AAP Tanzania Final Evaluation Report

Supporting Integrated and Comprehensive Approaches to Climate Change Adaptation in Africa - Mainstreaming CCA in the National Sectoral Policies of Tanzania

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18/03/2013
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<tr>
<td>AAP</td>
<td>Africa Adaptation Program</td>
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<tr>
<td>ATLAS</td>
<td>Enterprise Resource Planning system used by UNDP</td>
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<td>AWP</td>
<td>Annual Work Plan</td>
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<td>CO</td>
<td>Country Office</td>
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<td>CSO</td>
<td>Civil Society Organization</td>
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<td>DFID</td>
<td>Department for International Development</td>
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<td>FVPO</td>
<td>First Vice President Office Zanzibar</td>
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<td>EMA</td>
<td>Environmental Management Act</td>
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<td>GEF</td>
<td>Global Environmental Facility</td>
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<td>GoT</td>
<td>Government of Tanzania</td>
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<td>LGA</td>
<td>Local Government Authority</td>
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<td>MCDGC</td>
<td>Ministry of Community Development Gender and Children</td>
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<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
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<td>MKUKUTA</td>
<td>National Strategy for Growth and Reduction of Poverty</td>
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<td>MoEVT</td>
<td>Ministry of Education and Vocational Training</td>
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<td>MoF</td>
<td>Ministry of Finances</td>
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<tr>
<td>MTEF</td>
<td>Mid-Term Expenditure Framework</td>
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<td>MTR</td>
<td>Mid-Term Review</td>
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<td>NAPA</td>
<td>National Adaptation Program of Action</td>
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<td>NEMC</td>
<td>National Environmental Management Council</td>
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<tr>
<td>NEX/NIM</td>
<td>National Execution/ National Implementation Modality</td>
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<td>NGO</td>
<td>Non-Governmental Organization</td>
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<td>PMU</td>
<td>Project Management Unit</td>
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<tr>
<td>REDD</td>
<td>Reduction of Emission from Deforestation and Forest Degradation</td>
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<tr>
<td>QPR</td>
<td>Quarterly Progress Report</td>
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<tr>
<td>SMART</td>
<td>Specific, Measurable, Actionable, Realistic, and Time Bound</td>
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<tr>
<td>SUA</td>
<td>Sokoine University of Agriculture</td>
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<td>TMA</td>
<td>Tanzania Meteorological Agency</td>
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<td>UDSM-IRA</td>
<td>University of Dar-es-Salaam, Institute for Resource Assessment</td>
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<tr>
<td>UNDAF</td>
<td>United Nations Development Assistance Framework</td>
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<td>United Nations Development Assistance Plan</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNFCCC</td>
<td>United Nations Frame Convention on Climate Change</td>
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<td>VPO-DoE</td>
<td>Vice President Office Division of Environment</td>
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Executive Summary

Tanzania’s economy is highly dependent on climate sensitive sectors such as agriculture, natural resources and tourism and its low adaptive capacity makes it highly vulnerable to the impacts of climate change.

The main barriers to mainstreaming climate change into Tanzania’s planning and investment instruments are: inadequate awareness among officials and decision makers on climate change issues, weak leadership and coordination capacities and limited availability of precise data on climate change impacts and adaptation measures.

The AAP seeks to address these barriers through development of capacities at different levels of state institutions to generate and manage information related to climate change and to incorporate it into planning instruments. The strategy to achieve this objective is organized into five outcomes set at regional level and adapted for national implementation:

1. Dynamic long-term planning capacities and tools enhanced to manage inherent uncertainties of climate change
2. Climate Change leadership and coordination of CC framework strengthened to manage climate change risks/opportunities
3. Climate change adaptation policies mainstreamed in MDAs
4. Regional, sub-regional, national, and local financing options expanded to meet national adaptation costs
5. Knowledge on the implications of climate change generated and shared among stakeholders at all levels

The AAP Tanzania was implemented as a UNDP NIM project under the direction of the director of the Division of Environment, Vice President Office with a total budget of 2,971,576.00 USD completed with 851,746 USD of UNDP’s TRAC funds.

The implementation was delayed for one year and could finally be on track by 2011. A no-cost extension was granted for 2012 and the project is finalizing implementation in March 2013.

The AAP intended to mainstream climate change into mainstream Climate Change Adaptation mechanisms in Tanzania’s policies, development and investment frameworks focusing on four MDA’s plans, MTEF and selected LGAs

1 These outcomes are named outputs in the project document and annual reports. See section 2.4.1 for a detailed explanation of the terminology.
The evaluation report concludes that the AAP was highly relevant to Tanzania’s condition as a vulnerable country and was in line with the country’s priorities and mid-term objectives. The implementation was considered satisfactory. However the targets set for the AAP Tanzania were only partially achieved mainly due to time constraints and an overly ambitious project design.

For the given time frame, the project’s main achievements were:

- Development of capacities on climate change in all participating institutions particularly VPO-DoE, Ministry of Finances and TMA.
- Enhancement of TMA’s capacities in generating and managing meteorological information
- Development of toolkits and guidelines that would support the mainstreaming of climate change in sector planning and investment instruments
- Successful implementation of four pilot projects that has solved the immediate water supply needs of communities in four districts. However, urgent action should be taken on watershed management, governance and demand-side issues to enable the sustainability of this result. The time frame for the project cycle of the pilot interventions, unfortunately, did not permit the timely documentation and dissemination of lessons learned in policy making.
- Involvement of the Ministry of Finance on climate change issues and initial studies on climate change finances
- First steps towards increasing public awareness on climate change issues

Based on these conclusions, the evaluation report highlights the following recommendations:

- More emphasis should be put in operational issues and monitoring and evaluation to avoid implementation bottlenecks and allow more efficient adaptive management and realistic target-setting
- Mainstreaming climate change or environmental issues in planning and investment instruments should take the timeframe of planning cycles into consideration at all levels and define a clear strategy that identifies entry points
- There is a need to establish a knowledge management system with participation of government, private sector and academic institutions to provide data for research and decision-making
• Promote further studies on impacts of climate variability (mid-term) and climate change (long-term), particularly on impacts of climate variability on key economic sectors
• Support the expansion of the meteorological, oceanographic and hydrological station networks
• Strengthen the role of the NCCSC and NCCTC by supporting regular meetings and the development of a work plan with performance indicators, with the goal of promoting the mainstreaming of adaptation and climate change issues in all government actions, plans and strategies.
1. Introduction

1.1 Purpose of the evaluation

The final evaluation of the Africa Adaptation Programme in Tanzania was conducted at the request of the UNDP country office to provide a detailed assessment of the status of its outputs and outcomes measured against the results and resources framework, how they were achieved and what factors have facilitated and/or hindered the achievements, and if the effects observed can be attributed to the project.

The evaluation was intended to serve the implementing partners of the AAP Tanzania and the UNDP CO in order to learn about more effective approaches to mainstreaming climate change into planning and investment instruments.

Based upon this, the objectives of this final evaluation are:
- To analyze the implementation of the project, and the progress achieved towards delivering the specified development objective and outcomes.
- To establish the relevance, effectiveness, efficiency, timeliness and sustainability of the results.
- To collate and analyze specific lessons and best practices pertaining to the strategies employed and implementation arrangements, which may be of relevance to other projects in the country and in similar contexts.

1.2 Methodology of the evaluation

To answer the evaluation objectives, primary and secondary data was collected and analyzed in the following steps from January 25th till March 18th, 2013:

- Mission to Dar-es-Salaam and Zanzibar (10 days) for briefing, scoping key issues, collecting documents provided by the project team and interviews with key actors and stakeholders
- Review and analysis of documents and financial information provided by the project team
- Submission of the draft evaluation report
- Review of the draft report by stakeholders
- Submission of final evaluation report

Secondary data from reports such as annual reports, mission reports, data, annual work plans, minutes of steering committee meetings, as well as national strategies and plans such as the National Strategy for Growth and Reduction of Poverty, NAPA, National Climate Change Strategy and context documents of bilateral and multilateral actors, such
as the UNDP country program, UNDAP and other independent assessments were used to establish the status of project outputs, level of involvement of national and provincial government, M&E system, efficiency of administrative processes and disbursement of funds as well as the institutional, sociopolitical, financial and environmental contexts.

