

Assessment of the Extent to which Productive Sector Policies Mainstream Sustainable Land Management Principles

Richard Y.M. Kangalawe¹ Verdiana T. Tilumanywa² Felician S.K. Tungaraza³ Martin Mlele⁴
Godwin Naimani⁵

1.Institute of Resource Assessment, University of Dar es Salaam, Tanzania

2.Department of Geography, University of Dar es Salaam, Tanzania

3.Department of Sociology and Anthropology, University of Dar es Salaam, Tanzania

4.Alpha and Omega Consulting Group Limited, Dar es Salaam, Tanzania

5.Department of Statistics, University of Dar es Salaam, Tanzania

Contact email: a_ocg@yahoo.com

Abstract

This paper provides an assessment of the extent to which productive sector policies mainstream sustainable land management (SLM) principles and suggests how mainstreaming of these principles could be strengthened and be more effective in Kilimanjaro region. Primary data was collected using qualitative methods including in-depth interviews with key informants and focus group discussions. Key informants included government officials, SLM project staff, NGOs and representatives of communities. Secondary data was gathered from review of relevant literature including government policies, strategies, project documents and other research materials. The data collected were analysed using content analysis and synthesised to determine the extent to which the productive sector policies mainstream sustainable land management principles. Findings indicate that several relevant NRM sectors have mainstreamed SLM principles, namely improved land productivity, improved livelihood and improved ecosystems. The degree to which these policies have mainstreamed SLM principles vary from adequately, moderately, and slightly. Despite the reported degree of mainstreaming the SLM principles in sector policies several challenges undermine the process, including land scarcity, land tenure, inadequate enforcement of policies, land use conflicts, human and financial resources constraints, and climate change. Various stakeholders are involved in SLM initiatives, ranging from local communities to international organisations. The diversity of stakeholders requires well coordinated efforts so as to maximise synergies and complementarities between the various actors. Also more effort has to be done at policy level to ensure that all sector policies adequately address sustainability in natural resources management to ensure that land productivity, livelihoods and ecosystems are improved.

1. Introduction

The Kilimanjaro landscape is important in providing ecosystem services such as water catchment, local climate modification, tourism and support for local livelihoods. However, land degradation has seriously threatened the ability of the landscape in providing these services (Misana et al., 2012; William, 2003; Kangalawe et al., 2014, 2015). This problem is largely manifested in the form of severe soil erosion, silting, deforestation and decrease of land productivity. These environmental problems are mainly due to complex and interrelated factors including rapid population increase, land use change, poor land management practices, climate change, uncontrolled felling of trees for firewood and charcoal, frequent and uncontrolled burning of forests, unsustainable mining activities, overstocking, insecure land tenure and limited community participation in environmental activities (Liwenga et al., 2012; Misana et al., 2012; William, 2003; Kangalawe et al., 2014, 2015).

Against this background, the Government of Tanzania and the UNDP/GEF through the Kilimanjaro Regional Administrative Secretary (RAS) designed and is implementing a project in seven administrative councils (Moshi Municipal Council, Moshi, Rombo, Mwangi, Same, Siha and Hai districts) entitled "Reducing Land Degradation on the Highlands of Kilimanjaro Region". The project goal is to ensure "Sustainable Land Management (SLM) provides the basis for economic development, food security, and sustainable livelihoods while restoring the ecological integrity of the Kilimanjaro region's ecosystems". Its purpose is to provide local land users and managers with the enabling environment (policy, financial, institutional, capacity) necessary for the widespread adoption of SLM practices.

Although Tanzania has a comprehensive legal and policy framework for land management, there are a number of constraints to the implementation of activities that would result in the institutionalization of the practice in the long term. This paper presents findings from a study on assessment of the extent to which productive sector policies mainstream sustainable land management principles and suggests recommendations to strengthen the mainstreaming of SLM issues to ensure more effective land management in Kilimanjaro region.

2. Methodology

In order to determine the extent to which productive sectors effectively mainstream SLM principles into their

policies both primary and secondary data were collected. Primary data was collected through the use of qualitative methods including in-depth interviews with key informants and focus group discussions with local communities, key government and project officials in the pilot districts. Key informant interviews involved government officials from RAS office and local government authorities (LGAs), UNDP SLM staff, NGOs and representatives of the communities from the pilot districts. A total of 46 key informants were interviewed.

Focus group discussions (FGDs) were held with policy implementers (including communities) from all districts. A purposive sampling design was used to select people who could provide the required information on how natural resource policies and legislations are implemented and mainstreamed in the productive sectors in Kilimanjaro region. A total of 10 FGDs were conducted with groups of farmers and officials. In FGDs group composition ensured gender representation, involving both women and men. The identification of respondents was undertaken with the help of District Focal Persons (DFPs) involved in the SLM project in each district. With both target groups there was a checklist of structured questions to guide the interviews.

