



FINAL EVALUATION

Mozambique

Thematic window
Environment & Climate Change

Programme Title:

Environment Mainstreaming and Adaptation to
Climate Change

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Prologue

This final evaluation report has been coordinated by the MDG Achievement Fund joint programme in an effort to assess results at the completion point of the programme. As stipulated in the monitoring and evaluation strategy of the Fund, all 130 programmes, in 8 thematic windows, are required to commission and finance an independent final evaluation, in addition to the programme's mid-term evaluation.

Each final evaluation has been commissioned by the UN Resident Coordinator's Office (RCO) in the respective programme country. The MDG-F Secretariat has provided guidance and quality assurance to the country team in the evaluation process, including through the review of the TORs and the evaluation reports. All final evaluations are expected to be conducted in line with the OECD Development Assistant Committee (DAC) Evaluation Network "Quality Standards for Development Evaluation", and the United Nations Evaluation Group (UNEG) "Standards for Evaluation in the UN System".

Final evaluations are summative in nature and seek to measure to what extent the joint programme has fully implemented its activities, delivered outputs and attained outcomes. They also generate substantive evidence-based knowledge on each of the MDG-F thematic windows by identifying best practices and lessons learned to be carried forward to other development interventions and policy-making at local, national, and global levels.

We thank the UN Resident Coordinator and their respective coordination office, as well as the joint programme team for their efforts in undertaking this final evaluation.

MDG-F Secretariat

The analysis and recommendations of this evaluation are those of the evaluator and do not necessarily reflect the views of the Joint Programme or MDG-F Secretariat.

FINAL EVALUATION



JOINT PROGRAMME ON ENVIRONMENTAL MAINSTREAMING AND ADAPTATION TO CLIMATE CHANGE IN MOZAMBIQUE

UNJP/MOZ/085/SPA

Final Report

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The present report of the final evaluation of the UN Joint Programme (UNJP) on Environmental Mainstreaming and Adaptation to Climate Change in Mozambique is based on an evaluation mission of an external consultancy team between the 2nd and 17th of July 2012 to Maputo, Xai-Xai and Chicualacuala. The mission was conducted and the report prepared by the external consultants Dennis Eucker and Bianca Reichel. The evaluation team would like to thank the Coordinator of the UNJP as well as all Focal Points from the UN agencies and government institutions, technical and administrative staff, who facilitated this evaluation and took part in interviews, discussions and made contributions for the elaboration of the final report. Thanks are also directed to the UNJP staff facilitating the field visit in terms of logistics, interviews and meetings and discussion groups with local communities. Thanks also go to the many community members visited during the evaluation that generously gave their time and participated in the discussions.

The content of this report does not necessarily reflect the policies or views of the UN agencies and government institutions part of the UNJP.

Table of Contents

ABBREVIATIONS.....	4
LIST OF TABLES AND FIGURES.....	5
EXECUTIVE SUMMARY	6
1. INTRODUCTION.....	10
1.1 ABOUT THE MDG-F AND THE UN JOINT PROGRAMME	10
1.2 GOALS OF THE EVALUATION	11
1.3 METHODOLOGY	12
2. DESCRIPTION OF THE JOINT PROGRAMME	14
3. RELEVANCE	25
3.1 CLIMATE CHANGE CONTEXT	25
3.2 POLICY CONTEXT	25
3.3 THE CONCEPTUAL APPROACH OF THE JOINT PROGRAMME	26
3.4 RELEVANCE ON THE DISTRICT AND THE COMMUNITY LEVEL.....	28
4. EFFICIENCY.....	31
4.1 PROGRAMME DESIGN AND IMPLEMENTATION STRUCTURE	31
4.2 THE INFLUENCE OF EXTERNAL FACTORS	33
4.3 THE MANAGEMENT SET-UP.....	33
5. EFFECTIVENESS	36
5.1 ENVIRONMENTAL MAINSTREAMING	37
5.2 ADAPTATION TO CLIMATE CHANGE	38
5.3 MDGs AND MDG-F	39
6. SUSTAINABILITY	41
6.1 ENVIRONMENTAL MAINSTREAMING	41
6.2 ADAPTATION MEASURES	42
7. CONCLUSIONS.....	45
8. RECOMMENDATIONS.....	47
8.1 RELEVANCE & SUSTAINABILITY	47
8.2 EFFECTIVENESS.....	47
8.3 EFFICIENCY.....	48
BIBLIOGRAPHY.....	49
ANNEXES	50
ANNEX I: LIST OF INTERVIEWEES.....	50
ANNEX II: LIST OF UNJP ACTIVITIES AT COMMUNITY LEVEL	51
ANNEX III: LIST OF UNJP TRAININGS	55
ANNEX IV: M&E FRAMEWORK OF THE JOINT PROGRAMME	58
ANNEX V: TERMS OF REFERENCE.....	64

Abbreviations

CERUM	Multiple Resource Use Centre	OECD	Organization for Economic Cooperation and Development
CIF	Climate Investment Fund	PARPA	Action Plan for the Reduction of Absolute Poverty
CRISTAL	Climate Risk Screening Tool – Adaptation & Livelihoods	PEDD	District Strategic Development Plan
DAC	Development Assistance Committee	PESOD	District Socioeconomic Plan
DNA	National Directorate for Water Management	PMC	Programme Management Committee
DPA	Provincial Directory for Agriculture	PRSP	Poverty Reduction Strategy Paper
DPCA	Provincial Directors for the Coordination of Environmental Action	PV	Photovoltaic
DRM	Disaster Risk Management	SDAE	District Service for Economic Activities
ESAN	National Strategy for Food Security	SDPI	District Service for Planning and Infrastructure
FAO	Food and Agricultural Organization of the United Nations	SETSAN	National Technical Secretariat for Food Security
GoM	Government of Mozambique	SPCR	Strategic Programme on Climate Resilience
IIAM	Mozambican Institute for Agricultural Research	SPFFB	Provincial Services for Forest and Animal Wildlife
INAM	National Institute for Meteorology	ToR	Terms of Reference
INGC	National Institute for Disaster Management	UN	United Nations
IPCC	Intergovernmental Panel on Climate Change	UNCCD	United Nations Convention to Combat Desertification
IUCN	International Union for the Conservation of Nature	UNDAF	United Nations Development Assistance Framework
IWRM	Integrated Water Resource Management	UNDP	United Nations Development Programme
JP	Joint Programme	UNEP	United Nations Environment Programme
MDG	Millennium Development Goals	UNFCCC	United Nations Framework Convention on Climate Change
MDG-F	Millennium Development Goal Achievement Fund	UN-HABITAT	United Nations Human Settlements Programme
M&E	Monitoring and Evaluation	UNIDO	United Nations Industrial Development Organization
ME	Ministry of Energy	UNJP	United Nations Joint Programme
MICOA	Ministry for the Coordination of Environmental Action	WFP	World Food Programme
MINAG	Ministry of Agriculture		
MPD	Ministry for Development and Planning		
NAPA	National Adaptation Programme of Action		
NRM	Natural Resource Management		

List of Tables and Figures

Figure 1: Overview of lessons learnt and recommendations.....	8
Figure 2: Component I – Environmental Mainstreaming and Climate Change.....	15
Figure 3: Component II – Adaptation measures.....	18
Figure 4: Overview of the current status of agricultural associations.....	20
Figure 5: Relevance of the conceptual approach.....	27
Figure 6: Key roles of UN agencies participating in the Joint Programme.....	31
Figure 7: Mapping of actors related to the strategic objectives.....	32
Figure 8: Impact chain of the Joint Programme.....	36
Figure 9: Effectiveness related to development objective 1.....	37
Figure 10: Effectiveness related to development objective 2.....	38

Executive Summary

Mozambique is a country especially exposed to extreme climatic events and at high risk of being affected by climate change. In the country's arid and semi-arid areas, like in Chicualacuala District, increasing and recurrent levels of drought are threatening the agricultural livelihoods (crops, livestock, and forest) of local populations. Adapting to the consequences of climate change by, for example, enabling access to water resources and to making better use of fertile soils in river-near areas is mandatory for providing a basis for sustainable development.

The United Nations Joint Programme (UNJP) on 'Environmental Mainstreaming and Adaptation to Climate Change in Mozambique' was implemented between 2008 and 2012 as a response to this situation, in cooperation between six UN agencies (FAO, UNEP, UNIDO, UNDP, UN-HABITAT and WFP), the National Government of Mozambique (MICOA, INGC, ME and MINAG), the Provincial Government of Gaza and the District Government of Chicualacuala. As this report shows, activities implemented under the UNJP bear merit, where they were integrated in national structures and where they generated positive results for the focal communities in Chicualacuala District.

Future UNJP programmes however should be implemented over a longer time frame to facilitate the sustainability of achievements and render the programme more efficient. Such programmes also need to address local participation in the planning process, and should take into account local development priorities and concerns more comprehensively. In terms of climate change adaptation, future initiatives should aim to link aspects of physical and societal vulnerability more comprehensively, and enhance the adaptive capacity of communities at large more fully.

The report starts off by providing a brief description of the background of the UNJP, the purpose of the evaluation, and its methodology. Recognizing the substantial exposure to droughts regularly experienced by water-scarce communities, the high levels of poverty resulting in inadequate coping strategies at the local level, and the deficits in dealing with the challenges under the existing institutional framework, the UNJP put a strong focus on supporting the Government in improving the situation on the ground and has been implementing a broad range of activities in 19 local communities in the District of Chicualacuala. Throughout the implementation timeframe, the UNJP included activities to enhance risk awareness and preparedness, small-scale adaptation measures and livelihood support.

The report then describes the development interventions carried out under the programme, and provides a detailed description and analysis of the implementation regarding outputs delivered and outcomes attained according to the different levels and areas of intervention.

Regarding **relevance**, the study finds that activities under the UNJP have been highly relevant to the overall risk context of Mozambique. Findings show differentiated levels of relevance at the local level, though: Taking into consideration the topographic characteristics of Chicualacuala district, the relevance of the UNJP is actually proven high for river-near local communities, while upland arid areas have not fully benefitted from the range of activities that were undertaken. It is also recognized that the programme has been aligned with activities of other actors and to a large extent run in support of relevant overarching national and sub-national strategies. However, it was found that the UNJP missed out on adequately addressing several aspects that were and are highly relevant to local communities. Some of the activities were reduced in their underlying relevance, due to limited performance levels (e.g. solar panels and drip irrigation systems, despite being welcomed by the target communities and the government). In other cases relevance was reduced by not fully responding to income-related challenges of water-scarce upland communities (e.g. creating market incentives for livestock keepers to improve animal health, even if outside the scope of the programme). These are key concerns that were not addressed, placing the sustainability as well as replicability of these activities at risk.

Concerning **effectiveness**, it is seen that the UNJP has been successful in the sense that it reached the majority of its expected outputs and outcomes. Yet it faced a number of constraints regarding

programme management: (1) a monitoring framework with certain quality weaknesses, (2) an inadequately short implementation period, and (3) a lack in impact orientation. At the same time, some of the individual activities, such as the establishment of community groups and livestock promoters, are seen as highly effective.

Analysing the UNJP's **efficiency**, some external obstacles were identified that are related to the remoteness of the district. However, the efficiency was mostly constrained by internal management procedures. Based on a significance ranking of existing challenges, a central part of the interviewees stated that the programme would have further benefited from (I) a stronger focus on impacts, (II) stronger participation of all actors involved in both the planning and implementation process and (III) an improved communication and information system. Other important aspects that were identified in order to increase efficiency of the Joint Programme were to build implementation on better consideration of strengths and weaknesses of all institutions involved, elaborating a joint M&E system, and to create better perspectives for replication.

With regards to **sustainability**, the report recalls the pivotal role of local ownership - the willingness and capacity of local communities to maintain programme achievements. The sense of ownership at the district level and within communities varies significantly; positive examples include the involvement of district technicians, as well as the dedication of members within the newly created community groups. However, there are a number of constraints that may put the sustainability of the programme results at stake and which are mainly related to a lack of financial and human resources of (local) government and underlying development priorities. The report recognises the involvement especially of INGC, MICOA and INAM as a promising way to scale up and replicate best practices from the UNJP, where these were integrated into government structures.

Future programmes should aim for greater local involvement in the planning process and be extended by an inception phase and a consolidation period in order to provide more supportive guidance and render results more sustainable. Concerning adaptation programmes in semi-arid areas, a stronger and differentiated conceptual focus should be applied for dry-land communities in which agriculture is not a viable option to adapt livelihood strategies. The report ends with three key lessons learnt and recommendations for future UN joint programming: First, programmes should be thoroughly planned, by ensuring the participation of all levels into programme development and implementation. Second, they should be built upon complementary strategies and on longer time frames. Third, initiatives should strive for overcoming both external and internal obstacles, for adapting the implementation and monitoring process, and for putting a stronger focus on the impact level.

The report concludes that the UNJP has been successful in the sense that it contributed towards building awareness on challenges related to climate change adaptation of the Government (e.g. integration in plans) and local communities (e.g. NRM-committees). However, much remains to be done to promote adaptation to climate change even further. With the impending effects of climate change, improved adaptive capacity of communities must be the goal - this will require more time and new alliances with actors that have not been addressed sufficiently in this programme, including local governments and private market players.

Figure 1: Overview of lessons learnt and recommendations

RELEVANCE SUSTAINABILITY	EFFECTIVENESS	EFFICIENCY
What should a relevant and sustainable planning/ implementation strategy look like?	Which strategy is most likely to be effective in terms of producing lasting outcomes?	How can the strategy be designed to generate maximum benefits?
1 Plan thoroughly and ensure participation of all levels into programme implementation	2 Build complementary implementation strategies that are built on longer time frames	3 Overcome obstacles by better planning, elaborate a joint monitoring process and put a stronger focus on the impact level
1a Ensure for careful planning, based on existing experience	2a Build complementary and flexible adaptation strategies	3a Overcome both external and internal obstacles
<p>Adaptation-specific interventions are still recent and face a number of challenges, ranging from ambiguous definition of adaptation to the identification of targets and the choice of indicators used to monitor progress. However, international and national development actors have a long history in implementing projects in climate-sensitive areas, increased by the present programme. In the future, ways should be found to making best use of existing experience.</p> <p>Planning should also be related to the existing strengths & weaknesses of agencies and their partners.</p>	<p>Joint programmes should build their activities on complementary approaches, and create opportunities for more flexible implementation approaches. This should not concern the 'what' (activities) of the implementation approach in the first place, but should rather create for more space on 'how' (process) results can be achieved. Consequently, strategies should involve the elaboration and regular update of a M&E framework, including amendments whenever deemed necessary. If applied properly, this will provide the programme with a possibility to react more properly to external demands and internal constraints.</p>	<p>Perhaps unsurprising for such an ambitious and complex programme, the evaluation found that efficiency was constrained by a number of both external and internal obstacles.</p> <p>In future initiatives, lessons learned from this programme should be used for resolving obstacles one at a time.</p> <p>External constraints are a frank reminder that careful programme planning should be ensured. This, once more, shows the importance of building the programme on longer time frames, by including an inception phase.</p>
1b Make sure that participation and integration are guaranteed	2b Build on longer time frames	3b Limit the number of agencies involved, especially on the local level
<p>In order to build national and local ownership, take into account priorities of all actors and levels involved, and make sure that the participation of target communities will be guaranteed. The integration of interventions in (sub-)national structures, together with the involvement of government technicians and community member from the planning phase onwards will improve the follow-up and sustainability of the programme.</p>	<p>In order to strive for greater effectiveness, future joint programmes should be implemented over a longer time frame, including an inception phase at the beginning and a consolidation phase at the end of the intervention.</p> <p>Evaluation results have shown that a more realistic timeframe (while being carefully designed against the background of expected implementation efforts) would have been a central pillar for assuring the effectiveness of the programme.</p>	<p>Results from this evaluation show that, in many instances, inputs from one agency depended on the completion of activities by another agency. This was mostly due to time-consuming internal administration processes in at least some of the agencies involved.</p> <p>Therefore, ways should be found for preventing that delays in one agency impinge on the work of others.</p> <p>This will also include a more equal sharing of responsibility for achieving the objectives.</p>
1c Put a stronger focus on adaptive capacity	2c Develop joint monitoring and evaluation approaches	3c Put a stronger focus on the impact level
<p>The report shows that the activities under the programme were highly relevant for the overall risk context and the vulnerability of local communities. In the future, joint programmes should put an even stronger focus on enhancing adaptive capacity in a long-term. Especially in dry-land areas, viable option for improving livelihoods and low-cost adaptation practices need to be promoted.</p> <p>At the same time, activities should accompany communities on their way to reach higher levels of resilience and allow for the consolidation of results.</p>	<p>In order to guarantee for project effectiveness on the ground, it will be necessary that results on the local level can be measured. The monitoring approach found in this joint programme allows for rather general findings only on whether the project and the strategy applied were "successful", and does not allow for coming up with uniform and transparent findings.</p> <p>Adopting a comprehensive and impact-oriented M&E framework should build a basis for future programmes, in order to provide an effective monitoring and overall management according to international standards (e.g. OECD).</p>	<p>This recommendation is similar to 2c, in that it argues for the importance of joint M&E approaches, but comes from the angle of efficiency.</p> <p>For the project, making sure that impacts on the local level are guaranteed and that progress can be measured will render joint programmes more efficient.</p> <p>In this context, the Joint Programme would have benefitted from elaborating a coherent M&E framework for impact assessment, including indicators, or indicator categories/types, for tracking and evaluating the success of its interventions.</p>

INTRODUCTION



1. Introduction

Meeting the challenge of climate change will require a tremendous effort by developed and developing countries alike. Climate change is changing the contexts in which development takes place by changing the nature and intensity of climate-related risks. Current development interventions that fail to address climate change are likely to result in unintended consequences and, in some cases, in 'maladaptation' (Brooks et al. 2011). Development organizations, just as with developing countries, will need to track these consequences and consider how policies and development interventions act to support or undermine adaptive capacity from the national level down to the community level.

This report presents the results from the final evaluation of the United Nations Joint Programme on Environmental Mainstreaming and Adaptation to Climate Change in Mozambique. The report findings are based on a comprehensive review of available literature and programme documents, interviews with key stakeholders and beneficiaries on the national and sub-national level, including background talks and field visits in the programme's target district and local communities.

In relation to the relatively new field of climate change adaptation, this report is based on a number of overall considerations and understandings. Adaptation-specific interventions do not yet have a long record of implementation. Robust monitoring and evaluation is therefore an important part of this, both to ensure that the prospective benefits of interventions are being realized and to help improve the design of future interventions (Lamhauge et al. 2011). Within international development contexts, especially when related to poverty eradication and human development, it is reasonable to propose that successful adaptation secures inclusive development in the face of climate change that might otherwise undermine it. While success in adaptation can keep development 'on track' (Brooks et al. 2011), it will be more important than ever to ensure the relevance, efficiency, effectiveness and sustainability of adaptation interventions.

In Mozambique, climate change adaptation-focused development activities are relatively new to both government and UN agencies. There is, however, a long history of implementing development projects and programmes that have adaptation-related aspects, such as flood control infrastructure and livelihood diversification in drought-prone areas. Many of these activities have also been assessed using existing evaluation frameworks available within development cooperation agencies.

Even though adaptation remains a rather vague concept whose boundaries have yet to be defined in more detail, some important efforts have been undertaken by a number of organizations to come up with appropriate evaluation frameworks for adaptation-specific projects and interventions. These initiatives are still relatively recent, and the frameworks that are being developed are yet to be comprehensively tested and applied.

Against this background, the report uses the definition of adaptation proposed by the OECD/DAC: *"An activity should be classified as adaptation-related if it intends to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity or resilience"* (OECD 2010a).

1.1 About the MDG-F and the UN Joint Programme

In December 2006, the UNDP and the Government of Spain signed a major partnership agreement for the amount of €528 million with the aim of contributing to progress on the MDGs and other development goals through the United Nations System. The MDG-F supports joint programmes that seek replication of successful pilot experiences and impact in shaping public policies and improving peoples' life by accelerating progress towards the Millennium Development Goals (MDGs) and other key development goals.

The MDG-F operates through the UN teams in each country, promoting increased coherence and effectiveness in development interventions through collaboration among UN agencies. The Fund

uses a joint programme mode of intervention and has currently approved 130 joint programmes in 50 countries.

MDG-F programmes are organized around eight thematic windows that contribute in various ways towards progress on the MDGs, National Ownership and UN reform. These include: 1) Children, Food Security & Nutrition; 2) Gender Equality & Women's Empowerment; 3) Environment & Climate Change; 4) Youth, Employment & Migration; 5) Democratic Economic Governance; 6) Development & the Private Sector; 7) Conflict Prevention & Peace Building and 8) Culture & Development.