In order to ensure participation stakeholders from, from the project management unit, to implementation partners and beneficiaries, the evaluators recorded their views and perceptions on the design, implementation, results and sustainability of the project through semi-structured individual and group interviews. A list of all interviewed stakeholders is attached in annex 2.

The extent of achievement and success in the different aspects of the project according to the evaluation criteria was established based on success indicators listed in the evaluation matrix in annex 1.

1.3 The project and its development context

Tanzania is vulnerable to climate change as evidenced by climate related loss and damages. Droughts and floods are the main climatic threats to a predominantly agrarian country, where the primary sector contributes 30% of the GDP and 80% of its population depends exclusively on rain-fed agriculture. Adaptation capacity is low, with more than a third of the population below the national poverty line and where infrastructure and basic services network are considered weak.

Climate projections for the mid and late 21st century forecast a very likely increase in mean temperatures, as well as alterations in the rain seasonality that will likely increase aridity and therefore will have an impact on agriculture and likely on hydropower development. Frequency and intensity of floods are likely to increase and together with rise in sea level. Increased exposure due to unplanned development and population growth could potentially affect the main ports and most densely populated coastal areas.

Therefore, Tanzania is faced with a significant risk to its future development. The Government of Tanzania has responded to this challenge by preparing a national communication to the UNFCCC, a national adaptation plan of action (NAPA) and several projects and studies supported by bilateral and multilateral donors.

Despite these efforts, the following barriers hampered the institutional response to the challenges posed by climate change:
• Limited understanding of the impacts and adaptation options by decision makers and work teams of state institutions and the general public
• Limited capacity to generate information on climate variability and change
• Limited capacity to access financial flows for adaptation action

2. Findings

2.1 Project objectives and results

2.1.1 Relevance
Tanzania’s economy is highly dependent on climate sensitive activities such as agriculture and wildlife and coastal based tourism. Dry tropical woodlands and grassland occupy most of the country’s territory and are subjected to periodic and recurrent droughts that affect wildlife as well as livestock and agriculture. Exposure to floods during the rainy season is increased as unplanned settlements and infrastructure grow with little regard to climate driven risks.

In summary, Tanzania’s population vulnerability to alteration of the climate regime is high because of the high prevalence of poverty and lack of access to basic services (water, sanitation, health, education and finances), as well as lack of environmental governance that increases environmental risks and depletion of natural resources.

Sectoral plans and interventions in Tanzania are guided by a number of macro and micro economic policies. The relevance of any development intervention in the country including climate change related interventions is gauged on the basis of how such interventions contribute to the attainment of these important frameworks. They include for example Tanzania Development Vision 2025 which was adopted by the Government in 1999 and its implementation started in 2000. Attributes of the vision include: High quality livelihood (which can be jeopardized by climate change), a strong and competitive economy, good governance, a well-educated and learning population, peace, stability and unity. In this context the AAP was very relevant because it addresses climate change issues which can negatively affect livelihoods and the economy. The country is guided by the Millennium Development Goals through which all member nations have pledged to eradicate extreme poverty and hunger, achieve universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health,

combat HIV/AIDS, malaria and other diseases, ensure environmental Sustainability, and develop a global Partnership for Development. In this context the AAP was very relevant for almost all the aspects of the MDGs. Tanzania has the MKUKUTA and the Five years development plan 2011/12 to 2015/16. MKUKUTA is the National strategy for poverty reduction which identifies three cluster outcomes aiming among other things at contributing to the attainment of the Millennium Development Goals (MDGs) 2015 and the Vision 2025. The three clusters include: (1) Growth and reduction of income poverty, (2) Improvement of quality of life and social wellbeing and (3) Good governance and accountability. In this context the AAP was very relevant in the sense that its interventions aimed to address outcomes 1 and 2 of the MKUKUTA. The Five years development plan provides among other things the commitment of the government to implement the MKUKUTA.

GOT’s awareness of the current and potential effects of climate change on Tanzania’s development path has been growing in the last decade as expressed in the Initial National Communication (2003) to the UNFCCC and particularly in the National Adaptation Plan of Action (2007) that identifies key vulnerabilities and immediate adaptation action needs in seven sectors: agriculture, energy, forestry and wetlands, health, human settlements coastal and marine and fresh water resources.

Climate change is explicitly addressed in the Environmental Management Act (2004) that gives the mandate to the Minister responsible for Environment (VPO-DoE) to take measures to address climate change, by issuing guidelines, including reforming school curricula, and emphasize national positions at local level. Despite this, climate variability and change are not explicitly addressed in Tanzania’s strategies and planning instruments, although they acknowledge the impacts of climate-driven factors (floods, droughts). Both the Tanzania Vision 2025 (2000-2025) and the National Strategy for Growth and Reduction of Poverty (MKUKUTA I) 2005-2009 stress the need of economic growth and provision of basic services for human development. MKUKUTA I also included vulnerability and environmental conservation as an operational target with measures such as water conservation, community-based natural resource management and river basin management.

A number of initiatives has been funded by the GOT’s development partners in support of priorities described in NAPA, several studies on the impact of climate change, particularly the Economics of Climate Change Study (DFID), the REDD program (Norway and UN-REDD), as well as several sustainable land management oriented projects (UNDP-GEF).
The AAP Tanzania sought to support the country’s efforts to reduce its vulnerability to climate change by developing institutional capacities and enhancing leadership and institutional coordination. It intended to achieve this by bringing explicit measures for adaptation to climate change into the country’s national, sector and local planning instruments and it is therefore in line with the target of reducing vulnerability stated in the National Strategy for Growth and Reduction of Poverty, as well as the climate change actions mandated by EMA and with NAPA. Also, as it emphasizes strengthening evidence-based planning and resource allocation, aligning strategic plans of ministries, MDAs and LGAs, as well as strengthening government capacity, it directly supports GOT’s priorities as expressed in MKUKUTA I and the Vision 2025.

The AAP was also relevant to the outcomes of the UN country team and the UNDP country program. The project supported the implementation of:

- UNDAF 2007-2010, specifically Outcome 1: *Increased access to sustainable income opportunities, productive employment and food security in rural areas* and Outcome 2: *Increased access to quality basic social services for all by focusing on the poor and the most vulnerable*;
- The UNDP country program document, specifically Outcome 1: *Increased adoption of equitable pro-poor and gender sensitive economic policies and programmes*, Outcome 4: *Effective mechanisms in place, including social protection, that address institutional barriers and socio-cultural dimensions to promote and protect the rights of the poor and vulnerable* and Outcome 5: *Improved community access to safe, clean water and environmental sanitation in the rural and urban areas*.

### 2.1.2 Effectiveness

The objective of the AAP Tanzania was to mainstream climate change adaptation mechanisms in planning, market/ fiscal/ financial and implementation processes by developing capacities at national and district level on climate change, planning, budgeting and M&E to enable development actors, particularly district councils, sector ministries and the VPO-DoE, as well as the MoF to mainstream climate change adaptation in their sector and national planning instruments. The capacity development would be achieved through targeted trainings and development of guidelines, studies, as well as hardware capacities, tools and instruments.

The AAP was structured in five outcomes that responded to the regional AAP framework, which included:

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3 These outcomes are named outputs in the project document and annual reports. See section 2.4.1 for a detailed explanation of the terminology.
• enhancement of capacities to generate and manage information on climate change through impact studies and meteorological capacities (outcome 1);
• improvement of coordination mechanisms through the strengthening of the National Climate Change Technical Committee (NCCTC), and the VPO-DoE that would coordinate all national and sub-national climate change activities, including those under the AAP (outcome 2);
• mainstream climate change in sector and district plans, through demonstration (pilot) projects (outcome 3);
• development of financial mechanisms to fund adaptation action (outcome 4); and
• establishment of a knowledge management system on climate change in Tanzania (outcome 5).

