)

Category	Values	Values
Land related	Settlement (land for home creation)	Recreation and aestheticism (spaces, natural landscapes, climate, …)
	Cultivation (agricultural land)	Minerals
	Livestock keeping (grazing lands)	Knowledge (creation and transfer)
	Cultural heritage (archeological, historical, burial and ritual sites)	Bequest
Forest related	Forests	Air quality
	Hunting and gathering (meat, insects, honey, fruits, mushrooms, vegetables, …)	Climate regulation
	Materials (fuelwood, charcoal, timber, poles, fibres, thatching grass, herbs, …)	Conservation (forets, wildlife and habitats)
	Forest grazing	Knowledge (creation and transfer)
	Watershed or water catchments	Bequest
	Recreation, leisure and aestheticism	
Water related	Clean and safe water for human consumption	Fishes
	Clean and safe water for livestock consumption	Navigation
	Water for irrigation	Recreation, leisure and aestheticism
	Water other uses	
Others	Food	Freedom and respect
	Shelter	Production time, occupation and job/employment matters
	Clothes	Market and trade
	Health	Physical assets (ownership and security)
	Education	Life security and peace of mind
	Social relations, interactions and networks	Physical security and safety issues

Appendix 6.1: Graphs showing improved lines of fit for the linear regression tests

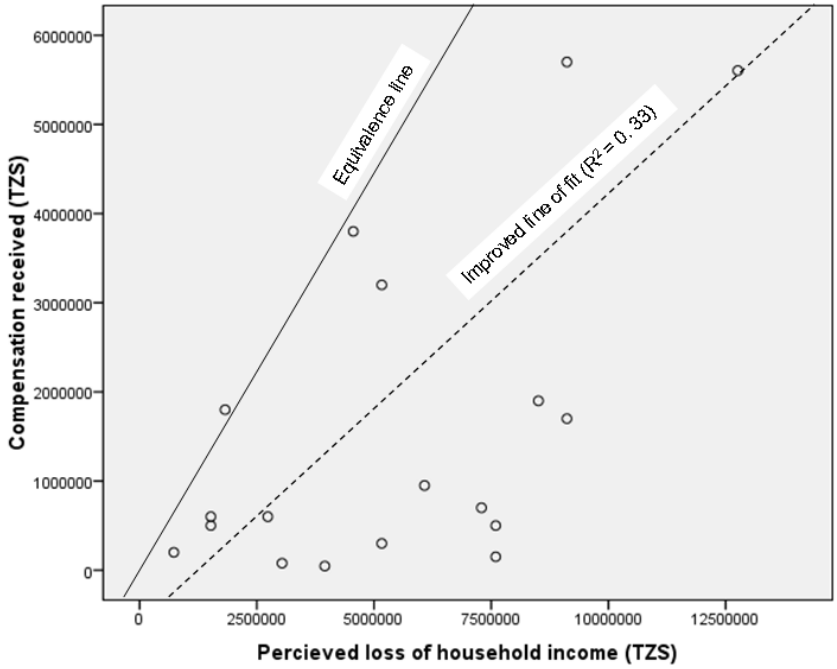


Figure 6.2*b*: Improved line of fit for the perceived loss of household annual income and compensation received at M'baya-paid by SONGAS project in 1997

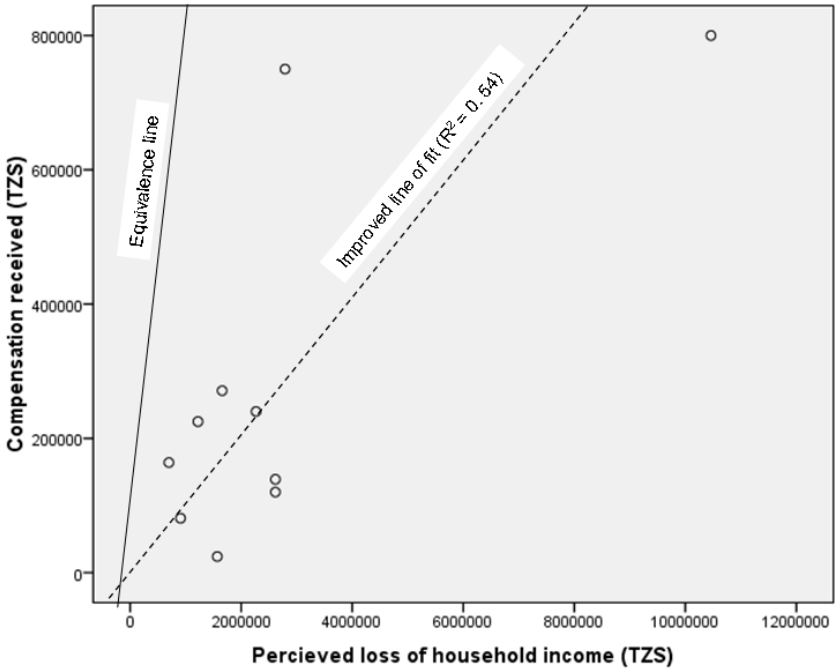


Figure 6.3*b*: Improved line of fit for the perceived loss of household annual income and compensation received at Idete-paid by KVTC project in 2006