The UN Joint Programme on Environmental Mainstreaming and Adaptation to Climate Change in Mozambique is a four year programme (1/9/08-31/8/2012, including a one year, no extra cost extension by MDG-F). The JP aims to reduce the risks of climate change to poverty reduction efforts in affected areas of Mozambique through the mainstreaming of environment in central and local level plans and programmes, and improving the adaptive capacity of the communities and other stakeholders through enhancing their coping mechanisms and diversifying their livelihoods options.

The overall goal and specific objectives of the JP, its envisaged outcomes and outputs, and actors involved, will be presented and analysed in the following part of the report.

The programme is currently in its final phase of implementation and completion of activities, including an exit strategy. The evaluation managers have therefore commissioned a final evaluation that will be in line with the MDG-F Monitoring and Evaluation (M&E) Strategy, and based on the principles and standards of UNEG and OECD/DAC regarding evaluation quality and independence. The evaluation hence analyses the JP's relevance, efficiency, effectiveness, impacts, and sustainability. Overarching principles and standards do also reflect the MDG-F Environment and Climate Change thematic window that contributes in various ways towards progress on the MDGs 1 and 7, National Ownership (in particular by MICOA as the leading ministry) and UN reform (in particular to the UN Initiative 'Delivering as One') in Mozambique. Despite the programme's extension, this final evaluation is among the first in the framework of MDG-F financed development interventions.

1.2 Goals of the evaluation

The present final evaluation report is summative in nature. It seeks to: 1) Measure to what extent the joint programme has implemented activities with focus on the outputs delivered and outcomes attained, oriented on development results (impacts) and 2) Generate substantive evidence based knowledge on the respective MDG-F thematic windows, by identifying best practices and lessons learned that can be useful to other development interventions at national (scale up) and international level (replicability).

As a result, the findings, conclusions and recommendations generated by this evaluation will be part of the thematic window meta evaluation which the MDG-F Secretariat is undertaking to synthesize the overall impact of the fund at national and international level.

The final evaluation has the following specific goals:

1. Measure to what extent the joint programme has contributed to solve the needs and problems identified in the design phase.
2. To measure joint programme's degree of implementation, efficiency and quality delivered on outputs and outcomes, against what was originally planned or subsequently officially revised.
3. Measure to what extent the joint programme has attained development results to the targeted population, beneficiaries, participants whether individuals, communities, institutions, etc.
4. To measure the joint programme contribution to the objectives set in their respective specific thematic windows as well as the overall MDG fund objectives at local and national level (MDGs, Paris Declaration and Accra Principles and UN reform).

5. To identify and document substantive lessons learned and good practices on the specific topics of the thematic window, MDGs, Paris Declaration, Accra Principles and UN reform with the aim to support the sustainability of the joint programme or some of its components.

1.3 Methodology

The final evaluation was conducted throughout July, 2012. The report follows the outline stated in the Terms of Reference (ToR), Annex V. Findings are based on the use of methodologies as determined by the specific needs for information. These include: 1) A comprehensive review of available literature and programme documents (including the programme proposal, work plans, monitoring frameworks, baseline studies, monitoring reports, the Mid-Term Review, workshop reports, relevant studies, and any other documents that provided evidence on which to form judgements); 2) Semi-structured key stakeholder interviews and other qualitative tools on the national and decentralised level. Based on this methodology, the evaluation made sure that the voices, opinions and information of all participants of the Joint Programme were taken into account. 3) Background talks (individual and focus groups) and field visits in Chicualacuala district and in ten communities. A list of stakeholders and other key informants that were consulted is attached as Annex 1 to this report.

This study has encountered several **limitations** which mainly come along with the qualitative design of the survey. The target area is remote and sparsely populated, and target communities are geographically dispersed, making it challenging to apply a quantitative analysis and to interpret the results across the whole of the programme area. Furthermore, the current state of the JP (with activities still on-going), its focused beneficiary group and trial-and-error character would show limited results with a representative household survey. In order to conduct an adequate evaluation under the given circumstances, it was therefore agreed to base the evaluation study on a qualitative approach.



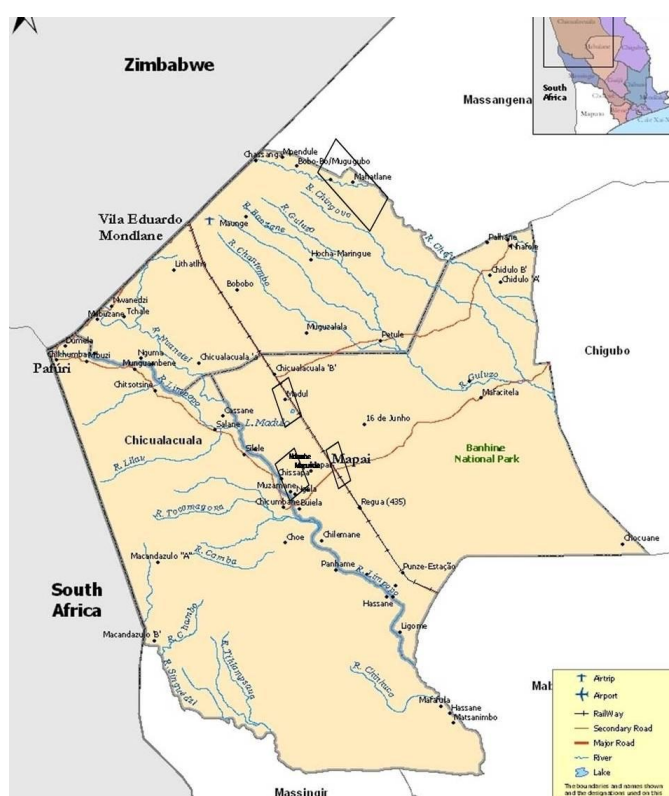
THE JOINT PROGRAMME

2. Description of the Joint Programme

The Joint Programme was initiated in September 2008 in cooperation between the Government of Mozambique (GoM) and the United Nations (UN), responding to the high vulnerability of Mozambique to the impacts of climate change in arid and semi-arid regions. On behalf of the Government of Mozambique, the Ministry for Coordination of Environmental Affairs (MICOA) as a lead ministry, the National Institute for Disaster Management (INGC), the Ministry of Energy (ME), the Ministry of Agriculture (MINAG), the Provincial Government of Gaza and the District Government of Chicualacuala entered the Joint Programme. From the side of the UN, the implementing agencies were the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP), the United Nations Environmental Programme (UNEP), UN-HABITAT, the United Nations Industrial Development Organization (UNIDO) and the World Food Programme (WFP), with FAO taking the role as coordinating agency. The components of the Joint Programme have been implemented in accordance with the mandates and experience of each participating agency and institution. The total allocated cost of the Joint Programme is USD 7 million, funded by the Spanish Government through the MDG-F. The programme ended on 31/8/2012, after a one year, and no cost, extension phase.

The **overall objective** of the Joint Programme is to *"support and strengthen the efforts of the GoM to reduce the risks associated with climate change in vulnerable areas"*. The **specific objectives** are, firstly, to *"integrate environment and climate change aspects into government plans, policies and strategies at national, provincial and district level"* (Development objective 1) and second, to *"improve the resilience of rural communities to climate change by improving and strengthening management of the natural resource base and diversifying livelihoods"* (Development objective 2).

The Joint Programme was designed to be implemented mainly along the Limpopo River Basin in southern Mozambique. However, responding to the request of the government, the focus shifted almost exclusively to one of the poorest and most remote districts in the basin, Chicualacuala (see map below), which has an area of 18,155 km² and a population of approximately 40,000 inhabitants.



Map of Chicualacuala District. Rectangles show the focal areas of the UNJP.
FAO 2009

The district is classified as semi-arid with an average precipitation of about 400mm/m²/year, but with rainfalls becoming more and more unpredictable in recent years. Chicualacuala is a remote and isolated district, with poorly developed public services and at the same time, high levels of food insecurity, high illiteracy rates and a high prevalence of HIV / AIDS. Main sources of livelihood of the local population are agriculture, charcoal cutting, livestock keeping, and labour migration.

In the following, a description and first assessment of the current situation of the Joint Programme is provided, as based on the monitoring framework (see Annex IV), its envisaged outcomes (results) and outputs (products), as well as changes that have been made over the course of the implementation phase. The analysis is based on the underlying two components of the programme: I. Environmental Mainstreaming and Climate Change, and II.

Adaptation Measures. Figure 2 provides an overview of the outcomes and outputs of the first component, guiding the following description.

Figure 2: Component I – Environmental Mainstreaming and Climate Change

OUTCOMES	OUTPUT
Outcome 1: Government, civil society, communities and other stakeholders informed, sensitized and empowered on environment and climate change (CC) issues.	1.1 Environment priorities and indicators reflected in planning frameworks and budgets at district and community level: 1.2 GIS-based data and maps on climate change vulnerability for risk areas 1.3 Training programmes on disaster and climate change prediction, including interpretation of maps and application of monitoring data for early warning purposes 1.4 Knowledge and experience sharing within the different groups (UN agencies and beneficiaries)
Outcome 2: Government capacity at central and decentralized levels to implement existing environment policies strengthened	2.1: National Disaster Preparedness plan and other relevant plans revised/updated to include climate change and environment aspects 2.2 Early warning and communication system enhanced in the Gaza province: 2.3 Authorities, civil society and other relevant actors trained to incorporate and report on environmental and climate change risk events:
Outcome 3: Climate proofing methodology mainstreamed into government development plans, UN / Donors' programming and local stakeholders' activities/invests	3.1 Tools for climate proofing of risk zones in the Limpopo River Basin developed: 3.2 Assessment of climate proofing approaches carried out 3.3 Stakeholders trained on climate proofing

At the national level, and through partnerships with MICOA, INGC, ME, and INAM, the Joint Programme put a focus on supporting the development and implementation of national plans and strategies, including the development of capacities, in the area of environment and climate change. To this end, focal points and key technical staff participated in seminars, programme activities and in developing tools, manuals and plans, and at a later stage also conducted training at the sub-national levels.

In terms of providing support to national policies, the programme made contributions in the process of elaboration of the National Strategy for Food Security (ESAN II) with the Food and Nutritional Security Technical Secretariat (SETSAN), as well as of the INGC's Contingency Plans for 2009-2010 and 2011-2012. In partnership with MICOA, training workshops for key actors in climate and environmental aspects were implemented. In this context, a training manual for teachers was elaborated and tested (but which has not been finally published yet).

Moreover, work agreements between INGC and the University of Cape Town were facilitated under the Joint Programme, based upon which comprehensive climate change analyses were conducted for the Limpopo Basin. First results from the studies and from related country-wide activities conducted under the broader INGC climate change programme were presented at the UNFCCC Conference of Parties (COP 17) in Durban and the Rio Earth Summit (Rio +20). Currently, the elaboration of a climate proofing strategy for the Limpopo River Basin is in process. There is high national interest in this subject, and government representatives are favourable to include various aspects into the upcoming National Strategy for Climate Change Adaptation.

In partnership with INGC, a new standard model of risk analysis (based on community mapping and GIS) was applied in Chicualacuala as a pilot district, which has been replicated in more than 20 districts up to now. Another innovation created in partnership with INGC was to improve the design of the multiple resource use centre CERUM – a facility designed to boost the development of arid and semi-arid areas through demonstrations and trainings at local level. As part of raising awareness of adaptation to climate change and disaster risk management, a set of training materials and tools were developed and tested (e.g. Living with Floods, Limpopo River Game, Building with Storms). In

addition, the programme supported the preparation and dissemination of training manuals (e.g. on rain water harvesting) and other information tools (Video 'The Change', brochures, etc.) which are expected to be used by programme partners (such as MICOA and INGC) for sensitization and training purposes at various levels.

In the energy sector, the UNJP has supported the implementation of national plans through the promotion, training and installation of photovoltaic (PV) systems for water supply and irrigation, and of improved cooking stoves at the community level. Another activity, the introduction of biogas energy, is seen as a pilot initiative for the government and results will serve to analyse its feasibility for replication.

Another pilot experience is the mapping of ecosystems of the Limpopo River Basin and the development of an Integrated Water Resources Management Plan for the District of Chicualacuala (see output 4.5). Based on these results, it is expected that the GoM will integrate key aspects of integrated water resources management in the national Socio-Economic Development Plan (PES).

At the provincial level, interventions undertaken under the UNJP put an emphasis on capacity building and introduction of instruments to follow up and replicate the integration of climate change into district plans, providing technical support to districts in key sectors. To this end, the programme established cooperation and partnerships with the Provincial Department of Agriculture (DPA), the Provincial Department of Coordination of Environmental Affairs (DPCA) and the Provincial Technical Planning Team. Moreover, the DPCA took part in trainings on environmental conservation and adaptation to climate change for teachers, environmental educators and community members. In addition, technical staff from the DPCA and DPA were involved in conducting the risk analysis and mapping in Chicualacuala and more strongly in the replication in six more districts along the Limpopo River Basin.

To improve the strategic planning, the UNJP introduced the methodology CRiSTAL to analyse consequences of climate change, vulnerability and adaptation options in Gaza Province. The tool was applied in communities of the Administrative Posts of Mapai and Eduardo Mondlane, and was supported by MICOA with participation of provincial and district technicians. Results from the analysis were then integrated into the Strategic Development Plan (PEDD) 2010-2014 of Chicualacuala district. Exchange visits for discussing the application of the tools were held with technical staff from Cabo Delgado and Nampula Provinces where CRiSTAL was also applied in strategic planning processes.

At the district level, the technical planning team participated in the application of the CRiSTAL methodology, including results in the elaboration of the PEDD. The current PEDD contains information on climate change, its impacts and strategic activities in order to facilitate adaptation across key sectors. Presently, out of a team of eight members there are still two technicians remaining in the district team who participated in the activity and who know about CRiSTAL. The annual Socio-Economic Plan of the District (PESOD) is largely based on the PEDD and, for the year 2012, includes ten adaptation-relevant activities with budget estimates.



District Team working on the PESOD

From the District Service for Economic Activities (SDAE) – an important implementing partner of the UNJP at district level – some technicians did also participate in the mapping of risk areas. While the Land Use Plan of the district was still in its draft phase during the time of the field visit, the consultants were informed that relevant data from this exercise will be included.

As regards to the improvement of the existing meteorological and early warning system, the programme built an automatic weather station in Eduardo Mondlane town. This activity was not planned or budgeted originally, showing the flexibility of the JP in responding to Government priorities (INAM, in this case), while also directly contributing to output 2.2. At the moment, the

station and data monitoring are not functioning regularly, being that the solar panel that runs the station has been stolen twice (despite security arrangements) and a new panel is now mounted on demand. Two technicians of the SDAE were trained to read and analyse the data. INAM contracted another two qualified technicians to support the system from their new office, currently under rehabilitation by the JP in Eduardo Mondlane town. In addition, the programme gave support to improve the capacities and technical equipment of the community radio station in order to enhance its ability to provide weather forecasting. Journalists received training and a higher radio antenna was installed (covering most of the district area). A regular weather forecast was transmitted by the radio while the meteorological station was functioning and the journalists said that it was much requested by farmers. The consultants understand that, as this report is being written, a PV system is being installed at the radio station by the programme, securing the power supply for its operation. Together with the meteorological system (once it will run on a permanent basis) the radio is an essential means for the local forecast and early warning system in the district.

In order to integrate the topic of climate change into the school curriculum of the district, teacher training was conducted in Chicualacuala District and in Chokwé, including teachers from Gaza Province, under the leadership of MICOA. In addition, technicians from MICOA were involved in awareness raising activities in some of the district's local communities, where they applied tools and manuals developed under the programme.

Community members targeted by the Joint Programme, including community leaders, members of local committees, associations, etc., participated in various trainings and awareness raising workshops on issues related to environment, adaptation to climate change and participatory planning. Contents of these meetings included basic information about climate change risks, adaptation measures and district planning processes. Other community sessions put a focus on disaster prevention and management in which the didactic materials mentioned above were used as methodological basis (Output 1.3).

The programme realized exchange visits with members of the government and of the focal communities, in order to learn about best practices to be replicated (within the UNJP) in Chicualacuala. For example, 20 members of local farmer associations and technicians from SDAE visited communities in Manica Province in order to learn about Community Based Natural Resource Management (CBNRM) and agro-processing. Another exchange visit of local farmers to Massingir District brought about valuable insights into the application of irrigation techniques in river areas. A further visit was organized to Kenya with participation of five district and provincial technicians and one community member to learn methods of rain harvesting and techniques of sub-surface dams. Moreover, there was an exchange with Chigubo district for the purpose of enhancing knowledge on the practical application of an integrated water resource management, which included five community members and one technician from the District Service for Planning and Infrastructure (SDPI). Finally, several intra-community visits were organized and facilitated in the district, under focussing on adaptation-relevant strategies and techniques (Output 1.4).

In general, meetings held with government officials, civil society (e.g. associations), community leaders and beneficiaries showed that all of these target groups of the programme showed relevant levels of knowledge about climate change and risk reduction, particularly in the area of environmental conservation. On behalf of the government, capabilities exist for integrating climate change into strategic plans and into training activities, while in many if not most of the communities there are local committees in place that address specific aspects related to environmental risks and climate change (NRM-committees, disaster risk reduction committees, etc.). According to the communities visited by the consultants, a significant trend exists in the reduction of uncontrolled fires – which appears to show a general increase in the awareness about the effects and control of forest protection. This is seen as an indicator of success of the intervention, even though there are other factors that have been contributing to this development (e.g. government campaigns). At the

same time, over-exploitation of forests for charcoal production remains a continuous challenge for Chicualacuala.

Figure 3: Component II – Adaptation Measures

OUTCOMES	OUTPUTS
Outcome 4: Community coping mechanisms to climate change enhanced	4.1 Inventory of strategies and coping mechanisms currently in use by communities and in the Limpopo River Basin 4.2 Community based natural forest resource management system established 4.3 Territorial planning mechanisms at community level introduced 4.4 Agro forestry practices introduced and applied at the community level 4.5 Multipurpose integrated water resource management systems created 4.6 Sustainable conservation agriculture practices introduced and efficiency in small scale irrigation systems improved 4.7 Prospects of biogas generation and composting using waste manure as coping mechanisms to climate variability determined
Outcome 5: Communities' livelihoods options diversified	5.1 Options for livelihood diversification identified 5.2 Inventory and feasibility assessment of potential renewable energy sources carried out 5.3 Animal husbandry grazing and veterinary service coverage improved 5.4 Agro-processing and marketing activities developed 5.5: Use of animal traction promoted to encourage land preparation and transport

Figure 3 provides an overview of the outcomes and outputs of the second component of the UNJP, the introduction of adaptation measures, mainly implemented at the district level. The target area included nineteen communities, and programme interventions were accompanied by activities from counterparts at the national and provincial level. Generally, areas covered by the programme included both highlands and lowlands and comprised a wide range of sectorial activities, such as water access, increase and diversification of agricultural and livestock production, income generation, natural resource management and use of renewable energies. A number of baseline studies were conducted which included information concerning risks and impacts related to climate change, an analysis of existing and potential options for response and adaptation measures, as well as studies on the potential of boreholes, small dams, irrigation schemes and renewable energies. Results from the studies were integrated in the planning and adaptation of programme activities as well as in the elaboration of programme material. The following provides a more detailed overview of the activities that were implemented:

Integrated management of water resources (output 4.5): In Chicualacuala District, one of the key problems remains access to clean drinking water for human consumption and watering animals, and to irrigation water, hence the programme supported the improvement of the water supply for local communities. Eight water supply systems were built, most of them in the upland areas, six of them from new boreholes. Furthermore, the broken water pump of the main supply system in Eduardo Mondlane was replaced. Six boreholes were equipped with PV systems for running submersible pumps, which supply water for up to three plastic reservoirs of 10 000 litres, connected to public taps. To facilitate the maintenance of these small water supply systems, water committees were formed that collect money from users and are responsible for minor repairs. Once the water systems are fully in place, committee members will receive training by programme-related organizations. Two of the boreholes that were constructed at the moment have limited access to the public (one at CERUM that will later be a public space and one at the slaughterhouse of Mapai, where the access will depend on the operator) and another borehole is almost exclusively used for irrigation purposes. Given that the pump of one of the boreholes is broken, there are currently two communities (Madulo and Braganca) who are benefiting from the newly established water systems.

To strengthen alternative ways of water supply, 100 rainwater harvesting tanks (60 made of ferro-cement, and 40 made of tin) were locally constructed. Half of these systems were installed at the houses of vulnerable families in Eduardo Mondlane and another half in Mapai. In addition, two

community tanks made of ferro-cement were built at primary schools in Eduardo Mondlane and one is still planned for Mapai. Some of the tanks have already been used this year, but due to the lack of rain, the water reserves were poor and consumed within a few weeks. One question arose concerning the hygiene of the tanks according to existing WHO recommendations. While first volumes of rain water should run off, the applied model with fixed tubes does not allow this. At this time, about 25 of the household tanks still need to be constructed and hand pumps for the two community tanks are in the process of being procured.

