

# EXPLORING SUSTAINABLE LOW CARBON DEVELOPMENT PATHWAYS



## MAPPING AND ASSESSMENT OF EXISTING LOW CARBON DEVELOPMENT INITIATIVES IN TANZANIA

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# EXPLORING SUSTAINABLE LOW CARBON DEVELOPMENT PATHWAYS

Providing sustainable development for all and fighting climate change – these are two major challenges the world faces today. The project “Exploring Sustainable Low Carbon Development Pathways” aims to point out ways how to combine both: climate protection and sustainable development. As a joint initiative by Friedrich-Ebert-Stiftung (FES), Bread for the World (BftW), World Wide Fund for Nature (WWF), Climate Action Network International (CAN-I) and ACT Alliance of Churches, the project is led by the common understanding that any future development model has to be:

**LOW CARBON.** That means with a minimal output of greenhouse gas emissions.

**ECOLOGICALLY SUSTAINABLE.** That means fully respecting planetary boundaries.

**HUMAN RIGHTS-BASED.** That means with a strong focus on poverty reduction and participation.

**SOCIALLY INCLUSIVE.** That means creating wealth and employment while absorbing negative social impacts.

**JUST.** That means equally sharing burdens and opportunities between different stakeholders.

**NATIONALLY APPROPRIATE.** That means respecting countries different backgrounds and challenges towards sustainable development.

The project was started in 2013 in four pilot countries: Kazakhstan, Peru, Tanzania and Vietnam. In close co-operation and ownership with different national partners from civil society, politics and science we aim to

- Explore Sustainable Low Carbon Development Pathways in these countries which could serve as regional and international examples.
- Show that Low Carbon Development is not only possible but economically and socially beneficial.
- Create platforms for dialogue at the national level for a range of different stakeholders.
- Support and intensify networks between civil society actors in the respective countries and regions.

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# EXECUTIVE SUMMARY

## BACKGROUND INFORMATION

Mitigation of emissions that cause climate change is one of the most challenging problems facing the global community. Climate change is already a threat to economic growth, long-term prosperity, as well as the survival of already vulnerable communities, especially in developing countries. Compounded by many other factors, climate change is weakening efforts for achieving sustainable development and increasing social and environmental vulnerabilities, particularly in the economic and livelihood sectors of developing countries.

To ensure a safe and sustainable future, concerted efforts are required to address climate change (both adaptation and mitigations) and poverty reduction. In the United Nations Framework Convention on Climate Change (UNFCCC) negotiated in Rio in 1992, participants adopted the concept of low carbon development (LCD) strategies and/or low carbon growth plans as a strategy to reduce emissions and the impacts of climate change. Since then, LCD strategies have attracted interest in climate negotiations as a soft alternative to voluntary or obligatory GHG emission reduction targets in developing countries. Article 4.1 (b) (COP 16) of the UNFCCC requires all countries to formulate programmes on climate change mitigation. Developed countries have commitments to reduce Green House Gases (GHG) owing to historical responsibilities. The Cancun Agreements (COP 16) confirmed the concept of LCD strategies as a way to establish and ensure long-term and holistic approaches to low carbon development. Since then, some LCD-related programmes and projects have been developed globally.

To complement the efforts, »Exploring Sustainable Low Carbon Development Pathways«—a project that seeks to combine both climate protection and sustainable development—was initiated. As a joint initiative by Friedrich-Ebert-Stiftung (FES), Bread for the World (BftW), World Wide Fund for Nature (WWF), Climate Action Network International (CAN-I), and ACT Alliance of Churches, the project is led by the common understanding that any future development model has to be:

- i. **Low Carbon:** minimal output of greenhouse gas emissions
- ii. **Ecologically Sustainable:** fully respecting planetary boundaries
- iii. **Human Rights-based:** a strong focus on poverty reduction and participation
- iv. **Socially Inclusive:** creating wealth and employment while absorbing negative social impacts
- v. **Just:** equally sharing burdens and opportunities between different stakeholders
- vi. **Nationally appropriate:** respecting countries' different backgrounds and sustainable development challenges

The project launched in 2013 and was piloted in four countries: Kazakhstan, Peru, Tanzania, and Vietnam.

## RATIONALE FOR LOW CARBON DEVELOPMENT IN TANZANIA

Tanzania has relatively low greenhouse gas (GHG) emissions, both in total emissions and per capita. Forestry (due to deforestation and degradation) and agriculture (mainly emissions from livestock and land use change) are the highest emitting sectors. However, it is estimated that GHG emissions will double between 2005 and 2030, due to future plans for coal and gas development with insignificant development of renewables, which will increase the carbon intensity of electricity generation. Further increases will be from fossil-fuel consumption in the transport sector, population growth, and urban development. This would prevent Tanzania benefiting from greater opportunities in the international carbon credits market, and potentially cause additional economic difficulties and dependence. Instead, Tanzania should engage in low carbon development (LCD) to improve long-term economic growth and poverty alleviation.

Targeting sustainable LCD initiatives is now more crucial than ever, as projections show that in the next 20 years Tanzania's economy will face the complex challenge of addressing climate change impacts while alleviating poverty. Pro-poor, low carbon development has substantial economic and technological benefits for Tanzania, including:

- **Improving efficiency:** reduces energy-associated costs; improves land and forest management practices; reduces pollution and improves health.
- **Promoting economic independency:** reducing dependencies on imported fossil fuels and costly energy technologies will encourage Tanzanian expertise in low-cost, appropriate and locally maintained technologies.
- **Creating new economic opportunities:** including development of new businesses and industries; carbon market opportunities; employment creation; and improved local incomes from productive agriculture and forest use.
- **Ensuring adaptation benefits:** for example, sustainable forest management will mitigate emissions and maintain forest resources as important assets in the adaptation strategies of the rural poor.

## OBJECTIVES

Tanzania has ratified various multilateral environmental agreements and has also received support from donor agencies on environmental and climate change impacts (URT 2012). However, there is evidence that adaptation programmes have not yet managed to build community resilience and face funding shortages, but LCD initiatives have the potential to bridge the gap.

To respond the need for building community resilience, from 22–23 January 2014 a kick-off workshop on LCD in Tanzania was held in Dar es Salaam. More than 75 participants with a range of experience and expertise attended this workshop by local and international institutions. The workshop was part of »Exploring Sustainable Low carbon Development Pathways«, mentioned above. At the workshop, it was shown that there are a number of problems that inhibit broad acceptance and ownership of LCD measures among the broad population, as well as inadequate coordination among key actors/stakeholders implementing LCD measures. Some of the problems include inadequate funding, inadequate technologies at local and national levels, as well as inadequate awareness of climate change issues.

As a response to the workshop deliberations, this study reports on the existing LCD initiatives in Tanzania by highlighting:

1. The missing link among existing LCD initiatives;
2. Ways to strengthen the existing LCD initiatives;
3. Ways to improve implementation;
4. Ways to create synergies between different LCD approaches.

In this study, a strong focus has been placed on the role of civil society and local stakeholders as important actors in ensuring an inclusive and bottom-up implementation of LCD initiatives in the country.

## METHODOLOGY

The information used to prepare this report was collected through a literature review, stakeholders' workshops, and stakeholder consultations.

## EXISTING LCD INITIATIVES AND STAKEHOLDERS IN TANZANIA

A number of LCD-related initiatives have been established and implemented in Tanzania by government institutions, civil society organizations (CSOs), and development partners. Different stakeholders—such as United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), Department for International Development (DfID), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), as well as the Norwegian and Finnish embassies—are playing significant roles in funding LCD-related projects in the country.

Local institutions—both governmental and NGOs—are implementers of the LCD initiatives. Discussions with stakeholders showed that the number of LCD-related projects have increased in recent years. Climate change relevant expenditure has increased steadily as a proportion of the total budget from 4.2 per cent in 2009/10 to 6.5 per cent in 2012/13. This growth in budget for activities related to climate change is driven by a total increase in donor funding.

## MOTIVE BEHIND LCD INITIATIVES IN TANZANIA

The Cancun Agreements (UNFCCC) insisted on the importance of national economic development priorities, and proposed that LCD strategies should be mandatory for developed countries and encouraged the developing countries as well:

Discussions with stakeholders (in Dar es Salaam between September and November 2014) revealed that investments in LCD projects are made, in order:

- i. To contribute to the global effort of reducing emissions of GHGs, thus mitigating climate change,
- ii. To support strategic, sustainable and cost-effective low carbon growth,
- iii. To limit climate impacts and associated management costs at national and community levels,
- iv. To help harness international climate finance opportunities and implementation support,
- v. To strengthen national competitiveness in the face of a green revolution,



- vi. To safeguard natural resources,
- vii. To promote national economic independency,
- viii. To ensure community adaptation benefits,
- ix. To increase crop production resilience in vulnerable areas in Tanzania,
- x. To power diversification to reduce dependence on hydropower, which has been always affected by hydrological changes,
- xi. To harness local resources for community well-being

## STAKEHOLDERS' INVOLVEMENT AND PARTICIPATION

Transitioning to an LCD country is a process that needs the engagement of key stakeholders—including policy- and decision-makers—in order to build consensus on LCD paths. Among the key stakeholders in the LCD strategy initiatives are:

- a. The governments (national and local), which can present long-term vision on the climate and LCD pathway, establish a policy framework in which policies across different sectors are put in place and can be used to increase stakeholders' awareness on climate change.
- b. The CSOs, which can find out the targets that the government sets itself, and which actions are required to benefit grass-roots communities on various LCD initiatives in the country.
- c. The private sector, which can identify what is needed to establish a favourable investment climate for LCD actions, and signal potential investors regarding the long-term ambitions and priority sectors, and what interventions—such as regulatory frameworks or policies—the government will undertake to help achieve the ambitions.
- d. The international community, which can help to identify needs and priorities, as well as coordinate donor support. In relation to other international climate instruments, an LCD strategy can provide a coherent framework for nationally appropriate mitigation action (NAMA) and measurement, reporting, and verification (MRV) needs.