Secondary data involved reviewing literature on natural resources policies including legislations, project documents, and published papers and unpublished materials. The aim of the review was to assess the extent to which national policies and legislation are integrated on the ground and mainstreamed SLM principles, and the extent to which they influence SLM activities in the study area. Of particular concern for this paper are sectoral policies and legal documents related to environmental, land, human settlements, forest, population, agriculture, livestock, water, women gender development and energy.

Data collected from focus group discussions and key informant interviews were analysed by triangulation by comparing data from different sources to study natural resources management (Olson et al., 2004) and determine the extent to which the productive sector policies mainstream sustainable land management principles. In each focus group discussion a consensus on a particular aspect was recorded to represent that particular phenomenon. The analysis on the mainstreaming considered the number of SLM principles mainstreamed. A scale of 0 to 3 was used where policies that mainstreamed all the three principles scored 3, and were rated as having adequately mainstreamed the SLM principles. Those with two principles mainstreamed scored 2 and were rated as moderately mainstreamed the SLM principles; while a policy mainstreaming only one principle scored 1, and was rated as slightly mainstreamed the SLM principles. A policy found to have not mainstreamed any of the principles would score 0 (zero) and rated as not mainstreaming SLM principles.

3. Results and discussion

3.1 Sustainable land management (SLM) and their mainstreaming in sector policies in Kilimanjaro region

Results of this study indicated that SLM is basically guided by three key principles namely; (i) improved land productivity – where SLM emphasizes the need for increasing land productivity by increasing production from the land and improving water use efficiency and productivity. (ii) improved livelihood - where every initiative of SLM has to focus on how to improve livelihood of the communities as the means to provide incentives to the communities versus the cost they are likely to incur in conservation of the land resources; and (iii) improved ecosystems - for SLM practices to be sustainable they must be environmentally friendly, reduce current and future land degradation, improve biodiversity and increase resilience to climate variation and change. These aspects are inherent in most of the productive sector policies that are implemented in Kilimanjaro region (Liniger et al., 2011). Sustainable land management (SLM) is crucial to minimizing land degradation, rehabilitating degraded areas and ensuring the optimal use of land resources for the benefit of present and future generations (FAO, nd).

The findings showed that several relevant sector policies such as the National Environmental Policy (1997), National Land Policy (1995), National Human Settlement Policy (2000), National Forest Policy (1998), National Population Policy (2006), National Agricultural Policy (2013), National Livestock Policy (2006), National Water Policy (2002), Women and Gender Development Policy (2000), and the National Energy Policy (2003) have mainstreamed SLM principles. There are, however, considerable variations in the degree to which these policies have mainstreamed SLM principles, ranging from adequately, moderately, and slightly mainstreaming of the principles. Among the twelve analysed sector policies, six (50%) seem to have adequately mainstreamed SLM principles. This category includes environmental, land, livestock, agriculture, water and energy policies. The other five (42%) of the sector policies have moderately mainstreamed these principles. In this group are the forest, human settlement, population, food security and wildlife policies. One of the policies (8%), that is, the women and gender development policy was rated as having only slightly mainstreamed the principles. In essence all the policies that have mainstreamed all the three principles are the most productive sectors with a direct concern to the rural dwellers.

The policy analysis further revealed that the “improved livelihood” principle seemed to be widely mainstreamed by a number of policies followed by “improved ecosystem” and “improved land productivity” principles. The diversity of the policies mainstreaming SLM is a testimony that sustainable land management and natural resource management issues are cross-cutting and need cross-sectoral and multidisciplinary

approaches to effectively address them. However, the fact that only about fifty percent of the sector policies have adequately mainstreamed all the three SLM principles indicates that more effort has to be done at policy level to ensure that all sector policies adequately mainstream issues of sustainability in land and other natural resources management. This is particularly important to ensure that land productivity, livelihoods and ecosystems are improved for the benefit of present and future generations.

The study has shown that various methods are employed to ensure effective mainstreaming of SLM principles in different productive sectors. Different stakeholders have been involved in designing and implementing different guidelines which provide directives for implementation of the SLM initiatives in the region. Forest management plans and by-laws have been prepared to ensure sustainable management of the forest resources, together with the establishment of CBFM and JFM, initiatives that have provided provisions for communities to fully manage their resources, thereby reducing illegal activities like logging in their areas. Furthermore, several income generating activities focusing on promoting SLM initiatives have been established, for instance, establishment of demonstration farms (known in Kiswahili as *mashamba darasa*) where communities have been trained on conservation agricultural techniques such as planting by spacing, use of compost and farm yard manure, and other important techniques that are relevant to SLM. Several flyers, posters and brochures with SLM messages have also been distributed to the communities in order to improve awareness of the communities in the region. Initiatives taken by the various sectors have shown considerable benefits leading to increased livelihoods to the communities, improving land productivity and ensuring management of the Kilimanjaro ecosystem.