The design logic provided several feedbacks between outcomes:
• information generated under outcome 1 should advise the development of financial mechanisms and communication and awareness strategies to be formulated under outcome 4 and 5 respectively;
• community-based projects implemented under outcome 3 should also be documented to inform policy making processes supported by activities under outcomes 3 and 4;
• toolkits and guidelines developed under outcomes 2 and 5 should again strengthen the districts implementing the pilot projects (See annex IV; design logic).

Therefore, successful implementation of the project depended on a very careful timing of activities to achieve the intended results in time to influence and support implementation under other outcomes and exquisite coordination with Tanzania’s national and sector planning cycles.

The AAP has indeed set basis for future developments in climate change coordination and investment, as it has raised institutional capacities on climate change issues and has set the stage for climate change mainstreaming particularly by involving the Ministry of Finance.

Capacities have been substantially increased at the Tanzania Meteorological Agency, which is the country’s provider and manager of meteorological data and the Division of Environment, the institution in charge of coordination of climate change matters and implementation of the main legal instrument including climate change provisions, which is the Environmental Management Act. Nonetheless, the project was not able to directly
support the strengthening of the national climate change committees that would have fostered inter-institutional coordination, including that of civil society and private sectors.

Although mainstreaming of climate change issues in national, sector and district planning and investment instruments has not been achieved, the pilot projects have been successfully implemented and could offer insights and lessons learned for future adaptation initiatives.

Finally, advances have been made to include climate change related issues in primary and secondary curricula and awareness-raising campaigns may have contributed to generating conscience of the importance of climate change among the general public. Despite these efforts, the establishment of a climate change knowledge management system, which could generate, manage and distribute information on climate change (projections, impacts, adaptation options) to different users (district, sector ministries, research institutions) has yet to be accomplished.

A detailed description of the projects achievements per outcome measured against the targets set in the project’s logical framework are as follows:

**Outcome 1 Dynamic long-term planning capacities and tools to manage inherent uncertainties of climate change enhanced**

The logic of this outcome was to prepare a series of studies on climate change: adaptation measures and costs, vulnerability etc. based on existing but dispersed information (output 1.1), as well as strengthening the Tanzanian Meteorological Agency (TMA) with equipment and training to develop its capacities to produce climate projections (output 1.2). The information generated should then be fed into the policy making process and be mainstreamed in the country’s main planning instrument, the National Strategy for Growth and Reduction of Poverty Strategy (MKUKUTA), in four districts and four sector plans, as well as in budgeting.

The targets for this outcome were:

1. Information on climate change risk, vulnerability and impact studies, adaptation options and their linkage to socioeconomic data consolidated into a comprehensive document (first year)
2. TMA trained and equipped with appropriate modeling software and meteorological hardware (second year)
3. Climate change adaptation incorporated in MKUKUTA and MKUZA (second year)
4. Four MDAs and four districts incorporated climate change adaptation in their Mid-Term Expenditure Framework (MTEF) and strategic plans (second year)

The Institute for Resource Assessment (IRA) of the University of Dar-es-Salaam has prepared a study on vulnerability, climate trends and traditional adaptation practices. The study summarized general perceptions on impacts and adaptation options at national level for the forest, agricultural, water, health, construction, wildlife and livestock sectors. The study also contained a case study for the district of Igunga, where a comprehensive research was conducted on climate change perceptions (including comparing perceptions with actual meteorological data) and adaptation measures currently implemented at community level. The report also included research priorities and capacity needs for local research institutions.

The AAP strongly contributed to the development of capacities at the TMA with the acquisition of a cluster of seven new automatized meteorological stations, as well as a computer cluster to process and manage meteorological data. Also, the AAP supported the training of TMA’s modeling experts in downscaling techniques\(^4\). TMA also trained its staff in analysis of climate data with AAP support.

To achieve the expected outcome TMA would still need to expand their meteorological network and the meteorological data would still need to have decadal records to be able to downscale regional climate models and/ or existing historical data would need to be digitalized and processed for this purpose.

This outcome’s target of mainstreaming climate change issues in the MKUKUTA II (2010-2015) could not be attained since its impact, i.e. better and more accurate climate and vulnerability information will only be available for the next planning cycle.

No MDA or districts incorporated climate change adaptation in their Mid-Term Expenditure Framework (MTEF) and strategic plans. This target was duplicated under outcomes 3 and 4. Only the environmental sector under the responsibility of the VPO-DoE and the Ministry of Education and Vocational Training (see outcome 2) incorporated climate change in their plans and strategies.

The National Environmental Action Plan (NEAP) was reviewed to include climate change issues. The NEAP describes the current status and trends of the environment in Tanzania

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\(^4\) Personal communication TMA AAP team; there is no reference to this training in the AWP or QPRs and annual reports
as well as the legal, institutional and political framework that addresses environmental issues. It lists main environmental challenges/ issues and the corresponding actions, expected outputs, indicators, time frame and implementing partners but it does not include a budget or any estimation of the cost of the proposed actions. Climate change was included as environmental challenge in the description of status and trends. Suggested actions to address climate change include mainstreaming climate change in sector strategies, implementation of adaptation projects, promotion of early warning systems (all goals of the AAP) and implementation of the National Climate Change Strategy\(^5\). Climate change is not mainstreamed in NEAP but included as an environmental issue with the same weight in number of priority actions as “Urban Pollution” or “Electrical and Electronic Equipment Waste”.

**Outcome 2** Climate Change leadership and coordinating CC framework strengthened to manage climate change risks/opportunities

This outcome intended to strengthen national capacities to coordinate climate change adaptation action through trainings on climate change, leadership, planning, budgeting, and management and M&E for officials of institutions members of the National Climate Change Technical Committee (NCCTC), as well as for district councils in the four districts where pilot projects were to be implemented. These capacity development activities were expected to enable the NCCTC, MDAs and district councils to formulate climate change adaptation action plans including monitoring and evaluation frameworks (output 2.1).

At the same time, the awareness level of the general public and students at all educational levels should be raised by specific awareness packages and a reviewed environmental education strategy that would include climate change issues in primary, secondary and tertiary curricula (output 2.2).

The targets for this outcome were:

1. Hold one national forum with all national fora coordinating climate change related activities (first year)
2. Climate change action plans and M&E frameworks at national and in four district level in place (second year)

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\(^5\)The National Climate Change Strategy was developed and formulated during the AAP timeframe but without direct participation or contribution from the AAP although AAP focal points participated in the formulation and preliminary experiences from the AAP were included, such as indigenous knowledge.
3. VPO-DoE and CCA coordinating structures trained in climate change adaptation management (second year)

4. Climate change adaptation packages developed and disseminated to various stakeholders (second year)

5. National environmental education strategy reviewed to reflect climate change (second year)

The forum of all climate change related institutions or for a will be held in April 2013 and therefore cannot be analyzed within the scope of this evaluation report. Also, there were no activities aimed to strengthen the existing National Climate Change Steering Committee (NCCSC) or the National Climate Change Technical Committee (NCCTC). On the other hand, a Climate Change Steering and Technical Committees were established and approved by the Government of Zanzibar. The Steering and Technical Committees intend to coordinate all climate change related activities in Zanzibar, as well as to implement externally funded activities and interventions.

The AAP did not support formulation of action plans and M&E frameworks at sector or district level. M&E guidelines for climate change were developed and disseminated by the VPO-DoE. The objective of these guidelines is to guide MDAs and LGAs to monitor and evaluate development objectives that are relevant to climate change adaptation. The guidelines describe the environmental institutional framework as it is shown in the NEAP (developed under outcome 1) and explain general concepts on results based management, results framework and indicators. They provide general templates for project logical framework but do not provide any example specific to climate change related issues.

In Zanzibar the AAP supported the formulation of a Climate Change Strategy. The development process involved consultation with different stakeholders. The Zanzibar Climate Change Strategy document was still being finalized by the time of the final evaluation.