## RELEVANCE OF EXISTING LCD INITIATIVES TANZANIA

Among the key findings from this study is the understanding that although most of the LCD initiatives in Tanzania are northern driven, they fit well with national development agenda and environmental priorities, and include:

- i. LCD initiatives supported by development partners and other stakeholders contribute to local and national development. These include, for example, activities that have a positive impact on biodiversity conservation, restoration of ecosystems, demonstration of green energy sources (solar PV, wind), conservation of forests, climate smart agriculture, community forest management (CFM), and sustainable land management (SLM).
- ii. A number of local research institutions, public agencies, CSOs and NGOs have been able to use technical support and resources to implement LCD-related projects at the local/community level. These include: Commission for Science and Technology (COSTECH), Ministry of Agriculture, Food and Cooperatives (MAFC), Ministry of Finance (MoF), Tanzania Forest Research Institute (TAFORI), Tanzania Environmental Friendly Association (TEFA), Climate Action Network Tanzania (CAN TZ), National Environmental Management Council (NEMC), Rural Electrification Agency (REA), Tanzania Traditional Energy Development Organization (TaTEDO), Sokoine University of Agriculture (SUA), Tanzania National Park (TANAPA), University of Dar es Salaam (UDSM), Ministry of Energy and Minerals (MEM), and Ministry of Natural Resources and Tourism (MNRT).

- iii. At the international level, development partners and other stakeholders for LCD initiatives and support have been relevant to a variety of objectives linked to global environmental benefits in the areas of climate change adaptation and mitigation. For example, the support to increase use of renewable energy and rural electrifications.

## THE ROLE OF CSOS AT THE LOCAL AND INTERNATIONAL LEVELS

Since negotiations occur on an intergovernmental level far away from most citizens, CSOs stand a better chance of representing multiple interests in a society. These interests include:

- a. Local environment and climate change adaptation
- b. Climate change mitigation
- c. Climate finance and economic growth

## THE SITUATION AND ROLE OF CSOS IN TANZANIA

Most of the CSOs in Tanzania are either in their infancy or still growing (Belgium Cooperation 2009). Apart from faith-based organizations (FBOs), which can be traced back to colonialism, CSOs in Tanzania have a very short history (Tanzania Education Network and Mtandao wa Elimu Tanzania 2009). Although CSOs working on climate change and environmental issues in Tanzania are still young, their role includes: coordinating and representing civil society in UNFCCC negotiations and other international arenas, providing citizens with better feedback information, advocating and lobbying for policy change, monitoring and valuation of climate finances, raising community awareness.

Specific to the LCD pathways and strategies in Tanzania, CSOs are expected to play a pivotal role because:

- i. Success of the energy transition will always depend on public support. CSOs stand to represent and coordinate multiple interests of civil society and the public at large.
- ii. Civil society actors from Tanzania have become significant players in the global development scenery for the delivery of social services and implementation of development programmes, as a complement to government action, especially in regions where government presence is weak.
- iii. Civil society actors are seen as change agents in their respective societies trying to improve the living conditions, while striving for a more equitable and climate just world.
- iv. They are mediators in the transformation to a post-fossil society, able to influence the policy-making process, while reshaping the general public interests and specific constituencies—such as consumers, workers, and farmers.
- v. A strong civil society network will allow for more structured and effective engagement with the public and private actors in seeking a direct and equitable cooperation on climate protection and low carbon development

## MISSING LINKS IN LCD INITIATIVES IN TANZANIA

Regarding the history of LCD initiatives in Tanzania, findings from this study show that a wide range of factors—from political to economic and social aspects—have influenced the current situation. Just to mention a few, the major bottlenecks in the success of LCD initiatives have been:

- i. Poor coordination and duplication of projects
- ii. Breakdown of information
- iii. Limited funding
- iv. Political factors
- v. Lack of clear institutional framework
- vi. Lack of skills / know-how
- vii. Policy / regulatory framework

## WAYS TO IMPROVE LCD INITIATIVES IN TANZANIA

Improving LCD initiatives in Tanzania requires both an environment conducive to organizational strengthening, and the existence of basic core capacities. Some strategies that can improve LCD initiatives in Tanzania:

- i. Build capacity of CSOs
- ii. Strengthen networking among CSOs
- iii. Promote LCD at local and national levels
- iv. Raise stakeholders' awareness about the importance of LCD
- v. Conduct opportunities and risks assessments for target groups before implementation of initiatives
- vi. Create political momentum for LCD
- vii. Provide links and common platform for LCD initiatives
- viii. Use existing LCD initiatives to highlight successful examples
- ix. Localize LCD initiatives

## STEPS TO LOW CARBON GROWTH IN TANZANIA

Steps to low carbon growth in Tanzania include creating and supporting national goals, scoping national low carbon growth, mobilizing resources, and proposing low carbon options. Such steps can enhance the practical implementation stage towards decarbonization of the development pathway.

## CONCLUSION

Mitigating climate change is a responsibility of every party to the UNFCCC and its allied protocols, including the Cancun Agreement and Bali Action Plan (BAP). The Cancun Agreement stipulates that developed countries should formulate low-emission development strategies and plans (LEDS), while developing countries are encouraged to do the same in the context of sustainable development (Decision 1/CP.16, Paras. 45 and 65). Therefore, climate change mitigation must remain an important priority for Tanzania, despite its designation as a least developed country. Tanzania has a huge potential to contribute to the development of LCD initiatives. However,

this potential has not been effectively tapped so far due to a number of constraints explained earlier, with incentive being one of the major issues. The potential of LCD initiatives to mitigate climate change is a response to the 2007 Bali Action Plan (BAP), which proposed the concept of NAMAs such as LCD initiatives.

A number of factors have impacted the implementation of LCD Initiatives in Tanzania. Coordination-related problems, inadequate technical capability, financial dependency, and information asymmetry, among others, hamper the sustainability of most LCD initiatives in Tanzania. Furthermore, capacity building in developing sustainable LCD initiatives has not been a key priority.

Despite LCD initiatives featuring in recent climate change negotiations, Tanzania has not incorporated LCD in its national climate change strategy. Furthermore, the current LCD initiatives are not anchored to the national environmental policy.

The sustainability of LCD initiatives requires wide engagement of stakeholders. However, fund-raising and lobbying techniques for NGOs in general, and CSOs in particular, are highly inadequate. Moreover, most CSOs are not self-sufficient in terms of knowledge, and are highly dependent financially.

## RECOMMENDATIONS

- i. Based on the Cancun Agreement, Tanzania is obliged to achieve the peaking of global and national GHG emissions in the country, and should seek to provide incentives to support LCD initiatives (1/COP.16.6 and 1/COP.16.10).
- ii. The government should facilitate the establishment of a coordination platform for LCD stakeholders, preferably hosted by the government institutions (e.g., Vice President's Office). The platform should promote information sharing and technology dissemination.
- iii. The lack of technical capability hampers sustainability of most LCD initiatives in Tanzania, thus capacity development should be a key priority and step towards sustainable implementation of LCD initiatives in Tanzania.
- iv. For sustainability of LCD initiatives, the government should incorporate LCD by revising the national climate change strategy. This must also be anchored in the new and updated national environmental policy, which is outdated and does not accommodate any climate change issues at all.
- v. Information on GHG emission levels and LCD initiatives in different sectors should be collected and kept in a well-prepared database, and shared with people at the grass-roots level.
- vi. CSOs and research institutions play a critical role in pushing for LCD in both developed and developing countries. Therefore, it is important to engage, strengthen, and support them in advancing LCD initiatives in Tanzania.
- vii. Capacity building on fund-raising and lobbying techniques for NGOs, especially (CSOs), is of paramount importance in order to create self-sufficiency and financial independency while addressing LCD initiatives in Tanzania.

## LIST OF ABBREVIATIONS

<b>ARTI-TZ</b>	Appropriate Rural Technology Institute–Tanzania
<b>BftW</b>	Bread for the World
<b>CA</b>	Conservation Agriculture
<b>CAN-I</b>	Climate Action Network International
<b>CARE-I</b>	CARE International
<b>CBOs</b>	Community Based Organizations
<b>CC</b>	Climate Change
<b>CCIAM</b>	Climate Change Impacts, Adaptation and Mitigation
<b>CAN TZ</b>	Climate Action Network Tanzania
<b>CDM</b>	Clean Development Mechanism
<b>CFM</b>	Community Forest Management
<b>COP</b>	Conference Of Parties to UNFCCC
<b>COSTECH</b>	Commission for Science and Technology
<b>CSA</b>	Community Smart Agriculture
<b>CSOs</b>	Civil Society Organizations
<b>DfID</b>	Department for International Development
<b>DoE</b>	Division of Environment
<b>DPG</b>	Development Partners Group
<b>FAO</b>	Food and Agriculture Organization
<b>FBO</b>	Faith Based Organizations
<b>FES</b>	Friedrich-Ebert-Stiftung
<b>FYDP</b>	Five-year Development Plan
<b>GIZ</b>	The Deutsche Gesellschaft für Internationale Zusammenarbeit
<b>GHG</b>	Greenhouse Gases
<b>IIED</b>	International Institute for Environment and Development
<b>INGOs</b>	International Non Governmental Organizations
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>LCD</b>	Low Carbon Development
<b>MAFC</b>	Ministry of Agriculture, Food and Cooperatives
<b>MDAs</b>	Ministry, Departments and Agencies
<b>MEM</b>	Ministry of Energy and Minerals
<b>MKUZA</b>	Mpango wa Kupunguza Umasikini Zanzibar
<b>MNRT</b>	Ministry of Natural Resource and Tourism
<b>MoF</b>	Ministry of Finance
<b>MRV</b>	Measurement, Reporting and Verification
<b>NAMA</b>	Nationally Appropriate Mitigation Action
<b>NCCFP</b>	National Climate Change Focal Point
<b>NCCS</b>	National Climate Change Steering Committee
<b>NCCTC</b>	National Climate Change Technical Committee
<b>NEMC</b>	National Environmental Management Council
<b>NGOs</b>	Non-governmental Organizations
<b>NSGRP</b>	National Strategy for Growth and Reduction of Poverty
<b>PMO</b>	Prime Minister’s Office
<b>RALG</b>	Regional Administration and Local Government
<b>REA</b>	Rural Electrification Agency
<b>REDD+</b>	Reducing Emissions from Deforestation and Forest Degradation
<b>SFM</b>	Sustainable Forest Management
<b>SIDA</b>	Swedish International Development Agency
<b>SLM</b>	Sustainable Land Management
<b>SUA</b>	Sokoine University of Agriculture
<b>TAFORI</b>	Tanzania Forest Research Institute
<b>TANAPA</b>	Tanzania National Park
<b>TaTEDO</b>	Tanzania Traditional Energy Development Organization
<b>TEFA</b>	Tanzania Environmental Friendly Association
<b>TFCG</b>	Tanzania Forest Conservation Group
<b>UDSM</b>	University of Dar es Salaam
<b>UNDP</b>	United Nations Development Programme
<b>UNEP</b>	United Nations Environment Programme
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VPO</b>	Vice President’s Office
<b>WWF</b>	World Wide Fund for Nature

# 1. INTRODUCTION

## 1.1 BACKGROUND INFORMATION

Climate change is a threat to economic growth, long-term prosperity, and the survival of already vulnerable communities, especially in developing countries. The reduction of greenhouse gas emissions that cause climate change is one of the most challenging problems facing the global community. Both developing and developed countries are still struggling to establish forward-looking national economic development plans and strategies that encompass low-emission and/or climate-resilient economic growth (OECD, IEA 2010).