During the field visit, the consultants came upon a situation of serious water shortage in most of the dry-land communities. In Mahatlane and Hocha-Ribue, women and children drew water from the riverbed or from provisional water holes. Other communities reported that people and animals use the same water sources, resulting in serious health risks. Throughout the implementation of the Joint Programme, the construction of dams was considered a priority by the district government. Unfortunately, during the design of this JP, construction of dams was not included in the programme planning and could not be realized. Most of the stakeholders interviewed during the evaluation agreed, however, that the construction of dams or adequate alternatives for capturing water during the rainy season is essential for reducing the prevailing vulnerability to drought.

Members of the government and of target communities have received training in water resources management as a means for preventing and responding to extreme events of drought, flood and erosion. Facilitators were trained in the Integrated Water Resource Management (IWRM) at institutional level, with participation of the National Directorate of Water (DNA), the Provincial Department of Public Works and Habilitation (DPOPH), the INGC, the Superior Polytechnic Institute of Gaza, the SDAEs from Mabalane and Guijá, as well as the SDPIs from Chicualacuala, Mabalane, Guijá, Xai-Xai and Chibuto. An Integrated Water Resource Management Plan, the first of its kind in Mozambique, was developed with the District Government, with participation of the community members and accompanied by technicians from the Provincial Government. The plan contains concrete actions, such as the construction of boreholes, planting trees etc. and will guide the District Government in the implementation of water related activities, some already integrated in the PESOD 2013. As it is common with many plans at district level, their realization depends on the capacities and resources available and funding of most activities is mostly uncertain. Furthermore the consultants identified a lack of practical and low-cost examples which would facilitate the replication at community level and deliver best practices for scaling up.



PV-rum watersystem in Madulo



Rainwater tanks at the orphanage in Mapai



Water hole in the river bed, in Mahatlane

Agriculture is providing a basis for food security for the majority of the local population in Chicualacuala District, and is therefore understood to be a focal area for climate change adaptation. The programme supported four farmers' associations with more than 175 members in total in the communities of Madulo, Ndombe, Mapuvule and Chissapa located in the lowland area. In the dry-land area, individual farmers also benefited from training and from the introduction of drought-resistant crop seeds and fruit tree saplings.

The Joint Programme supported the process of creating and legalizing the associations, followed by a set of specific training measures. To protect the farms from animal invasion, the programme encouraged to build fences around the agricultural land, by providing barbed wire and food for work campaigns as incentives for farmers to participate in this activity. In cooperation with the

Mozambican Agronomic Research Institute (IIAM), the programme introduced new crops (e.g. a variety of potato, beet, and bean species), trained farmers in agricultural production, including conservation agriculture, which increased and diversified the levels of production. Farmers were also trained in the application of new techniques, such as mulching and crop rotation (output 4.6), and in the production of compost manure and cultivating forest nurseries (output 4.7); however, progress in both activities turned out to be limited, as their value was not recognised by the potential beneficiaries and water scarcity complicated their application.

Small-scale irrigation systems were installed in the four associations (see figure 4 below). Members received training in irrigation techniques and in the maintenance of gravity-led and drip irrigation systems (output 4.6). Presently, though, only in the associations of Chissapa the irrigation system is fully in place and functioning, while other associations are missing parts (Mapuvule) or show challenges regarding maintenance (Ndombe) and proper use (Madulo) of their system.

Figure 4: Overview of the current status of agricultural associations

Association	Irrigation system	Current status
<i>Madulo</i>	Drip irrigation, PV system	Functional, 1 ha (out of 2.5 ha) under irrigation. Lack of water for irrigation because of competition with use for personal consumption, low maintenance of the system.
<i>Ndombe</i>	Gravity-led, PV system, motor pump	Broken motor pump. Pump connected to the PV system has low capacity only (takes 5 days to fill 3 tanks) and does not work at the moment (blocked intake pipe).
<i>Mapuvule</i>	Gravity-led, motor pump	Partially functional, lack of finished tubes, while farmers do not maintain properly (first leaks in the connections).
<i>Chissapa</i>	Gravity-led, motor pump	Functional.

The consultants observed that currently no mechanisms of maintaining the PV systems are in place (e.g. water committees). In Ndombe community, satisfaction with the existing system is limited and the capacity for maintenance low. The systems do not yet cover the full area of the associations. However, some immediate and positive results have been achieved so far, in terms of increased production and diversification, particularly in the second cropping season.

The purchase of a tractor, run by the associations of Ndombe, Mapuvule and Chissapa, has clearly resulted in increased benefits for their members and the community. In addition to being able to farm a larger area in a shorter time, the marketing of products, as well as general transport, have been significantly improved, and contributed to increasing the income of farmers.



Drip irrigation in Madulo



Fenced land of the association in Ndombe



Tractor Management Committee, Mapuvule

Livestock keeping is an economically important activity for many households in the district, and contributes to reducing their vulnerability to disasters, especially among the communities in the upland areas, but also along the river. Livestock such as cattle and goats are an important asset for otherwise poor families, as they can draw upon selling at least some of their animals or their meat during times of hardships and scarcity.

In the area of livestock the UNJP aimed at improving local veterinary services (output 5.3), and to providing support to the district government in this regard. Across the three administrative posts, 18 treatment corridors were built with improved material (galvanised posts and rails), while local farmers contributed local material for the construction of the attached corrals. 36 livestock promoters from 21 communities were trained and equipped with treatment material for spraying the cattle against ticks (2-5 Meticais as per cattle) and for providing other veterinary services. In addition, more than 200 farmers in the target communities were trained in animal husbandry. Training concerning appropriate feeding techniques included hay production and the creation of fodder banks – with limited success due to water scarcity. Moreover, as part of regional development planning activities in Mapai, trainings on improved management of land and pasture were conducted, in which more than 100 district technicians and community leaders participated. Five drinking troughs were built to improve the animals' access to water and at the moment one of them is in operation (Bragança). The situation that the consultants could observe is that animals still demand on water from water holes that need to be dug by the livestock keepers, or from ponds, with negative impact to the surrounding vegetation.



Treatment corridor and promoter



Agro-Vet Shop in Eduardo Mondlane



Drinking trough in Bragança

A veterinary pharmacy along with a store of agricultural inputs was opened within the UNJP that facilitates the purchase of products and drugs for livestock promoters and farmers. However, farmers said that they mostly found the shop closed, so they continue purchasing their products in Maputo and Chokwé.

Another intervention of the UNJP, aimed to improve local market conditions (output 5.4), was the rehabilitation of the old slaughterhouse in Eduardo Mondlane town and the construction of a slaughterhouse in Mapai, the latter connected to a PV-powered water supply system. While in Eduardo Mondlane a private operator could be identified (after a delayed tender procedure), the one in Mapai has not yet been handed over to the District, so tendering has not started so far. The two slaughterhouses are not equipped (in Mapai, this will still depend on possible external funding or a potential future operator). Currently, slaughtering in Mapai is still practiced under poor hygiene conditions in an open area nearby the facility.

Diversification of livelihood options (outcome 5 envisaged under the Joint Programme), has been an integral part of most of the UNJP activities, however a focus was put on several innovative activities, targeting women as main beneficiaries. Activities under this outcome have included beekeeping, the development of integrated agro-livestock systems (incl. fish farming and small animals), and processing of agricultural and livestock products.

In Mahatlane community, a group of selected livestock keepers was trained in the processing of livestock products. As a result, some families have benefitted from this activity, in terms of having learnt about improved techniques for milk production and for producing yogurt and cheese (mostly for supplementing the family diet). In the associations covered by the Joint Programme, members were trained in the processing of agricultural products. It is particularly women members of the associations who know some of the processing techniques, e.g. drying fruits and vegetables, making jam, tomato sauce and other products, who they say they use them from time to time.

Under the programme, beekeeping was introduced in the communities of Mahatlane, Hocha-Ribue (upper zone) and Ndombe (river zone). In each community, 20 community members received five hives and the necessary equipment. Due to water scarcity and lack of proper management, all of the hives in the upland area were abandoned by the bees after a short time. In Ndombe, though, beekeeping appears to be a worthwhile activity: One beekeeper told the consultants, he had produced 86 litres of honey over the few months since he started.

Another activity was the introduction of integrated agro-livestock systems in the farming associations in Ndombe, Mapuvule, and Chissapa, with the aim and to provide alternative livelihoods through fish farming, and rearing pigs, rabbits and ducks. The fish pond and stables were built with the beneficiaries' labour and materials. At this point, one tank (out of a total number of twelve originally constructed) is running in Chissapa, while others faced maintenance problems or leaks in the tanks.

Taken as a whole, the success of activities to enhance the diversification of livelihood options varies across the various activities and communities. Beekeeping was found to depend on access to water and good management of the hives. While for the processing of agricultural and milk products, beneficiaries are still in a testing phase and need more training and habit to make the best use out of the products. Finally, the functioning of the agro-livestock systems crucially depends on water availability (ideally by gravitation to avoid the use of pumps) and on an on-going commitment of the beneficiaries – in the stables, most of the rabbits and ducks have already disappeared, although the pigs are generally breeding well.



Beneficiary of pig creation, Mapuvule



Beekeeper with hives in Ndombe



Beneficiaries of agro-livestock, Mapuvule

Natural Resource Management: In 15 communities, Local Committees of Natural Resource Management were created. All the committees received training on associativism, environmental conservation, climate change and related topics. Up to now, eleven committees have been legalized, with their own bank accounts to charge the tax of forest exploitation ('os 20%'). In order to ensure community-based forest control, 25 forest officers were trained in forest control and tax collection, and were incorporated into the District Services for Forestry and Wildlife (SDFFB) (output 4.2). Of the five committees visited over the course of the evaluation, all reported to have charged fees through the tax, with the committee in Mapuvule reaching a value of 23,000 Meticaïs since its inception in 2011. The regularity of meetings and supervision remains to be mainly driven by demand and there are still questions about the management of the bank account. In general the NRM-committees are all functioning and some are already planning the use of funds for assisting the community (e.g. supporting the primary school or the association). In those communities where delimitation of community borders and inventory of forest resources took place, this has facilitated the success of this activity (in Ndombe, Mapuvule, Muzamane, Madulo, Chissapa and Ngala). Clearly, the two activities have created community ownership and increased awareness of the value of the forest.

Another activity related to reforestation and the promotion of agro-forestry was the introduction of three tree nurseries run by community members. Under the Joint Programme, more than 28,000 seedlings of fruit trees and native species were grown or brought to the district, but after distribution to the beneficiaries (farmers, schools and health centres), almost all of the plants died. Reasons for this can be found in the scarcity of water, but also in the low value given to the trees, particularly of native timber species. However, one nursery is still running in Mahatlane community where direct

support and follow-up by the programme has continuously been provided. Also, the visits to all four associations covered by the Joint Programme showed agro-forestry practices at different levels, combining agricultural cultivation by planting fruit trees and some native trees species (e.g. papaya, moringa and macuacua).

Spatial planning is another area supported by the UNJP in the District of Chicualacuala, as it is seen as a precondition for the sustainable development of the district, particularly in the context of climate change. Consequently, this was done in a participatory manner with the district and local communities, by making sure that aspects of climate change and tools to reduce disaster risks were integrated. The drafting of a Land Use Plan, following the new Decree of MICOA, presented a first experience in Gaza Province. It involved the National Directorate for Territorial Planning, the Ministry of State Administration (MAE), MINAG, DPCA and local authorities. Two public consultations were held and data from risk mappings were included in the plan; however, the document is still in a preliminary version (output 4.3).

In the context of improved construction techniques adapted to the conditions of arid and semi-arid areas, the Joint Programme introduced a number of new practices. Innovations included a model of more resistant tanks to capture rainwater (even though production at the local level faced some challenges). A manual on rainwater harvesting was developed and disseminated in cooperation with the INGC, and trainings were conducted for members of the provincial and the district government. Another innovation constitutes the design of the CERUM, mentioning that it experienced delays of construction, mainly due to the lack of locally available material, and is therefore still at an early stage. Once functional, however, the centre is expected to serve as demonstration and training facility for improved construction and agriculture practices.

Renewable energy (output 4.7) has played a transversal role in the UNJP; it built an important component in the area of water supply and irrigation, and the topic was also included in trainings and other specific activities. In 2009, an inventory was conducted in nine communities of Chicualacuala, which resulted in a proposal for the introduction of renewable energy. Activities included the installation of solar panels to water supply systems, replacing the former manual pumps which were difficult to use because of the great depth of the boreholes (about 100 meters). There is an on-going process for the installation of a biogas system in Mepuza community which is envisaged to provide energy to a school, health clinic and a number of workshops. This system will operate based on animal faeces and will be connected to a community corral with a cement ground that avoids contamination with sand. While the biogas system needs to be seen as a pilot experience, the results will be of great relevance regarding the future of this practice in the country.



Construction of CERUM, Eduardo Mondlane



PV system, association of Ndombe



Tanks for the biogas system, Mepuza

RELEVANCE



"The extent to which the objectives of a development intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donors' policies."

OECD 2010b:32

3. Relevance

To what extent has the Joint Programme been relevant? This chapter answers this question by looking at the climate change context (3.1), the policy context (3.2), the conceptual approach of the programme (3.3), and the relevance to the beneficiaries in the target district (3.4).

3.1 Climate change context

Mozambique ranks as one of the most disaster-prone nations in the world (Dasgupta et al. 2007). With its diverse landscapes, high poverty rates (more than 50 per cent of the population live below the poverty line), and extreme exposure to cyclones, drought and flood, Mozambique is forecasted to be severely affected by climate change. An increase in number of climate-related disasters was observed over the past 30 years at least (Queface 2008).

Both in absolute terms of people affected and human lives lost, drought is by far the most serious climate-related hazard in Mozambique: Between 1956 and 2008, more than 16 million people were directly affected by droughts, and more than 100,000 were killed (Queface 2008). In the future, the dry season is projected to get even drier across Mozambique (IPCC 2007), and there are indications of a later start to the rainfall season (INGC 2009a). This comes along with a positive trend in terms of temperature increase, which has been found over most of the country over the past 45 years (INGC 2009a).

Looking at climate-related disasters, the highest percentages of deaths occur during floods and in their aftermaths. Mozambique is located at the downstream of a number of major river basins, such as the Zambezi, Limpopo and Rovuma rivers. Moreover, the Southern coast is already subject to occasional, but severe, tropical cyclones (4 in 16 years). In the future, their number is expected to increase (Lal 2001; McDonald et al. 2005) which tends to result in widespread flooding in the region.

The World Bank has estimated the cost of inaction to climate change as US\$ 450 million per year – mostly through slower economic growth and an undermining of livelihoods. Rain-fed agriculture, coastal towns and transport infrastructure are known to be sectors particularly vulnerable to drought, flood and cyclones. Other sectors such as fisheries, natural resources and health also show potential vulnerability. The effects of climate change on growth could accumulate into significant declines in national welfare by 2050 (World Bank 2010).

The adverse impacts of climate change are set to pose a growing burden on the population. Including risk factors such as Mozambique's high poverty rate, the impacts of climate change will be exacerbated by the frail socio-economic context of its population. The degree of human-made local environmental degradation will influence the vulnerability of social systems to climate change even further.

Considering this background and the fact that the Joint Programme has specifically targeted vulnerable communities in arid and semi-arid areas, the programme's objectives are principally seen as highly relevant for enhancing adaption options and for gaining pilot experiences in this area.

3.2 Policy context

Given the multitude of climate change risks, adaptation measures to cope with the impacts of climate change are urgently needed at different levels in Mozambique. With the forecasted increase of adverse climate events, the country braces itself for things to come. It is the poor and vulnerable in particular that face growing risks, a circumstance that calls for investment and promotion of adaptation and support strategies.

The current Poverty Reduction Strategy Paper (PRSP) in Mozambique has recognized the need to adapt to climate variability and change in order to reduce people's vulnerability (GoM 2006a; b). A 2005 review showed that Mozambique already is unlikely to attain the Millennium Development Goals (MDGs) within the given timeframe of 15 years. Progress has been slow in the areas of hunger

eradication, extension of primary education, gender equality, HIV/AIDS reversal, and environmental sustainability (GoM 2005).

Recognizing the need to improve the country's capacity to overcome the consequences of slow progress and at the same time create strategies to adapt to climate change, the GoM reformulated and created several national legal instruments. The efforts are also supported by several conventions ratified by Mozambique: the Convention of Biological Diversity, the United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC) (Boell 2009). Moreover, in 2007, Mozambique submitted its National Adaptation Programme of Action (NAPA) under the UNFCCC, which identifies urgent and immediate needs with regard to climate change impacts and adaptation priorities.

Perhaps unsurprisingly for a country so severely exposed to hazards and experienced in disasters, the area of disaster preparedness and management has been prioritized, and since the shock of the 2000 floods Mozambique has made significant progress for reducing the impact of disasters on the country (Midgley et al. 2012). The National Institute for Disaster Management (INGC) was established in 1999 with a clear mandate for coordinating disaster management and risk reduction. Progress has been made with regards to knowledge and research capacities and a number of highly valuable and informative studies have been conducted over recent years (e.g. INGC 2009a, INGC 2009b, MICOA 2007).

While the knowledge base is steadily increasing, the institutional capacity and co-ordination mechanisms of the government are still facing challenges. This is mostly due to a *“lack of alignment of policies/strategies/plans, lack of integration (multidisciplinary perspective) and limited human and financial resources”* (Sietz et al. 2011).

To help focus and coordinate action on climate change, the GoM has recently prepared a Strategic Programme on Climate Resilience (SPCR) which has been endorsed for support from the Climate Investment Funds (CIFs). The Council of Ministers has also tasked the Ministry for the Coordination of Environmental Action (MICOA) with responsibility for developing a cross-sector National Climate Change Strategy and has convened a strategy planning group within MICOA to initiate and coordinate the cross-sector planning process.

The Joint Programme is considered highly relevant to the policy context, given the prevailing necessity to support institutional progress on climate change adaptation and to gain insights into working approaches on how to reduce the impacts of climate change in vulnerable environments.

3.3 The conceptual approach of the Joint Programme

Despite the fact that adaptation-specific initiatives are still recent in development co-operation, there are a number of authors that have addressed the question of what is 'successful' adaptation in the context of climate change¹. While these studies provide a set of criteria with which to plan adaption-related initiatives, they say little about processes of adaptation, or how these processes are likely to be linked to, and mediated by, the ways in which climate change manifests itself (Brooks et al. 2011).

Given the extreme exposure to climate change impacts found in Mozambique while, at the same time, the country is facing institutional challenges to deal with climate change adaptation, the Joint Programme has cut across various sectors and sub-sectors (i.e. agriculture, livestock, forest, land, water, etc.) and has undertaken a broad range of efforts at different levels to build the resilience and strengthen capacity for climate change adaptation.

¹ Yohe and Tol (2002), for example, frame adaptation in terms of efficacy, feasibility and acceptability. Adger et al. (2005) propose evaluating adaptation in terms of effectiveness, efficiency, equity and legitimacy. And Stern (2006) applies similar criteria of efficiency, effectiveness and equity.

To facilitate this analysis, the programme documents were analysed according to five categories, based on the OECD/DAC 'adaptation marker' (OECD 2010a). This tool was introduced by the DAC to help identifying funding flows related to adaptation, and gives an indicative list of activities that can be considered relevant for adaptation. Based on this list of activities, the programme documents were categorised as proposed by Lamhauge et al. (2011): i) Climate risk reduction, ii) Policy and administrative management for climate change, iii) Education, training and awareness on climate change, iv) Climate scenarios and impact research, and v) Co-ordination on climate change measures and activities across relevant sectors. Results from the analysis are shown in Figure 5 below.

Figure 5: Relevance of the conceptual approach

Type of activity considered relevant for adaptation by the OECD/DAC (2010)	Description	Covered by JP outcomes and outputs
Climate risk reduction	Implementation of initiatives that reduce the vulnerability to climate change through sectorial measures such as water conservation, irrigation, infrastructure, and flood prevention.	Yes (Outcome 4 and 5)
Policy and administrative management for climate change	Implementation or improvement of legislation integrating climate change issues, mainstreaming adaptation, and taking into consideration all stakeholders.	Yes (Outcomes 2 and 3)
Education, training and awareness on climate change	Dissemination of information on climate change risks, institutional capacity building, and training activities aimed at changing behaviours, or increasing disaster preparedness.	Yes (Outcome 1 and 2)
Climate scenarios and impact research	Development of climate change studies, scenarios and climate impact studies, tools and equipment necessary to better understand climate change and associated vulnerabilities.	Yes (Outcome 3)
Co-ordination on climate change measures and activities across relevant sectors	Creation of linkages between institutions, participation of stakeholders in dialogues and decision-making, strengthened community of practice on climate change, and use of research for dissemination and policy-making.	Yes, partially (Outcome 3, in terms of use of research for dissemination and policy-making)

The above analysis shows that the Joint Programme has been highly relevant in terms of most of the adaptation-related criteria outlined by the OECD/DAC. The programme has cut across various sectors and sub-sectors in an effort to build the resilience and strengthen capacity for climate change adaptation and is therefore meeting in full range most, if not all, of relevant areas of activities related to responding to the challenges posed by climate change.