Capacity-strengthening activities in the form of two-day trainings were conducted at district level in the four districts, where pilot projects were implemented. These trainings included general topics of environmental management and climate change. Officials of the VPO-DoE attended more trainings related to planning and budgeting for climate change and one seven-day training included officials from all AAP implementing partners, including one official from the Ministry of Energy and one from the Ministry of Agriculture, Food and Cooperatives. The training consisted in an exercise, where
participants examined actions of the National Strategy for Growth and Reduction of Poverty (MKUKUTA) 2010-2015 under a “climate lens” and suggested actions to promote adaptation and minimize mal adaptation. There was no follow-up on these suggested measures to be incorporated into MKUKUTA.

The National Environmental Management Council (NEMC) developed awareness packages consisting of leaflets and brochures with brief lists of impacts and adaptation options on the NAPA sectors (agriculture, energy, forestry and wetlands, health, human settlements coastal and marine and fresh water resources), as well as materials like cups, key holders, wheel covers, posters and ball pens with simple messages such as “Climate Change Causes more Poverty”. These materials were distributed in awareness-raising activities with a number of stakeholders including the private sector and civil society organizations. Specific targets or an impact monitoring strategy and a baseline were not established for these awareness-raising activities.

The Ministry of Education and Vocational Training (MoEV) reviewed its Environmental Education Strategy with the support of the AAP. The strategy now includes general climate change issues. The strategy is expected to attract external funding for its implementation. The MoEV has also reviewed primary education curricula to include climate change issues. This reviewed curriculum is pending approval by the Ministry. An implementation of the new curricula would need some external support, as the capacity of teachers to communicate the new subject matters needs to be developed.

**Outcome 3 Climate Change Adaptation policies mainstreamed in MDAs**

This outcome sought to mainstream climate change issues in sector planning, i.e. MDA’s programs and projects through development of mainstreaming guidelines as well as guidelines on M&E (Output 3.1).

Community-based adaptation projects would be implemented in four districts, of which results would enlighten sector policy and program formulation. (Output 3.2)

The sector policies/ strategies/ programs and projects would then be reviewed during the AAP time frame by the VPO-DoE according to the guidelines developed under this outcome (Output 3.1).

The targets for this outcome were:
1. Four pilot projects designed and which implementation would begin on the mainland and Zanzibar (first year)
2. Guidelines for integration of climate change adaptation developed for Ministries, Departments and Agencies (MDAs) policies, programs and projects (second year)
3. Four MDAs and four districts have mainstreamed climate change adaptation in their policies, programs and projects (second year)

Four pilot projects were designed and implemented in the districts North A (Zanzibar), Mbinga (Ruvuma), Igunga (Tabora) and Missenyi (Kagera). All four projects consisted in enhancements of water supply to villages suffering from water scarcity related to drought, salinization or distance from water source.

The projects were selected based on agro-ecological zones (coastal, arid, sub-humid) and in consultation with the district and village councils coordinated by the VPO-DoE and the FVPO Zanzibar. The AAP project document envisioned a multisector approach but this was abandoned due to the clear priority on water set by the village councils involved. The four projects achieved enhancement of fresh water supply for the villages and included measures on the demand side such as water governance (creation of water management councils at village level, fee collection systems), but specific measures such as regulation of extraction effort, competition for water resources or watershed management as well as the impacts climate change or adaptation measures are yet to be established.

In the district North A of Zanzibar a new borehole and distribution system (pumps, pipes and tank) have been installed for the coastal village of Nungwi. Wells supplying this fishing village at Unguja’s North coast have been turning brackish, effectively depriving villagers of fresh water supply. The new system extracts water from a rain-replenished aquifer. Replenishments and extraction rates have not been quantified but extraction rates are supposed to be increasing due to population increase and tourism demand.

The Mbinga (Ruvuma) pilot project brought water supply for domestic consumption and on small scale irrigation to the Ng’ombo village from a safe source (creek) some 10 km away from the village by gravitation, including installation of tanks and pipes.

The Igunga (Tabora) pilot project involved rehabilitation by dredging and enhancing the dam of two natural rain water reservoir (charcoal dam) as well as providing separated water points for people and cattle, and limiting direct access to the reservoir to enhance water quality.
In Missenyi (Kagera) the pilot project consisted in enhancing water supply for several villages through construction of wells and drilling boreholes including piping and pumps.

Two of the four pilot projects were completed and the other two are at near completion by the time of the final evaluation.

Although documentation of best practices and lessons from the pilots was done, allocated time frame for the project cycle did not permit wide dissemination of lessons learned in order to adequately influence policy. This weakness notwithstanding, in the districts where piloting was done the project influenced the planning processes to accommodate climate change adaptation activities. Despite the fact that indications of institutional sustainability of the pilots and social acceptability were evident technical sustainability of water supply was not adequately supported by detailed feasibility studies during the design phase of the project.

The AAP intended to use the lessons learned from this project to inform policy making processes at sector and district levels, in at least the four districts where they were implemented and the four MDAs identified under outcome 1. In fact this target was duplicated in outcome 1 and 4 and has not been achieved for two main reasons:

1. The time needed for the pilot project cycle - design, implementation, evaluation, as well as documentation - was longer than the timeframe allocated for the implementation of the AAP.
2. The entry points at the policy making process or even the MDAs, which policy was to be informed, were not identified during the formulation or the implementation stages of the AAP.
3. The mainstreaming process at sector and district levels was never initiated
4. The target “four MDAs and four districts have mainstreamed climate change adaptation in their programs, plans and budgets” appears under outcome 1, 3 and 4. The logical connection between the three outcomes or the complementarity of their approach was not discussed in the project document or any AAP operational document.

Two guidelines documents were produced: National Guidelines for Mainstreaming Gender into Climate Change Related Policies, prepared by the Ministry of Community Development, Gender and Children (MCDGC) and the Guidelines for Integrating Climate Change Adaptation into National Sectoral Policies, Plans and Programmes of Tanzania, prepared by the VPO-DoE.
The National Guidelines for Mainstreaming Gender into Climate Change Related Policies describes the institutional framework for gender in Tanzania and a simple explanation of climate change science and impacts. It illustrates the different impacts of climate change on men, women and children. The guidelines calls for revision of programs, plans and strategies to check the inclusion of gender-based disaggregated data on impacts and effects, including specific actions to correct gender inequalities, developing institutional capacity on gender issues and allocating budget for gender related activities. However, it neither provides case studies nor examples of specific gender-based actions in climate change policy.

The Guidelines for Integrating Climate Change Adaptation into National Sectoral Policies, Plans and Programmes of Tanzania describes the environmental institutional framework and enumerates impacts of climate change in several sectors: fresh water resources, coastal and marine environment, agriculture and food security, energy, livestock and rangeland, fisheries, forests, human health, infrastructure and human settlements. It also lists some general adaptation actions per sectors, such as crop diversification or protection of water catchments and recommends performing vulnerability analysis, but does not describe methodological aspects.

The mentioned Guidelines has not yet been applied to mainstreaming climate change in sector policies. The Guidelines would need further elaboration on methodological issues, such as vulnerability analysis and costing of adaptation options (including gender issues), as well as a more detailed description of adaptation actions per sector to effectively support policy making at sub-national or sector level.

**Outcome 4** Regional, sub-regional, national, and local financing options to meet national adaptation costs expanded.

This outcome intended to develop the capacities of the Ministry of Finances through trainings on mainstreaming CCA in budgeting and investment planning tools (drawn from outcome 1, vulnerability assessments) to be able to produce guidelines on mainstreaming climate change issues in sector budget, as well as to develop fiscal mechanisms to promote investment on climate change adaptation (output 4.1). The guidelines and fiscal instruments are supposed to be put in action by mainstreaming the fiscal instruments of four MDAs and four districts (presumably the same four targeted by outcome 1 and 3).
The MoF is supposed to be able to develop and formulate a climate change finance strategy or model that would include private investment as well as international funds (output 4.2).

Targets under this output were:

1. MoF trained in identification of long-term financing of climate change adaptation and development of fiscal mechanisms to coordinate climate change funds (first year)
2. Market/ fiscal/ financial mechanisms or guidelines for financing of climate change adaptation developed for LGAs and community level (second year)
3. Global and private sector long-term climate change financing integrated in national investment plans (second year)

The AAP set the basis for the involvement of the Ministry of Finance in climate change, being the first climate change adaptation project with institutional engagement of finances in a field traditionally considered as “environmental”.