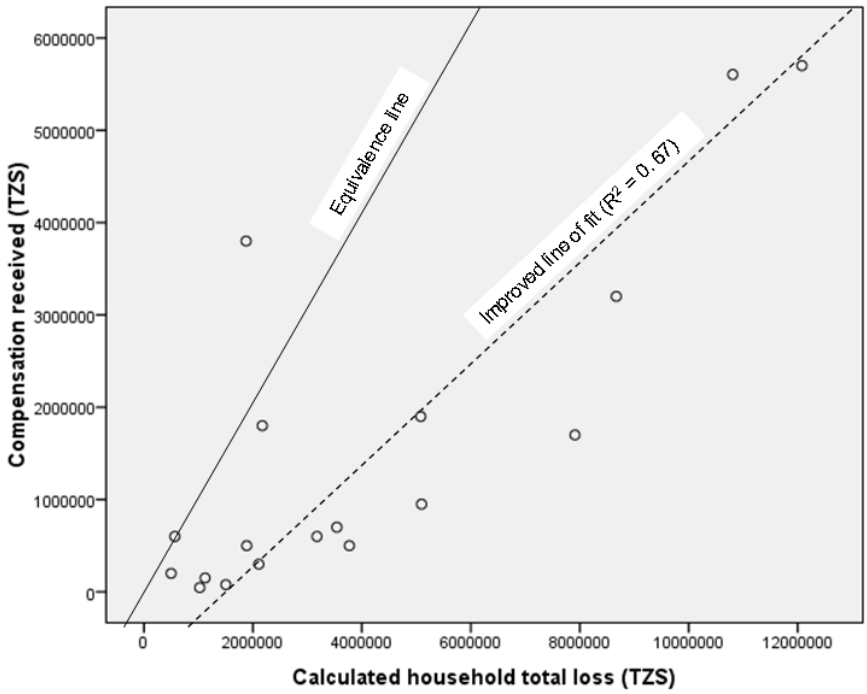


Figure 6.4*b*: Improved line of fit for the calculated total household loss and compensation received at M'baya-paid by SONGAS project in 1997

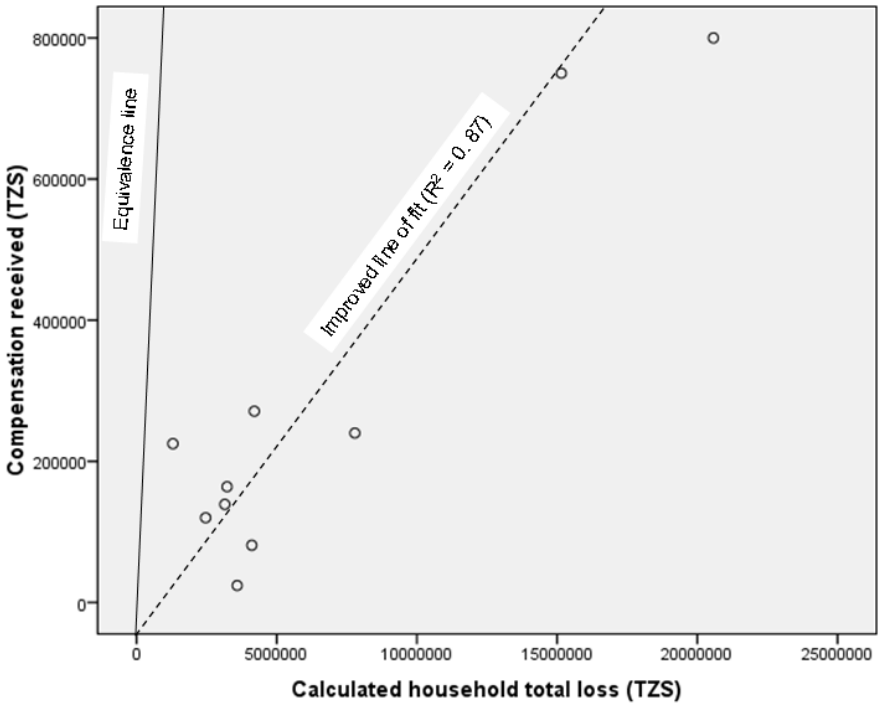


Figure 6.5*b*: Improved line of fit for the calculated total household loss and compensation received at Idete-paid by KVTC project in 2006

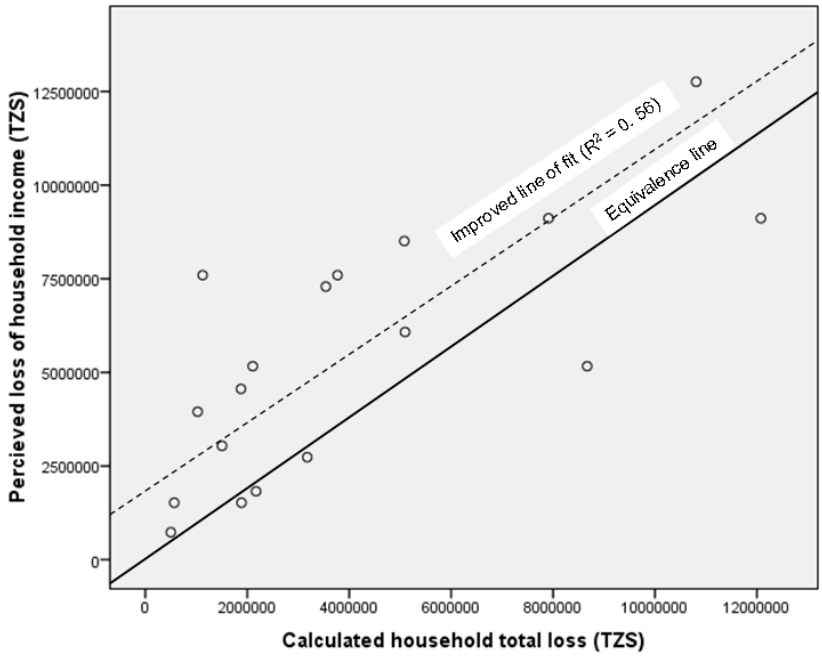


Figure 6.6*b*: Improved line of fit for the calculated total loss against perceive income loss in M'baya village