It is assumed, however, that the degree to which the above types of activity contribute to climate change adaptation can vary significantly (Lamhauge et al. 2011). Risk reduction activities are estimated to have the most direct impact on people's ability to adapt to climate change. Policy making ensures that climate change risks are taken into account in laws and strategic planning. Education, training and awareness aim to change people's behaviour and habits in order to adapt to the current climate, to consider future climate change in their decision-making and to be prepared for adverse events. Climate change research, then, also supports risk reduction by supplying information that is necessary to understand where training, policy and risk reduction activities are most needed. Last but not least, co-ordination activities ensure that there is a dialogue between stakeholders and that research and relevant information are disseminated.

While the programme was mostly considered a pilot initiative for dealing with climate change challenges, activities related to co-ordination on climate change measures – in terms of developing and supporting linkages between institutions, participation of stakeholders in dialogues and decision-making, and strengthened community of practice – were not explicitly included in the programme design. Therefore, while the programme can be considered fully relevant in terms of climate-risk reduction and other activities, and while institutional components were covered in a comprehensive way on the vertical level of institutions (vertical mainstreaming), horizontal aspects of institutional design and management remained largely unaffected. While the importance of establishing and maintaining good cooperation between the Joint Programme and the Government at all levels was emphasized (Midgley et al. 2012), little was done to strengthen institutional ties and coordination across government levels and agencies. This, however, was outside the scope of this programme, particularly when looking at the relatively “short” implementation period.

In terms of contributing to progress on the MDGs, the conceptual approach of the Joint Programme has shown high levels of consistence with these overarching goals, especially through its objective to *“improve the resilience of rural communities to climate change by improving and strengthening management of the natural resource base and diversifying livelihoods”* (Development objective 2). A clear relation can be drawn between this objective and MDG 1 (Eradicate extreme poverty and hunger) and 7 (Ensure environmental sustainability). In terms of MDG 8 (Develop a global partnership for development), the evaluation has found that the programme is in full consistence with development objectives of the United Nations system (UNDAF, *Delivering as One*).

3.4 Relevance on the district and the community level

The population of the semi-arid Gaza Province is highly exposed to climate variability and increases in variability brought about by climate change (Midgley et al. 2012). They are also highly sensitive to this situation, owing to their high reliance on rain-fed agriculture and serious structural water deficits. Although there exists some adaptive capacity (mostly through livestock keeping), coping mechanisms such as charcoal production are reliant on climate-sensitive natural resources which are rapidly degrading. Thus, vulnerability is seen as high, and the impacts of climate change are expected to be severe.

The Joint Programme has been working actively in 19 communities in both upland and lowland areas of the district which require differential adaptation approaches. In general, interviewees from the district government expressed their view that support for adaptation is essential in order to improve local living conditions, and interviewees from the community level found the implemented activities highly relevant to address their needs. The set-up of institutional arrangements such as agricultural associations and environmental resource management committees, and the establishment of community funds were widely seen as relevant in the sense that they enhanced community-level adaptation. The drilling of boreholes addressed the key concern of access to safe water; and although some boreholes have not been finished yet, communities and the local government highly welcomed the initiative. The construction of rainwater tanks for communities and for selected poor families was regarded as highly relevant by all levels.

As far as livelihood support is concerned, the distribution of productive assets, animals, seedlings and saplings, and the provision of a tractor for three farming associations – accompanied by an appropriate training programme - was generally viewed as relevant to improve the immediate livelihoods of particularly vulnerable households. It appears that there has been little dispute over beneficiary household selection: community members generally expressed their view that the beneficiary selection criteria had been fair, even if some irregularities were reported.

While in almost all cases the programme activities addressed community needs, a mixed picture arises related to a number of activities: Beekeeping was not considered relevant in some of the upland communities (given the impossibility to attract bees to stay during the dry season), and the capacity of water pumps linked to solar panels was seen as insufficient (also in relation to drip

irrigation that was introduced in some communities) for proper levels of irrigation. Moreover, while the programme provided support to upland livestock keepers through the construction of treatment corridors, the consultants found that in some communities the new facilities have not been properly used yet by the farmers. This is understood as a frank reminder that market incentives for livestock keepers to improve the health of their animals remain a key concern that was not addressed by the programme. Yet, this clearly remains a national challenge which is to improve standards on the demand side, and not something that could have been adequately addressed through this type and scope of programme. In addition, some of the activities were reduced in their underlying relevance, due to limited performance levels (such as solar panels and drip irrigation systems). Therefore, some of the activities, while understood as relevant measures, have done little to better adapt the livelihood of households in the long term, especially in the upland areas of Chicualacuala District.

It must be stressed that the programme also came with a flexible “menu” of interventions - while most of the activities were planned beforehand, in some cases the programme responded to specific needs of the district government and in the communities. However, one point needs to be raised in this regard: The ability to ensure water access during the dry season through small dams remains on the district’s and communities’ priority list – this was overlooked at the design stage and was hence beyond the scope of the programme. This will leave communities’ exposure to water scarcity constantly high. However the water supply systems (once running) are an important improvement to the previous situation.

In conclusion, and in spite of the points raised above, the programme activities have been highly relevant to the local communities. It is also recognized that the programme has been aligned with activities of other actors and to a large extent run in support of relevant overarching national and sub-national strategies. But while relevance of the Joint Programme was very high for river-near local communities, arid upland areas have not fully benefitted from the range of activities that were implemented.



EFFICIENCY

"A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results."

OECD 2010b:21

4. Efficiency

Following the review of the relevance of the Joint Programme above, this chapter turns to its efficiency, looking first at the programme design and structure (4.1), to external factors that have limited/facilitated efficiency (4.2), and then to its management set-up (4.3).

4.1 Programme design and implementation structure

The Joint Programme was originally designed for a larger area of the Limpopo River Basin, including areas located in the lower Limpopo where the programme could have built upon existing UN activities. Over the course of designing the programme, the final choices then fell on Gaza Province (at the demand of the central government) and on Chicualacuala district (at the request of the provincial government). There is general agreement amongst all stakeholders interviewed that this was an appropriate choice given the extreme vulnerability of the district, as well as the fact that the district has so far received little or no development assistance from outside agencies.

In terms of overall programme planning and implementation, the programme ensured for full involvement of the national and provincial government in the planning phase, and promoted and strengthened partnerships at the district level and with target communities designed to address its objectives. The activities were also mostly aligned with the PEDD district plan.

During programme design, joint planning of the vast majority of activities was undertaken between participating UN agencies and the GoM. Programme planning took mostly place at national and provincial level, though. Even though the programme included several requests from the district at a later stage, programme design would clearly have benefitted from contributions from the district level, and from local communities.

Concerning the implementation structure, the selection of 'focal points' in each of the participating UN agencies (FAO, UNDP, UNEP, UN-HABITAT, UNIDO, WFP) and institutions from the government (MICOA, MINAG, INGC, INAM) made sure that collaborating partners were 'on par' in the implementation phase. Meetings of the Project Management Committee (PMC) were held frequently (every three months) and it was confirmed from all sides that coordination worked quite well, with increasing levels of cooperation over time. The programme structure, as well as coordination and communication between the stakeholders, can hence be regarded as mostly efficient. Figure 5 provides an overview of the key roles of UN agencies in the Joint Programme, based on the initial programme proposal and the Monitoring Framework (see Annex IV). The table shows that while the programme structure has been closely aligned with the initiative "Delivering as One" which aims to provide technical assistance in a more coordinated way, the roles of at least some of the agencies were only roughly defined initially and mostly enhanced during the implementation process.

Figure 6: Key roles of UN agencies participating in the Joint Programme

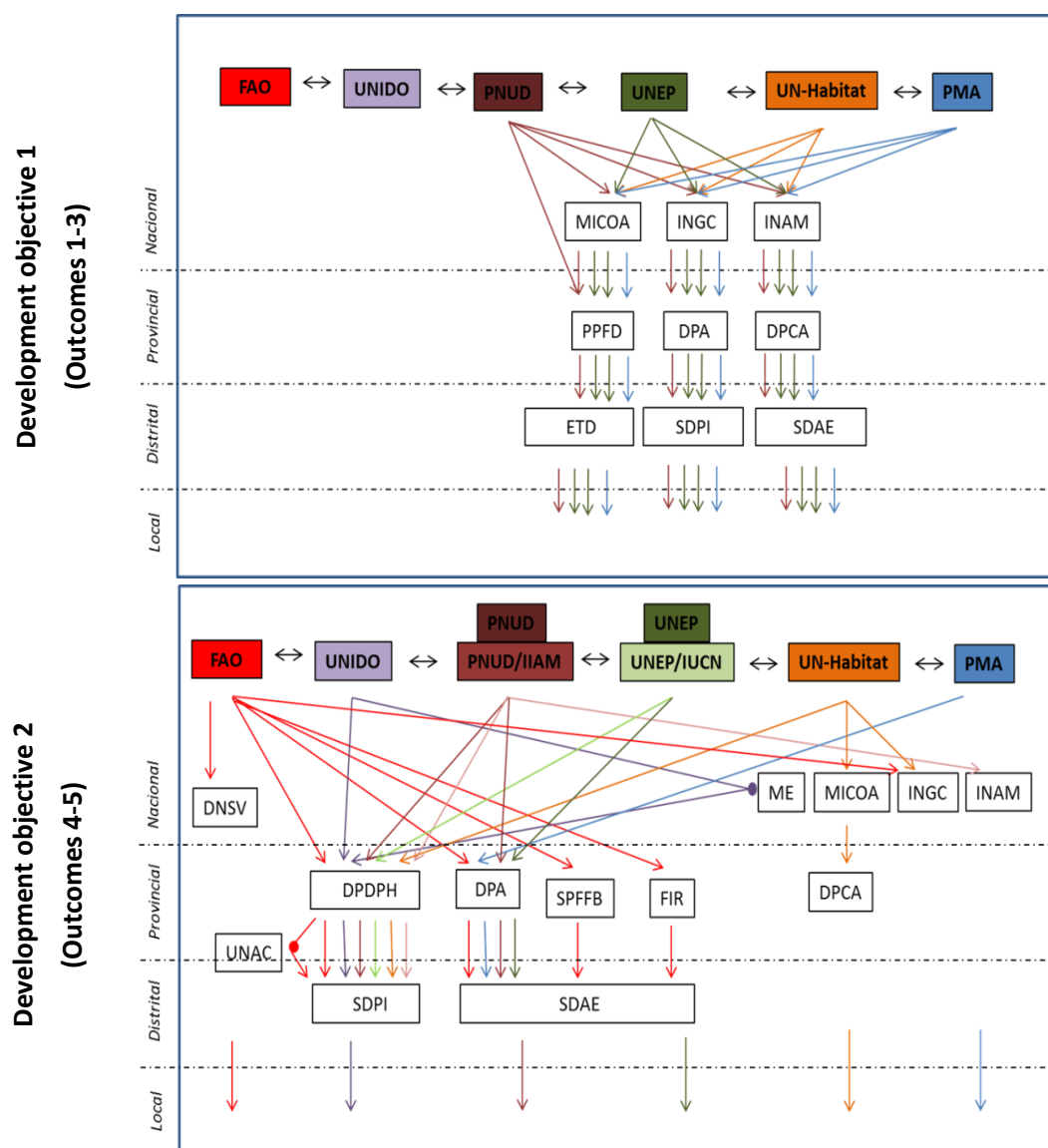
FAO	Overall programme management and in-country coordination, logistical arrangements. Technical expertise and leadership in the programme. Development of strategic approaches at the community level (related to climate change adapted production and NRM).
UNDP	Involved in trainings (e.g. district planning), the development and implementation of strategies for advocating and communicating, especially within the various levels of government.
UNEP	Main technical expertise and leadership on environment and climate change (climate proofing). Closely involved in analyses and assessments of risk areas, in the development of strategic approaches and capacity building at community level on integrated water management.
UN-HABITAT	Technical expertise in the area of environment and climate change, notably related to territorial planning issues and governance at local level. Involved in vulnerability and disaster assessments as well as in capacity building activities related to upgrading human settlements and basic services.
UNIDO	Technical expertise and leadership on renewable energies for productive purposes, solid waste management, small-scale agricultural and industrial processing. Closely involved in the implementation of demonstration sites and pilot projects, most notably in the area of alternative energies for productive purposes and solid waste management.

WFP	technical expertise and leadership on disaster management, as well as vulnerability mapping, field work on vulnerability assessment and baseline information on food security and disasters, as well as mapping of information and related capacity building activities.
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The Joint Programme was one of the first pilots for the UN initiative “Delivering as One”. For the programme, this approach included six UN agencies and six national ministries and institutions, as well as a variety of other relevant actors and stakeholders. While bringing in the expertise of multiple UN agencies could be a better arrangement than the usual approach of delegating one agency against the complex nature of a climate change adaptation programme (Midgley et al. 2012), there are lessons to be learned from the experience, especially at the local level.

Actor mapping (see Figure 6 below) shows how and with which government partners the various UN agencies participating in the Joint Programme were following their respective key roles. While the implementation structure related to the first development objective (outcomes 1-3) followed a mostly clear implementation structure, activities related to the second development objective (outcomes 4-5) were more dispersed and characterized by much higher amounts of intra-institutional linkages with government agencies from the national down to the district level. Inevitably, this has led to a number of obstacles concerning the efficiency of the implementation phase. We will come back to this in chapter 3.3.

Figure 7: Mapping of actors related to the strategic objectives



4.2 The influence of external factors

As the Joint Programme has been implemented over four years in its current design, its objectives and activities are well-understood amongst its participating agencies and partners from the government. Based on the information reviewed for this evaluation, the programme appears to also have been largely effective in reaching the majority of its objectives in time. It is still noteworthy however, that implementation encountered numerous delays that were at least partly caused by external factors.

Firstly, the *remoteness of the programme area*: Even though one main reason for selecting Chicualacuala district as the target area of the Joint Programme was its geographical isolation and the resulting need for substantial assistance, its remoteness constituted a major obstacle to programme efficiency itself. The district could only be accessed via an unpaved road. The area has been regularly flooded during the rainy season, making access of programme staff to the area and travelling in the district challenging, or even impossible. The communities were found to be widely dispersed in the district; hence programme staff spent large amounts of time travelling.

Secondly, *obstacles to transport*: The transport of construction and other material necessary for implementation of various programme activities – mainly related to water supply and irrigation – turned out to be a challenging and complex task.

Third, the *lack of local goods and material*: The lack of an available market infrastructure in Chicualacuala district led to increased logistical efforts, both in terms of access to consumable goods for the programme staff, as well as for bringing in material for implementing many if not most of the activities. In particular, there was hardly any communication infrastructure available on site.

Fourth, *delayed tender procedures*: In some cases, progress in the achievement of a number of outputs was constrained due to a delay in opening public tenders. For example, putting the slaughterhouse in Mapai town into service was delayed by more than one year.

4.3 The management set-up

Generally, the “Delivering as One” approach has been accepted by most of the interviewees as a good way towards harmonization between all agencies and government partners. Yet it became clear that for the implementation of some particular activities, the programme would have benefited from a management set-up based on single agency implementation approaches and, in here, clearly defined and delineated tasks for each agency. Obstacles for efficiency are constituted by various essential aspects that, once properly understood, can be solved one at a time in joint initiatives, however. In terms of management set-up, the following must be stressed out:

1. *Delayed availability of baseline studies*: An assessment of available baseline data is crucial, particularly in a 'new' area in which it is not possible to draw upon experience from previous activities. However, baseline studies took more time than originally planned. Reasons for this are also mostly related to the remoteness of the district and the target communities. Hence, sufficient time (e.g. a one year conception phase) needs to be allocated at the beginning of the programme.
2. *Lack in quality of the Monitoring and Evaluation (M&E) framework*: Proper monitoring and evaluation allows for a verification of progress and achievement of the overall development objectives. Monitoring results provide a real time insight into the state of implementation, and activities can be regularly adapted. A joint M&E framework with an improved logical structure and more specific targets should thus have been designed carefully and used by all participating institutions as an instrument of operational planning and impact monitoring.
3. *Quality and focus of feasibility studies*: Under the given monitoring frameworks and regulations of participating organizations, the majority of activities, especially infrastructure-related ones, had to be based on feasibility studies. At least in some cases – mostly related to boreholes –

results from these studies were of low quality and not well enough focused on providing guidance for implementation, hence not allowing for construction in proper time. A more careful selection of contractors and better control of their work should thus have been warranted.

4. *Time-consuming administration processes and procurement procedures:* The framework of existing guidelines and regulations across the various UN agencies did clearly show some trade-offs. Many activities needed the intervention of two or more agencies to be completed. However, the input from one agency often depended on the completion of activities by other actors in order to achieve programme results. This obstacle must be overcome in the future, either by defining more realistic timeframes for completion of activities, by preventing that delays in one agency impinge on the work of others, or by limiting the amount of agencies involved in joint activities on the ground.
5. *Insufficient amount of staffing for programme coordination and management across all levels:* Throughout the implementation phase, one person served as programme coordinator both at the national and the local level of the programme. Moreover, this person was also the responsible for implementing the FAO-related activities. While this approach has clearly provided for building trust on the partner level, it shows some obstacles for efficient coordination. Future joint initiatives should therefore take this aspect into careful consideration, and create one central coordinating unit and one field coordination unit.

Due to the above mentioned obstacles, this has meant that, instead of working steadily throughout the implementation phase, some of the agencies were obliged to move fast in the last two years in order to get their activities done on time. The increased time pressure produced at least three new obstacles: The implementation became more top down-oriented, as a stronger focus was to achieve the outputs, leaving less space for local participation and criteria of sustainability and impact. Moreover, some of the activities were cancelled due to a lack of feasibility to achieve them in the given time. Once more, emphasis should be put on an appropriate timeframe, in order to allow for proper implementation of activities, in which all partner are equally involved, and in which the ultimate focus is on the impact level of the programme.

These findings have also been reflected by the interview partners over the course of the evaluation; a score card ranking was introduced in which a comprehensive list of lessons learned regarding the programme's efficiency was discussed with the various focal points. Based on a ranking of existing challenges, a central part of the interviewees stated that the programme would have further benefited mostly from (I) a stronger focus on impacts, (II) stronger participation of all actors involved in both the planning and implementation process and (III) an improved communication and information system. Other important aspects that were identified in order to increase efficiency of the Joint Programme were to build implementation on better consideration of strengths and weaknesses of all institutions involved, elaborating a joint M&E system, and to create better perspectives for replication.

EFFECTIVENESS

"The extent to which the development intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance."

OECD 2010b:20

5. Effectiveness

Following the review of the efficiency of the Joint Programme above, this chapter turns to its effectiveness, looking first at the methodology, followed by the aspects of environmental mainstreaming (5.1), and then the adaptation to climate change (5.2). Finally, effectiveness of the programme will be analysed as regards the MDGs (5.3).

As an underlying concept for analysing the effectiveness of the UNJP, the report uses the impact chain model. The analysis is based on information obtained from reviewing the M&E framework of the programme that was elaborated in the phase of planning and monitoring. Applying the impact chain will allow us to trace the sequence of the various implementation steps and the performance of the intervention that was aimed to achieve its overall development objectives (direct impacts) (GTZ 2004). The key steps of this chain are illustrated in the figure below, providing some examples from the programme: 1) activities like the construction of the CERUM; 2) the delivery of products, such as the water supply systems, 3) the use of products by the beneficiaries, for example through the application of conservation agriculture techniques (= use of adaptation measures), and 4) the generation of results, e.g. by increased amounts of agricultural production in dry periods. While development interventions usually are accountable up to the point of achieving their results, organizations should also strive for making significant contributions to the (indirect) impact level.

Figure 8: Impact chain of the Joint Programme



The analysis of the effectiveness of the programme is structured according to the two development objectives/ intervention components. The degree of effectiveness is being measured on the level of outputs and outcomes achieved (see M&E Framework, Annex IV), according to their targets and will be estimated as a percentage. The figure above indicates the present state of effectiveness of the programme which is in many cases still located between the implementation of activities and achievement of outcomes. This takes into account certain weaknesses of the M&A framework, where outputs and targets remain unspecified and the logical structure lacks in completeness, with outputs presenting the lowest level of the framework.