Compounded by many other factors, climate change is weakening efforts for achieving sustainable development, and increasing social and environmental vulnerabilities, particularly in the economic sectors of developing countries. To ensure a safe and sustainable future, concerted efforts are required to address climate change (both adaptation and mitigation) and poverty reduction. At the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992, participants adopted the concept of LCD strategies and/or low-carbon growth plans to reduce emissions and impacts of climate change as part of the UNFCCC. Since then, LCD strategies have attracted interest in climate negotiations as a soft alternative to voluntary or obligatory GHG emission reduction targets in developing countries (ECN, 2011).

Article 4.1 (b) (COP 16) of the UNFCCC requires all countries to formulate programmes on climate change mitigation. Developed countries are required to reduce GHG owing to historical responsibilities. The Cancun Agreements (COP 16) confirmed the concept of LCD strategies to ensure that long-term and holistic approaches to LCD are established. Since then, LCD-related programmes and projects have been developed globally.

»Exploring Sustainable Low Carbon Development Pathways« is a project that seeks to combine both climate protection and sustainable development principles to complement the global effort of furthering national economies, while mitigating climate change. As a joint initiative by FES, BftW, WWF, CAN-I, and ACT Alliance of Churches, the project is guided by the common understanding that any future development model has to be:

- i. **Low Carbon:** a minimal output of greenhouse gas emissions.
- ii. **Ecologically Sustainable:** fully respecting planetary boundaries.
- iii. **Human Rights Based:** a strong focus on poverty reduction and participation.
- iv. **Socially Inclusive:** creating wealth and employment while absorbing negative social impacts.
- v. **Just:** equally sharing burdens and opportunities between different stakeholders.
- vi. **Nationally Appropriate:** respecting countries different backgrounds and sustainable development challenges.

Developing countries, including Tanzania, have potential for advancing sustainable development through a transition towards low-carbon and climate resilient growth, particularly in the fields of agriculture, transport, forestry, renewable energy, and energy efficiency (UKAID 2010). Increases in emissions will be necessary for Tanzania's growth given its development status, and there is no suggestion that future emissions should be constrained. Moreover, because Tanzania is among the least developed countries in the world, the main focus should be to lift people out of poverty. This will necessarily lead to a higher emission level, although the current ecological footprint is relatively low—about one ton of CO<sub>2</sub> per person per year (Ibid.). The future emissions pathway illustrates that greenhouse gas emissions are likely to increase significantly over the next 20 years (Ibid.). Emissions growth in Tanzania is related to a specific development pathway that has increased dependence on fossil fuel use as the capacity of some renewable

sources shrink. This is illustrative of some of the aspects of unsustainable growth, including continued unsustainable use of natural resources, and increasing dependence on and inefficient use of fossil energy (Ibid.). While low carbon development has become the new catchphrase in climate policy (IIED 2013), it is an agenda that tackles reducing carbon emissions, while at the same time building climate resilience and supporting development in a supposedly win-win policy agenda (See Figure 1). However, any LCD strategy needs to be pro-poor and should take into account a country’s socio-economic and development priorities. If this is done, LCD can reduce poverty by offering the chance to modernize, innovate, and strengthen economic systems and labour markets, to create new and sustainable jobs, and to strengthen participation and social cohesion (ECN, 2011). The relationship between climate and development goes both ways, since economic development that favours business-as-usual scenarios always leads to higher GHG emissions causing climate change, whereby in the medium and longer term, climate change can hurt development (Ibid. 2011).

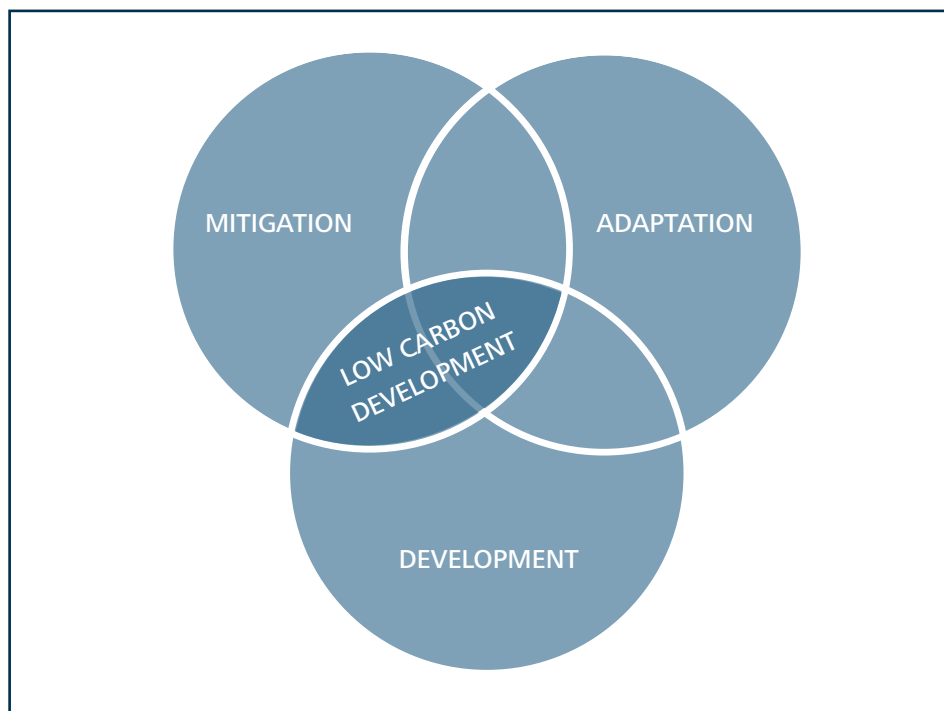


Figure 1: LCD at the Intersection of Sustainable Development and Mitigation, Source: (ECN 2011)

To some extent, developing countries like Tanzania are already carrying out a range of low carbon projects. The first project in Tanzania can be traced back to 2003, when a process to formulate a LDC capacity building programme was initiated with support from United Nations Development Programme (UNDP). The same year, the Tanzanian Ministry of Energy and Minerals (MEM) prepared a draft Baseline Report on the Status and Opportunities for Low Carbon Energy Development at District Level. Other low carbon initiatives already established by the Tanzanian government include exploring clean energy sources—e.g. geothermal, wind, solar, clean coal, natural gases—and organizing a stakeholders’ workshop to discuss the NAMAs in 2013, where various stakeholders were acquired. However, there are many other stakeholders, including CSOs, working on low carbon development in Tanzania both directly and indirectly. Unfortunately, there is a lack of networking and collaboration between CSOs. In order to engage a wide range of stakeholders in LCD initiatives, CSOs, media, and the general public cannot be ignored. Amore active role by the public gives them the chance to plan for their future and demand more actions on the ground.

The project on »Exploring Sustainable Low Carbon Development Pathways« was started in 2013 in four pilot countries: Kazakhstan, Peru, Tanzania, and Vietnam. In close co-operation and ownership with different national partners from civil society and science, the project aims to:

- i. Explore Sustainable Low Carbon Development Pathways in these countries, which could serve as regional and international examples.
- ii. Show that Low Carbon Development is not only possible, but economically and socially beneficial.
- iii. Create platforms for dialogue at the national level for a range of different stakeholders.
- iv. Support and intensify networks between civil society actors in the respective countries and regions.

## 1.2 RATIONALE FOR LCD IN TANZANIA

A study by UKAID (2010) indicates that Tanzania has relatively low GHG emissions, both in gross emissions and per capita emissions. Forestry (due to deforestation and degradation) and agriculture (mainly emissions from livestock, land use change and fertilizer applications) are the highest emitting sectors. However, it is estimated that GHG emissions will double between 2005 and 2030 due to future plans for coal and gas development with insignificant development of renewables, which will increase the carbon intensity of electricity generation. Further increases will be from fossil-fuel consumption in the transport sector, population growth, and urban development. This would prevent Tanzania from benefiting from greater opportunities in the international carbon credits market, and potentially cause additional economic difficulties and dependence. To that effect, Tanzania should engage in LCD to improve long-term economic growth and alleviate poverty.

Although there are positive signs that Tanzania is beginning to embrace low carbon options both through its policies and regulatory structures, there is a clear lack of coordination between the relevant ministries and other stakeholders—e.g., the private sector, CSOs, and academia—and therefore no clear road map on the joint implementation of LCD initiatives in the country. Furthermore, available policies and other government strategies are not benefiting lower income groups, but further entrenching poverty. Moreover, the development and implementation of LCD strategies need to ensure meaningful coordination and participation of all actors in society, in order to leverage the required shift to fight the climate crisis and ensure more sustainable development.

Targeting sustainable LCD initiatives is now more crucial than ever, as projections show that in the next 20 years Tanzania's economy will face the complex challenge of addressing climate change impacts while alleviating poverty. Pro-poor LCD has substantial economic and technological benefits for Tanzania, including:

- **Improving efficiency:** reducing energy-associated costs; improving land and forest management practices; reducing pollution and improving health.
- **Promoting economic independency:** reducing dependencies on imported fossil fuels and costly energy technologies will encourage Tanzanian expertise in low-cost, appropriate and locally-maintained technologies.
- **Creating new economic opportunities:** including development of new businesses and industries, carbon market opportunities, employment creation, and improved local incomes from productive agriculture and forest use.
- **Ensuring adaptation benefits:** for example, sustainable forest management will mitigate emissions and maintain forest resources as important assets in the adaptation strategies of the rural poor.