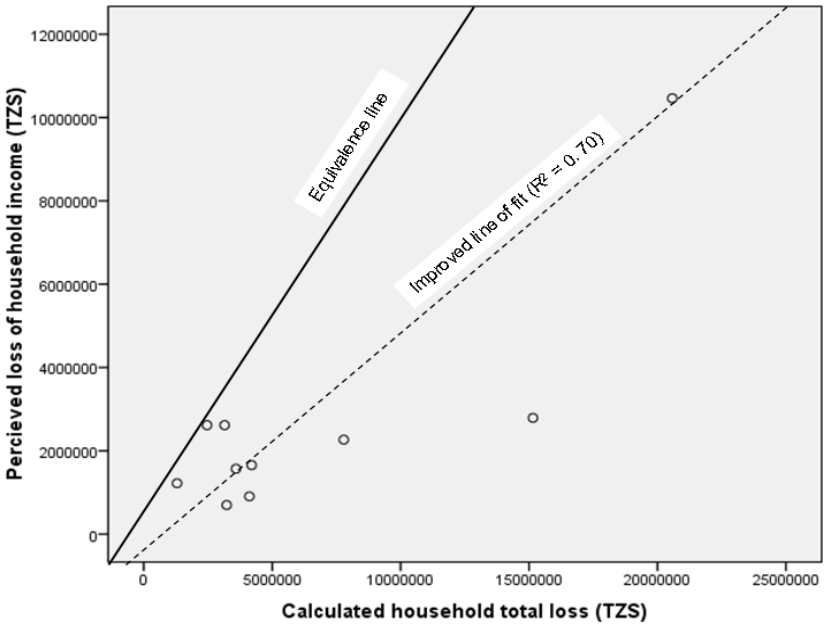


Figure 6.7*b*: Improved line of fit for calculated total loss against perceive income loss in Idete village

Appendices 6.2 – 6.4: Correlation matrices

Appendix 6.2: Correlation matrix for variables associated with household losses caused by development project in M'baya village

Variables		Age of HH head (years)	Household size (N)	Number of male people in a HH (N)	Household workforce per ha (N/ha)	Land owned by the HH (ha)	Land loss (ha)	Land occupancy (years)	Value of annual crops (TZS/ton)	Value of permanent crops (TZS/ton)	Perceived loss of HH income (TZS/ha/yr)	Intangible losses (relative weight 'N')	Perceive benefits (relative weight 'N')	Amount of compensation paid (TZS)
Age of household head (years)	Pearson correlation	1							0.440*	**0.448****	-0.380*			
	Sig. (2-tailed)								0.04	**0.007**	0.018			
	N	60							22	**35**	38			
Household size (N)	Pearson correlation		1	**0.761****			**0.443****			**0.513****	**0.520****		0.314*	**0.545****
	Sig. (2-tailed)			**0.000**			**0.005**			**0.002**	**0.001**		0.015	**0.002**
	N		60	**60**			**38**			**35**	**38**		60	**30**
Number of male people in the HH (N)	Pearson correlation		**0.761****	1	0.332*		0.390*	0.390*			0.404*		**0.355****	
	Sig. (2-tailed)		**0.000**		0.010		0.016	0.02			0.012		**0.005**	
	N		**60**	60	60		38	38			38		**60**	
Household workforce per ha (N/ha)	Pearson correlation			0.332*	1	-0.332*								**0.501****
	Sig. (2-tailed)			0.010		0.012								**0.005**
	N			60	60	60								**30**
Land owned by the HH (ha)	Pearson correlation				-0.332*	1								0.457*
	Sig. (2-tailed)				0.012									0.011
	N				60	60								30
Land loss (ha)	Pearson correlation		**0.443****	0.390*			1				**0.619****		**-0.544****	0.454*
	Sig. (2-tailed)		**0.005**	0.016							**0.000**		**0.001**	0.012
	N		**38**	38			38				**38**		**38**	30
Land occupancy (years)	Pearson correlation			0.390*				1		**0.5.03****	**0.354****			
	Sig. (2-tailed)			0.02						**0.002**	**0.002**			
	N			38				38		**35**	**38**			
Value of annual crops (TZS/ton)	Pearson correlation	0.440*							1					
	Sig. (2-tailed)	0.04												
	N	22							22					
Value of permanent crops (TZS/ton)	Pearson correlation	**0.448****	**0.513****					**0.503****		1	**0.782****			
	Sig. (2-tailed)	**0.007**	**0.002**					**0.002**			**0.000**			
	N	**35**	**35**					**35**		35	**35**			
Perceived loss of HH income (TZS/ha/yr)	Pearson correlation	-0.380*	**0.520****	0.404*			**0.619****	**0.354****		**0.782****	1			0.432*
	Sig. (2-tailed)	0.018	**0.001**	0.12			**0.000**	**0.002**		**0.000**				0.017
	N	38	**38**	38			**38**	**38**		**35**	38			30
Intangible losses (relative weight "N")	Pearson correlation													
	Sig. (2-tailed)													
	N													
Perceived benefits (relative weight 'N')	Pearson correlation		0.314*	**0.355****			**-0.544****						1	
	Sig. (2-tailed)		0.015	**0.005**			**0.001**							
	N		60	**60**			**38**						38	
Amount of compensation paid (TZS)	Pearson correlation		**0.545****		**0.501****	0.457*	0.454*				0.432*			1
	Sig. (2-tailed)		**0.002**		**0.005**	0.011	0.012				0.017			
	N		**30**		**30**	30	30				30			30

Source: Survey, 2007; *** Correlation is significant at the 0.01 level (2-tailed);* * Correlation is significant at the 0.05 level (2-tailed):*

Appendix 6.3: Correlation matrix for variables associated with household losses caused by development project in Idete village