However, regarding the achievement of the overall objective, i.e. *"to support and strengthen the government's efforts to reduce the risks associated with climate change in vulnerable areas"*, important contributions were made as can be seen through analysing the programme's interventions and outcomes at different levels.

5.1 Environmental Mainstreaming

The first specific objective of the programme, to *"integrate aspects of the environment and climate change in national, provincial and district government plans, policies and strategies"* has been achieved to a large extent. This achievement was mainly due to the successful contributions made on the policy level (to ESAN II strategy, to Contingency Planning and to the National Strategy for Adaptation to Climate Change), but also by strengthening provincial and district capacities to integrate issues of climate change into their respective socioeconomic development plans.

Figure 9: Effectiveness related to development objective 1

Outcome 1: "Government, civil society, communities and other stakeholders informed, sensitized and empowered on environment and climate change (CC) issues."	95%
Outcome 2: "Government capacity at central and decentralized levels to implement existing environment policies strengthened."	90%
Outcome 3: "Climate proofing methodology mainstreamed into government development plans, UN / Donors' programming and local stakeholders' activities/invests."	50%

The Joint Programme supported the political and policy process by providing inputs and information through studies and training materials, and by integrating knowledge into the work of key actors at national and sub-national level. Interviews with actors from the government and from the communities have shown that there are enhanced levels of knowledge of risks related to climate change, including possible adaptation measures. Of the first outcome, the vast majority of products were carried out, and their respective targets were achieved. However, overall capacities at district and community level remain limited. To give an example, the forecast and early warning of disasters and climate-related risks depends mainly on the INAM (output 1.3). In addition, the application on behalf of the District Government of risk maps and other material introduced by the UNJP (target 1.3) cannot be verified at this moment and needs more follow-up.

In general, the UNJP strengthened capacities at different levels and tools were successfully developed for integrating environmental and climate change issues into existing strategies and plans. Main government partners to be mentioned here include MICOA, INGC, ME, INAM, the Government of the Province of Gaza, and the Government of the District of Chicualacuala. The Joint Programme has also facilitated the implementation of policies and plans through monitoring and providing technical support as well as material, e.g. for the CERUM and for INAM (still on-going). Specific aspects of environmental policies were supported, such as the creation of NRM committees and the integration of environmental topics into the school curriculum. Most of the outcomes, including achievement of specific targets, have therefore been - or are in the process of being - achieved.

The focus of some targets changed according to priorities, such as "sufficient time between the warning and the arrival of the event". Considering that the programme put great emphasis on preventing adverse effects from droughts, the programme needs to guarantee a functioning weather forecast through the flow of information between INAM and the community radio to achieve the target. Regarding the overall effectiveness at district level, it needs to be stressed that low levels of institutional capacities, as well as limited funds remain a challenge to the implementation of plans and policies in general and in relation to "new" topics such as climate change in particular.

Climate proofing presents a new approach introduced recently in Mozambique, in great parts through the UNJP. The completion of the strategy for the Limpopo River Basin is likely to be finished by October 2012, including an evaluation of the approach. It must be stressed that this component of the Joint Programme has started with much delay, which is also the reason why the full range of products provided and results achieved is still in progress. Nevertheless, the programme has been supporting an important step towards climate change adaptation; while climate proofing is framed in a national programme and supported by other donors, the process will certainly continue.

5.2 Adaptation to climate change

Figure 10: Effectiveness related to development objective 2

Outcome 4: “Community coping mechanisms to climate change enhanced.”	70%
Outcome 5: “Communities’ livelihoods options diversified.”	

In Chicualacuala District, the UNJP generated positive results, some in areas related to natural resource management, agriculture (lower zone) and livestock (upper zone), as well as at least partly on access to water and promoting renewable energy. However, the level of achieving its outcomes vary: 1) in terms of conducting trainings and introducing practices, the UNJP generally complied with its plans, 2) concerning the application of new techniques and knowledge, effectiveness of the programme however cannot be taken as granted, and 3) for some installations, particularly related to water and renewable energy, and also to the CERUM (even if not particularly stated in the M&E framework), effectiveness will largely depend on concluding these activities, and on the use and sound management of the installed facilities.

In the area of NRM, the local committees proved to be functional and fully integrated into the community; yet, sustained levels of support are needed in some areas (see sustainability). The decrease of uncontrolled fires is a positive trend, but there still remains the challenge of intensive logging for charcoal production. Regarding the integrated water management, a substantial base of knowledge was created by the UNJP, its functionality still depending on the conclusion of the facilities, training of water committees, and a follow-up period beyond the UNJP. The goal of reducing by 50% the leakage of water in irrigation systems has been achieved to some extent, but only one system is fully operational today. The products provided in relation to spatial planning and improved constructions were delivered partially, missing the completion of the plan as well as the works of the tanks and CERUM. In the introduction of renewable energies, the most visible product is the PV system used for water supply, which facilitates the management of the pumps and, at the same time, raises issues of maintenance. There is a large demand for solar panels and now some homes have PV systems. The introduction of improved stoves has also created a demand, but the use is still limited, lacking local production.

The activities of diversification are seen as being of some success, showing one or two ‘success stories’. As pilot experiences, they need a longer period of ‘trial and error’ and to change certain habits of the local population. In agriculture, the combination of irrigation, crop diversification and use of agricultural inputs immediately show results, but in the context of conservation techniques, the use of manure and the integration of forestry, the application is still found to be low. While the products created by the UNJP regarding livestock were of great support for the SDAE and improved access to veterinary services, many livestock keepers still have some resistance to pay for treatments. The completion of the drinking troughs is crucial to improve the precarious situation in the coming months. In relation to the target on reducing the mortality of cattle (5.3), it is impossible to draw conclusions as some of the activities are not over yet (question of attribution). However, data from SDAE reports show an improvement in livestock, with no cases of FMD since 2010 and an increase between 2010 and 2011 in animal numbers per species (19% cattle, 21% goats and sheep).

Looking at the outcome, successes mainly regard the primary beneficiaries of the associations. For example, in Mapuvule and Chissapa farmers report that they have improved their food security situation during the dry season (‘children already eat before going to school’) and have increased their earnings significantly.

The evaluation of the Joint Programme showed a high degree of effectiveness, if measured according to its monitoring framework. Considering that expected outputs and outcomes were mostly oriented on capacity building and the application of knowledge the results of the UNJP in most cases stay at this level and rarely show impacts for the target groups. There are promising exemptions, like the improved food security situation for members of the farmer associations and increased income for

successful beekeepers, however these represent a small number of beneficiaries that are from the less drought-stricken zones close to the river. At the same time, some individual activities in the uplands, such as the creation of community groups and livestock promoters, are considered effective, taking into account their high relevance and potential future impact on climate change adaptation at community level. In order to be more effective, future programs should take into account certain challenges of the programme management that implicate the quality of outcomes. These include: (1) planning adjustments after the conduction of base line studies, (2) an adequate time-frame of the project, (3) increased impact orientation and (4) a sufficient number of personnel for the coordination and implementation of the programme at the different levels of intervention.

5.3 MDGs and MDG-F

Regarding the MDGs and the objectives under the MDG-F² in the area of environment, it is currently not possible to quantify the contribution that the Joint Programme has made. On the one hand, the number of direct beneficiaries was lower than originally planned, covering a district with about 40,000 inhabitants. On the other hand, it is too early to identify impacts created under the UNJP, mainly because of the short timeframe between the implementation of development interventions and the evaluation mission, but also because of the pilot nature of the programme. Looking at the individual products and results, the structure of the UNJP was designed according to the Environment & Climate Change thematic window under the MDG-F, and does therefore correspond to the above analysis. Still, some qualitative contributions – in terms of lessons learned and best practices – have been made to the Millennium Development Goals 1 and 7.

MDG 1: Halve by 2015 the proportion of people living on less than a dollar a day and the proportion of people who suffer from hunger.

Farmer associations in Chissapa and Mapuvule are success stories that may serve as a practical example for semi-arid areas with permanent access to water. Members of the association (about 100 in total) have gained revenues of approximately 20,000 Meticaïs in 2011 and reported that production in the dry season ensures at least one meal a day for their families. The differences between the associations showed that, in addition to the supply of an irrigation system and a tractor, the need for good organization and internal management of these associations remains high. Beekeeping was another positive example in the lowland area, as it impressively increased income of those beekeepers that followed good management techniques of their hives. For upland arid areas, livestock production has turned out to be essential for reducing vulnerability of the population to drought – selling animal or meat mostly occurs in times of shortage; further innovative approaches have great potential to improving the welfare of families on a sustained basis.

MDG 7: Promote sustainable development, reduce the loss of biological diversity and to halve, by 2015, the proportion of people without access to safe water and sanitation.

The creation of NRM committees must be seen as good practices geared to sustainable development in terms of protecting ecological diversity. Key success factors were the delimitation of community forest areas and the inventory of existing forest resources. This process brought ownership regarding forest control and taxation by the communities, as they can financially benefit from protecting their environmental resources. There have been instances where community members refused loggers from outside to access “their” forests, due to licensing procedures that they found inappropriate, proofing the functioning of this introduced structure.

Looking at the promotion of sustainable development, the range of trainings conducted by the UNJP from the national to community level, covering key issues of environmental conservation and climate change was also a success from an awareness raising perspective that needs to be followed up.

² Objective: “The MDG-F seeks to reduce poverty and vulnerability in eligible countries by supporting interventions that enhance management and environmental services to national and local level, increasing access to new financing mechanisms and capacity to adapt to climate change.”

SUSTAINABILITY



"The continuation of benefits from a development intervention after major development assistance has been completed. The probability of continued long-term benefits. The resilience to risk of the net benefit flows over time."

OECD 2010b:36

6. Sustainability

Factors that have influenced the sustainability of the programme were considered to be: 1) the relatively short time-frame of the programme, 2) the delayed start of the implementation phase and certain activities within the course of the programme, 3) the large number of interventions in different areas and levels and 4) the pilot nature of many of the interventions. An assessment of the sustainability of the UNJP components is provided in this chapter, including an overall estimate and an analysis that highlights some of the main aspects.

6.1 Environmental Mainstreaming

The sustainability of this intervention area is considered with medium to high, depending on the degree of integration of the newly introduced tools and approaches in national policies as well as the availability of resources for research, training and implementation of plans at all levels.

National: The GoM is currently experiencing an increase in external funding partners and supporting initiatives on climate change, which should ensure the continued consideration of key issues within national policies. However, looking at the specific interventions of the UNJP, their sustainability varies. There are approaches such as Climate Proofing and tools such as Risk Area Mapping, which were well received and have been integrated into national structures. Likewise, the input made in the elaboration of national strategies and plans partly guarantees the continuation of initiatives to adapt to climate change. Other tools, though, show a lack of integration at national level that diminishes their sustainability, particularly the methodologies to integrate climate change adaptation into district planning (PEDD, Land Use Plan and Integrated Water Management Plan).

Province: The training and integration of staff from the provincial government within the implementation of the programme created a basis for follow-up, especially regarding the support to the districts. However, this largely depends on national policies, and other factors such as the high turnover of staff and the resources available for monitoring at site. As an example, the CRiSTAL methodology was seen as a good experience and there is a will to replicate it in other districts. For resource limitations however, the provincial team decided to integrate only some of the questions from the methodology in the data collection for the PEDD. This will mainly depend on the new guidelines developed by the Planning and Development Ministry (MPD).

District: The integration of climate change adaptation activities in the PEDD, PESOD, the Land Use Plan and the Integrated Water Management Plan, along with the introduction of new tools, will provide a certain degree of follow-up by the government regarding some of the activities introduced. Still, without additional funds, the lack of resources as well as the high turnover of staff are a constraint for the implementation of most activities identified in the plans.

Another specific question arises with the application of new tools, including risk maps, manuals, and plans. These must be integrated in the activities of the district government and need more monitoring by the Province and partners who are supporting this area. Regarding the sustainability of the local weather forecasting, it is essential to finish the meteorological station as well as INAM's office, guaranteeing their technical support. The meteorological data collection system is connected to INAM Maputo, so monitoring and inclusion of data in the national system will take place, once the system works.

Community: At interviews with community beneficiaries, climate change was identified as a very important issue, as members of the communities are suffering its impacts, particularly regarding access to water and agricultural production (uplands no longer produce during the 2nd crop season since 2000). Hence there is great interest to change these conditions – associations and local committees introduced by the UNJP are the first steps towards this direction that facilitate local organization and initiatives. Further action is still required, so that awareness-raising reaches more people and good practices with visible benefits need to be created for local replicability. To achieve a functional early warning communication system (for floods and cyclones), the strengthening of risk

management committees will be crucial in the future – within the UNJP this was not a priority, as it was focusing more on aspects of risk reduction to drought.

6.2 Adaptation Measures

The sustainability of this intervention area depends highly on the success of the various measures introduced, the local ownership and possibilities to follow up. There are success stories, which may have greater sustainability, but as these are new experiences a modest estimate needs to be applied. The analysis also considers the sustainability of new concepts in general, looking at options for their replication.

Natural Resource Management: In relation to the work of the committees, there is a high acceptance on the side of communities and motivation of members, since the taxes charged are intended for common interests (e.g. school, health post). The inclusion of tax officers within the District Service will provide some follow-up by the district technician, although the limited funds of the service will not allow for a good monitoring of the committees' activities. Regarding deforestation, activities of delimitation and forest inventories were identified as good practices that increase local ownership, making the intervention more sustainable. However, these activities are very time-consuming and require transport, what is seen as a huge challenge for their replication.

Spatial Planning: The sustainability depends largely on the capabilities, political interest and funds to implement activities identified within the Land Use Plan. Regarding improved constructions, the location of Chicualacuala is still a challenge for finishing and operationalizing the CERUM, which might have implications on its future functionality. Another challenge is the construction technique of the drinking through that is more difficult than traditional ones and may face problems for local replication.

Water Management: It will be crucial to provide adaptation practices that respond to the necessities of people, agriculture and livestock, particularly in the uplands, e.g. the construction of small dams and boreholes. The installation of small water systems and rainwater tanks is generally seen as a good practice, but their replication is complicated for houses with traditional thatched roofs and families without sufficient funds (besides other reasons mentioned above). In general, district as well as community activities in water management need more follow-up (and funding) after the closure of the programme, the district resources being very limited to ensure this.

Renewable energy: From the options introduced by the UNJP, the greatest potential (in terms of sustainability) is seen in the promotion of improved cooking stoves, which are known in the country and create more local benefits in terms of local production, accessible costs and target group. Individual use of solar panels is also considered a good practice and a high demand exists, however, poor and vulnerable households cannot afford them. For PV systems, used in water supply and irrigation, it needs to be stressed that few experiences exist in terms of maintenance and future technical problems will be difficult to repair with local means. For irrigation, the PV systems were found to be of low capacity and already showed lack of maintenance due to little satisfaction by users.

Activities of diversification: Even if the overall success within the programme was limited, the GoM is currently promoting fish-farming as a good practice to be replicated throughout the country. To make the integrated agro-livestock a sustainable model for reducing the vulnerability of farmers, particularly women, it will need to be redesigned (other practices existing in Mozambique). In relation to beekeeping there is a high likelihood of a continuation where it proved to be successful, also because of the great demand for honey within and outside the district. In the highlands it is necessary to follow up and verify the viability of this activity during the rainy season. The processing of agricultural and livestock products requires further training and follow-up to create sustainable benefits. In total, adaptation measures introduced in the highlands were less successful and sustainable – as these are the most vulnerable communities, alternatives need to be found.

Agriculture: In general, the organization in associations with fenced agricultural land and access to irrigation is a model that promises some degree of sustainability. Influencing factors are the management and leadership, along with the capabilities to maintain and increase the irrigation systems installed. The sustainability of improved practices in the use of conservation agriculture will depend on the results visible in the demonstration fields, along with a follow-up by SDAE. This is also the case for agro-forestry practices, which need to show first results in order to promote this important practice. Regarding the tree nurseries another model needs to be found that is better integrated and accepted by the communities (incentives), as the model used for the UNJP was not found to be sustainable. In terms of irrigation, the drip-system is technically considered the best option for semi-arid land with limited access to water, while concerns of sustainability and replication regard its high costs, the limitation of the irrigated area and certain challenges of maintenance. Along with the PV system, its viability still needs to be monitored in the medium term. Having said that, the use of diesel-driven water pumps also has its challenges – while it is promising that all associations were able to buy fuel and ensure minor repairs in the course of the program, the system in Ndombe is paralyzed because of a broken pump.

Livestock: Although the programme has faced some resistance from livestock holders to pay for the treatment of animals, there were places with more acceptance where the government has worked before to raise awareness (Mahatlane). Livestock promoters that were able to receive payments for drugs and services are more likely to continue their work autonomously, while others will need the support of the SDAE in order to carry on. The continuation of governmental campaigns is crucial for the sustainability of the livestock health interventions of the programme. The interest in treating livestock also depends largely on the market, which at this time has neither classification nor quality control for meat. An improved market will automatically encourage livestock holders to invest more in animal health. Finally, it is crucial to ensure the operation of the agro-veterinarian shop to improve local access to drugs.

The analysis shows that sustainability in the context of national mainstreaming is higher, due to the inclusion in continuous processes with access to funds. While the character of the second component of the programme was more innovative, with some successes and some failures, sustainability is limited according to the success of the activities and resources locally available. In terms of sustainability, it will only be possible to measure the success of climate change adaptation through a medium to long term monitoring.

CONCLUSIONS



7. Conclusions

It is a national and international consensus that adaptation to the impacts of climate change is required to provide a basis for sustainable development. In this sense, the Joint Programme has supported the efforts of the GoM through environmental mainstreaming and adaptation to climate change, including a wide range of activities to raise awareness and introduce measures of risk and prevention, and support for small-scale subsistence. In general terms, the evaluation showed that the activities carried out under the Joint Programme bear merit, since positive results at various levels were achieved.

Regarding relevance, the study has found that activities under the Joint Programme have been highly relevant to the overall risk context of Mozambique. It is also recognized that the programme has been aligned with activities of other actors and to a large extent run in support of relevant overarching national and sub-national strategies. However, the programme would have benefited from a better inclusion of local priorities and aspects that are highly relevant to local communities during the design phase.

The report has analysed the efficiency of the programme and found a number of obstacles to programme management. This refers to the delayed implementation of at least some of the activities of the programme, the time pressure to implement them, and deficiencies for joint monitoring and evaluation.

In terms of effectiveness, even though some of the activities still remain to be fully implemented and concluded, the Joint Programme has been successful in the sense that it has reached most of its objectives, in terms of products and results achieved. Concerning the impacts, though, the Joint Programme has been limited by several factors, even though some success stories were identified.

The sustainability of programme interventions is assessed as moderate, as it will crucially and in many cases depend on the finishing of the remaining activities, on the one hand, and on the priorities and capacities of the central and provincial government as well as of local stakeholders to maintain results, on the other hand. For the communities, sustainability is strongly linked to the immediate benefits of the initiatives. In terms of the program's success in achieving an adaptation of local communities to the impacts of climate change, this can only be verified by monitoring in the medium to long term.

Finally, it must be stressed out that the Joint Programme on Environmental Mainstreaming and Climate Change Adaptation in Mozambique was an ambitious and complex programme, with development objectives that have cut across various levels of government and various sectors and sub-sectors. Adaptation to climate change is an on-going process that cannot be achieved over night. However, successful adaptation initiatives can path the way to keeping human development 'on track'.

In order to make final judgments about the overall performance of the programme, it would be useful to directly compare the results from the present final evaluation with other joint initiatives that have been implemented under the MDG-F thematic window on environment & climate change. Out of the 17 joint programmes that have been implemented under the thematic window, these may include programmes that have been targeting on strengthening the institutional capacities to adapt to climate change, as well as others that have been aiming at enabling communities to adapt to climate change through enhancing their livelihoods.

RECOMMENDATIONS



8. Recommendations

This final chapter presents a list of recommendations for the future development and implementation of joint programmes that follows the overall structure of the report, and which is based on the evaluation criteria of OECD/DAC, including relevance and sustainability (8.1), effectiveness (8.2) and, finally, efficiency (8.3).

8.1 Relevance & Sustainability

Responding to the question of what should a relevant and sustainable planning/ implementation strategy look like, the overall recommendation drawn from the evaluation is that **joint programmes should be planned thoroughly**, by ensuring participation of all levels into programme implementation. This includes the following aspects.

To ensure for **careful planning**, and to base it on existing experience: Adaptation-specific interventions are still recent and face a number of challenges, ranging from ambiguous definition of adaptation to the identification of targets and the choice of indicators used to monitor progress. However, development agencies, as well as government institutions have a long history in implementing projects in climate-sensitive areas and the present programme presents a further contribution to this knowledge pool. In the future, ways should be found to make best use of existing experiences. Planning should also be related to the existing strengths & weaknesses of agencies and their partners.