## 1.3 OBJECTIVES

Tanzania has ratified various multilateral environmental agreements and has also received support from donor agencies for implementing environmental and climate change projects and programmes (URT 2012). However, there is evidence that adaptation programmes have not yet managed to build community resilience and face funding shortages; and LCD initiatives have the potential to bridge these gaps.

In response, a kick-off workshop on LCD in Tanzania was held in Dar es Salaam from 22–23 January 2014, whereby more than 75 local and international participants with a broad range of experiences and expertise were in attendance. The workshop was part of »Exploring Sustainable Low carbon Development Pathways«, mentioned earlier. During the workshop, it emerged that there are a number of problems that constrain the positive effects of the relevant policies—such as inadequate funding and inadequate technologies at both the local and national levels. Other obstacles include inadequate awareness of climate change issues, which makes it difficult to find broad acceptance and ownership for LCD measures among the broad population, and inadequate coordination among key actors/stakeholders implementing LCD measures.

As a response to the workshop deliberations, this study reports on the existing LCD initiatives in Tanzania by highlighting:

- i. The missing link between existing LCD initiatives;
- ii. Ways to strengthen the existing LCD initiatives;
- iii. Ways to improve implementation;
- iv. Ways to create synergies between different LCD approaches.

However, in this study a strong focus was placed on the role of civil society and local stakeholders as important actors in ensuring an inclusive and bottom-up implementation of LCD initiatives in the country.

## 2. METHODOLOGY AND APPROACH

Information used to prepare this report was collected through a literature review, stakeholders' workshops, and stakeholder consultations.

### 2.1 LITERATURE REVIEW:

This task involved the collection and review of documents, including the relevant policies, legislation, and various reports related to LCD initiatives in Tanzania.

### 2.2 PARTICIPATORY STAKEHOLDER CONSULTATIONS:

Key stakeholders consulted during the preparation of this report included government institutions, development partners, the private sector, NGOs, CSOs, CBOs, and some target individuals. The idea behind the stakeholders' consultation was to get their views and perceptions on the existing LCD initiatives in the country.

### 2.3 PARTICIPATORY WORKSHOP:

A participatory workshop was organized to discuss the issues linked to LCD, the impact of missing links, and strategies to strengthen them.

### 3. EXISTING LCD INITIATIVES AND STAKEHOLDERS IN TANZANIA

A number of LCD-related initiatives have been established and implemented in Tanzania by government institutions, CSOs, and development partners. Some are listed in Table 1. Different stakeholders—e.g., TaTEDO, UNDP, UNEP, DfID, GIZ, and the Norwegian and Finnish embassies—are playing significant roles in funding LCD-related projects in the country.

LCD STAKEHOLDER	ACTIVITY IMPLEMENTED	AREA/REGION COVERED
UNDP	Funding Projects on: SLM, SFM, adaptation, CSA, biodiversity conservation projects, energy access, renewable energy and energy efficiency, REDD+	Countrywide
UNEP	Funding projects on: REDD+, adaptation and mitigation	Countrywide
DFID	Funding Projects on: climate change resilience and low carbon sustainable growth options, poverty eradication in the context of CC, forests and their livelihoods, sustainable agriculture, clean energy and climate(e.g., solar power and biomass energy)	Countrywide
Norwegian Embassy	Funding projects on: REDD+, energy projects, adaptation and mitigation (afforestation and reforestation), CDM	Countrywide
Finnish Embassy	Funding projects on: sustainable management of natural resources	Countrywide
FAO	Funding projects on: CSA and CA, forest projects	Countrywide
WWF	Implementing projects on: afforestation, reforestation, environment and biodiversity conservation, CC adaptation and mitigation, and SLM	Countrywide
CARE I	Afforestation, reforestation, and SLM	Countrywide
GIZ	Has committed 26 million euros to support the Tanzanian energy sector with the aim of fostering the use of renewable energy, access to energy (especially in rural areas), and better energy efficiency	Countrywide
Sida	Increase access to modern energy, direct investments in generation of energy particularly promoting renewable energy and encourage private public partnerships and increased use of innovative practices and collaboration with private actors.	Countrywide
IIED	SLM and watershed management	Countrywide
ARTI-TZ	Promote sustainable technologies for energy production, environmental protection, employment and income generating opportunities in Tanzania	Countrywide
Oxfam	Conservation agriculture, climate change, and poverty alleviation	Countrywide
The Royal Norwegian Society for Development	Rural development and investment	Countrywide
Hivos Tanzania Ltd	Renewable energy, sustainable agriculture, climate change and policy	Countrywide
Agro eco energy	Renewable energy and inclusive socio-economic development	Pwani
Helvetic	Dealers in renewable technologies (e.g. solar panels)	Countrywide
Sim Gas	Renewable energy	Countrywide

Table 1: The Contribution of Development Partners and Stakeholders in Achieving LCD Initiatives

From Table 1, it is clear that most of LCD initiatives have been established by development partners and international non-governmental organizations (INGOs). Governmental institutions and local NGOs are only implementers of the initiated LCD projects (see Table 2). The discussion with stakeholders revealed that the number of LCD-related projects has increased in recent years. A study by Yanda, et al. (2013) ascertains that expenditure relevant to climate change has increased steadily as a proportion of the total budget from 4.2 per cent in 2009/10 to 6.5 per cent in 2012/13. This growth in budget for activities related to climate change is driven by a total increase in donor funding. There has been a decline in local financing by 4 per cent over the period, while international financing grew by 61 per cent, reflecting considerable development in partner support. Insufficient knowledge (trained staff), awareness, and financial resources have been mentioned as major factors in the limited local LCD initiatives in Tanzania. LCD initiatives funded by development partners concentrate primarily on projects related to renewable energy, pro-poor energy, energy efficiency, REDD+, forest conservation, and sustainable agriculture, which includes agroforestry and climate smart agriculture. This offers a good opportunity to promote LCD in different sectors in Tanzania, while promoting local economic development.

On the other hand, projects implemented by local institutions are sector-specific—e.g., energy, forestry and agriculture. This is because most of these institutions work on their sector-tailored projects independently, despite the fact that they all address interlinked problems and implement projects with the same wider community goals. They lack a coordination unit, which has hugely weakened stakeholder initiatives to get sound achievements.

STAKEHOLDER	LCD INITIATIVES	INITIATIVE OBJECTIVE	AREA/REGION COVERED
VPO-DoE	Climate Change Impacts, Adaptation and Mitigation (CCIAM) programme	To promote natural forest conservation, afforestation, reforestation, and better agricultural practices for improved livelihood	Nationwide
VPO-DoE	Mainstreaming Environment and Climate Change	To provide guidance on mainstreaming responses to climate change within economic development	Nationwide
PMO	Strengthening National Disaster Preparedness	To enhance the national capacity to reduce vulnerability and mitigate disasters	Nationwide
PMO-RALG	Dar es Salaam Rapid Transport Programme	To provide a mass transport programme that will help improve the overall mobility of the city and reduce emissions	Nationwide
PMO-RALG	Mainstreaming of Sustainable Forest Management	To support key MDAs and LGAs in integrating climate change adaptation and mitigation into their strategies and plans	Nationwide
COSTECH	Climate Change Adaptation and Mitigation and Climate Innovative Technologies	Promotion and coordination of technology innovation for sustainable development	Nationwide
SUA	Climate Change Adaptation and Mitigation	To enhance the national capacity to reduce vulnerability and mitigate disasters (especially to farmers)	Nationwide
MEM	Rural PV- Market Barrier Removal	To reduce Tanzania's energy-related CO2 emissions by introducing photovoltaic (PV) as a substitute for fossil fuel (kerosene) utilized for lighting in rural areas	Nationwide
MEM	Climate Change Adaptation and Mitigation	To support climate change adaptation and mitigation	Nationwide
UDSM	Climate Change Adaptation and Mitigation	To enhance the national capacity to reduce vulnerability and mitigate disasters	Nationwide
TaTEDO	Climate Change Adaptation, Mitigation and Pro-poor Energy	To enable the majority of the population in rural areas to access sustainable energy technologies for poverty reduction and climate change mitigation and adaptation	Nationwide
MNRT-Forest Department	Climate Change Adaptation and Mitigation (Afforestation and Reforestation)	To sustainably enable the national forests to contribute to the social, economic, ecological, and cultural needs of present and future generations	Nationwide
MEM	Rural Electrification	To avoid deforestation, climate change, air pollution (indoor & outdoor), and land degradation	Nationwide
MAFC	Climate Change Adaptation and Mitigation	To enhance farmers' capacity to reduce vulnerability, adapt and mitigate climate relate disasters	Nationwide
Carbon Tanzania	Climate Change Adaptation and Mitigation	To conserve forests and support forest communities in mitigating climate change	South-eastern and northern Tanzania
TFCG	Climate Change Adaptation and Mitigation	To promote forest conservation, and alternative livelihoods for climate change adaptation and mitigation	Nationwide
MJUMITA	Climate Change Adaptation and itigation	To promote forest conservation, and alternatives livelihoods for climate change adaptation and mitigation	Nationwide

Table 2: LCD Initiatives in Tanzania and the Implementing Stakeholders

### 3.1 MOTIVE BEHIND LCD INITIATIVES IN TANZANIA

The Cancun Agreements under the UNFCCC insisted on the importance of national economic development priorities, and proposed that LCD strategies should be mandatory for developed countries; they were also encouraged for developing countries.