Variables		Age of HH head (years)	Household size (N)	Number of male people in a HH (N)	Household workforce per ha (N/ha)	Land owned by the HH (ha)	Land loss (ha)	Land occupancy (years)	Land rented after compensation (ha)	Distance from home to rented land (km)	Value of annual crops (TZS/ton)	Value of semi perma'nt crops (TZS/ton)	Perceived loss of HH income (TZS/ha/yr)	Intangible losses (relative weight 'N')	Perceived benefits (relative weight 'N')	Amount of compensation paid (TZS)
Age of household head (years)	Pearson correlation Sig. (2-tailed) N	1 60			**-0.341** **0.008** **60**			**0.363**** **0.006** **55**							-0.308* 0.016 60	0.686* 0.014 13
Household size (N)	Pearson correlation Sig. (2-tailed) N		1 60	**0.777**** **0.000** **60**		0.297* 0.026 56	**0.450**** **0.001** **55**						**0.367**** **0.006** **55**			
Number of male people in a HH (N)	Pearson correlation Sig. (2-tailed) N		**0.777**** **0.000** **60**	1 60			**0.441**** **0.001** **55**						**0.370**** **0.005** **55**			
Household workforce (N/ha)	Pearson correlation Sig. (2-tailed) N	**-0.341**** **0.008** **60**			1 60	**-0.355**** **0.007** **56**	**0.430**** **0.000** **55**		-0.542* 0.011 21					**0.344**** **0.007** **60**	**0.367**** **0.004** **60**	
Land owned by the HH (ha)	Pearson correlation Sig. (2-tailed) N		0.297* 0.026 56		**-0.355**** **0.007** **56**	1 60	**0.424**** **0.002** **51**									
Land loss (ha)	Pearson correlation Sig. (2-tailed) N		**0.450**** **0.001** **55**	**0.441**** **0.001** **55**	**0.430**** **0.000** **55**	**0.424**** **0.002** **51**	1 55	0.326* 0.015 55		**0.596**** **0.004** **21**			**0.582**** **0.000** **55**		**-0.537**** **0.001** **55**	
Land occupancy (years)	Pearson correlation Sig. (2-tailed) N	**0.363**** **0.006** **55**					0.326* 0.015 55	1 55			0.272* 0.047 54		**0.493**** **0.000** **55**			
Land rented after compens'n (ha)	Pearson correlation Sig. (2-tailed) N				-0.542* 0.011 21				1 21							**0.448**** **0.000** **13**
Distance from home to rented land (km)	Pearson correlation Sig. (2-tailed) N						**0.596**** **0.004** **21**			1 21			**0.478**** **0.002** **21**			
Value of annual crops (TZS/ton)	Pearson correlation Sig. (2-tailed) N							0.272* 0.047 54			1 54	**0.616**** **0.002** **23**	**0.620**** **0.000** **54**	1 55		0.578* 0.049 13
Value of semi-permanent crops (TZS/ton)	Pearson correlation Sig. (2-tailed) N										**0.616**** **0.002** **23**	1 23				
Perceived loss of HH income (TZS/ha/yr)	Pearson correlation Sig. (2-tailed) N		**0.367**** **0.006** **55**	**0.370**** **0.005** **55**			**0.582**** **0.000** **55**	**0.493**** **0.000** **55**		**0.478**** **0.002** **21**	**0.620**** **0.000** **55**		1 55			**0.792**** **0.002** **13**
Intangible losses (relative weight 'N')	Pearson correlation Sig. (2-tailed) N				**0.344**** **0.007** **60**									1 55		
Perceived benefits (relative weight 'N')	Pearson correlation Sig. (2-tailed) N	-0.308* 0.016 60			**0.367**** **0.004** **60**		**-0.537**** **0.001** **55**								1 55	
Amount of compensation received (TZS)	Pearson correlation Sig. (2-tailed) N	0.686* 0.014 13							**0.448**** **0.000** **13**		0.578* 0.049 13		**0.792**** **0.002** **13**			1 12

Source: Survey, 2007; *** Correlation is significant at the 0.01 level (2-tailed);* * Correlation is significant at the 0.05 level (2-tailed)*

Appendix 6.4: Correlation matrix for variables associated with household losses caused by development projects across the villages (overall)