Make sure that **participation and integration** at all levels are guaranteed: In order to build national and local ownership, priorities of all actors and levels involved should be taken into account, and it should be made sure that the participation of target communities is guaranteed. The integration of interventions into (sub-)national structures, together with the involvement of government technicians and community members from the planning phase onwards will improve the follow-up and sustainability of the programme.

To put a stronger focus on **adaptive capacity**: The report shows that the activities under the programme were highly relevant for the overall risk context and the vulnerability of local communities. In the future, joint programmes should put an even stronger focus on enhancing adaptive capacity in a long-term. Especially in dry-land areas, viable option for improving livelihoods and low-cost adaptation practices need to be promoted. At the same time, activities should accompany communities on their way to reach higher levels of resilience, and allow for the consolidation of results.

8.2 Effectiveness

In order to find strategies that are most likely to be effective in terms of producing lasting outcomes, joint programmes should be built on complementary implementation strategies, and on longer time frames. This includes:

To build complementary and flexible **adaptation strategies**: Joint programmes should build their activities on complementary approaches, and create opportunities for more flexible implementation approaches. This should not concern the 'what' (activities) of the implementation approach in the first place, but should rather create for more space on 'how' (process) results can be achieved. Consequently, strategies should involve the elaboration and a regular update of a monitoring framework, which should also include amendments whenever deemed necessary. If applied properly, this will not be a sign of arbitrariness, but rather provides the programme with a possibility to react more properly to external demands and internal constraints.

To build on **longer time frames**: In order to strive for greater effectiveness, future joint programmes should be implemented over a longer time frame, including an inception phase at the beginning and a consolidation phase at the end of the intervention. Results from the evaluation have shown that a more realistic timeframe – while being carefully designed against the background of expected

implementation efforts – would have been a central pillar for assuring the effectiveness of the programme.

To improve **monitoring and evaluation** approaches: In order to guarantee project effectiveness on the ground, it will be necessary that results on the local level can be measured. The monitoring approach found in this joint programme allows for rather general findings only on whether the project and the strategy applied were “successful”, and does not allow for coming up with uniform and transparent findings. Therefore, future programmes should develop a monitoring framework with a structure that is more logical and comprehensive, including specific targets and oriented on impacts, in order to monitor and manage them in an effective way according to international standards (e.g. OECD).

8.3 Efficiency

How can the strategy be designed to generate maximum benefits?

The central recommendation to improve efficiency of joint programmes is to overcome given obstacles by better planning, by elaborating a joint monitoring process, and by putting a stronger focus on the impact level. This comprises:

To overcome both **external and internal obstacles**: Perhaps unsurprising for such an ambitious and complex programme, the evaluation found that efficiency was constrained by a number of both external and internal obstacles. In future initiatives, lessons learned from this programme should be used for resolving obstacles one at a time. External constraints are a frank reminder that careful programme planning should be ensured. This, once more, shows the importance of building the programme on longer time frames, by including an inception phase.

To limit the **number of agencies** involved, especially on the local level: Results from this evaluation show that, in many instances, inputs from one agency depended on the completion of activities by another agency. This was mostly due to time-consuming internal administration processes in many agencies involved. Therefore, ways should be found for preventing delays in one agency impinging upon the work of others. This will also include a more equal sharing of responsibility for achieving the objectives.

To put a stronger focus on the **impact level**: For Joint Programmes to be efficient they need a joint, impact-oriented M&E approach. For the project, making sure that impacts on the local level are guaranteed and that progress can be measured will render joint programmes more efficient. In this context, the Joint Programme would have benefitted from elaborating and applying a coherent framework for impact assessment that each agency takes as a basis for its operational planning and which includes indicators/ targets, or indicator categories for tracking and evaluating the success of their interventions.

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ANNEXES

Annex I: List of Interviewees

Date	Name	Organisation/ Institution	Place
02.07.2012	Julio DeCasto	FAO	Maputo
02.07.2012	Andrew Mattick	FAO	Maputo
02.07.2012	Marta Manjate	INGC	Maputo
02.07.2012	Meeting with Focal Points and other members of JP	FAO, UNDP, UNEP, UN-HABITAT, UNIDO	Maputo
03.07.2012	Regina Cruz	IUCN	Maputo
03.07.2012	Berino Francisco Silinto	INAM	Maputo
03.07.2012	Julieta Matediane	UNDP	Maputo
03.07.2012	Pedro Caixote	ME	Mauto
03.07.2012	Massingue Stelion Ntumbo, Manuel, Sitoi, Eduardo Masingue	IIAM	Maputo
03.07.2012	Jaime Comiche	UNIDO	Maputo
04.07.2012	Luis Banze	DPA	Xai-Xai
04.07.2012	Alípio Vaz	PPFD	Xai-Xai
04.07.2012	Ernando Tchambul	DPPF	Xai-Xai
04.07.2012	Natércia Cuna	DICOA	Xai-Xai
04.07.2012	Rita Cavel	Equipa Técnica Provincial, PESOD	Xai-Xai
04.07.2012	Manuel Tirane	DPCA	Xai-Xai
06.07.2012	Campus Ferro	FAO	Eduardo Mondlane
06.07.2012	Manuel Nambulete	SDAE	Eduardo Mondlane
06.07.2012	Felisberto Balate	SDAE	Eduardo Mondlane
06.07.2012	Caene Ricardo	SDAE	Eduardo Mondlane
06.07.2012	Abel Ndovu	Radio Comunitário	Eduardo Mondlane
07.07.2012	Agostinho António Malhar	SDPI	Eduardo Mondlane
09.07.2012	Agonstinho dos Santos	Posto Administrativo de Eduardo Mondlane	Eduardo Mondlane
10.07.2012	Abel Samuel Nhonyano	UN-HABITAT	Eduardo Mondlane
10.07.2012	Meeting with members of the Equipa Técnica Distrital	Governo Distrital	Eduardo Mondlane
11.07.2012	Carlos Cossa	Posto Administrativo de Mapai	Mapai
13.07.2012	Isaac Ismael Cuave	SDFFB	Mapai
16.07.2012	Erasmus Nhachungue	MICOA	Maputo
16.07.2012	Manuela Muianga, Silva Jacinto Magaia	UN-HABITAT	Maputo
17.07.2012	Raúl Cumba	WFP	Maputo
17.07.2012	Ana Menezes	UNEP	Maputo
18.07.2012	Sandra Gomes	FAO	Maputo
26.07.2012	Anna Kontorov	UNEP	Phone Interview
26.07.2012	Barbara Vanlogchem	University of Cape Town	Phone Interview
26.07.2012	Anthony Mills	University of Cape Town	Phone Interview
27.07.2012	Elizabeth Khaka	UNEP	Phone Interview

Annex II: List of UNJP Activities at Community Level

Comunidade	Agriculture	Forestry	Livestock	Water	Energy	Date	Institution
Mucachane			Corridor (1)			2012	FAO, SDPI
			Livestock Promoter (1)			2012	FAO, SDPI
Chilemane			Corridor (1)			2012	FAO, SDPI
			Livestock Promoter (1)			2011/12	FAO, SDPI
Buela			Livestock Promoter (1)			2011	FAO, SDPI
Mepuza					Biogas plant (1)	2011/12	UNIDO, ME, SDPI
					PV System (3 tanks)	2010	UNIDO, ME, SDPI
				Borehole (1 new) (+Water Committee)		2012	UNIDO, SDPI
Bragança				Borehole (1 new) (+ Water Committee)		2010/11	UNIDO, SDPI
				Animal drinking through		2012	UNEP/IUCN
					PV System (3 tanks)	2010/11	UNIDO, UN-HABITAT ME, SDPI
Ngala			Livestock Promoter (1)			2011	FAO, SDPI
		NRM-Committee (1)				2011	FAO, SDAE
		Forest officers (2)				2011	FAO, SPFFB, FIR
		Distribution of seedlings				2012	FAO, SPFFB
Chissapa			Livestock Promoter (1)			2009	FAO, SDPI
			Corridor (1)			2009	FAO, SDPI
	Irrigated field (30ha)					2010	FAO, SDAE
	Farmer association (1)					2010	FAO, PMA, SDAE
		NRM-Committee (1)				2011	FAO, SDAE, GP
		Forest officers (2)				2011	FAO, SPFFB, FIR
			Pigs (16 families)			2011	FAO, SDAE
		Distribution of seedlings (Fruit trees)				2011	FAO, SDAE
Muzamane		NRM-Committee (1)				2011	FAO, SDAE
		Forest officer (1)				2011	FAO, SPFFB, FIR
		Distribution of seedlings				2011/12	FAO, SDAE
			Livestock Promoter (1)			2011	FAO, SPFFB
Mapuvule	Farmer association (1)					2010	FAO, SDAE
			Integrated agriculture-livestock system			2010	FAO, UNEP, SDAE
			Livestock Promoter (1)			2010	FAO, SDAE
		NRM-Committee (1)				2011	FAO, SDAE
		Forest officer (1)				2011	FAO, SPFFB, FIR
	Irrigation system (15 ha)					2010	FAO, PMA, SDAE

Ndombe		Distribution of seedlings				2011	FAO, SDAE
	Irrigation system (15 de 54 ha)					2009	FAO, SDAE
	Farmer Association (1)					2009	FAO, SDAE
	Mixed field					2009	FAO, SDAE
		Orchard				2010/11	FAO, SDAE
		NRM-Committee				2011	FAO, SDAE
		Forest officers (3)				2011	FAO, SPFFB, FIR
		Beekeeping (20 families)				2010/11	FAO, Cooperação de Apicultura (de Maputo)
		Distribution of seedlings				2010/11	FAO, SDAE
		Tree nursery				2010	FAO, SDAE
			Livestock Promoter (1)			2009	FAO, SDAE
			Livestock Promoter (1)			2009	FAO, SDAE
				PV System (3 tanks)		2010	FAO, UNEP, UNIDO, ME, SDAE
Mapai			Integrated system			2010	FAO, UNEP, SDAE
	Demonstration fields (conservation agriculture)					2010-2012	PNUD/IIAM, SDAE
			Slaughterhouse (building)			2010-2012	FAO, DNSV
			Livestock Promoter (1)			2011	FAO, SDAE
			Corridor (2)			2009, 2011/12	FAO, SDAE
			Animal drinking through (1)			2011	FAO, SDAE
				PV System + Water Committee		2011	UNIDO, ME, SDPI
			Borehole (1 novo) at slaughterhouse			2011	FAO
		Distribution of seedlings				2011	FAO, SDAE, SPFFB
		Orchard				2009/ 10	
Lissenga				Water harvesting system: 30 ferro-cement and 20 tin tanks		2010-2012	UN-HABITAT UNEP/IUCN, SDPI
			Livestock Promoter (1)			2011	FAO, SDAE
Matsilele			Corridor			2011/ 12	FAO, SDAE
			Livestock Promoter (1)			2011	FAO, SDPI, SDAE
Mabuzane			Livestock Promoter (1)			2011	FAO, SDPI, SDAE
Cunguma			Livestock Promoter (1)			2011	FAO, SDPI, SDAE
Hocha Ribue		NRM-Committee (1)				2011	FAO, SDAE
		Forest officers (2)				2011	FAO, SPFFB, FIR
		Beekeeping (20)				2010/ 11	FAO, SDAE, Coop. De Apicultura

				Borehole (1 new)		2012	UNEP/IUCN, SDPI
					PV system	2012	MICOA, ME
			Animal drinking through			2012	FAO, SDAE
Madulo	Drop-irrigation system (1 ha), mixed field					2009/10	FAO, SDAE
				Borehole (1)		2009	FAO, SDAE
					2 PV systems (+ Water Committee)	2009	FAO, SDAE
		NRM-Committee (1)				2011	FAO, SDAE
		Forest officers (2)				2011	FAO, SPFFB, FIR
		Fruit trees				2009	FAO, SDAE
		Tree nursery				2009	FAO, SDAE
		Distribution of seedlings				2009- 2011	FAO, SDAE
			Livestock Promoter (2)			2009, 2011	FAO, SDAE
			Corridor			2009	FAO, SDAE
Chicualacual a B				Borehole (1)		2011/ 12	UN-Habitat, SDPI
					PV System (+ Water Committee)	2011/ 12	UNIDO, ME
			Animal drinking through			2012	FAO, SDAE, SDPI
		NRM-Committee				2011	FAO, SDAE
		Forest officers (2)				2011	FAO, SDAE
Chihondzoene			Corridor (1)			2011	FAO, SDAE
Chicualacual a Rio			Corridor (1)			2011	FAO, SDAE
Tchale A e B			Corridor (1)			2011	FAO, SDAE
			Livestock Promoter (1)			2011	FAO, SDAE
Litlatla			Corridor (1)			2011	FAO, SDAE
			Livestock Promoter (1)			2011	FAO, SDAE
		NRM-Committee				2011	FAO, SDAE
		Forest officer (1)				2011	FAO, SDAE
Eduardo Mondlane			Slaughterhouse (rehabilitation)			2011	FAO, SDAE, SDPI
			Corridor (1)			2011	FAO, SDAE, SDPI
	CERUM					2011-2012	UN-HABITAT, FAO, INGC
	Meteorological Station					2009-2011	FAO, UNEP, INAM
	Community Radio					2009-2012	FAO, UNIDO, PNUD, SDPI
	Agro-Vet Shop					2009	FAO, SDAE, SDPI
	Field for people living with HIV					2011	PMA, SDAE
				Water harvesting system: 30 ferro-cement and 20 timber tanks; 1 community tank		2010-2012	UN-HABITAT, UNEP/IUCN

	INAM office				2012	PNUD, SDPI
				Borehole (1) at CERUM	2012	UN-HABITAT, SDPI
	Rehabilitation of the SDAE office				2009	
Dingue		NRM-Committee			2011	FAO, SDAE
		Forest officers (2)			2011	FAO, SPFFB, FIR
		Distribution of seedlings			2011	FAO, SDAE
	Demonstration fields (conservation agriculture and silviculture)				2011-2012	PNUD/ IIAM, SDAE
			Livestock Promoter (2)		2009/ 2011	FAO, SDAE
			Corridor		2009	FAO, SDAE
3 de Fevereiro/ Mugugugo		NRM-Committee			2011	FAO, SDAE
		Forest officer (1)			2011	FAO, SPFFB, FIR
		Distribution of seedlings			2011	FAO, SDAE
			Livestock Promoter (2)		2010	FAO, UNAC, SDPI
			Corridor		2009	FAO, SDAE
					2011	FAO, SDAE
Mahatlane		NRM-Committee			2011	FAO, SDAE
		Forest officers (2)			2011	FAO, SPFFB, FIR
		Distribution of seedlings			2010/ 2011	FAO, SDAE
		Tree nursery			2010	FAO, PNUD, SDAE, UNAC
		Orchard			2010	FAO, UNDP/ IIAM, SDAE
			Fodder bank		2010	PNUD/ IIAM, SDAE
			Livestock Promoter (2)		2011	FAO, SDAE
			Corridor		2009	FAO, SDAE
			Cheese production		2009	PNUD/ IIAM, SDAE
			Hey production		2012	PNUD/ IIAM, SDAE
				Borehole (1) (+ fountain)	2011	
			Corridor		2009	FAO, SDPI
Malonguete			Livestock Promoter (1)		2010	FAO, SDPI
		NRM-Committee			2011	FAO, SDAE
		Forest officer (1)			2011	FAO, SPFFB, FIR
		Distribution of seedlings			2010- 2011	FAO, SDAE
Maunge		NRM-Committee			2011	FAO, SDAE
		Forest officer (1)			2011	FAO, SPFFB, FIR
		Distribution of seedlings			2010. 2011	FAO, SDAE
			Livestock Promoter (2)		2009, 2011	FAO, SDPI
			Corridor		2010	FAO, SDPI
Mupendule		NRM-Committee			2011	FAO, SDAE
		Forest officer (1)			2011	FAO, SPFFB, FIR
			Livestock Promoter (2)		2010	FAO, SDPI

Annex III: List of UNJP Trainings

ACTIVIDADE	ACTORES	PARTICIPANTES	DATA/ DURAÇÃO	LUGAR
AGRICULTURA				
Agro-processamento	FAO, SDAEs	Camponeses, Extensionistas, Técnicos dos SDAEs,...	20010-11	Distrito e comunidades
Agricultura de Conservação	FAO, SDAEs, PNUD/IIAM	Camponeses, Extensionistas, Técnicos dos SDAEs,...	2009-12	Distrito e comunidades
Agro-floresta	FAO, SDAEs, PNUD/IIAM	Camponeses, Extensionistas, Técnicos dos SDAEs,...	2009-12	Distrito e comunidades
Irrigação	FAO, SDAEs	Camponeses, Extensionistas, Técnicos dos SDAEs,...	2009-12	Distrito e comunidades
Viveiros hortícolas	FAO, SDAEs	Camponeses, Extensionistas, Técnicos dos SDAEs,...	2009-12	Distrito e comunidades
Associativismo	FAO, UNAC	Camponeses, Extensionistas, Técnicos dos SDAEs,...	2009-12	Distrito e comunidades
Gestão e uso do Tractor	FAO, SDAEs	Camponeses, Extensionistas, Técnicos dos SDAEs,...	2011	Distrito e comunidades
Agricultura Integrada com Piscicultura e pequenas espécies	FAO, UNEP	Associações, Técnicos da FAO	2010-2011	Associações junto do rio
FLORESTA				
Delimitação e Demarcação de Zonas de Floresta	FAO (Consultor), SDAEs	Comunidades, Técnicos do(s) SPFFB, SDAEs	2009-2012	Distrito e comunidades
Inventário Florestal	FAO (Consultor), SDAEs	Comunidades, Técnicos do SPFFB, SDAEs	2009-2012	Distrito e comunidades
Viveiros Florestais	FAO, SDAEs	Agricultores (60% mulheres), Técnicos dos SDAEs	2009-2012	Comunidades
Melhoria de produção (colheita, processamento, produção de mudas de espécies nativas)	FAO, PNUD/IIAM, SDAEs	Agricultores	2009-2012	Distrito e comunidades
Apicultura	FAO (Consultor)	Camponeses (50% mulheres)	2009-2010	Distrito e comunidades
Associativismo	FAO, SDAEs	Camponeses, Técnicos dos SDAEs	2009-2012	Distrito e comunidades
Treinamento em abordagens eco-sistémicas de produção e conservação	UNEP	Associações agro-florestais, líderes comunitários e distritais	Vários treinamentos com reciclagens anuais - 2009 – 2010- 2011 - 2012	Várias comunidades, Escolas e postos administrativos
Formação de fiscais florestais comunitários	FAO, SPFFB	24 agricultores de 18 comunidades receberam formação como fiscais	2011	Xai Xai
Treinamento dos comités de gestão de recursos naturais	FAO, SDAE	5 comités receberam treino	2011	Comunidades
PECUARIA				
Formação de Promotores Pecuários	FAO, SDAEs	Promotores (36)	2009-2010-2011	Distrito e comunidades

Tracção Animal	FAO (Consultores), SDAEs	Donos de burros e de bovinos	2009-2010	Distrito e comunidades
Maneio Animal: Reprodução	FAO, SDAEs	Criadores	2009-2010-2011	Distrito e comunidades
Maneio Animal: Alimentação	FAO, SDAEs	Criadores	2009-2010-2011	Distrito e comunidades
Maneio Animal: Saúde	FAO, SDAEs	Criadores	2009-	Distrito e comunidades
Mungição	PNUD/IIAM, SDAEs	Criadores seleccionados	2011	Famílias seleccionadas
Fabrico de queijo	PNUD/IIAM, SDAEs	Criadores seleccionados	2011	Famílias seleccionadas
Produção de feno	PNUD/IIAM, SDAEs	Criadores seleccionados	2011	Famílias seleccionadas
ÁGUA				
Sistema Comunitário em Captação de água	UNEP/IUCN, UN-HABITAT, SDPI	Beneficiarios, Pedreiros locais	2010-2011-2012 2012	Vila Eduardo Mondlane, Mapai
Sistema Familiares em Captação de água (ferrocimento metálicos)	UNEP/IUCN, UN-HABITAT, SDPI	Beneficiarios, Pedreiros	2010, 2011	Vila Eduardo Mondlane
Comités de Gestão de água	UNIDO, UN-HABITAT	Membros dos comités	2012 (Depois do acabamento dos furos/sistemas)	Vila Eduardo Mondlane, Mapai
Formação na Elaboração dum Plano IWRM	UNEP/IUCN, AraSúl	Vários stakeholders (p.ex. da DNA, DPDP, ISP, SPOPH, ISPG Chokwe, INGC, SDAE de Mabalane, Guijá; SDPI de Chicualacuala, Mabalane, Guijá, Xai-Xai, Chibuto) e membros das comunidades e representantes das autoridades de Mapai, Eduardo Mondlane e Pafuri	2011 11 a 15 de Julho; 18 a 19 de Julho; 20 a 23 de Julho	1ª fase Chokwe, (19 participantes); 2ª fase Mapai (21 participantes); 3ª fase Eduardo Mondlane (18 participantes)
Treinamento em conservação e gestão de água, manejo de zonas áridas e mudanças climáticas (introdução do jogo da seca)	UNEP	Vários (estudantes, professores, associações e líderes comunitários, indivíduos das comunidades em geral (bares, igrejas, etc.)	2011 - 2012	Ed. Mondlane Mapai, e todas associações
Formação na Elaboração dum Plano IWRM	UNEP/IUCN, ARA-Sul	Vários stakeholders (p.ex. da DNA, SPOPH, ISPG Chokwe, INGC, SDAE de Mabalane, Guijá; SDPI de Chicualacuala, Mabalane, Guijá, Xai-Xai, Chibuto) e membros das comunidades e representantes das autoridades de Mapai, Eduardo Mondlane e Pafuri	11 a 15 de Julho 2011; 18 a 19 de Julho 2011; 20 a 23 de Julho 2011	1ª fase Chokwe, (19 participantes); 2ª fase Mapai (21 participantes); 3ª fase Eduardo Mondlane (18 participantes)
ENERGÍA				
Produção de Biogás	UNIDO, ME	Técnicos do governo distrital, líderes comunitários, professores, líderes religiosos		
Energia Solar (Painéis, como se manta etc.)	UNIDO, ME	Técnicos do governo distrital, líderes comunitários, professores, líderes religiosos		
Fogões melhorados (produção)	UNIDO, ME			