**1/CP.16.10.** [.] Realizes that addressing climate change requires a paradigm shift towards building a low-carbon society that offers substantial opportunities and ensures continued high growth and sustainable development, based on innovative technologies and more sustainable production and consumption and lifestyles, while ensuring a just transition of the workforce that creates decent work and quality jobs

**1/CP.16.6** [.] Parties should cooperate in achieving the peaking of global and national greenhouse gas emissions as soon as possible, recognizing that the time frame for peaking will be longer in developing countries, and bearing in mind that social and economic development and poverty eradication are the first and overriding priorities of developing countries and that a low-carbon development strategy is indispensable to sustainable development;

**1/CP.16.65** [.] Encourages developing countries to develop low-carbon development strategies or plans in the context of sustainable development

**1/CP.16.79** [.] Aware of the need to provide incentives in support of low-emission development strategies

Depending on the national context, an LCD strategy should serve different audiences and have different purposes, adding robustness to the attainment of low carbon actions, and climate resilient and sustainable growth in developing countries (ECN, 2011). An LCD strategy should provide a process that—depending on the developing country’s readiness—meets development needs and fills capacity, knowledge, and information gaps. LCD-related processes lay a foundation for NAMAs and provides a framework for MRV. It helps to attract new resources to address the incremental costs of low carbon growth through technology, financing, and capacity building.

In contrast to the developed countries, an LCD strategy offers the chance for developing countries to formulate strategies and policies that are consistent with their sustainable development strategies. Different from many other developing countries, Tanzania has great potential for advancing sustainable development through a transition towards low carbon and climate resilient development, particularly in the fields of renewable energy, forestry, and agriculture. Development partners and local stakeholders in Tanzania are keen to increase these opportunities, by promoting LCD-related initiatives in the country.

Discussions with stakeholders (in Dar es Salaam between September and November 2014) revealed that their main aims in LCD project investment include:

- xii. Contributing to the global effort of reducing emissions of GHGs, thus mitigating climate change
- xiii. Supporting strategic, sustainable, and cost-effective low carbon growth
- xiv. Limiting climate impacts and associated management costs at national and community levels
- xv. Helping harness international climate finance opportunities and implementation support
- xvi. Strengthening national competitiveness in the face of a green revolution
- xvii. Safeguarding natural resources
- xviii. Promoting national economic independency
- xix. Ensuring community adaptation benefits
- xx. Building resilience in crop production for Tanzania's vulnerable areas
- xxi. Powering diversification to reduce dependence on hydropower, which has been always affected by hydrological changes
- xxii. Harnessing local resources for community well-being

Looking at the motives behind LCD initiatives in Tanzania, it is clear that stakeholders are shifting away from business as usual, and building a sound future targeting energy, forestry, agriculture, and transport. Nevertheless, much effort is still needed to achieve a sound low carbon pathway, especially in the transport and forestry sectors.

## 3.2 STAKEHOLDERS' INVOLVEMENT AND PARTICIPATION

Making the transition to a low carbon growth nation is a process that requires the engagement of key stakeholders—including policy- and decision-makers—in order to build consensus on, and institutionalize LCD pathways. Relevant stakeholders should be involved from the start of the process, to enable the creation of outcome ownership (Figure 2). Key stakeholders in the LCD initiatives include:

- i. The governments (national and local), which can develop long-term vision on climate and LCD pathways, establish a policy framework in which policies across different sectors are put in place, and increase stakeholders' awareness of climate change.
- ii. The CSOs, which can help to implement LCD initiatives set by the government and achieve the targeted benefits at the community level.
- iii. The private sector, which can identify what is needed to establish a favourable investment climate for LCD actions, and inform potential investors about the long-term ambitions and priority sectors, and what interventions—such as regulatory frameworks or policies—the government will undertake to help achieve the ambitions.
- iv. To international community, which can help to identify the needs and priorities, as well as coordinate donor support. In relation to other international climate instruments, an LCD strategy can provide a coherent framework for NAMA and MRV needs.

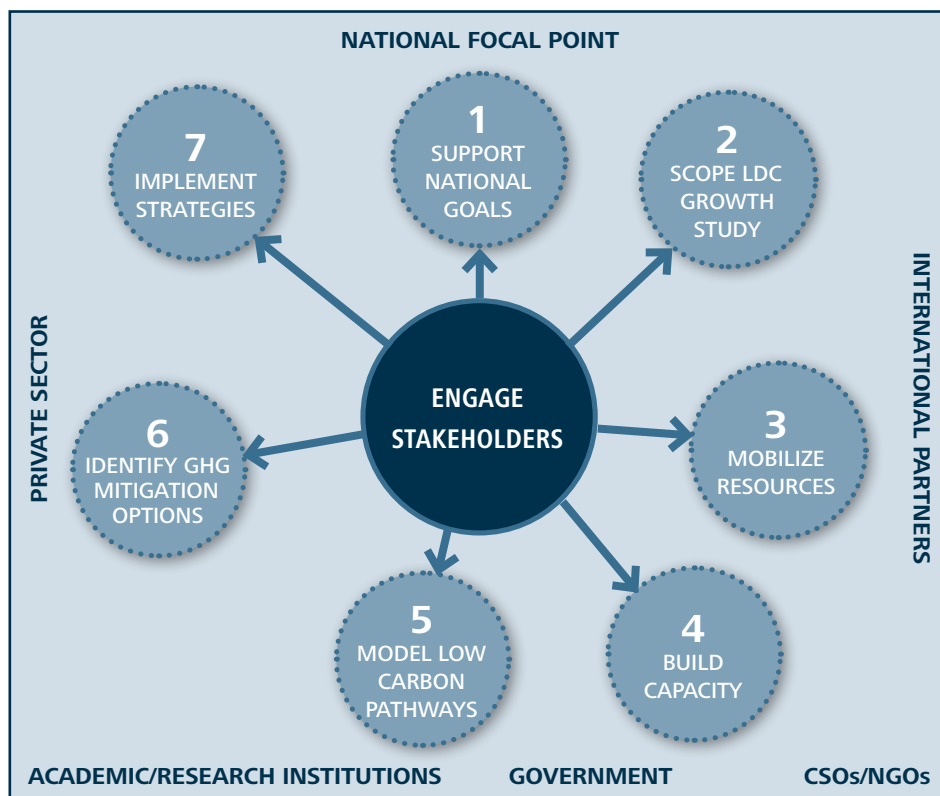


Figure 2: National Low Carbon Growth Process Framework  
 Source: Modified from ESMAP 2009

During the interviews and discussion with various respondents, it was revealed that stakeholders were involved in all stages of designing and implementation of LCD strategy initiatives in Tanzania. For example, in the development of the Agriculture Climate Resilience Plan by the Ministry Of Agriculture, Food Security and Cooperatives (MAFC), various stakeholders from academic and research institutions, CSOs, relevant ministries and departments, as well as development partners were involved. However, some of the LCD strategy projects did not bring significant change to local communities, and were considered to be government projects. This was due to limited transparency at the project implementation stage.

### 3.3 RELEVANCE OF EXISTING LCD INITIATIVES IN TANZANIA

LCD strategies in Tanzania, whether supported by development partners and/or locally implemented, are considered relevant to environmental management and national sustainable development priorities (UKAID 2010). The support from development partners and INGOs has played a significant role in raising community awareness on environmental and climate change issues in Tanzania (Pye 2010). A good example is the establishment of the national REDD+ secretariat pioneered by the Norwegian embassy, which has helped to lay a foundation for REDD+ readiness and capacity building in Tanzania. Another good example of a successful donor-supported project is an initiative to mainstream climate change in MDAs, which was supported by UNDP. This initiative has helped to inform government ministries in Tanzania that climate change is a cross-cutting issue that cannot be addressed by one ministry alone.

Among the key findings from this study is the understanding that although most of LCD initiatives in Tanzania are northern driven, they fit into national development agendas and environmental priorities, such that;



- i. LCD initiatives supported by development partners contribute to achieving community and national economic development. These include, for example, activities that have a positive impact on biodiversity conservation, restoration of ecosystems, demonstration of green energy sources (solar PV, wind), conservation of forests, climate smart agriculture, CFM, SLM.
- ii. A number of local research institutions, public agencies, CSOs, and NGOs—such as COSTECH, MAFC, MoF, TAFORI, TEFA, CAN TZ, NEMC, REA, TaTEDO, SUA, TANAPA, UDSM, MEM, and MNRT—have used technical support and resources to implement LCD-related projects at the local level.
- iii. At the international level, development partners and other stakeholders for LCD initiatives and support have been relevant to a variety of objectives linked to global environmental benefits, climate change adaptation and mitigation—for example, support to increase the use of renewable energy and rural electrification.

### 3.4 THE ROLES OF CSOS AT THE LOCAL AND INTERNATIONAL LEVELS

CSOs play a significant role in UNFCCC negotiations, international development cooperation, and national development. In the past two decades, the number of accredited observers through CSO window has increased significantly (Reid, et al. 2012); most of which are environmental NGOs, research institutions, and business associations.

Since negotiations occur on an intergovernmental level far away from most citizens, CSOs stand a better chance of representing multiple interests in a society. These interests include:

- a. Local environment and climate change adaptation
- b. Climate change mitigation
- c. Climate finance and economic growth

Negotiators and activists from these organizations agree that the main benefit of civil society involvement is that it improves the democratic legitimacy of global climate governance, which affects both the process and the outcome of the negotiations. On the other hand, CSOs increase transparency of the process by providing citizens with better information to hold their governments accountable for their international policies. CSOs also create a more balanced representation of a society's various interests regarding climate change. Since CSOs have a wide range of collaborations, they often have expert knowledge on environmental issues that can help achieve the goals in addressing global warming.

However, CSOs in developing countries have not yet managed to influence the final outcome on emissions reduction, and the process has been slow to give sound outcomes (Belgium Cooperation 2009). National policies and a lack of political will are considered to be among the challenges. This situation has continued, threatening the future of countries whose economies are climate sensitive. CSOs and other stakeholders still have a long way to go if they are to create a low carbon society.

### 3.5 SITUATION AND ROLE OF CSOS IN TANZANIA

Apart from faith-based organizations (FBOs), which can be traced back to colonialism, CSOs in Tanzania have a very short history (Tanzania Education Network and Mtandao wa Elimu Tanzania 2009), and most of them are either in their infancy or still growing (Belgium Cooperation 2009). Initially, most of the CSOs in Tanzania were dealing with development and political lobbying and advocacy. From the beginning of the 2000s, however, CSOs in Tanzania have been working on issues related to the environment and climate change. Since then, the number of environmental CSOs has increased significantly. The rapid growth is attributed to global call for action,

Intergovernmental Panel on Climate Change (IPCC) assessment reports, climate change impacts on the ground, and a general awareness of environmental issues. The relationship between the Tanzanian government and local NGOs has not always been a compatible one, but the government promises to provide an enabling environment for the NGO community to operate (Lange et al. 2000, Belgium Cooperation 2009).