3.2 Challenges towards mainstreaming SLM Principles in Kilimanjaro Region

The findings further indicate that mainstreaming of SLM principles and the ongoing SLM project activities in the region has had considerable benefits to the community. Despite the perceived current and future benefits from the implementation of SLM related policies there are several challenges that undermine the process of mainstreaming SLM principles. These include land scarcity, land tenure, inadequate enforcement of policies and legislation, existing of land use conflicts, human and financial resources constraints, climate change, low level of youth participation and political influence.

3.3 Stakeholders involved in mainstreaming SLM in Kilimanjaro region

The study has shown that a significant number of policy stakeholders are and might be involved in spearheading SLM initiatives in Kilimanjaro region, ranging from local communities, district, regional, and national level, as well as international organisations. Examples of these stakeholders include Tanzania Forest Services institute, Forest Industry Training Institute, LGAs, KEDA, TaTEDO, EAMCEF, TACRI, CODE-TZ, TANAPA, WWF, DANIDA, NORAD, Pangani WBO, UNDP, USAID, Ministry of livestock and fisheries, Ministry of land, settlements and housing, and Ministry of Natural Resources and Tourism among others. The large number of these stakeholders indicates the commitment in ensuring that SLM principles are observed and mainstreamed. However, such a diversity of stakeholders requires well coordinated efforts during implementation of various activities so as to maximise synergies and complementarities between the various actors, approaches applied and capacities. The present SLM project could play an important role to harmonise the implementation of the various initiatives in the region.

Apart from involving key stakeholders the region is also adhering to several national policy events, such as the National Day of Planting trees, World Environmental Day, Water week, Nane Nane Exhibitions, World Women Day, Uhuru National Torch, and the World Wetland Day, among others. All these are relevant avenues on which the project could collaborate to enhance and promote mainstreaming of SLM principles. The fact that most of these events are celebrated at national, region, and district levels only leaving the communities who are main beneficiaries of SLM initiatives they may consequently be ineffective in promoting SLM ideals at the local level. However, efforts should be made to ensure that key messages from such national SLM related event are appropriately taken to local communities for subsequent learning, customisation and implementation.

4. Conclusion

Findings generated from this study indicate that there are several NRM sectors which have mainstreamed SLM principles, despite that SLM and/or NRM aspects are not clearly spelt out in the policy statements of the respective productive sector policies. Mainstreaming of SLM principles in productive sector policies is essential in order to avoid unnecessary conflicting policies. The diversity of the policies mainstreaming SLM issues is, however, a testimony that SLM and NRM issues are cross-cutting and need cross-sectoral and multidisciplinary approaches to effectively address them. The rate at which these principles have been mainstreamed has, however, varied considerably between policies, ranging from adequate, moderate to slight mainstreaming. Among the twelve analysed sector policies only six were rated to have adequately mainstreamed the principles while five had moderately mainstreamed the principles. One of the policies was rated as having only slightly mainstreamed

the principles. The fact that only about fifty percent have adequately mainstreamed SLM principles indicates that more effort has to be made at policy level to ensure that all sector policies address issues of sustainability in natural resources management. This is particularly important to ensure that land productivity, livelihoods and ecosystems are improved.

The study has shown that initiatives taken by the most productive sectors to the rural dwellers such as forest, agriculture, water, land, energy and livestock have had considerable benefits leading to increased livelihoods to the communities, improving land productivity and ensuring sustainable management of the Kilimanjaro ecosystem, aspects that are compliant with the SLM principles. However, despite the perceived benefits from these policies only few sector policies have adequately mainstreamed SLM principles due to challenges such as land scarcity, land tenure, inadequate enforcement of policies and legislation, existing of land use conflicts, human and financial resources constraints, climate change, low level of youth participation and political influence.

The study also found that there are several national policy events and stakeholders, from local communities, district, regional, and national level, to international organisations, which the SLM project in Kilimanjaro region could collaborate with to spearhead and enhance SLM policy mainstreaming. While the multitude of stakeholders may indicate the gravity of the NRM problems in the region, and hence their commitment in ensuring that SLM principles are observed and mainstreamed, such diversity requires well coordinated efforts during implementation of various activities so as to maximise synergies and complementarities between the various actors, approaches applied and capacities. The present SLM project in the region for which this assignment is a part could play an important role in harmonising the implementation of various initiatives in the region. Policies that encourage inclusive and equitable ownership of land among community members so as to enhance participation of all groups in SLM activities would be most preferred. This should go in tandem with enhanced stakeholder participation in the policy formulation process and enforcement at all levels for enhanced sustainability.