PLANIFICAÇÃO DISTRITAL				
Ordenamento Territorial/ Uso de Terra (PDUT)	UN-Habitat, MICOA-DPCA Gaza	Membros do Governo Distrital, Técnicos Distritais, professores, líderes comunitários, religiosos, sociedade civil	2010-2011-2012	Vila Eduardo Mondlane
Metodologia: Integração de Assuntos Ambientais no PEED	UNEP, UNDP, MPD, MICOA	Técnicos do governo distrital, líderes comunitários, professores, líderes religiosos, associações, etc.	Vários treinamentos com reciclagens anuais - 2009 – 2010- 2011 - 2012	Sedes dos distritos e nas comunidades
Planificação Ambiental Participativa	Todas agências, MICOA, MAE, INGC	Membros do Governo Distrital, técnicos do Distrito, líderes comunitários, professores	Vários treinamentos com reciclagens anuais - 2009 – 2010- 2011 - 2012	Sedes dos distritos e nas comunidades
Delimitação de 9 Localidades no Distrito de Chicualacuala	UN-Habitat, MAE, DPGC, SDPI	Técnicos da Província e do Distrito	2010-2011	Todo o Distrito
Cadastro de Terras	UN-HABITAT	Técnicos SDPI	2010	Vila Eduardo Mondlane
Mapeamento de Riscos	UN-HABITAT, PMA, MAE/INGC			
EDUCAÇÃO AMBIENTAL/ ADAPTAÇÃO ÀS MUDANÇAS CLIMÁTICAS				
Climate change and proofing workshops	UNEP/WFP/INGC	Administradores e secretários permanentes dos Distritos da Bacia do Limpopo e respectivos responsáveis das Infra-estrutura e ambiente. Técnicos provinciais e nacionais .	Maio de 2011) (3 dias)	Bilene, Gaza (Nível provincial)
Total: 1 nível nacional 1 nível provincial 5 nível distrital/local	UNEP/UEM/MICOA	Decisores de nível nacional, provincial e distrital; Professores secundários, técnicos dos Conselhos	Julho de 2011 (3 dias)	Maputo (Nível Nacional)
	UNEP/FAO	Distritais e associações agro-florestais, manejo de água, etc.	2012 (várias sessões entre Abril e Julho)	Nas sedes do distrito, escolas e comunidades
TROCA DE EXPERIÊNCIA				
Quénia: Sistemas de recolha de água das chuvas, represas de subsolo, represas e barragens de areia;	UNEP/IUCN	Administrador de Chicualacuala; Director do SDPI; Chefe do Posto Administrativo de Mapai; Líder Comunitário de Eduardo Mondlane, 2 técnicos da DPCA, técnico da UN-HABITAT	2010, 9 dias 24 de Maio a 1 de Junho	UNEP-Nairobi; e vários distritos e localidades semiáridas em Quénia
Chigubo: Manutenção de represas, comités de gestão de água.	UNEP/IUCN	1 técnico do SDPI, 5 membros de 3 comunidades de Mapai e Miqueleguene	2011, 2 dias em Novembro	Machaila e Zinhane, Comunidades de Machaila, Chipimbe e Harriane
Manica: Gestão comunitária dos recursos naturais		20 pessoas de Chicualacuala		
Massingir: Troca de experiência sobre técnicas de irrigação				

Annex IV: M&E Framework of the Joint Programme

Expected Results (UNDAF CP Outcomes and Outputs; and JP Outcomes and Outputs)	Indicators (including baselines* and targets)	Means of Verification (MOV)	Collection methods (with indicative time frame & frequency)	Responsible Agency(ies) and Implementing Partners	Risks and Assumptions
JP OUTCOME 1: Government, civil society, communities and other stakeholders informed, sensitized and empowered on environment and climate change (CC) issues.	Absence of/limited information on environment and CC data and training materials, including lack of knowledge in the use of said data.	Publications Documents officially approved or published	Quarterly progress reporting Annual plans	UN-HABITAT, UNDP, FAO, WFP	The (degree of) commitment of Government, civil society, communities and other stakeholders involved should be evidenced by adequate funding drought related initiatives
OUTPUT 1.1: Environment priorities and indicators reflected in planning frameworks and budgets at district and community level	Four policy briefs developed and discussed per year	Increased budget allocation for environmental activities	District annual budget	UN-HABITAT, UNDP, MICOA, INGC, provincial and district authorities	Weak understanding and low priority given to CC and environment issues
	CC issues included into two national plans and/or strategies	One National and one Provincial workshop organized References to CC in national plans and/or strategies	Copies of publications/materials Minutes of meetings, lists of participants	WFP, UNDP, FAO CONDES MICOA	
OUTPUT 1.2: GIS based data and maps on CC vulnerability for risk areas in the Limpopo River Basin	Five (5) district thematic maps CC data collected and recorded Water/related CC impact assessed	Maps produced and available Statistical data reports on meteorological and CC information	Actual use of maps in Government offices and Civil society managed programmes	WFP INGC, UEM, INAM	Current data covers short periods, with gaps Scarce data on CC Maps too generic
OUTPUT 1.3: Training programmes on disaster and climate change prediction, including interpretation of maps and application of monitoring data for early warning purposes	Diagnostic tools on the application and use of climate information developed and applied by programme	Publications Meetings agenda and minutes New toolkit produced, published and distributed	Copies of publications/materials	UNDP, WFP, UN-HABITAT INGC, MICOA, District and Province authorities	Low prioritization of issues from relevant authorities and stakeholders
	Materials for training programmes adapted/developed Two training of trainers courses One pilot district using maps	Number of materials adapted, produced, and used in the training sessions. Number of training sessions Evidence of inclusion of maps in reports	Copies of materials adapted/developed Training session reports including lists of participants	UNDP, UN-HABITAT, WFP INGC, MICOA, Provincial and District authorities	Reduced number of participants at training sessions Lack of people with sufficient skills to receive and pass on training Work overload for potential skilled candidates

OUTPUT 1.4: Knowledge and experience sharing within the different groups (UN implementing agencies and beneficiaries)	At least three field days organized targeting 8 communities on a yearly basis	Reports of field days	Semester progress reporting, minutes, lists of participants	ALL UN AGENCIES, Government partners and select Civil Society Organizations (CSOs)	Insufficient Inter agency coordination Timely and coordinated logistical support Access to communities is hampered by road inaccessibility
JP OUTCOME 2: Government capacity at central and decentralized levels to implement existing environment policies strengthened	Number of Government staff at different levels aware of importance of environment implications Environment policies implemented Government action plans and budgets include environment considerations	Documents officially approved or published Execution of budgets evidence expenditures on environment conscious activities	Quarterly progress reporting Reports	UN-HABITAT, UNDP, UNEP, FAO, WFP	Government, civil society, communities and other stakeholders committed Stakeholders agree on usefulness of environmental indicators National policies, strategies and structures should be consolidated
OUTPUT 2.1: National Disaster Preparedness plan and other relevant plans revised/updated to include climate change and environment aspects	National disaster preparedness and risk assessment plans prepared and updated each year Two yearly training sessions on participatory planning to include environment and CC issues Publication of results of risk assessment	Number of plans updated and revised Number of hazard risk maps prepared Mapping of involved stakeholders	Yearly monitoring of plans Hazard risk areas identified in maps Training session reports including list of participants	UNEP UN-HABITAT, WFP, FAO MICOA, MAE, SETSAN. INGC, MINAG, provincial/district authorities	Insufficient funds/reliable data for environment data collection Clear perception of individual roles of stakeholders, including Government, in drought rehabilitation, emergency response and preparedness
OUTPUT 2.2: Early warning and communications system enhanced at provincial level	Gaps in local capacities identified and addressed Percentage of areas covered by communications network Sufficient time between the warning and the arrival of event	Existence and operational capacity of communications network (radio communication facilities)	Copies of publications/materials Information on disaster risk management in reports	UN-HABITAT, UNDP, UNIDO MOPH, INGC, INAM, ICS	Gaps in local communication capacities Limited radio coverage Dispersed population cannot be reached in time
OUTPUT 2.3: Authorities, civil society and other relevant actors trained to incorporate and report on environmental and climate change risk events	Twenty civil society representatives (TV, radio, newspapers) trained on reporting on CC At least two yearly training events with inputs from the three collaborating agencies Educative material adapted and produced Study on the contribution of natural resources/predicted impacts of climate change completed	Frequency and accuracy of reports on climate change and environmental events Number of manuals produced for training purposes Training session reports including lists of participants Value of contribution of natural resources to provincial economy	Copies of publications/materials/manuals Publication and dissemination of the study Semester progress reporting, minutes, lists of participants	UNEP, UNDP, FAO INGC, INAMM, MINAG and MICOA	Collaboration from relevant authorities and stakeholders Absence/weakness of environment and CC risks in sectoral strategies for development Education authorities do not conscientiously incorporate environmental and cc risks into the curricula nor develop region-specific materials

	Government and local NGOs trained in the application and use of current and forecasted climate information by programme	At least three training events on application and use of current and forecasted climate information			
	Educative (thematic) material adapted and produced	Number of games, books and other material adapted and produced Publications	Copies of publications/materials disseminated	UN-HABITAT, UNDP	Collaboration from relevant authorities and stakeholders insufficient
JP OUTCOME 3: Climate proofing methodology mainstreamed into government development plans, UN / Donors' programming and local stakeholders' activities and investments	Absence of climate proofing methodologies and assessments Methodology for climate proofing produced				
OUTPUT 3.1: Tools for climate proofing of risk zones in the Limpopo River Basin developed					
OUTPUT 3.2: Assessment of climate proofing approaches carried out					
OUTPUT 3.3: Stakeholders trained on climate proofing					
JP OUTCOME 4: Community coping mechanisms to climate change enhanced	Adoption by communities of best practices in use of natural resources Reduce current water leakage in irrigation systems by 50%	Improved livelihoods Adaptive measures implemented List of variables indicating higher efficiency in water including verification of leaks along the system	Semester progress reporting and site visits Technical reports on water management Measurement of amount of water leaked	UN-HABITAT, UNDP, UNEP, FAO, WFP MINAG (INAM), ME	Resistance to change based on cultural habits Needs and expectations of communities not taken into consideration from the inception stage Climate conditions (favourable or unfavourable)
OUTPUT 4.1: Inventory and subsequent implementation of strategies and coping mechanisms currently	Baseline study, including methodology and strategy for assessing and implementing cc coping mechanisms produced capacity needs assessment carried out	Baseline document available / distributed across the region	Copies of inventory baseline study and strategy	UNDP, UNEP, FAO, WFP MINAG, MICOA, MOPH, CSO	Availability of relevant data Insufficient collaboration from relevant authorities and stakeholders to obtain information

in use by communities and in the Limpopo River Basin	CC coping mechanisms implemented and/or reinforced in three communities	Reports of site visits confirming existing CC coping mechanisms	Visit communities Copies of publications/reports	UNDP/UNEP MINAG, MICOA, MOPH, CSO	Insufficient funds to apply the CC coping strategies
OUTPUT 4.2: Community based natural forest resource management system established	At least 1 community area including forested areas demarcated and registered (DUAT title)	Communities holding DUAT (Right of Use and Benefit to Land) titles Cadastre maps of delimited areas	Records at Serviço de Geografia e Cadastro Copies of land title certificates	FAO, MINAG and CSOs, DPA and District authorities	Communities are entirely committed to community areas Communities' willing to cooperate in the judicious use of natural resources if given the right initiatives
	At least three community committees and associations established and legalized	Records of local, district or provincial authorities	Boletim da Republica containing information	FAO MINAG, Provincial forestry services, district authorities, CSOs	Community steering committees with the associations are not aware of CC and environmental issues nor are they strong enough to actually steer the organization
	Forestry inventory(ies) completed and management plans developed	Availability of forestry inventory(ies) Dissemination of management plans Monitoring of management plans Maps	Visit sites and confirm compliance with monthly extraction quotas or annual allowable cuts Management plans and by-laws	FAO MINAG, Provincial forestry services, district authorities, CSOs	Guides from management plan ignored Non-compliance with management plans
OUTPUT 4.3: Territorial planning mechanisms at community level introduced	Territorial planning, including CC and disaster risk reduction tools carried out for Eduardo Mondlane and Mapai One training session on planning and cadastre	Availability of documents and tools included in the territorial plans; Number of maps included Training session reports including lists of participants	Visit district planning center to find manuals and maps Urban plans Materials produced available	UN-HABITAT MINAG, MOPH, district administrator	Collaboration from relevant authorities and stakeholders insufficient
	Local building codes and standards revised; shelter reinforcement implemented	Manuals and codes available Number of facilities using building codes adapted to local conditions applied	Visit district planning center to find manuals Visit facilities	UN-HABITAT MINAG, MOPH, district administrator	Availability of material and labour
OUTPUT 4.4: Agroforestry practices introduced and applied at the community level	Examples of good agroforestry practices implemented in at least three sites Vegetation survey conducted by Dec 2008 Tree nurseries and species trials established by April 2009	Visit communities List of potential species for agroforestry	Semester progress reporting, minutes, lists of participants	FAO, WFP, UNDP MINAG, district agriculture authorities, MICOA	Resistance to change People will be sensitized in a way that allows for committed participation
OUTPUT 4.5: Multi purpose integrated water resource management systems created	Baseline document of existing water reserves completed Improved water pumping facilities in eight sites	Dissemination of baseline Baseline and documents availed by relevant authorities Results of tests of water	Publications and reports Visits to water points Programme progress report Site visits	UNEP, UN-HABITAT, UNIDO MINAG, MOPH, MICOA, INGC, and district authorities	Collaboration from relevant authorities and stakeholders Water tables are deeper than expected

	<p>Reinforcement rain water harvesting systems in ten sites</p> <p>Number of additional water points</p> <p>10 sites using Improved water management system</p> <p>Improved capacity to assess water/related CC impact; planning and implementation of CC adaptation strategies 8/08</p>	<p>quality</p> <p>Control existence</p> <p>Visit sites, check for improvement indicators</p>	<p>calculate measurement of indicators</p>		
<p>OUTPUT 4.6:</p> <p>Sustainable conservation agriculture practices introduced and efficiency in small scale irrigation systems improved</p>	<p>Map of soil suitability and land use for agricultural activities produced</p> <p>At least ten fields where sustainable conservation agriculture practices adopted by end of programme</p> <p>Two small scale irrigation systems where improvements implemented and 50 farmers trained on use of efficient irrigation system</p> <p>Renewable energy use for irrigation purposes implemented in at least two sites</p>	<p>Maps available with potential agricultural areas identified and soil characterization</p> <p>Visit the fields and demonstration fields</p> <p>Visit the fields and observe operationality</p> <p>Percentage of farmers using conservation agriculture best practices</p> <p>Visits to fields</p> <p>Training materials</p>	<p>Visit fields</p> <p>Talk to communities/ associations</p> <p>Manuals</p> <p>Reports of the field visits including photographs</p> <p>Visit farms to see how many farmers applying best practices</p> <p>Progress reporting</p> <p>Feasibility studies</p>	<p>FAO, WFP</p> <p>MINAG, Provincial and District Agricultural Service</p>	<p>Communities' reticence to adopt conservation agriculture practices</p> <p>Untimely scheduling of irrigation schemes may affect productivity</p> <p>Availability of renewable energy sources</p>
<p>OUTPUT 4.7:</p> <p>Prospects of biogas generation and composting using waste manure as coping mechanisms to climate change determined</p>	<p>Inventory of solid waste management and mapping along the Limpopo River</p> <p>At least five demonstration sites using waste management</p> <p>Number of training sessions on waste management, manure compost and bio-digestion systems</p>	<p>Reports of inventory of solid waste management and feasibility studies</p> <p>Tested waste management prototypes</p> <p>Training session reports including lists of participants</p>	<p>Semester progress reports and feasibility studies reports</p> <p>Visit the demonstration prototypes</p>	<p>UNIDO, FAO, UNEP, UN-HABITAT</p> <p>MICOA, MINAG, Provincial and District authorities</p>	<p>Availability of material and labour</p> <p>Collaboration from relevant authorities and stakeholders</p>
<p>JP OUTCOME 5:</p> <p>Communities' livelihoods options diversified</p>	<p>Use of alternative/renewable energy for production purposes</p>	<p>Adaptive options tested and in use</p>	<p>Semester progress reporting and site visits</p>	<p>UN-HABITAT, UNDP, UNEP, FAO, WFP</p>	<p>Methodology accepted and used by local communities</p>
<p>OUTPUT 5.1:</p> <p>Options for livelihoods diversification identified</p>	<p>Document on generic livelihood diversification options completed and sustainable livelihood options identified</p> <p>Three communities provided with knowledge and skills on sustainable livelihood options</p>	<p>Results of feasibility studies available</p> <p>Report on options adapted</p>	<p>Documents including feasibility studies</p> <p>Visit communities</p>	<p>FAO, WFP, UNEP</p> <p>MICOA, INGC, local communities, district authorities</p>	<p>Options not feasible</p>

OUTPUT 5.2: Inventory and feasibility assessment of potential renewable energy sources carried out	Existing and feasible energy renewable sources documented	Reports and feasibility studies	Semester progress reports and site visits	UNIDO, UN-HABITAT, FAO, UNEP MICOA, ME, INGC. Local communities, CSOs, District authorities	Weak institutional capabilities to support programme
	At least five pilot demonstration sites using renewable energy sources/year	Visit pilot demonstration units			
	Train 50 persons on the use and management of renewable energy technologies	Manuals produced Reports of training sessions including lists of participants	Quarterly progress reports	UN-HABITAT, UNIDO MICOA, ME, INGC. Local communities, CSOs, District authorities	Collaboration from relevant authorities and stakeholders
	Improved stoves introduced in 5 communities	Tested stove prototypes Visit the communities	Semester progress reporting	UN-HABITAT, UNIDO, WFP	Availability of material and labour
OUTPUT 5.3: Animal husbandry grazing and veterinary service coverage improved	At least ten basic cattle infrastructures built	Visit the sites to confirm existence and operationality	Semester and progress reports	FAO MINAG, District authorities, local communities	Large grazing lands make it difficult to establish a good network of infrastructures
	Livestock mortality reduced by 25% to 50% by end of programme	Statistics for livestock mortality ex-ante and post programme	Veterinary controls and reports	FAO MINAG, District authorities, local communities	Dispersed animals may not get vaccinated
	At least four training workshops conducted during the project	Training session reports Manuals produced	Copies of reports	FAO MINAG, District authorities, local communities	
OUTPUT 5.4: Agro-processing and marketing activities developed	Establishment of meat processing facility (slaughter house)	Visit to confirm existence and operationality	Semester progress reporting	FAO, UNIDO	Limited or not available energy for slaughter house and refrigeration
	Refrigeration system installed At least three training sessions conducted on food processing covering 100 people	Training session reports and materials produced	Copies of reports	MINAG, UEM, Provincial government, District authorities	Small number of animals to be slaughtered
OUTPUT 5.5: Use of animal traction promoted to encourage land preparation and transport	At least 200 farmers introduced in the use of animal traction	Visit farmers to observe use of animal traction	Observation and reports of visits	FAO MINAG, Provincial government, District authorities	Target number of farmers too high

Annex V: Terms of Reference

General Context: the MDG-F

In December 2006, the UNDP and the Government of Spain signed a major partnership agreement for the amount of €528 million with the aim of contributing to progress on the MDGs and other development goals through the United Nations System. In addition, on 24 September 2008 Spain pledged €90 million towards the launch of a thematic window on Childhood and Nutrition. The MDG-F supports joint programmes that seek replication of successful pilot experiences and impact in shaping public policies and improving peoples' life in 49 countries by accelerating progress towards the Millennium Development Goals and other key development goals.