Despite being young, CSOs have an important role that includes coordinating and representing civil society in UNFCCC negotiations and other international arenas, providing citizens with better information, advocating and lobbying for policy change, monitoring and valuation of climate finances, and raising community awareness.

Specific to the LCD pathways and LCD strategies in Tanzania, CSOs are expected to play a pivotal role because:

- i. Success of the energy transition will always depend on public support. CSOs stand to represent and coordinate multiple interests of civil society and the public at large.
- ii. Civil society actors from Tanzania have become significant players in the global development scenery for the delivery of social services and implementation of development programmes, as a complement of government action, especially in regions where government presence is weak
- iii. Civil society actors are seen as change agents in their respective societies, trying to improve the living conditions while striving for a more equitable and climate just world.
- iv. They are mediators in the transition to a post-fossil society, able to influence the policy-making process while reshaping the general public interests and specific constituencies (e.g., consumers, workers and farmers).
- v. The needs and interests of the civil society stakeholders for developing low carbon development is important.
- vi. A strong civil society network will allow for more structured and effective engagement with public and private actors in seeking a direct and equitable cooperation on climate protection and low carbon development.

## 4. MISSING LINKS IN LCD INITIATIVES IN TANZANIA

Considering the history of LCD initiatives in Tanzania, findings from this study show that a wide range of factors—ranging from political to economic and social aspects—have influenced the current situation. A few of the major bottlenecks in the success of LCD initiatives in the country are discussed in the following sections.

### 4.1 LACK OF COORDINATION AND DUPLICATION OF PROJECTS

A lack of coordination and duplication of projects is increasingly becoming a common problem for different initiatives and across various stakeholders (including government, development partners and CSOs). In the government, the National Climate Change Steering Committee (NCCSC) and the National Climate Change Technical Committee (NCCTC) do not appear to meet on a regular basis, and lack a supporting secretariat beyond the National Climate Change Focal Point (NCCFP) (Yanda et al. 2013). Furthermore, the mandates of the NCCSC and NCCFP committees are not in the public domain, and thus the extent of their role in coordinating the country's response to climate change remains unclear. Therefore, in practice, the process of coordinating climate change actions across sectors and levels of government remains a formidable challenge (Yanda et al. 2013). On the other hand, LCD initiatives and progress to date have largely been donor-driven and, given the lack of a coordinating national strategy, has been generally piecemeal and fragmented (Thornton and Norrington 2011). There is lack of (inter-agency) coordination among CSOs dealing with climate change and LCD initiatives, in terms of projects and programmes. Despite the recent increase in the number of NGO networks, the CSOs are still seen as working in isolation and not benefiting from existing NGO networks (Belgium Cooperation 2009). This situation has hampered the focuses and targets of several projects. On the basis of findings from this assessment, there are indications that several organizations dealing with LCD initiatives in the country tend to implement similar projects in isolation, a situation that results in confusion among members in the community, and a repetition of projects goals and activities.

### 4.2 BREAKDOWN OF INFORMATION / INFORMATION ASYMMETRY

A study by UKAID (2010) indicates that relatively low levels of absolute and per capita emissions, a lack of track record in low carbon development, and competing priorities of poverty alleviation have resulted in low levels of awareness. Furthermore, the same study shows that climate change continues to be seen through a development aid perspective, rather than from the perspective of domestic-led economic restructuring or growth. This also mean that relevant information concerning LCD has not been receiving much attention in relation to potential stakeholders, especially from the community to national levels. Various stakeholders, including CSOs, have a big role to play in raising awareness in targeted communities, which creates a sense of a local and national ownership and identity of LCD initiatives in their localities. To achieve this, however, building a strong CSOs network (knowledge and practice network) at the local level to national levels cannot be overemphasized, because this will create the platform for negotiating and implementing new ideas, practical solutions, and strategies (Mulugetta and Urban 2010).

A study by Belgium Cooperation (2009) showed that with regards to information, one can distinguish between different critical elements in Tanzania. There is an existing culture in the government system where «every government file or document is held secretly, unless indicated differently». This culture of confidentiality in the government system makes access to information by CSOs and the public rather complicated. The responsiveness of government and NGOs often depends on who is asking and what their status is. Government officers are often not aware which documents are to be made public.

### 4.3 LIMITED FUNDING

Existing LCD initiatives in Tanzania face the problem of insufficient funding for major LCD activities, because they require extremely large upfront investment, more than some environmentally unfriendly projects (Pye 2010). The government and CSOs, which are currently running LCD initiatives, are also not in a position to mobilize large sums for LCD efforts without support from developed countries (Mulugetta and Urban 2010).

### 4.4 POLITICAL FACTORS

Political influence also plays a role in LCD initiatives in Tanzania. For instance, the process of re-framing the policy agenda to respond to needs and priorities of LCD initiatives is done under political influence. The framing always involves supporting institutions at local and national levels, in order to engage actively with existing development priorities and to encourage existing institutions to play key roles in the framing of new instruments, such as funding and action. Political leaders with different political priorities, can sometimes fail/delay to provide enough attention and cooperation on opportunities that link LCD initiatives with economic stimulus programmes to avoid antagonizing their political interests.

This, in turn, results in the impossibility of establishing of relevant synergies in normal government practice; hence over time, variation of the balance of emphasis between CSOs and the government (Meadowcroft 2010). However, several sources report on the difficulties democratic states encounter when planning to address issues related to climate change (Lafferty and Meadowcroft 1996; Eckersley 2004). Various factors that hinder production of definite results in democratic states, with regard to LCD, include the tendency for politicians to hesitate to undertake reforms that may jeopardize voters interests (e.g., imposing higher energy taxes); and the incentives from top politicians to attract votes by opposing LCD initiatives that might be pledged by their opponents. The other underlying factor is the influence of powerful economic project owners who can resist change to retain their ambitions, the existence of veto points, and political checks and balances, which in one way or another restrict emission reduction efforts in their respective states, Tanzania being among them.

### 4.5 UNCLEAR INSTITUTIONAL FRAMEWORK

The institutional architecture or structure for establishing, implementing, and maintaining sustainability for parts of government, the private sector, and civil society dealing with LCD in Tanzania is unclear. The Ministry of Environment plays a key role in strategy coordination for climate change, including the LCD issues. However, the ministry has little power to implement all of these plans in collaboration with its key implementing entities, which are often the line ministries. As a result, the institutional structure of most of plans related to the environment and climate change affect the likelihood of acquiring policy synergies between low carbon, development, and resilience. In national government, the Ministry of Environment is overwhelmed by other development demands, and may be less able to influence mainstream development planning that might offer the main win-wins in LCD through specific services—such as energy access, transport, or agriculture. Research shows that if there is no a strong relationship between interplay and fit—in this context government and CSOs—which always makes institutions more responsive to, and consistent with the problem in question, resourceful results becomes undesirable (King 1997).

On the other hand, the Tanzanian Ministry of Environment is also understaffed, a situation that leads to limited capacity to undertake LCD initiatives across the country, and hinders technical arrangements to make a strong base on which synergies can be established between CSO, NGOs, and the government itself (Tompkins et al. 2013). Furthermore, related to funding problems, CSOs in Tanzania often lack space, vehicles, research capacities, technical equipment, and financial resources to pay staff (Jones and Tembo 2008). Employment in CSOs may not attract the most able graduates, and an organization may not offer adequate training for lower-level members.

## 4.6 LIMITED SKILLS / TECHNICAL KNOW-HOW

This is particularly pertinent to technical and financial project preparation, and acts as a barrier under CDM and other LCD projects applications (UKAID 2010). Generally, local actors tend to be better tuned to their specific needs, therefore they could be used as the departure point to recount how high emissions have impacted their areas, and how they can act locally to transform their predicament provided the right kinds of support in terms of relevant knowledge and full involvement. However, the knowledge concerning LCD initiatives in Tanzania has been provided at a very surface level, due to the absence of implementation guidelines and other constraints, as explained earlier. On the other hand, technical methods and procedures for estimating reduced carbon footprint are definitely not suited to local conditions, hence jeopardizing their participation and projects sustainability.

## 4.7 POLICY / REGULATORY FRAMEWORK

The development of a coordinated climate policy framework is at an early stage in Tanzania (UKAID 2010). The fiscal framework to support low carbon options remains underdeveloped. For example, utilities pricing supports traditional fossil fuel generation at the expense of other renewables, with limited use of technology specific tariffs.

## 5. WAYS TO IMPROVE LCD INITIATIVES IN TANZANIA

Improving LCD initiatives in Tanzania requires both an environment conducive to organizational strengthening, and the existence of basic core capacities. The discussion below covers some approaches that could improve LCD initiatives in Tanzania.

### 5.1 BUILD THE CAPACITY OF CSOS

The ability of CSOs to reach their full potential in contributing to LCD initiatives has been challenged by low capacity. As reported by OECD/DAC and LenCD (2011), CSO capacity needs include analytical and adaptive capacities, the capacities for effective leadership, strategic planning, management and governance, the capacity to enhance accountability and increase legitimacy, as well as the capacity for resource mobilization. Currently steps are underway to strengthen CSOs in Tanzania on LCD pathways. However, these efforts are still in their infancy and need to be sustainable. Several existing LCD initiatives and those undertaken by different organizations, either: (i) cannot handle the projects they approve for potential emission reductions; (ii) do not have the capacity to attract projects and investments that would serve their broader LCD initiatives and development strategies; (iii) and/or cannot adequately monitor the quality, focus, and returns of projects and investments they host in relation to the target population/groups. This calls for the need to build the capacity of CSOs at national and local levels to attract, process, and effectively manage LDC initiatives in the country.