The capacity building activities consisted in one training event on climate change organized by the Ministry of Finance for officials from other ministries, local government and civil society. To support the capacity building activities two studies were commissioned by the Ministry of Finance:

1. Study on Potential Incentives for Private Sector Investment in Climate Change
2. Study on Climate Change Adaptation Funding in Tanzania

At the time of the final evaluation, only the report of the Study on Climate Change Adaptation Funding in Tanzania was available. This report made the case for adaptation, listed the impacts of climate change and described the institutional framework to tackle climate change issues in Tanzania. It established the low level of funding of adaptation activities and briefly described multilateral and bilateral funding sources. It ended by recommending the creation of a national climate change fund to coordinate funding of adaptation activities.

Guidelines on financing climate change adaptation for local governments, districts or villages or fiscal mechanisms for climate change adaptation were not developed under this project.

A finance strategy for climate change was not developed.
Outcome 5 Knowledge on the implications of climate change generated and shared among stakeholders at all levels

This outcome sought to provide Tanzania’s with a communication strategy for climate change issues that would be based on the information generated under outcome 1 and on the documentation and lessons learned from the implementation of the AAP. The communication strategy would target national and international stakeholders. On the national level, private investors and communities would be the primary targets; toolkits would be developed for both groups (business and communities) to promote and facilitate mainstreaming of climate change issues in their plans, programs and projects.

The targets under this outcome were:
1. National Climate Change Communication Strategy developed (first year)
2. Documentation and dissemination of the AAP process through mass media (second year)
3. Three climate change adaptation management toolkits developed for the arid, coastal and semi-humid zones (second year)
4. Climate change knowledge package developed for the private sector (second year)

The National Climate Change Communication Strategy was developed through a consultative process coordinated by the VPO-DoE. The overall objective of the Strategy was to facilitate effective communication on climate change information. It provided guidelines on the characteristics of a good communication campaign and listed key topics that should be communicated in six thematic areas namely, general knowledge on climate change, adaptation, mitigation, climate change research, gender and financing. It did not provide an action plan with specific targets, budget or timeframe.

The documentation process of the implementation of AAP activities was not finalized at the time of this final evaluation.

A draft Climate Change Adaptation Information Toolkit for Farming Communities in Tanzania was produced by the VPO-DoE. The intended users of this toolkit were community members and extension officers. The toolkit summarized climate change science and impacts in agriculture, livestock, fisheries, energy, infrastructure and human health and listed the same general adaptation options as the Guidelines developed under outcome 3, but it gave some detail on adaptation options for agriculture. It briefly
described the steps needed for community-based planning, including identification of problems, developing results and indicators (providing some examples).

A climate change knowledge package for the private sector was not developed and there is no evidence of the results of the AAP being disseminated through the mass media.

2.2 Sustainability

The AAP has contributed to develop Tanzania’s capacities to generate and manage climate data by supporting the acquisition of meteorological stations and high performance computers. TMA has the financial capacity to maintain the newly procured equipment but further expansion of its capacities to use regional and general models to generate projection of climate variables would depend on additional external support to increase its meteorological network coverage, digitalize and process historical meteorological data.

The efforts of the AAP increased awareness among key government institutions, particularly the VPO-DoE, MoF, MoEVT and MCDGC, which will facilitate the progressive mainstreaming of climate change issues in Tanzania’s planning instruments.

Two key planning instruments were developed during the time frame of the AAP Tanzania: the National Climate Change Strategy (2012) and the National Strategy for Growth and Reduction of Poverty 2010-2015 (MKUKUTA II). Although these instruments were not formulated with the support of the AAP, they promote adaptation to climate change and would guide GOT’s climate change interventions in the short-term.

The National Climate Change Strategy was created with the goal of enhancing Tanzania’s adaptive capacity. It was not formulated with direct support from the AAP but with AAP focal points from different institutions. It set objectives and suggests interventions in key sectors: water resources, coastal and marine environment, forestry, wildlife, agriculture and food security, human health, tourism, energy, industry, livestock, fisheries, infrastructure, human settlements, and land use with participation of a number of government and civil society actors. It did not include a financial strategy, however, it recommended the establishment of a National Climate Change Fund.

The National Climate Change Strategy’s institutional arrangements involved key state institutions coordinated by the VPO-DoE with the NCCSC and the NCCTC as advisory bodies.
MKUKUTA II (2010-2015) and the Five Year Development Plan (2011-2016) are the short-term planning instruments of Tanzania and direct public actions and investment. MKUKUTA II seeks to promote inclusive economic growth by efficiently using natural and human resources, strengthening institutions and good governance, provision of infrastructure and enhancing state revenue from internal and external sources. It is organized in three clusters:

1. Growth for reduction of income poverty
2. Improvement of quality of life and social well-being
3. Good governance and accountability

Cluster 1 sets targets for increased productivity in agriculture and livestock, forestry, fisheries, tourism and energy. Cluster 1 includes the goal of “Ensuring Food and Nutrition Security, Environmental Sustainability and Climate Change Adaptation and Mitigation” that lists the objectives of a) Crop and livestock varieties suited to adverse conditions brought about by climate change introduced and adopted and b) Climate change projection and early warning and natural disaster response, coordination framework strengthened.

MKUKUTA proposes growth based on climate sensitive sectors such as agriculture and livestock and energy through investments in infrastructure and provision of inputs as well as modernization and support to commercialization. The risks associated with climate variability and extremes are not mainstreamed throughout the economic growth strategy but rather separated as a subset of the food security goal.

Financial support for adaptation action would largely depend on external funding support to come up with the estimated 150 million USD/ year needed to build up adaptation capacity.

Current support is provided by UNDP with the project Mainstreaming Environment and Climate Change Adaptation in the Implementation of National Policies and Development Plans and Norway’s commitment to REDD.

The Mainstreaming Environment and Climate Change Adaptation in the Implementation of National Policies and Development Plans project is funded with UNDP core funds (820,000 USD) and the One UN Fund (2 million USD). Additional funds are still needed to be mobilized amounting to 4 million USD. The outcomes of this project are basically the same as AAP’s:
1. Environment and Climate Change Adaptation Mainstreamed in National Development Planning Processes as part of MKUKUTA II implementation
2. Reviewed NAPA as part of the process for the development of National Climate Change Strategy and NAMAs
3. Strengthened Institutional Framework for Climate Change Governance
4. National Climate Change Financing Mechanisms Developed
5. Improved level of information availability and awareness on climate change impacts and adaptation strategies, environmental laws and regulation among the general public and rural communities.

The *Norwegian Climate and Forest Initiative* has committed 33 million USD for REDD pilot projects engaging nine Tanzanian civil society organizations with the following outputs:

1. Participatory Forest Management (PFM) processes reviewed and REDD mechanism agreed upon and implemented
2. Governance, legal and institutional issues addressed
3. Advocacy, education, awareness and knowledge management campaigns
4. Alternative income generating activities for Forest Adjustment Communities supported

### 2.3 Partnerships

#### 2.3.1 Relevance and efficiency

The following relevant initiatives were identified in the project document:

1. UN-REDD pilot project for reduction in deforestation and forest degradation in Tanzania, funded by UN-REDD, with 4.3 million USD and implemented by the Forest and Beekeeping Division of the Ministry of Natural Resources and Tourism
2. Mainstreaming Climate Change into Integrated Water Resources Management in Pangani River Basin
3. The Norwegian Climate and Forest Initiative with 33 million USD for REDD pilot projects engaging nine Tanzanian civil society organizations

The project document listed other projects that deal with natural resource management, particularly forestry and renewable energies.