5. Acknowledgement

This paper is based on a study commissioned by Kilimanjaro Regional Office and UNDP/GEF. We are grateful to them for funding this study. We are specifically thankful to the Kilimanjaro Regional Administrative Secretary's office and the Sustainable Land Management project office in Moshi for all the logistical support throughout the study. Special appreciations are due to Eng. Alfred Shayo, Acting Regional administrative Secretary; Mr. Paulo Shayo, the chairman of the Regional Sustainable Land Management Project Technical Team; Dr. Francis Mkanda, the Project Technical Advisor and Mr. Damas Masologo, the Acting National Sustainable Land Management Project Coordinator for facilitating the implementation of this study.

References

- FAO (nd). Sustainable Land Management. Available at: <http://www.fao.org/nr/land/sustainable-land-management/en/>. Accessed on 22/02/2015.
- Kangalawe, R.Y.M., Noe, C., Tungaraza, F.S.K., Naimani, G. and Mlele, M. (2014). Policy review, harmonization and traditional institutions for natural resources management in Kilimanjaro Region: Assessment, Documentation and Publication on Indigenous Institutions and Knowledge in Natural Resources Management in Project Pilot Districts. Phase I Final Report submitted to UNDP and Kilimanjaro Regional Administrative Secretary, Moshi.
- Kangalawe, R.Y.M., Tungaraza, F.S.K., Naimani, G., Tilmanywa, V.T., Mlele, M. and Nyagonde, S. (2015). assessment of National Natural Resource Policies Implementation in Kilimanjaro Region. Phase II Report of the Project "Policy review, harmonization and traditional institutions for natural resources management in Kilimanjaro Region". Submitted to UNDP and Kilimanjaro Regional Administrative Secretary, Moshi.
- Liniger, H.P., Mekdaschi-Studer, R., Hauert and M. Gurtner., C. (2011). Sustainable Land Management in Practice – Guidelines and best Practices for Sub-Saharan Africa. TerrAfrica, World Overview of Conservation Approaches and Technologies (WOCAT) and Food and Agriculture Organization of the United Nations (FAO) Rome (Italy); TerrAfrica, Midrand (South Africa); WOCAT, Bern (Switzerland). 243p
- Liwenga, E.T., Kwezi, L. and Afifi, T. (2012). Where the Rain Falls Project Case study – Tanzania: Results from: Same District, Kilimanjaro Region. REPORT No. 6. United Nations University Institute for Environment and Human Security (UNU-EHS).
- Misana, S., Sokoni, C. and Mbonile, M.J. (2012). Land use/cover change and their drivers on the slopes of Mount Kilimanjaro, Tanzania. *Journal of Geography and Regional Planning* 5:151–164.
- Olson, J, Misana S., Campbell, D., Mbonile, M.J. and Mugisha, S. (2004). A research framework to identify the root causes of land use change leading to land degradation and changing biodiversity. Working Paper

48. Land Use Change Impacts and Dynamics (LUCID): Nairobi International Livestock Research Institute.
- United Republic of Tanzania – URT (1995). National Land Policy. Ministry of Lands and Human Settlements, Dar es Salaam
- United Republic of Tanzania – URT (1997). National Environmental Policy. Vice President's Office, Dar es Salaam.
- United Republic of Tanzania - URT (1998). National Forest Policy. Ministry of Natural Resources and Tourism, Dar es Salaam.
- United Republic of Tanzania - URT (2000). Women and Gender Development Policy, 2000. Ministry of Community Development Gender and Children. Dar es Salaam.
- United Republic of Tanzania - URT (2002). National Water Policy. Ministry of Water and Livestock Development, Dar es Salaam.
- United Republic of Tanzania - URT (2003). National Energy Policy. Ministry of Water, Energy and Minerals. Dar es Salaam.
- United Republic of Tanzania - URT (2006). National Livestock Policy. Ministry of Livestock and Fisheries Development, Dar es Salaam.
- United Republic of Tanzania - URT (2006). National Population Policy. Ministry of Planning, Economy and Empowerment, Dar es Salaam.
- United Republic of Tanzania - URT (2013). National Agriculture Policy. Ministry Of Agriculture Food Security and Cooperatives, Dar es Salaam.
- William, C. (2003). The implications of land use change on forests and biodiversity: A case of the half mile strip on Mt Kilimanjaro, Tanzania. Land Use Change Impacts and Dynamics (LUCID) Project Working Paper 30. International Livestock Research Institute, Nairobi.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:

<http://www.iiste.org>

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: <http://www.iiste.org/journals/> All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Academic conference: <http://www.iiste.org/conference/upcoming-conferences-call-for-paper/>

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