### 5.2 STRENGTHEN NETWORKING AMONG CSOS

The profile of LCD initiatives means that numerous actors are competing to attract resources and serve as leaders in this area. This situation leads to lack of rational division of activities among organizations, which allows them to focus on what they do best on their own, in the presence of other organization dealing with similar initiatives. New coordination mechanisms among CSOs are urgently required to allocate responsibilities by sector, scale, and the intended beneficiaries of initiatives. This action will require committed personnel/teams to limit labour turnover. Mapping of the power structure should be done as a starting point to come up with a comprehensive reform of power relations among stakeholders. Regular reporting and briefing on LCD should be disseminated to stakeholders as a way of strengthening the possible network among CSOs, NGOs, CBOs and the government. Also, a dialogue approach through conferences, seminars, and training workshops needs to be conducted to achieve significant objectives. CSOs will be strengthened by encouraging strong consultation and citizen involvement, starting with the local and extending to the policy-making level. This will be incorporated with other stakeholders and influential groups—e.g., politicians, formal groups, civil servants, FBOs, media, consumer organizations, and women's groups.

### 5.3. PROMOTE LCD AT THE LOCAL AND NATIONAL LEVELS

Too often, LCD projects or other forms of activities for clean development are seen as marginal by local communities and at policy level. Tackling current emissions while working on other development priorities, like poverty alleviation, needs to be mainstreamed into all areas of policy. Creation of a national LCD strategy that can squarely address these issues would help to tackle efforts on curbing climate change impacts in a sustainable manner. The focus of attention should be on moving towards clean energy transitions, and discourage the tendency of investing and reinvesting in fossil fuel developments. Initially, deeply held pro-environmental values and beliefs, incentives, perceived benefits skill, and a sense of efficacy, social support, and practical assistance should be addressed to foster behaviour change among stakeholders

at all levels. This can be done by highly discouraging the serious problem of undermining the credibility that calls for clean development, which is currently accelerated by policy and the existing institutional framework. Phasing out support for fossil fuel infrastructures will not be easy and will not happen immediately, but it needs to happen soon under the influence of credible advocacies and campaigns at all levels. Solid knowledge of the problem should be practically acquired, in order to avoid generating superficial knowledge about LCD initiatives.

## 5.4 RAISE STAKEHOLDER AWARENESS ABOUT THE IMPORTANCE OF LCD

The transition towards a low carbon development pathway is not a matter of choice. To reach the reality of climate change that demands for economy-wide decarbonization for social development, public awareness on the importance of LCD should be overstated. This will develop social and national pathways that emphasize the need for LCD-related policies and decision-making. There is no doubt that there are clear benefits in pursuing LCD activities, but there is a need for considerable creativity in mobilizing community members, CSOs and government officials, and building their institutions in terms of technical know-how that can support local and national participation in a clean development pathway. The success of such an undertaking will help to assess how well existing knowledge among stakeholders is mapped out and new knowledge is generated for LCD initiatives, and hence widen participation, create collective ownership, capacity, and consensus around the LCD issues.

## 5.5 CONDUCT OPPORTUNITIES AND RISK ASSESSMENTS FOR TARGET GROUPS BEFORE IMPLEMENTING LCD INITIATIVES

Proactive consultation for all parties and stakeholders in LCD initiatives is highly recommended and should be a necessary first step. Such a consultation should be a thorough and comprehensive analysis and assessment of the distribution of the potential livelihood opportunities and risks across the overall social space. Opportunities and risk assessment would definitely enhance a systematic shift of the perception of LCD as a leading mitigation-oriented concept, in terms of a people-centred policy approach. Principles of non-discrimination and inclusion of disadvantaged social groups should be placed at the core draft of the initiatives before the actual implementation. Stakeholders' dialogues on LCD designs with appropriate development-related outcomes and associated social and physical challenges and opportunities should be addressed so that potential LCD strategies and actions are based on the involvement of civil society and stakeholders in general.

## 5.6 CREATE POLITICAL MOMENTUM FOR LCD

It will be important for development agencies, environmental groups, NGOs, social movements and actors dealing with LCD initiatives to join forces—preferably under a common, thematically overarching platform. The main focus of this unity should be to create and accelerate a political agenda on LCD that does justice to its significant transformative nature for the current and future well-being of sustainable development activities. Initially, this can be undertaken through strong coordination among CSOs and intensive and targeted awareness-raising to unpack a critical political consciousness among the general public. Lobbying and advocacy activities can also be employed in order to influence political decision-making processes.

## 5.7 PROVIDE LINKS AND A COMMON PLATFORM FOR LCD INITIATIVES

Providing a link and creating a common platform for LCD initiatives that respects, reviews, and combines knowledge from communities and different groups, as well as government efforts, will positively consolidate the operationalization of LCD projects/programmes in Tanzania. Linking government officials, CSOs, and community actors on LCD issues will also enable response and support to community action plans, and empower communities and other stakeholders through improved contacts and relations. This kind of a synergy will encourage open discussion, dialogue, and feedback among stakeholders, which will be stemmed in stakeholder involvement, recognizing mutual roles and utilizing their specific knowledge and capacities to enable participatory and coordinated outcomes.

## 5.8 USE EXISTING LCD INITIATIVES TO HIGHLIGHT

### SUCCESSFUL EXAMPLES

In undertaking LCD projects in the country, practical examples of the whole list of intended events should be openly implemented. Growth through economy-wide decarbonization and its common features at all levels should be linked to community's livelihood activities and related national policies, in order to favour the redefinition of technological and behavioural ways of life and resource use, in order to achieve LCD. This implies that attempts should be made to tap into stakeholders' own cultural and philosophical heritage as a way to influence the behaviour of citizens and development practitioners in a sustainable direction (Mulugetta and Urban 2010). Furthermore, real-life examples of the interface between livelihood activities and LCD benefits are not common. This is partly because LCD (as an issue to be explicitly addressed) is new, but also because many of the interfaces are actually part and parcel of the existing portfolio of socio-economic activities, and therefore often not seen through any specific LCD prism. It cannot, however, be overlooked that LCD is already a part of conservation and broader environmental management processes in which communities are involved. Government institutions and CSOs are now familiar with the concept of ecosystem services and their importance to livelihoods. Thus, in this context it is important to enable stakeholders—especially ordinary citizens—to recognize that by continuing to conserve and maintain forests, wetlands, and other ecosystems at their disposal, they will not only be contributing to global carbon sinks, but also building their social and institutional resilience.

In this viewpoint, there is no alternative to existing LDC initiatives in the country, but to incorporate low carbon measures into the daily activities of communities, as well as into development policies at the national level .

## 5.9 LOCALIZE LCD INITIATIVES

Because climate change adaptation and mitigation are often highly localized affairs, LCD measures—as one among the initiatives to overcome the situation—should be mainstreamed primarily at local levels. Areas of close geographical proximity may face very different adaptation challenges, and thus require very different approaches, but all activities that are in line with emission reduction—such as energy sources and agricultural practices—are rooted in almost the same origin in several localities. The necessary responses in relation to LCD then, are often very time- and location-specific in terms of knowledge baseline, resources, and social responsiveness. Furthermore, the problems associated with climate change differ for women and men, rich and poor, old and young, and among professions and livelihoods. These local variations make LCD initiatives a priori, highly suitable to local governments action because they require local knowledge to target their response to interventions. In dealing with severe carbon emissions,



local governments may also be assumed to have some comparative advantages, largely based on their greater access to local knowledge and the ability to mobilize local people and resources in light of LCD. The reasonable communication design for LCD initiatives should also include other climate change presentations of findings that convey pictures of hope to the audiences at local levels, focusing on the possible actions in relation to their areas, especially in mitigation and adaptation measures in an integrated strategy for greater engagement. However, the communication should prioritize deliberations that discuss likely occurrences of climate change in specific areas. Such deliberations have to focus on improving interpersonal knowledge and trust of people with very different values, provide critical social support and encouragement, increase openness to different opinions and risk information, and thus enable decision-making rather than obstruct it.

Communication about the initiatives should be designed in such a way that it does not jeopardize the community's other priorities. Instead, LCD issues should link those priorities in its operationalization for mutual implementation with other livelihood activities, such as socio-cultural and economic activities. Drawing the community's attention by using this communication method provides room for individual openness to climate-related information and LCD pathways, and pave the way to doable solutions. However, to cement the workability of the solution, other traditional solutions being implemented in the area should be integrated with the later ones for more comprehensive outcomes. In addition, local governments—by virtue of their multisectoral and area-based mandates—also represent potentially useful institutions within which to horizontally align LCD processes, as well as an opportunity to counter the frequently vertical alignment on climate change issues at large.

## 6. STEPS TO LOW CARBON GROWTH IN TANZANIA

### 6.1 CREATE AND SUPPORT NATIONAL GOALS

This is a very important stage in the process that brings together diverse stakeholders to discuss mechanisms for engagement and building consensus on LCD paths. This stage also aims to look at national priorities and goals for economic development, and determine which specific sectors are major emitters. In Tanzania, the workshop held in January 2014 could be considered one such crucial step towards addressing LCD strategies. At the workshop, different stakeholders from government ministries, academia, CSOs, and FBOs agreed to target four sectors—agriculture, forestry, transport, and energy—in the LCD strategies. However, the final agreement was to start with three sectors—forestry, agriculture, and energy. The process was guided by the DFID study (Opportunities for Low Carbon Investment in Tanzania) and interrelationship between sectors. Since January 2014, there have been consultations with stakeholders and capacity building and knowledge enhancement. Since this a new initiative, advocating and lobbying for either making or changing some national policies is inevitable. From the literature and stakeholders’ consultations, various responses per sectors were noted as can be seen in Table 3.