Other ongoing initiatives during the AAP time frame but not identified in the project document were:
1. Economics of Climate Change in Tanzania funded by the DFID that assessed climate change impacts and their economic costs, analyzed the costs and benefits of adapting to these effects over different timescales and assessed the potential for low carbon growth, including development benefits and finance opportunities

2. Capacity building for sustainable running water management and cost recovery in Zanzibar, funded by the European Union with 981,000.00 USD to support the village water committees in district North B, Zanzibar

3. Empowering and accompanying rural communities in their transformation to resilient eco-villages in Tanzania, funded by the European Union with 2.9 million USD to increase adaptation capacities and improve livelihoods in three types of ecosystems: coastal/islands, dry lands and highlands and identify, test, adopt and share innovative interventions in the targeted eco-villages

4. Climate Change Adaptation in Tanzania's Coastal Villages funded by USAID with 3.8 million USD to raise awareness of coastal vulnerability and adaptation to climate, identify climate change vulnerabilities and ways to increase resilience and reduce harm from climate change impacts and catalyze and share good practices in coastal adaptation

The AAP indirectly created synergies with other climate change initiatives by strengthening key partners, particularly the VPO-DoE, which has a coordinating role. The AAP was also in line with NAPA and the INC. However, the AAP did not establish direct collaboration with other climate change related initiatives identified or not in the project document, particularly with the REDD initiatives (although coordination with UNREDD was granted through UNDP’s involvement) and the Study on Economics of Climate Change. In addition, as described in the sustainability section, AAP’s objectives will be carried on by the Mainstreaming Environment and Climate Change Adaptation in the Implementation of National Policies and Development Plans project. Despite having an almost identical set of objectives and the fact that this project was formulated during the implementation of the AAP, the project document only lists the AAP as an ongoing climate change initiative without further detail.

2.3.2 Effectiveness

The AAP intended to strengthen leadership and institutional coordination for climate change action in Tanzania. Seven government institutions and one academic institution were included as implementing partners of the AAP: VPO-DoE, FVPO Zanzibar, Ministry of Finance, Ministry of Education and Vocational Training, National Environmental...
Management Council, Ministry of Community Development, Gender and Children and the Tanzanian Meteorological agency as well as the University of Dar-es-Salaam, Institute for Resource Assessment.

During the project formulation phase, other government institutions, such as the Prime Minister Office Regional Administration and Local Government (PMO-RALG), Ministry of Health and Social Welfare, Ministry of Water and Irrigation, Ministry of Agriculture, Food and Cooperatives, Ministry of Lands, Housing & Human Settlements Development, as well as representatives from civil society organizations and private sector were represented. In fact, the PMO-RALG, MOWI and MAFC were included as implementing partners in the project document.

The VPO-DoE, as government’s climate change focal point and the state institution responsible for the implementation of climate change adaptation measures selected the final implementing partners in function of the outcomes and outputs of the AAP.

The implementing partners of the AAP can be considered a subset of Tanzania’s climate change stakeholders that include “traditional” climate change partners as well as “cross-cutting” institutions such as the Ministry of Finance (MoF), the Ministry of Community Development Gender and Children (MCDGC), and the Ministry of Education and Vocational Training. Development partners normally involved in climate change activities are meant here as “traditional” climate change partners, as described below in the example of the project Mainstreaming Environment and Climate Change Adaptation in the Implementation of National Policies and Development Plans and the National Climate Change Strategy.

The Mainstreaming Environment and Climate Change Adaptation in the Implementation of National Policies and Development Plans project includes the Ministry of Finance, the National Environmental Management Council, the Ministry of Agriculture, the Ministry of Environment and Natural Resources, the Ministry of Water and the Ministry of Energy as implementing partners.

NAPA and the National Climate Change Strategy identify the following critical sectors for adaptation to climate change: agriculture and food security, water resources, human health, forestry and wetlands, fisheries, energy, coastal and marine resources, wildlife, tourism, infrastructure, settlements and industry. The government institutions with responsibility in those sectors are: Prime Minister’s Office, Ministry of Agriculture, Food and Cooperatives, Tanzania Meteorological Agency, Ministry of Water, VPO-DoE, National

Civil society organizations (CSOs) in Tanzania are very active in climate change issues, particularly Tanzania Traditional Energy Development Organization (TaTEDO), Tanzania Forest Conservation Group (TFCG), Wildlife Conservation Society (WCS), Wildlife Conservation Society of Tanzania (WCST) and World Wide Fund for Nature (WWF) and there are two CSO climate change associations: the ForumCC – also known as the Tanzanian Civil Society Forum on Climate Change and the Climate Action Network-Tanzania (CAN-Tanzania). Despite this relevance they were not included directly or indirectly in the implementation of the AAP, although some representatives were present in the Local Project Appraisal Committee.

During implementation each partner conducted their set of actions to deliver the expected products with overall coordination by the VPO-DoE but with little communication among them. AAP focal point meetings took place twice a year, coinciding with the project board meetings.

At local level, District Councils and Village Councils were involved at the districts, where the pilot projects were implemented. The sites were selected by the VPO-DoE for Tanzania mainland and FVPO for the site in Zanzibar. Within the districts, the District Councils actively participated and consulted with village councils for the final site selection.

The implementation and approach of the pilot projects were strongly determined by the village councils’ priorities: this explains why all four pilots focused on enhancing fresh water supply.

2.4 Processes and administration

2.4.1 Effectiveness

The terminology used in the project document does not correspond to the Results Based Management terminology used by the UNDP. In the Handbook on Planning, Monitoring and Evaluating for Development Results the results are defined as follows:

- **Outcome**: *short to medium term change in the development situation*
• **Output**: product and services tangible/ intangible delivered or provided by the project.
• **Activity**: task undertaken in order to produce the project's outputs.

The project document used ATLAS terminology naming the short to medium term changes as **outputs**, the products and services delivered by the project as **activity results** and the tasks undertaken to reach the products and services **activities**, which led to some confusion during the evaluation period.

The AAP Tanzania’s goal was to mainstream climate change adaptation mechanisms in planning market/ fiscal/ financial and implementation process. To achieve this objective, five outcomes were set at regional level, namely:

1. Dynamic long-term planning capacities and tools to manage inherent uncertainties of climate change enhanced
2. Climate Change leadership and coordinating CC framework strengthened to manage climate change risks/opportunities
3. Climate change adaptation policies mainstreamed in MDAs
4. Regional, sub-regional, national, and local financing options to meet national adaptation costs expanded
5. Knowledge on the implications of climate change generated and shared among stakeholders at all levels

Nine outputs and thirty-one activities were formulated to achieve the five outcomes. The outputs and activities generally responded to SMART formulation criteria but did not always take risks and assumptions into consideration. The logical coherence between the results levels was not always clear as explained below:

• The first outcome sought the integration of climate change considerations in the National Growth and Poverty Reduction Strategy (MKUKUTA II) and in sector and local planning and investment instruments through enhanced capacity of the Tanzanian Meteorological Agency and other MDAs, as well as publication of studies on Tanzania’s vulnerability to climate change; the design failed to clearly define entry points in the national, sector and local planning cycle and to take into consideration the time frame needed for the created capacities to have an effect on the policy making process.

• The second outcome intended to strengthen coordination and leadership on climate change issues through capacity development at national and local institutions; the design lacked a clear strategy to achieve the institutional arrangement for leadership and coordination. It also included development of
climate change adaptation action plans and monitoring and evaluation frameworks at national, regional and district level as an activity aimed at strengthen leadership; this activity would overlap with the intended mainstreaming of climate change issues in national, sector and local planning instruments under outcome 1.

- The third outcome sought the mainstreaming of climate change in sectoral policy instruments through sector and local adaptation strategies and action plans and implementation of pilot projects with multi-sector approach; The design of this outcome overlapped with outcome 2, under which adaptation action plans would also have been developed, and lacked a clear strategy for the inclusion of the lessons learned from the pilot projects in the policy-making cycle, as well as the time frame needed for the pilot project’s cycle.

- The fourth outcome envisioned the development of finance options for adaptation through development of capacities at state institutions for the management of funds as well as the development of a finance strategy for adaptation. The targets included development of fiscal instruments, mainstreaming climate change in sector policy and private and international fund flows integrated in national investment plans. The design again overlapped with the intended targets under outcome 1, 2 and 3 of having climate change adaptation mainstreamed into national and sector policy.