Variables		Age of HH head (years)	Household size (N)	Number of female people in a HH (N)	Household workforce per ha (N/ha)	Land owned by the HH (ha)	Land loss (ha)	Land occupancy (years)	Land rented after compensation (ha)	Distance from home to rented land (km)	Value of annual crops (TZS/ton)	Value of perma'nt crops (TZS/ton)	Perceived loss of HH income (TZS/ha/yr)	Intangible losses (relative weight 'N')	Perceived benefits (relative weight 'N')	Amount of compensation paid (TZS)
Age of household head (years)	Pearson correlation Sig. (2-tailed) N	1 60						**0.428**** **0.000** **93**			-0.248* 0.031 76			**-0.249**** **0.006** **120**	**-0.281**** **0.002** **120**	
Household size (N)	Pearson correlation Sig. (2-tailed) N		1 60	**0.827**** **0.000** **120**	0.187* 0.041 120	**0.269**** **0.004** **113**	0.248* 0.016 93	0.224* 0.031 93				**0.496**** **0.001** **41**	**0.483**** **0.000** **93**			**0.507**** **0.001** **43**
Number of male people in a HH (N)	Pearson correlation Sig. (2-tailed) N		**0.781**** **0.000** **120**	**0.315**** **0.000** **120**	**0.272**** **0.003** **120**		**0.274**** **0.008** **93**						**0.390**** **0.000** **93**			
Household workforce (N/ha)	Pearson correlation Sig. (2-tailed) N		0.187* 0.041 120		1 60	**-0.303**** **0.001** **113**			-0.484* 0.010 27						0.211* 0.021 120	**0.434**** **0.004** **43**
Land owned by the HH (ha)	Pearson correlation Sig. (2-tailed) N		**0.269**** **0.004** **113**	**0.278**** **0.003** **113**	**-0.303**** **0.001** **113**	1 60					-0.265* 0.024 72			-0.210* 0.025 113	0.227* 0.032 89	
Land loss (ha)	Pearson correlation Sig. (2-tailed) N		0.248* 0.016 93				1 55			**0.601**** **0.003** **22**			**0.647**** **0.000** **93**	0.227* 0.029 93		
Land occupancy (years)	Pearson correlation Sig. (2-tailed) N	**0.428**** **0.000** **93**	0.224* 0.031 93	0.265* 0.010 93				1 55			-0.244* 0.033 76	**0.521**** **0.000** **41**	**0.401**** **0.000** **93**	**-0.278**** **0.007** **93**		
Land rented after compens'n (ha)	Pearson correlation Sig. (2-tailed) N				-0.484* 0.010 27				1 27							
Distance from home to rented land (km)	Pearson correlation Sig. (2-tailed) N						**0.601**** **0.003** **22**			1 22			0.486* 0.022 22			
Value of annual crops (TZS/ton)	Pearson correlation Sig. (2-tailed) N	-0.248* 0.031 76				-0.265* 0.024 72		-0.244* 0.033 76			1 76		**0.577**** **0.000** **76**			
Value of permanent crops (TZS/ton)	Pearson correlation Sig. (2-tailed) N		**0.496**** **0.001** **41**	**0.540**** **0.000** **41**				**0.521**** **0.000** **41**				1 41	**0.750**** **0.000** **41**			
Perceived loss of HH income (TZS/ha/yr)	Pearson correlation Sig. (2-tailed) N		**0.483**** **0.000** **93**	**0.396**** **0.000** **93**		0.227* 0.032 89	**0.647**** **0.000** **93**	**0.401**** **0.000** **93**		0.486* 0.022 22	**0.577**** **0.000** **76**	**0.750**** **0.000** **41**	1 41			**0.448**** **0.003** **43**
Intangible losses (relative weight 'N')	Pearson correlation Sig. (2-tailed) N	**-0.249**** **0.006** **120**				-0.210* 0.025 113	0.227* 0.029 93	**-0.278**** **0.007** **93**						1 93	**-0.255**** **0.005** **120**	
Perceived benefits (relative weight 'N')	Pearson correlation Sig. (2-tailed) N	**-0.281**** **0.002** **120**			0.211* 0.021 120							1 12		**-0.255**** **0.005** **120**	1 120	
Amount of compensation received (TZS)	Pearson correlation Sig. (2-tailed) N		**0.507**** **0.001** **43**	**0.464**** **0.002** **43**	**0.434**** **0.004** **43**								**0.448**** **0.003** **43**			1 43

Source: Survey, 2007; *** Correlation is significant at the 0.01 level (2-tailed);* ** Correlation is significant at the 0.05 level (2-tailed)*

Appendix 6.5: List of variables included in the household verification survey

No.	*Variable name*	*Label (descriptions of variables)*	*Measure*
1	v1Villag	Name of the village case	Nominal
2	v21HhHead	Gender of the household head	Nominal
3	v22AgeResp	Age of the respondents (years)	Scale
4	v22AgeGrp1s	Categorised age of respondents (years)	Ordinal
5	v23AgeGrp2	Age based on workforce and elderly groups	Ordinal
6	v23EducLev1	Education levels of respondents in three groups	Ordinal
7	v23EducLev3	Education levels of respondents in weight wise	Scale
8	v23EducLev2	Education levels of respondents in two groups	Ordinal
9	v24HhSize	Household size	Scale
10	v24HhMe1	Number of male household members in age group below 5 years	Scale
11	v24HhFe1	Number of female household member in age group below 5 years	Scale
12	v24HhMe2	Number of male household member in age group btn 5 and 17 years	Scale
13	v24HhFe2	Number of female household members in age group between 5 and 17 years	Scale
14	v24HhChldn	Number of children (0-17) years old	Scale
15	v24HhMe3	Number of male household member in age group btn 18 and 35 years	Scale
16	v24HhFe3	Number of female household members in age groups between 18 and 35 years	Scale
17	v24HhYth	Number of young people/youth (18-35) years old	Scale
18	v24HhMe4	Number of male household member in age group btn 36 and 55 years	Scale
19	v24HhFe4	Number of female household members in age group between 36 and 55 years	Scale
20	v24HhAdults	Number of adult people (36-55 years old)	Scale
21	v24HhMe5	Number of male household member in age group above 55 years	Scale
22	v24HhFe5	Number of female household member in age group above 55 years	Scale
23	v24HhElders	Number of elderly people (above 55 years)	Scale
24	v24HhDpdnt	Number of dependants (0-17 group and above 55 years)	Scale
25	v24HhWforc	Workforce available at the household (18-55years)	Scale
26	v24HhDpWfRt	Dependant-Workforce ratio	Scale
27	v24HhWfha	Workforce per ha currently farmed by the household	Scale
28	v24HhMeTot	Number of total male people in the household	Scale
29	v24HhFeTot	Number of female people in the household	Scale
30	v25DurSty	Duration a household has stayed in the village	Scale
31	v25DurStGrp	Categorised duration of stay in the village	Ordinal
32	v26LandOwn1	Land owned (acres)	Scale
33	v26LandOwn2	Land owned (ha)	Scale
34	v26LandOwn3	Landhold (own) grouped	Ordinal
35	v26TotFLand	Total farmed land (ha)	Scale
36	v26DistOwn	Distance to land owned by the household (kms)	Scale
37	v26Crop1	Growing permanent crops on h/h land (coconut, cashew, mango, oranges)	Nominal
38	v26Crop2	Growing semi permanent crops on h/h land (cassava, pineapple, legumes)	Nominal
39	v26Crop3	Growing rice on household land	Nominal
40	v26Crop4	Growing maize on household land	Nominal
41	v26Crop5	Growing banana on household land	Nominal
42	v26Crop6	Growing sugarcane on household land	Nominal
43	v26Crop7	Growing horticultural crops on household land	Nominal
44	v26LandRent	Renting or not renting-in land	Nominal
45	v26LandReSz1	Size of land the household has rented-in (acres)	Scale
46	v26LandReSz2	Size of land the household has rented-in (ha)	Scale
47	v26DistRent	Distance to land the household has rented (kms)	Scale
48	v26CropR1	Growing permanent crops on rented land (coconut, cashew, mangoes, oranges)	Nominal
49	v26CropR2	Growing semi permanent crops on rented land (cassava, pineapples, legumes)	Nominal
50	v26CropR3	Growing rice on rented land	Nominal
51	v26CropR4	Growing maize on rented land	Nominal