COMMON THEME	RISING RESPONSES
Renewable Energy	Tanzania has many untapped RE potentials including small-scale hydropower (especially in the southern highlands), wind, solar water heating, PV, and ethanol. Investing in fossil fuel has not managed to solve the problem of energy needs. However, although it is very slow, the Ministry of Energy and minerals is already recognized as having untapped potential. Developments partners such as DFID, GIZ and Finland are already supporting the process financially.
Energy Efficiency and Demand	Only 18 per cent of the total population in Tanzania have access to reliable electricity. There is considerable demand to improve the efficiency of energy supply and demand across the programme, and studies have proved that all measures are cost effective. It is emphasized that tackling energy efficiency is a cheaper option than investing in new generation capacity.
Land Use, Land Use Change, and Forestry	Initiatives to improve agricultural productivity and livestock management will help slow and reduce deforestation and land degradation, and promote LCD pathways. In addition, the community could benefit from opportunities accrued by REDD+.
Transport	Tanzania’s reliance on fossil fuels is increasing, with fossil intensive sectors growing particularly in the transport sector. Low-cost emission reduction opportunities are already identified in the transport sector, and need to be harnessed through a variety of measures, including improved transport planning and managed traffic demand.
Policy Issues	The overall policy environment on climate change is thus relatively new and evolving in Tanzania. The earlier emphasis given to sustainable development provided the platform for climate change to be considered within several sector policy processes. Despite these policies, there is no overarching national climate change policy at present. There is a need to develop policy measures to support the implementation of a lower carbon development path as a common theme across the study programme.
Financing	To a large extent, funds for climate change in Tanzania are provided on bilateral bases, but there are also limited chances for global funding mechanisms. Nevertheless, Tanzania faces a large challenge to finance investments and institute supportive policies and programmes. Public and private investment sources are important in building a low carbon society.
Capacity and Knowledge	The country has a high demand for capacity building and knowledge transfer to support technical, cross-sector, and policy analyses and implementation, as well as resource mobilization.

Table 3: Raised Responses to Low Carbon Growth in Tanzania

## 6.2 SCOPE NATIONAL LOW CARBON GROWTH

This stage involved mapping and identifying local stakeholders and their organizations, including government MDAs. To this end, a review of available national policy paper(s) and goals for climate change, growth, and sector development was made. Since most of the identified sectors are interrelated and depend on each other, cross-sector analysis was important. The plan is to continue with engagements and building ownership and consensus. Regular meetings with government counterparts and stakeholders still need to be held to maintain communication, present preliminary results, and solicit feedback.

## 6.3 MOBILIZE RESOURCES

An LCD working group has been created. The team comprises people from academic and research institutions, FBOs, and CSOs; efforts are still being made to have a government representative in this group. The team's expertise is diverse and includes energy, forestry, social development, agriculture, and natural resource management. However, obtaining funds for running and implementing their activities is challenging.

## 6.4 PROPOSE LOW CARBON OPTIONS IN TANZANIA

A study by UKAID in 2010 proposed potential sectors for low carbon projects that could help Tanzania towards a more sustainable growth path, in addition to generating carbon finance to support such investment (Table 4). Low carbon projects will help to safeguard forests, reduce reliance on energy imports, provide more access to modern energy services, promote more sustainable biomass use, promote efficient and clean transport systems, and enhance economic competitiveness (UKAID 2010).

## 6.5 IMPLEMENT STRATEGIES

Among the biggest challenges countries face in implementing low carbon interventions are: (a) establishing a cohesive institutional framework and supporting policies and regulations for effective implementation across many sectors; (b) financing the upfront costs of low carbon interventions; and (c) creating partnerships for implementation (ESMAP 2009). More effort is needed to come up with favourable policies and environments for a transition to low carbon. New sources for financing and substantial initial investments are required. The role of the private sector in investing in sectors like transport, housing energy, and agriculture is very crucial. Furthermore, stakeholder involvement and partnership creation will be important in advancing policy initiatives, tackling implementation challenges, and addressing funding constraints (Ibid.).

SECTOR	OPTION	POLICY DRIVER	POLICY CO-BENEFITS	CLIMATE RESILIENCE	IMPLEMENTATION CONCERNS
Electricity Generation	Renewables: – Wind farms (grid) – Large hydro plant (grid) – Small scale hydro (mini-grid) – Solar PV (grid) – Solar thermal (grid) – Household solar (off-grid)	Expansion of – electricity generation – system, increasing – consumer access	– Carbon finance opportunities – Lower reliance on (and payments for) imported fossil fuels, increasing energy security – Reduced air pollution – Increased diversification away from hydro	– Potential competing uses of water (hydro) – Reduction in water resources	Additional costs of renewable generation (excl. hydro) Ensuring technology quality for decentralised RE e.g. SHS
Household Energy	Introduce improved stoves	Reduce primary biomass / charcoal demand	– Reduce indoor air pollution, & health impacts – Reduce fuel costs – Reducing pressure on forest stocks / safeguarding biodiversity – Save economic / leisure time (wood collect.)	Reduced pressure on forests enhances resilience to climate change and provides greater buffer zones and connectivity.	– Access to stove technology – Ensuring stove quality to deliver savings
	Improve efficiency of charcoal production	Reduce primary biomass demand	– Reduce fuel costs for producers – Reducing pressure on forest stocks / safeguarding biodiversity	As above	Establishing market for more expensive charcoal
	Promote fuel alternatives to charcoal (urban areas)	Reduce charcoal demand and increase use of modern fuels	– Reducing pressure on forest stocks / safeguarding biodiversity – Increase access to cleaner fuels – Reduction in urban air pollution	As above	Upfront costs of appliances and / or fuel
Industry	Tackle energy inefficiency in SMEs	Reducing industry fuel costs, increasing competitiveness	– Reduce fuel costs, enhance competitiveness – Enhance energy security – Reduce air pollution		Upfront costs with limited awareness of potential savings
Transport	Improve efficiency of road transport fleet (conventional technologies)	Reducing reliance on fossil fuel imports	– Reduce reliance on / payments for foreign fossil imports – Reduce costs of vehicle use – Reduce air pollution – Reduce road accidents (due to newer cars)		Additional upfront cost of more efficient vehicles
	Increase uptake of advanced technologies	Reducing reliance on fossil fuel imports	– Reduce reliance on / payments for foreign fossil imports – Reduce air pollution		– Additional upfront cost of more efficient vehicles – Avail. of technical services for advanced vehicles
	Alternative transport fuels	Reducing reliance on fossil fuel imports	– Reduce reliance on / payments for foreign fossil imports – Increasing energy security		Competition with other land uses
	Public transport systems	Meeting urban transport demand	– Reduce congestion – Reduce air and noise pollution levels – Save travel time / enhance productivity – Reduce road traffic accidents		– Large upfront investment costs – Incentivising shift away from private vehicles

SECTOR	OPTION	POLICY DRIVER	POLICY CO-BENEFITS	CLIMATE RESILIENCE	IMPLEMENTATION CONCERNS
Agriculture	Improve livestock and cropland management	Improve productivity & reduce land degradation	<ul style="list-style-type: none"> <li>– Protect / enhance arable land quality</li> <li>– Safeguard rural livelihoods</li> <li>– Increase economic productivity of sector</li> </ul>	Significant synergies with adaptation, establishing more resilient systems	Cultural issues concerned with changing farming practices
Forestry	REDD+ / Afforestation	Protect forestry-dependent economy and energy supply security	<ul style="list-style-type: none"> <li>Protect biodiversity, and dependent sectors</li> <li>Ensure security of wood fuel supply</li> </ul>	Reduced pressure on forests enhances resilience to CC and provides greater buffer zones & connectivity	<ul style="list-style-type: none"> <li>* Tenure issues</li> <li>* Enforcement</li> <li>* Permanence of savings</li> <li>* High transaction costs</li> </ul>

Table 4: Proposed Low Carbon Options for Tanzania

## 7. CONCLUSION AND RECOMMENDATIONS

### 7.1 CONCLUSION

Despite LCD initiatives featuring in recent climate change negotiations, Tanzania has not incorporated LCD in its national climate change strategy. Furthermore, the current LCD initiatives are not anchored to national environmental policy. Nevertheless, Tanzania has huge potential to contribute to LCD initiatives. The potential has not been well tapped thus far, due to a number of constraints explained earlier, with incentive being a major factor. The potential of LCD initiatives to mitigate climate change is in line with the provisions of the 2007 Bali Action Plan (BAP), which proposed the concept of NAMAs such as LCD initiatives.

Mitigating climate change is a responsibility of every party to the UNFCCC and its allied protocols, including the Cancun Agreement and the BAP to be specific. The Cancun Agreements stipulates that developed countries should formulate low-emission development strategies and plans, while developing countries are encouraged to do the same in the context of sustainable development (Decision 1/CP.16, Paras. 45 and 65). Therefore, mitigation to climate change must remain an important priority for Tanzania, despite its status as a least developed country.

Nevertheless, a number of factors have affected implementation of LCD Initiatives in Tanzania. Coordination-related problems, inadequate technical capability, financial dependency, and information asymmetry, among others, hamper the sustainability of most LCD initiatives in Tanzania. Furthermore, capacity building in the development of sustainable LCD initiatives has not been a key priority, in line with a lack of technical capability and coordination of LCD initiatives.

Sustainability of LCD initiatives requires the wide engagement of stakeholders. However, fund-raising and lobbying techniques for NGOs, especially CSOs are highly inadequate. Furthermore, most CSOs are not self-sufficient in terms of knowledge, and are highly dependent financially.

### 7.2 RECOMMENDATIONS

- i. Based on the Cancun agreement, Tanzania is obliged to achieve the peaking of GHG emissions in the country, and should seek to provide incentives to support low carbon development initiatives (1/COP.16.6 and 1/COP.16.10).
- ii. The government should facilitate the establishment of a coordination platform for LCD stakeholders, preferably hosted by some government institutions (e.g., Vice President's Office). The established platform should facilitate information sharing and technology dissemination.
- iii. Since the lack of technical capability has been reported to hamper sustainability of most LCD initiatives in Tanzania, capacity development should be a key priority and a key step towards sustainable implementation of LCD initiatives in Tanzania.
- iv. For sustainability of LCD initiatives, the government should incorporate LCD by revision the national climate change strategy, which also has to be anchored in the new and updated national environmental policy. Currently, the national environmental policy is outdated and it does not accommodate climate change issues at all.
- v. Information regarding GHG emission levels and LCD initiatives in different sectors should be captured and kept in a well-prepared database, and shared with people at the grass-roots level.
- vi. It is an undeniable fact that CSOs and research institutions play a key role in pushing for LCD in both developed and developing countries. Therefore, it is important to engage, strengthen and support them in order to advance LCD initiatives in Tanzania.
- vii. Capacity building in fund-raising and lobbying techniques for NGOs, especially (CSOs), is of paramount importance for creating self-sufficiency and financial independency, while addressing LCD initiatives in Tanzania.

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# EXPLORING SUSTAINABLE LOW CARBON DEVELOPMENT PATHWAYS



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