- The fifth outcome sought to disseminate knowledge on climate change among stakeholders using knowledge, lessons and experiences from the region.

The AAP Tanzania was executed under UNDP’s NEX/ NIM modality of implementation.

The project’s national director was the director of the Division of Environment of the Vice President Office and the project management unit (PMU) was also integrated within the VPO-DoE.

A project steering committee (SC) composed by high officials (permanent secretaries) of the government implementing partners and UDSM and UNDP oversaw the implementation of the project; they were informed on progress by the PMU and approved the annual work plans. The SC met once yearly. A technical committee was not set up formally, but the AAP focal points at the implementing partners were convened by the project’s national coordinator twice a year for information and coordination purposes.
2.4.2 Timeliness

The planned implementation time frame for the AAP in Tanzania was two years. The project document was prepared in 2009 and the local project appraisal committee was convened in November 2009. The inception workshop took place in May 2010.

The recruitment process for the project management unit (PMU), including national project coordinator and administrative assistant took longer than expected. A project national coordinator was hired by the end of 2010 but the assistant position remained vacant. Administrative support was provided by staff of the VPO-DoE.

Implementation started in 2011 and continued at good pace during 2012. By the time of the final evaluation (February-March 2013) implementation was reaching the final stages and a final workshop is scheduled to take place by the end of March 2013.

2.5 Disbursements and budget procedures

2.5.1 Efficiency

The project was funded with a grant from the government of Japan amounting to 2,971,576.00 USD. This amount was completed with 851,746 USD of UNDP’s TRAC funds. Figure 1 shows the amounts expended per year and source.

*Figure 1 Expenditures per year and fund; Amounts in USD*
UNDP records indicate that all funds were expended and all activities were completed or committed by the time of the final evaluation in 2013. Nonetheless, the expenses reflected in the CDRs only record expenses of 2,562,357 USD from the Japan grant (ATLAS code: 32045 JPN - Partnership DevtPgm PCF). Figure 2 shows budget, actual disbursement (cumulative) only of the JPN fund and delivery rate relative to the project budget as reflected in the project document. Figure 3 shows budget, total disbursement and delivery rate relative to the project budget as reflected in the project document.

Figure 2 Budget, Disbursement (JPN) and Delivery Rate (JPN)
The annual work plans approved by the steering committee reflected budget per activity of the logical framework. These logical framework activities grouped a number of activities implemented by the AAP partners and hence there were significant incongruence between budget and actual expenses. Figure 4 shows budget and expenses per outcome and year.

**Figure 4 Budget and disbursement per outcome; Amounts in USD.**
Most of the funds were expended in outcome activities and only 8% were invested in project management activities. Per category, most funds were expended in capacity development activities, including training, facilities, and material costs, followed by engineering works connected to the pilot projects, transportation equipment and computer hardware, software and services. Figure 5 shows total outcome disbursement vs. project management. Table 1 (annex VII) and figure show disbursement per ATLAS category. In figure 6 categories have been grouped as indicated in table 2 (annex VII).

**Figure 5 Disbursement in outcomes and project management; Amounts in USD.**

**Figure 6 Disbursement per category (grouped)**
2.6 Monitoring and evaluation

The Monitoring and Evaluation System of the AAP Tanzania included annual monitoring reports, quarterly progress reports, the indicators of the logical framework and ATLAS. A mid-term “light-touch” review was conducted at the end of 2011.

Indicator of the logical framework

The project’s logical framework counted with 12 outcome indicators and 21 output indicators. The outcome indicators responded to SMART criteria and include quality criteria that would have enable collection of data to quantify progress towards the targets. Output indicators are also SMART but in some cases coincide with the outcome indicators, i.e. do not add more monitoring information and are therefore superfluous (see annex VI).

Both outcome and output indicators are incomplete, since method and responsible person or means of verification are not defined for outcome indicators and target and baseline for the output indicators. Information collected in mission reports (BTORs), quarterly progress reports, annual reports or ATLAS was not, tabulated and analyzed according to the logframe indicators to inform the project board on implementation progress against the project’s logframe target. Mission, Quarterly and Annual reports were not results based but rather activity based and did not make reference to the degree of achievement of their outputs and outcomes.

Annual reports and quarterly progress reports

The national coordinator had to submit annual progress reports to the national project board for the annual project review and to serve as basis to design the next annual work plan. The annual report should have included a summary of results achieved against pre-defined annual targets at the output level. Two annual reports were prepared and one (2011) submitted to the project board. The 2012 and final annual report was still a draft at the time of the final evaluation.

The annual reports reported progress not against the targets set for the outputs and outcomes of the logical framework but based on the activities and actions conducted.

In the first quarter of 2011 an IRTSC Mission introduced the new format for the quarterly progress reports to be submitted to the AAP regional office. The new format is linked to the five outcomes of the AAP and permits an easy tabulation of information based on key actions to advance towards the achievement of the outcomes. It also includes a quarterly and overall rating of achievement. These ratings remained subjective without any criteria.
or indices to systematically rate the progress. The same activity-based reporting was kept in this format and the same activities got reported for more than one outcome.

The M&E system did not count with the means both financial and human to become functional. Neither the PMU nor the UNDP country office had specialist staff on monitoring and evaluation.

**Mid-term review**

A Mid-term review was conducted in November 2011 by an expert from the IRTSC. By the time the MTR was conducted, implementation had barely begun. Nevertheless the MTR was able to point out several issues:

- Initial disbursement issues and procedures solved
- Motivation and ownership but weak coordination and communication among implementing partners and with the UNDP
- Lack of coherence between the operational work plan used by the IPs and the AAP annual work plan
- Need of improvements in the M&E system

The MTR recommended improving communication and coordination, strengthening the role of the national project coordinator and more involvement of the UNDP, increase IRTSC support on knowledge management, climate adaptation packages and leadership and capacity building and reviewing the annual work plan to make it more coherent with the actual work conducted by the IPs.

There was no official management response, the recommendations were not given a follow-up and eventually, were not realized. The implementation of the AAP continued at a good pace, disbursement bottlenecks were solved but the rest of the issues raised by the MTR remained unchallenged.

3. **Conclusions**

The AAP was highly relevant to the national priorities and the vulnerability of Tanzania’s economy and human development and its current dependence on climate sensitive sectors such as agriculture, livestock, hydropower, coastal and wildlife based tourism.
The AAP addressed the need expressed in strategic documents such as the Development Vision 2025 and the National Strategy for Growth and Reduction of Poverty to develop capacity to manage climate-related impacts and adaptation options.

The AAP Tanzania has contributed in raising awareness on climate change issues among government officials, particularly in the Ministry of Finance, which has become a key institution in the development and implementation of new initiatives on climate change adaptation. Steps were taken towards the development of a financial strategy and integration of climate change in fiscal or investment instruments, such as the mid-term expenditure frameworks but the development of a coherent financial strategy, including appropriate fiscal incentives and the design of structures to mobilize and manage funds, will need more support in the near future.

The initially planned time frame of three years for implementation was insufficient for a project with the aim of supporting transformations at key state institutions. Moreover, implementation was delayed due to recruitment problems for about one year. Nonetheless implementation was agile and took place mostly in one year (2012) once the PMU became functional.

The implementation timeframe responded to the logic of the donor but not to the national realities. A project with the strategic vision of the AAP should have been given more time for the preparation of the project document and to allow more flexibility in order to avoid dispersion of limited funds in all fronts covered by the AAP.

The implementation of the AAP Tanzania had a strong national ownership and its activities were implemented independently by the implementing partners. The Inter-Regional Technical Support Component did not provide support on substantive and/or management issues, particularly in the mainstreaming process, long-term sustainability of pilot projects and particularly monitoring and reporting.

The design logic involved many feedbacks and linkages among the outcomes and the national, local and district planning cycles, thus it depended on the coincidence of many external factors and an unrealistic pace of implementation given the implementation timeframe of two years for all the activities to have followed in the planned sequence. The risk analysis did not take this into consideration. Thus, expected targets such as policy feedback from the pilot projects or mainstreaming of climate change issues in national and sector planning instruments could not be achieved.