52	v26CropR5	Growing banana on rented land	Nominal
53	v26CropR6	Growing sugarcane on rented land	Nominal
54	v26CropR7	Growing horticultural crops on rented land	Nominal
55	v26LanReOt	Size of land the household has rented out (acrea)	Scale
56	v26DistReOt	Distance to land the household has rented out (kms)	Scale
57	v26CropO1	Growing permanent crops on rented out land (coconut, cashew, mangoes, oranges)	Nominal
58	v26CropO2	Growing semi permanent crops on the rented out land (cassava, pineapples, legumes)	Nominal
59	v26CropO3	Growing rice on the rented out land	Nominal
60	v26CropO4	Growing maize on the rented out land	Nominal
61	v26CropO5	Growing banana on the rented out land	Nominal
62	v26CropO6	Growing sugarcane on the rented out land	Nominal
63	v26CropO7	Growing horticultural crops on the rented out land	Nominal
64	v31Bnft1	Perceived as first benefit accrued from the project	Nominal
65	v31Bnft11	Weighted first rank of benefit	Scale
66	v31Bnft2	Perceived as second benefit accrued from the project	Nominal
67	v31Bnft22	Weighted second rank of benefit	Scale
68	v31Bnft3	Perceived as third benefit accrued from the project	Nominal
69	v31Bnft33	Weighted third rank of benefit	Scale
70	v31BnftTot	Weighted total benefit	Scale
71	v31BnftCmty1	Total financial support to community per household (TZS/hh)	Scale
72	v31BnftCmty2	Total financial support to community per lost household (TZS/hh)	Scale
73	v31BnftCmty3	Total financial support per household member (TZS/person)	Scale
74	v32Loss1	Perceived as first loss incurred as a result of the project	Nominal
75	v32Loss11	Weighted first rank of loss	Scale
76	v32Loss2	Perceived as second loss incurred as a result of the project	Nominal
77	v32Loss22	Weighted second rank of loss	Scale
78	v32Loss3	Perceived as third loss incurred as a result of the project	Nominal
79	v32Loss33	Weighted third rank of loss	Scale
80	v32LossTot	Weighted total of loss	Scale
81	v33LndChg	Changes in land availability after the project	Ordinal
82	v33FtyChg	Changes in land fertility after the project	Ordinal
83	v33FodChg	Changes in food availability	Ordinal
84	v33IncChg	Changes in income from cash crops	Ordinal
85	v33NrsChg	Changes in natural resources such as forests, woods	Ordinal
86	v33IksChg	Changes in skills and innovativeness	Ordinal
87	v33EmpChg	Changes in employment opportunities	Ordinal
88	v33LbrChg	Changes in labour availability	Ordinal
89	v33EdcChg	Changes in education services	Ordinal
90	v33HltChg	Changes in health services	Ordinal
91	v34LStdChg	Comparison of living standard before and after the project	Nominal
92	v35ReasB	Reasons for better living standard after the project 1	Nominal
93	v35ReasW1	Reasons for decreased living standard after the project 1	Nominal
94	v35ReasW2	Reasons for decreased living standard after the project 2	Nominal
95	v41LandLos1	Land lost as a result of the project (acres)	Scale
96	v41LandLos2	Land lost as a result of the project (ha)	Scale
97	v41LandLos3	Land lost grouped	Ordinal
98	v41LandLos4	Land loss to land owned ratio	Scale
99	v41LandLos5	Severity of land loss-land owned ratio	Ordinal
100	v42TimeLL	Time a household worked in the land lost	Scale
101	v42TimeLLGrp	Grouped experience	Ordinal
102	v42Cocnut	Grew coconut	Nominal
103	v42CocTrs	Number of coconut trees grown	Scale
104	v42CocHvst	Coconut used to be harvested (coconut fruits)	Scale

105	v42CocTsh	Current value of the lost income from coconuts (TZS)	Scale
106	v42Cshnut	Grew cashew nuts	Nominal
107	v42CshTrs	Number of cashew nut trees grown	Scale
108	v42CshHvst	Cashew nut used to be harvested (kg)	Scale
109	v42CshTsh	Current value of the lost income from cashew nuts (TZS)	Scale
110	v42Mango	Grew mangoes	Nominal
111	v42MgoTrs	Number of mango trees grown	Scale
112	v42MgoHvst	Mango used to be harvested (tengas)	Scale
113	v42MgoTsh	Current value of the lost income from mangoes (TZS)	Scale
114	v42Orange	Grew oranges	Nominal
115	v42OrgTrs	Number used of orange trees grown	Scale
116	v42OrgHvst	Orange used to be harvested (tengas)	Scale
117	v42OrgTsh	Current value of the lost income from Oranges (TZS)	Scale
118	v42Pineapp	Grew pineapples	Nominal
119	v42PapAcrg	Stems of pineapples planted on lost land	Scale
120	v42PapHvst	Pineapple used to be harvested (kg)	Scale
121	v42PapTsh	Current value of the lost income from pineapples (TZS)	Scale
122	v42Banana	Grew banana	Nominal
123	v42BnnAcrg	Acreage/stems of planted banana	Scale
124	v42BnnHvst	Banana used to be harvested (bunches)	Scale
125	v42BnnTsh	Current value of the lost income from banana (TZS)	Scale
126	v42Cassava	Grew cassava	Nominal
127	v42CassAcrg	Acreage/stems of planted cassava	Scale
128	v42CassHvst	Cassava used to be harvested in (kg)	Scale
129	v42CassTsh	Current value of the lost income from cassava (TZS)	Scale
130	v42Rice	Grew rice	Nominal
131	v42RiceAcrg	Acreage/stems of planted rice	Scale
132	v42RiceHvst	Rice used to be harvested (kg)	Scale
133	v42RiceTsh	Current value of the lost income from rice (TZS)	Scale
134	v42Maize	Grew maize	Nominal
135	v42MaizAcrg	Acreage/stems of planted maize	Scale
136	v42MaizHvst	Maize used to be harvested in harvest (kg)	Scale
137	v42MaizTsh	Current value of the lost income from maize (TZS)	Scale
138	v42SgCane	Grew sugarcane	Nominal
139	v42ScanAcrg	Acreage/stems of planted sugarcane	Scale
140	v42ScanHvst	Canes used to be harvested (kg)	Scale
141	v42ScanTsh	Current value of the lost income from sugar canes (TZS)	Scale
142	v42Legume	Grew legumes	Nominal
143	v42LegmAcrg	Acreage of planted legume	Scale
144	v42LegmHvst	Legumes used to be harvested (kg)	Scale
145	v42LegmTsh	Current value of the lost income from legumes (TZS)	Scale
146	v42HortCrps	Grew horticultural crops	Nominal
147	v42HortAcrg	Acreage of planted horticultural crops	Scale
148	v42HortHvst	Horticultural crops used to be harvested in	Scale
149	v42HortTsh	Current value of the lost income from horticultural crops (TZS/hh)	Scale
150	v42AnnCrLos	Estimated income loss of annual crops (TZS/hh)	Scale
151	v42AnnCrLos2	Estimated income loss of annual crops per household (TZS/hh)	Scale
152	v42AnnCrpIndx	Value of annual crop (TZS/ton)	Scale
153	v42SmPerLos	Estimated income loss of semi-permanent crops (TZS/hh)	Scale
154	v42SmPerLos2	Estimated income loss of semi-permanent crops per household (TZS/hh)	Scale
155	v42SmPerIndx	Value of semi-permanent crop (TZS/ton)	Scale
156	v42PermLoss	Estimated income loss of permanent crops (TZS/hh)	Scale
157	v42PermLoss2	Estimated income loss of permanent crops per household (TZS/hh)	Scale

158	v42PermCrpIdx	Value of permanent crop importance (TZS/ton)	Scale
159	v42TotLoss1	Total crop-income lost because of the project (TZS/hh)	Scale
160	v42TotalLoss2	Total crop-income lost per household (TZS/hh)	Scale
161	v42TotLoss2	Total loss of household annual income per household (TZS/hh)	Scale
162	v42FPmCrp	Growing (not) permanent crops	Nominal
163	v42FSPmCrp	Growing (not) semi permanent crops	Nominal
164	v42TotLossI1	Total loss of income per ha as per AP (TZS/hh)	Scale
165	v42FAnnCrp	Growing (not) annual crops	Nominal
166	v43CompPd	Compensated or not compensated	Nominal
167	v44CompPd1	Amount of compensation paid (TZS)	Scale
168	v44CompCal	Calculated household total loss (TZS)	Scale
169	v44CompPcvd	Perceived loss of household income (TZS)	Scale
170	v44PvdIncL3	Perceived loss of household income per household (TZS/hh)	Scale
171	v44CompAspt	Aspects which were compensated for	Nominal
172	v45AdqcyBgn	Compensation adequacy at the beginning	Nominal
173	v46ReasAdqB	Reasons for adequate compensation at the beginning	Nominal
174	v47AdqcyAft	Compensation adequacy after sometimes	Nominal
175	v48ReasAdqA	Reasons for adequate compensation after sometimes	Nominal
176	v49LCompF1	Low payment for the losses incurred	Nominal
177	v49LCompF2	All losses were not properly counted	Nominal
178	v49LCompF3	Improper asset valuation	Nominal
179	v49LCompF4	Time and energy used on farm were not valuated	Nominal
180	v49LCompF5	Land was not compensated	Nominal
181	v49LCompF6	Short term crops were not considered	Nominal
182	v49LCompF7	Resettlement costs were not considered	Nominal
183	v49LCompF8	Others	Nominal
184	v410NoComp	Reasons for not being compensated	Nominal
185	v411Comnts	Comments on the losses which were not compensated	Nominal
186	v412CompPf1	Types of compensation preferred 1	Nominal
187	v412CompPf2	Types of compensation preferred 2	Nominal
188	v412CompPf3	Types of compensation preferred 3	Nominal
189	v412CompPf4	Types of compensation preferred 4	Nominal
190	v412GReasPf1	Good reasons for resettlement	Nominal
191	v412BReasPf1	Bad reasons for resettlement	Nominal
192	v412GReasPf2	Good reasons for cash payment	Nominal
193	v412BReasPf2	Bad reasons for cash payment	Nominal
194	v412GReasPf3	Good reasons for inkind compensation	Nominal
195	v412BReasPf3	Bad reasons for inkind compensation	Nominal
196	v412GReasPf4	Good reasons for IGA project	Nominal
197	v412BReasPf4	Bad reasons for IGA projects	Nominal
198	v413ModeCash	Forms of cash payment	Nominal
199	v413GResLump	Good reasons for lump sum payment	Nominal
200	v413BResLump	Bad reasons for lump sum payment	Nominal
201	v413GResInst	Good reasons for instalments	Nominal
202	v413BResInst	Bad reasons for instalments	Nominal
203	v51Awareness	a) Satisfaction levels for sensitisation done by project developers on their proposed projects	Ordinal
204	v51PptVMtngs	b) Satisfaction levels for participation of villagers in discussions of proposed project activities	Ordinal
205	v52ProjInfo	a) Satisfaction levels for adequacy of information provided in introduction of compensation	Ordinal
206	v52PptComp	b) Satisfaction levels for participation of APs/HCs in planning of compensation schemes	Ordinal
207	v52OppDscssn	a) Satisfaction levels for the opportunities given to APs/HCs to discuss compensation issues	Ordinal
208	v52ConsdView	b) Satisfaction levels for consideration given to views and concerns raised by APs/HCs	Ordinal
209	v52PptAPs	a) Satisfaction levels for participation of the APs in valuation processes	Ordinal
210	v52PptVGovt	b) Satisfaction levels for participation of the village governments in valuation processes	Ordinal
211	v52CompInfo	a) Satisfaction levels for Information provided on compensation estimation before payment	Ordinal
212	v52Advice	b) Satisfaction levels for training/advice provided to APs	Ordinal