Although the project’s logical framework included SMART indicators at outcome and output level, some of the indicators were identical for some outcomes and outputs, thus unnecessarily replicating monitoring activities without adding new information. Moreover,
the logframe indicators were never developed with criteria to collect, tabulate and analyze information, in order to allow reporting on progress against the target sets. Therefore, the project’s monitoring framework did not become functional and reporting was based on activities rather than results.

The study on local perceptions and actual climate trends and adaptation options, which has taken place at community level, has provided good insights on what is happening at field level and if extended, could enlighten policy to support the currently implemented, successful, low-cost adaptation measures. The actual state of knowledge on economically quantified impacts of climate variability and projections of the impacts of climate change, as well as the cost ranges of concrete and specific adaptation options, is far from optimal.

The AAP has significantly contributed to enhance Tanzania Meteorological Agency’s (TMA) capacities to generate and process meteorological information that could be used to run regional climate models and produce more accurate projections of climate variables in the future. Despite this, TMA would still need support to

a) expand the still insufficient meteorological, hydrological and coastal network by repairing damaged or abandoned stations and establish new automatized ones;

b) rescue and process historical meteorological data;

c) develop human capacities and acquire equipment and link with other climatologically and meteorological institute to be able to adapt and downscale regional and global climate models.

The toolkit and guidelines developed with the support of the AAP would need to be further developed with more specific outcomes and more customer-oriented layouts to be effective in helping mainstreaming of adaptation in national and local planning and investment instruments. The full potential of the enhanced instruments developed, particularly the mainstreaming and gender guidelines, will be demonstrated during future sector and national planning cycles.

The pilot projects responded to clear and imminent needs of communities for enhanced water supply but would need to take into consideration the impacts of climate variability and/or change for the sustainability of the newly developed water sources.

The pilot projects did not serve their original purpose of informing policy making processes at sector and local level because:

a) the time frame needed for the complete pilot project cycle (design, implementation, evaluation, documentation and dissemination) exceeded the time frame of the AAP.
b) a strategy that defined entry points in the policy making project was never formulated

The AAP invested most of its financial resources in development of capacities at key government institutions but did not establish the mechanism needed for a previous assessment of capacity needs or the evaluation of the impacts of the capacity development activities.

The prime target of capacity development was the institution that coordinates climate change related activities and UNFCCC focal point, the VPO-DoE but the AAP failed to support coordination structures by strengthening the existing inter-institutional coordinating structures: the National Climate Change Steering Committee and the National Climate Change Technical Committee.

A communication strategy for climate change was developed to orient dissemination of awareness and information but the set-up of a functional climate change knowledge system that addresses information needs of decision makers with up-to-date, quality data will need further development.

The awareness raising activities and related materials, while attaining some of its objectives, did not have strategic target groups, such as decision-makers or the media. The lack of a strategy to quantify effective messaging makes the evaluation of its impacts rather difficult.

The AAP has supported the inclusion of climate change matters into primary and secondary curricula, but actual implementation would require capacity development of teachers, which would remain dependent on external financial support.

Climate change adaptation and climate change mainstreaming in Tanzania would continue to depend on support by the GOT’s development partners but this support appears to be guaranteed in the mid-term, through the support to climate change initiatives in UNDAP, as well as other development partners’ agendas and plans.

4. Recommendations

More attention needs to be given to operational details and risks to project implementation during the design phase; this should include at least an assessment of time and resources involved in coming up with all the administrative requirements,
including recruitment of the project management team. Attention is also needed in setting up governing structures and a careful assessment of the risks involved in the timely execution and coordination of activities aiming to influence national, local and sector policy making and planning.

In the case of the AAP, where a regional framework with a support component at regional level is implemented nationally, roles and responsibilities of the involved institutions and the extent and quality of the support to be provided should be clearly specified and sufficient information on the availability of the support should be transmitted to all national implanting partners.

Monitoring and evaluation should not be considered a requirement to be included in the project document but rather as its core. Accurate measurement of development results, including assessment of attribution effectiveness and efficiency of implementation strategies depends on an adequate M&E system. This involves allocating enough resources for M&E in terms of staff time and expertise to develop the instruments needed to collect and analyze monitoring information in a clear, transparent manner.

Target setting should be realistic in terms of the implementation timeframe and the country’s planning cycles, avoiding feedbacks and sequential implementation of activities if the time frame is three years or less. Pilot projects should not be intended to generate information to support other results of the logical framework without necessary consideration of the time and resources involved in the pilot project’s cycle: consultation, design, implementation, documentation and dissemination of information.

The study on local impacts and adaptation options for the district of Igunga should be extended to other districts to provide orientation to policy making and design and implementation of adaptation projects to support local realities and needs.

The expansion of the meteorological, oceanographic and hydrological station network, as well as rescue and process all hand-written historical meteorological, oceanographic and hydrological data, should be supported to allow the development of early warning systems and to keep track of trends of climate variables, eventually permitting downscaling of global and regional climate models.

The capacity to collect and analyze hydrological data, including hydrological and ecological modeling capacities, should be strengthened to better understand the implication of variability of precipitation variability and temperature increase, as well as to assess the impact of interventions in watershed management such as forest conservation and reforestation and afforestation.
The role of the NCCSC and NCCTC should be strengthened by supporting regular meetings and the development of a work plan with performance indicators with the goal of promoting mainstreaming of adaptation and climate change issues in all government actions, plans and strategies.

Awareness campaigns should be focused with a clearly defined strategy, target group and appropriate messaging. A baseline needs to be established and a monitoring strategy to measure the impact designed with funds allocated.

A knowledge management platform with participation of the key political (VPO-DoE, MoF), and scientific and technical (TMA, DSM, SUA) institutions should be established. This platform would generate and collect all the information from other sources relevant to climate change in Tanzania (vulnerability assessments, downscaled climate projections, development scenarios, impacts assessments, adaptation costing etc.) and disseminate it according to the needs of stakeholders, such as adaptation measures feasibility and cost range for spatial planning, information gaps for research projects etc.

Measures aimed to enhance the supply of water such as dams, wells and boreholes should be balanced with interventions at the demand side, like increasing efficiency (drip irrigation, prevention of losses), recycling and governance issues (integrated water resource management, fees, and regulations).

5. Lessons learned

National implementation of regional projects such as the AAP through global networks like the UNDP should not create new structures such as AAP’s IRTSC that do not really add value to the UNDP’s regional structures and prove ineffective to actually support national implementation.

Mainstreaming climate change or environmental issues in planning and investment instruments needs to take into consideration the planning cycles timeframe at all levels and define a clear mainstreaming strategy that clearly identifies entry points and times in the policy making cycle as well as key institutions and roles within the institutions.

Mainstreaming climate change in planning and investment instruments needs the involvement of institutions outside the environmental sector, particularly financial and planning authorities such as ministries of finances and planning as well as infrastructure development.
The inherent uncertainties related to climate change projections due to lack of adequate geographical and temporal meteorological data coverage do not make recommendable to base costly adaptation strategies on downscaling regional climate models, i.e., the projections produced by them with the current data availability should not be taken as certainties. Instead, increasing the data generations capabilities in both geographical (increase number of meteorological stations) and temporal (rescue and digitalize historical data) scales, together with enhanced national modeling capacities will help a better understanding of future impacts of climate variability and climate change and hence a better orientation for adaptation policies.

Similar projects will benefit from promoting further studies on impacts of climate variability (mid-term) and climate change (long-term). This will involve extending the meteorological, hydrological and oceanographic networks as well as strengthen institutional capacities to rescue and manage data as well as develop capacities on methodologies to quantify and cost impacts and adaptation options particularly on impacts on key economic sectors: agriculture, livestock, infrastructure and generation.

6. Annexes

Annex I, Evaluation Matrix
Annex II, List of people interviewed
Annex III, List of documents consulted
Annex IV, AAP Tanzania design logic
Annex V, Pilot Projects
Annex VI, Monitoring System
Annex VII, Disbursement tables