213	v52TimelyPay	a) Satisfaction levels for the timing of compensation payments	Ordinal
214	v52DespHand	b) Satisfaction levels for the handling mechanisms of compensation complaints	Ordinal
215	v52AsstLand	a) Satisfaction levels for the assistance given to APs in acquiring alternative plots/farmlands	Ordinal
216	v52AsstRestt	b) Satisfaction levels for the assistance given to APs during relocation	Ordinal
217	v51Feedback	a) Satisfaction levels for communication systems in compensation processes	Ordinal
218	v52Monitoring	b) Satisfaction levels for monitoring of post-compensation outcomes	Ordinal
219	v53LandAcqst	Usage of the compensation payment on land acquisition	Nominal
220	v53LAcqPge	Estimate used for buying another plot in percentage (%)	Scale
221	v53House	Usage of the compensation payment on house construction	Nominal
222	v53HosePge	Estimate used to build another house in percentage (%)	Scale
223	v53Education	Usage of the compensation payment for education	Nominal
224	v53EducPge	Estimate used to pay for education in percentage (%)	Scale
225	v53HhExpns	Usage of the compensation payment on daily household expenses	Nominal
226	v53HhExPge	Estimate used for daily household expenditures in percentage (%)	Scale
227	v53DebtSrvc	Usage of the compensation payment for debt repayment	Nominal
228	v53DebtPge	Estimate used to pay debts in percentage (%)	Scale
229	v53SocialEvnt	Usage of the compensation payment for ceremonies percentage (%)	Nominal
230	v53SociPge	Estimate used for ceremonies in percentage (%)	Scale
231	v53Saving	Usage of the compensation payment for saving in percentage (%)	Nominal
232	v53SavePge	Estimate used for saving in percentage (%)	Scale
233	v53OthExpns	Usage of the compensation payment for other expenses in percentage (%)	Nominal
234	v53OthrPge	Estimate used for others in percentage (%)	Scale
235	v54NonCHh	Comparison with non-compensated households	Nominal
236	v61PrjBnft	Benefit gained from the project (SF/SONGAS)	Nominal
237	v62EducBnft	Satisfaction with educational services provided by the project	Ordinal
238	v62HlthBnft	Satisfaction with health services provided by the project	Ordinal
239	v62ElctBnft	Satisfaction with electrical power services provided by the project	Ordinal
240	v62WatBnft	Satisfaction with water services provided by the project	Ordinal
241	v62OthrBnft	Satisfaction with other services provided by the project	Ordinal
242	v63DistRns	Reasons for dissatisfaction	Nominal
243	v64BnftShrng	Goodness of the way the project share benefits with the community(SF/KVTC)	Ordinal
244	v65PrjCtrcts	Sharing benefits between KVTC and Idete community of through SF and contracts	Nominal
245	v6568Pve1	Liked aspects of the project benefits (Contracts/KVTC) 1	Nominal
246	v6568Pve2	Liked aspects of the project benefits (Contracts/KVTC) 2	Nominal
247	v6568Pve3	Liked aspects of the project benefits (Contracts/KVTC) 3	Nominal
248	v6568Nve1	Disliked aspects of the project benefits (Contracts/KVTC) 1	Nominal
249	v6568Nve2	Disliked aspects of the project benefits (Contracts/KVTC) 2	Nominal
250	v6568Nve3	Disliked aspects of the project benefits (Contracts/KVTC) 3	Nominal
251	v66611Vw1	Opinions on how to balance the community and Individual compensation 1	Nominal
252	v66611Vw2	Opinions on how to balance the community and Individual compensation 2	Nominal
253	v65PptCtr	Household participation in contract implementation	Nominal
254	v66PptLand	Household participation in KVTC's land protection	Nominal
255	v66PptBrd	Household participation in border protection	Nominal
256	v66PptTeak	Household participation in fire protection in Teak plantations	Nominal
257	v66PptNRs	Household participation in fire protection in natural forests	Nominal
258	v66PptTLog	Household participation in avoiding timber logging	Nominal
259	v66PptWldf	Household participation in avoiding wildlife poaching	Nominal
260	v66PptRept	Household participation in making monthly report	Nominal
261	v66CtrBnft	Benefits gained from participation in contracts implementation	Nominal
262	v67NoPptRn	Reasons for not participating	Nominal
263	v69IndvCom	Comparison between individual and community compensation	Nominal
264	v610ImbRns	Reasons for imbalance between individual and community compensation	Nominal