The MDG-F operates through the UN teams in each country, promoting increased coherence and effectiveness in development interventions through collaboration among UN agencies. The Fund uses a joint programme mode of intervention and has currently approved 128 joint programmes in 49 countries. These reflect eight thematic windows that contribute in various ways towards progress on the MDGs, National Ownership and UN reform.

The MDG-F M&E Strategy

A result oriented monitoring and evaluation strategy is under implementation in order to track and measure the overall impact of this historic contribution to the MDGs and to multilateralism. The MDG-F M&E strategy is based on the principles and standards of UNEG and OECD/DAC regarding evaluation quality and independence. The strategy builds on the information needs and interests of the different stakeholders while pursuing a balance between their accountability and learning purposes.

The strategy's main objectives are:

1. To support joint programmes to attain development results;
2. To determine the worth and merit of joint programmes and measure their contribution to the 3 MDG-F objectives, MDGS, Paris Declaration and Delivering as one; and
3. To obtain and compile evidence based knowledge and lessons learned to scale up and replicate successful development interventions.

Under the MDG-F M&E strategy and Programme Implementation Guidelines, each programme team is responsible for designing an M&E system, establishing baselines for (quantitative and qualitative) indicators and conducting a final evaluation with a summative focus.

The MDG-F Secretariat also commissioned mid-term evaluations for all joint programmes with a formative focus. Additionally, a total of nine-focus country evaluations (Ethiopia, Mauritania, Morocco, Timor-Leste, Philippines, Bosnia-Herzegovina, Colombia, Honduras and Ecuador) are planned to study more in depth the effects of joint programmes in a country context.

Description of the joint programme, programme name and goals; include when it started, what outputs and outcomes are sought, its contribution to the MDGs at the local and national levels, its duration and current stage of implementation.

Name: UN Joint Programme on Environmental Mainstreaming and Adaptation to Climate Change

Overall goal: To support and strengthen government efforts to reduce the risks associated with climate change in vulnerable areas

Development objective 1: Integrate environment and climate change aspects into government plans, policies and strategies at national, provincial and district level

Development objective 2: Improve the resilience of rural communities to climate change by improving and strengthening management of the natural resource base and diversifying livelihoods

Start/end date: The JP began on 1/9/08 and ends on 31/8/12 (including a one year, no extra cost extension approved by MDG-F). The JP is currently in the final phase of implementation and completion of activities, including an exit strategy.

Outcomes and outputs are as follows:

Outcome 1: Government, civil society, communities and other stakeholders informed, sensitized and empowered on environment and climate change (CC) issues.

Outputs

- 1.1 Environment priorities and indicators reflected in planning frameworks and budgets at district and community level:
- 1.2 GIS-based data and maps on climate change vulnerability for risk areas
- 1.3 Training programmes on disaster and climate change prediction, including interpretation of maps and application of monitoring data for early warning purposes
- 1.4 Knowledge and experience sharing within the different groups (UN agencies and beneficiaries)

Outcome 2: Government capacity at central and decentralized levels to implement existing environment policies strengthened

Outputs

- 2.1: National Disaster Preparedness plan and other relevant plans revised/updated to include climate change and environment aspects
- 2.2 Early warning and communication system enhanced in the Gaza province:
- 2.3 Authorities, civil society and other relevant actors trained to incorporate and report on environmental and climate change risk events:

Outcome 3: Climate proofing methodology mainstreamed into government development plans, UN / Donors' programming and local stakeholders' activities/invests

Outputs

- 3.1 Tools for climate proofing of risk zones in the Limpopo River Basin developed:
- 3.2 Assessment of climate proofing approaches carried out
- 3.3 Stakeholders trained on climate proofing

Outcome 4: Community coping mechanisms to climate change enhanced

Outputs

- 4.1 Inventory of strategies and coping mechanisms currently in use by communities and in the Limpopo River Basin
- 4.2 Community based natural forest resource management system established:
- 4.3 Territorial planning mechanisms at community level introduced:
- 4.4 Agro forestry practices introduced and applied at the community level:
- 4.5 Multipurpose integrated water resource management systems created:
- 4.6 Sustainable conservation agriculture practices introduced and efficiency in small scale irrigation systems improved:
- 4.7 Prospects of biogas generation and composting using waste manure as coping mechanisms to climate variability determined:

Outcome 5: Communities' livelihoods options diversified

Outputs

- 5.1 Options for livelihood diversification identified:
- 5.2 Inventory and feasibility assessment of potential renewable energy sources carried out:
- 5.3 Animal husbandry grazing and veterinary service coverage improved:
- 5.4 Agro-processing and marketing activities developed:
- 5.5: Use of animal traction promoted to encourage land preparation and transport

Contribution of the JP to MDGs

The JP addresses the following MDGs:

Goal 1: Eradicate extreme poverty and hunger

At the local level (district of Chicualacuala) the JP has assisted rural communities to increase agricultural production and productivity, reduce livestock mortality and improve the management of forests. The JP has also provided clean water for thousands of families.

Goal 3: Promote gender equality and empower women

At the local level, the emphasis is on ensuring the full entitlement of women to the benefits that the JP has brought. This includes increased incomes, improved diets and participation in decision making.

Goal 7: Ensure environmental sustainability

Better land management, including cultivation techniques, the use of manure and mulch improves soil structure and texture. Control of tree cutting helps improve infiltration of rainwater and reduce erosion

Goal 8: Develop a global partnership for development

Full involvement of the government (at all levels) and the rural community in Chicualacuala both in mainstreaming and climate change adaptation activities promotes and strengthens a partnership designed to address environmental and climate change issues within a national development agenda.

Summary of the joint programme's scale of complexity, including its components, targeted participants (direct and indirect), geographical scope (regions) and the socio-economic context in which it operates.

The JP is a large and complex programme that brings together the skills, experience and comparative advantage of six UN agencies, three government ministries and two government institutes to bear on the tasks of integrating climate change into the national agenda and increasing community resilience to climate change impact. The main components of the JP can be summarised as: a) increasing capacity in planning for climate change, improving early warning and climatic information systems including meteorological information; b) increasing awareness of environmental and climate change issues and providing the skills to analyse and respond to climate change events ; c) strengthening community capacity to adapt to climate change through the implementation of a range of activities linked to the management of water, agriculture, livestock and forests, including the diversification of livelihoods.

The JP was designed to be implemented primarily in the Limpopo River Basin in Southern Mozambique. However, responding to a request from the government, the JP has focused almost exclusively on one of poorest and most remote district within the Basin, Chicualacuala, which has an area of 18,155 km² and a population of about 40,000 inhabitants.

The directly targeted participants are government partners at all levels, civil society (e.g NGO's and journalists) and the rural communities with which the JP works in Chicualacuala. Indirect benefits accrue to the wider public that has become more aware of environmental and climate change issues as a result of the dissemination of information through various channels. Indirect benefits also go to the hundreds of families that buy agricultural, livestock and forest products produced by Chicualacuala farmers with the assistance of the JP.

Chicualacuala district is classified as semi-arid and has an average rainfall of around 400 mm/year. In recent years, under the impact of climate change, rainfall has become less predictable. The district is very isolated, has poor public services and a high level of food insecurity. Illiteracy rates are high, particularly amongst women. HIV/AIDS is prevalent at a higher rate than the national average because of the proximity to South Africa and Zimbabwe. The majority of the population are subsistence farmers, many of them keeping a few livestock. Off-farm employment and business opportunities are limited to charcoal cutting and buying and re-selling livestock. Many of the young men migrate to South Africa or to the cities of Mozambique in search of work .

Description of the human and financial resources that the joint programme has at its disposal, the number of programme implementation partners (UN, national and local governments and other stakeholders in programme implementation).

The JP has a total budget of \$7,000,000. There are six UN agencies implementing the JP. These are FAO (lead agency for the UN), UNDP, WFP, UNDP, UN-HABITAT, UNIDO. Division of the budget is shown in table 1.

Table 1: JP budget, breakdown by agency

Programme Budget (from the Fund)
FAO USD 2,535,001;
UNEP USD 1,350,000;
UNHABITAT USD 1,180,000;
UNIDO USD 1,019,999;
UNDP USD 700,000;
WFP USD 275,000.
Total USD 7,000,000

Government partners that work closely with the UN agencies are: MICOA (leading government partner), INGC, MINAG, INAM, ME, the Provincial Government of Gaza and the District Government of Chicualacuala. Each UN agency and each government partner has a focal point person responsible for this JP. However, almost all of them (except in the case of FAO) are also responsible for other projects and programmes and have limited time available for JP activities. Other stakeholders in programme implementation include IUCN (sub-contracted to UNEP) and the national NGO UNAC. The UN human resources involved in the JP are approximately as shown in table 2 below.

Table 2: UN human resources assigned to the JP

UN Agency	National staff		International staff	
	Operation	Programme	Operation	Programme
FAO	1	10	0	1/4
UNDP	1/4	1	0	1/4
UNIDO	1/4	1 1/2	0	1/4
WFP	1	4	0	0
HABITAT	3	3	2	3
UNEP	1/2	1/2	1/10	4/10

Changes noted in the programme since implementation began, and how the programme fits in with the priorities of the National Development Strategies as well as the MDG Fund.

There have not been any changes to programme outcomes or outputs since the JP began. However, responding to request from the government, various activities that are not mentioned in the project document have been included within the programme. These include, for example, beekeeping, the installation of a new meteorological station and the building of a appropriate technology centre.

The programme fits well within national priorities. It was formulated taking specifically into account three recommended actions of the 2007 NAPA:

1. Strengthening of an early warning system,
2. Strengthening capacities of agricultural producers to cope with climate change,
3. Management of water resources under climate change.

The programme also fits within the PARPA II, 2006 (Plan for the Reduction of Absolute Poverty), specifically the sections referring to the crosscutting issues of environment and food and nutritional security.

The programme is fully consistent with MDG-F priorities, notably the: “fight against poverty/contribute to MDGs” and “support to development and implementation of national and local policies”

The commissioner of the evaluation is seeking high-qualified consultants to conduct the final evaluation, of this joint programme

1. OVERALL GOAL OF THE EVALUATION

One of the roles of the Secretariat is to monitor and evaluate the MDG-F. This role is fulfilled in line with the instructions contained in the Monitoring and Evaluation Strategy and the Implementation Guide for Joint Programmes under the Millennium Development Goals Achievement Fund. These documents stipulate that **all joint programmes will commission and finance a final independent evaluation.**

Final evaluations are **summative** in nature and seek to:

1. Measure to what extent the joint programme has fully implemented their activities, delivered outputs and attained outcomes and specifically measuring development results.
2. Generate substantive evidence based knowledge, on one or more of the MDG-F thematic windows by identifying best practices and lessons learned that could be useful to other development interventions at national (scale up) and international level (replicability).

As a result, the findings, conclusions and recommendations generated by these evaluations will be part of the thematic window Meta evaluation, the Secretariat is undertaking to synthesize the overall impact of the fund at national and international level.

2. SCOPE OF THE EVALUATION AND SPECIFIC OBJECTIVES

The final evaluation will focus on measuring development results and potential impacts generated by the **joint programme**, based on the scope and criteria included in this terms of reference. This will enable conclusions and recommendations for the joint programme to be formed within a period between four and six months.

The unit of analysis or object of study for this evaluation is the joint programme, understood to be the set of components, outcomes, outputs, activities and inputs that were detailed in the joint programme document and in associated modifications made during implementation.

This final evaluation has the following **specific objectives**:

1. Measure to what extent the joint programme has contributed to solve the needs and problems identified in the design phase.
2. To measure joint programme's degree of implementation, efficiency and quality delivered on outputs and outcomes, against what was originally planned or subsequently officially revised.
3. Measure to what extent the joint programme has attained development results to the targeted population, beneficiaries, participants whether individuals, communities, institutions, etc.
4. To measure the joint programme contribution to the objectives set in their respective specific thematic windows as well as the overall MDG fund objectives at local and national level. **(MDGs, Paris Declaration and Accra Principles and UN reform)**.
5. To identify and document substantive lessons learned and good practices on the specific topics of the thematic window, MDGs, Paris Declaration, Accra Principles and UN reform with the aim to support the sustainability of the joint programme or some of its components.

3. EVALUATION QUESTIONS, LEVELS OF ANALYSIS AND EVALUATION CRITERIA

The evaluation questions define the information that must be generated as a result of the evaluation process. The questions are grouped according to the criteria to be used in assessing and answering them. These criteria are, in turn, grouped according to the three levels of the programme.

Design level:

- **Relevance: The extent to which the objectives of a development intervention are consistent with the needs and interest of the people, the needs of the country and the Millennium Development Goals.**
- a) How much and in what ways did the joint programme contributed to solve the (socio-economical) needs and problems identified in the design phase?
- b) To what extent this programme was designed, implemented, monitored and evaluated jointly? (see MDG-F joint programme guidelines.)

- c) To what extent joint programming was the best option to respond to development challenges stated in the programme document?
- d) To what extent the implementing partners participating in the joint programme had an added value to solve the development challenges stated in the programme document?
- e) To what extent did the joint programme have a useful and reliable M&E strategy that contributed to measure development results?
- f) To what extent did the joint programme have a useful and reliable C&A strategy?
- g) If the programme was revised, Did it reflect the changes that were needed?

Process level

- Efficiency: Extent to which resources/inputs (funds, time, human resources, etc.) have been turned into results

- a) To what extent did the joint programme's management model (i.e. instruments; economic, human and technical resources; organizational structure; information flows; decision-making in management) was efficient in comparison to the development results attained?
- b) To what extent was the implementation of a joint programme intervention (group of agencies) more efficient in comparison to what could have been through a single agency's intervention?
- c) To what extent the governance of the fund at programme level (PMC) and at national level (NSC) contributed to efficiency and effectiveness of the joint programme? To what extent these governance structures were useful for development purposes, ownership, for working together as one? Did they enable management and delivery of outputs and results?
- d) To what extent and in what ways did the joint programme increase or reduce efficiency in delivering outputs and attaining outcomes?
- e) What type of work methodologies, financial instruments, and business practices have the implementing partners used to increase efficiency in delivering as one?
- f) What type of (administrative, financial and managerial) obstacles did the joint programme face and to what extent have this affected its efficiency?
- g) To what extent and in what ways did the mid-term evaluation have an impact on the joint programme? Was it useful? Did the joint programme implement the improvement plan?

- Ownership in the process: Effective exercise of leadership by the country's national/local partners in development interventions

- a) To what extent did the targeted population, citizens, participants, local and national authorities made the programme their own, taking an active role in it? What modes of participation (leadership) have driven the process?

b) To what extent and in what ways has ownership or the lack of it, impacted in the efficiency and effectiveness of the joint programme?

Results level

- Effectiveness: Extent to which the objectives of the development intervention have been achieved.

- a) To what extent did the joint programme contribute to the attainment of the development outputs and outcomes initially expected /stipulated in the programme document?
 - 1. To what extent and in what ways did the joint programme contribute to the Millennium Development Goals at the local and national levels?
 - 2. To what extent and in what ways did the joint programme contribute to the goals set in the thematic window?
 - 3. To what extent (policy, budgets, design, and implementation) and in what ways did the joint programme contribute to improve the implementation of the principles of the Paris Declaration and Accra Agenda for Action?
 - 4. To what extent and in what ways did the joint programme contribute to the goals of delivering as one at country level?
- b) To what extent were joint programme's outputs and outcomes synergistic and coherent to produce development results? `What kinds of results were reached?
- c) To what extent did the joint programme had an impact on the targeted citizens?
- d) Have any good practices, success stories, lessons learned or transferable examples been identified? Please describe and document them.
- e) What types of differentiated effects are resulting from the joint programme in accordance with the sex, race, ethnic group, rural or urban setting of the beneficiary population, and to what extent?
- f) To what extent has the joint programme contributed to the advancement and the progress of fostering national ownership processes and outcomes (the design and implementation of National Development Plans, Public Policies, UNDAF, etc)
- g) To what extent did the joint programme help to increase stakeholder/citizen dialogue and or engagement on development issues and policies?

Sustainability: Probability of the benefits of the intervention continuing in the long term.

- a) To what extent the joint programme decision making bodies and implementing partners have undertaken the necessary decisions and course of actions to ensure the sustainability of the effects of the joint programme?

At local and national level:

- i. To what extent did national and/or local institutions support the joint programme?
 - ii. Did these institutions show technical capacity and leadership commitment to keep working with the programme or to scale it up?
 - iii. Have operating capacities been created and/or reinforced in national partners?
 - iv. Did the partners have sufficient financial capacity to keep up the benefits produced by the programme?
- b) To what extent will the joint programme be replicable or scaled up at national or local levels?
- c) To what extent did the joint programme align itself with the National Development Strategies and/or the UNDAF?

4. METHODOLOGICAL APPROACH

This final evaluation will use methodologies and techniques as determined by the specific needs for information, the questions set out in the TOR and the availability of resources and the priorities of stakeholders. In all cases, consultants are expected to analyse all relevant information sources, such as reports, programme documents, internal review reports, programme files, strategic country development documents, mid-term evaluations and any other documents that may provide evidence on which to form judgements. Consultants are also expected to use interviews, surveys or any other relevant quantitative and/or qualitative tool as a means to collect relevant data for the final evaluation. The evaluation team will make sure that the voices, opinions and information of targeted citizens/participants of the joint programme are taken into account.

The methodology and techniques to be used in the evaluation should be described in detail in the desk study report and the final evaluation report, and should contain, at minimum, information on the instruments used for data collection and analysis, whether these be documents, interviews, field visits, questionnaires or participatory techniques.

5. EVALUATION DELIVERABLES

It is estimated that the work will take a maximum of 45 days to complete. As a guide, the phases of the evaluation will be as follows:

1. Review of literature and preparation of inception report, 7 days
2. Interviews with UN and government partners in Maputo and Xai Xai, 3 days
3. Field work including interviews with district level partners, 10 days
4. Compilation and presentation of findings, 2 days
5. Preparation and submission of draft report, 10 days
6. Preparation and submission of final report, 8 days
7. Translation of report into English/Portuguese and submission in both languages 5 days

The consultant is responsible for submitting the following deliverables to the commissioner and the manager of the evaluation:

✂ **Inception Report** (to be submitted within 7 days of the submission of all programme documentation to the evaluation team)

This report will be 10 to 15 pages in length and will propose the methods, sources and procedures to be used for data collection. It will also include a proposed timeline of activities and submission of deliverables. The desk study report will propose initial lines of inquiry about the joint programme. This report will be used as an initial point of agreement and understanding between the consultant and the evaluation managers. The report will follow the outline stated in Annex 1.

✂ **Draft Final Report** (to be submitted within 10 days after the completion of the field visit, please send also to MDG-F Secretariat)

The draft final report will contain the same sections as the final report (described in the next paragraph) and will be 20 to 30 pages in length. This report will be shared among the evaluation reference group. It will also contain an executive report of no more than 5 pages that includes a brief description of the joint programme, its context and current situation, the purpose of the evaluation, its methodology and its main findings, conclusions and recommendations. The draft final report will be shared with the evaluation reference group to seek their comments and suggestions. This report will contain the same sections as the final report, described below.

✂ **Final Evaluation Report** (to be submitted within 8 days after reception of the draft final report with comments, please send also to MDG-F Secretariat)

The final report will be 20 to 30 pages in length. It will also contain an executive summary of no more than 5 pages that includes a brief description of the joint programme, its context and current situation, the purpose of the evaluation, its methodology and its major findings, conclusions and recommendations. The final report will be sent to the evaluation reference group. This report will contain the sections establish in Annex 2.

6. KEY ROLES AND RESPONSABILITIES IN THE EVALUATION PROCESS

There will be 3 main actors involved in the implementation of MDG-F final evaluations:

1. The **Resident Coordinator Office** as **commissioner** of the final evaluation will have the following functions:
 - Lead the evaluation process throughout the 3 main phases of a final evaluation (design, implementation and dissemination)
 - Convene the evaluation reference group
 - Lead the finalization of the evaluation ToR
 - Coordinate the selection and recruitment of the evaluation team by making sure the lead agency undertakes the necessary procurement processes and contractual arrangements required to hire the evaluation team
 - Ensure the evaluation products meet quality standards (in collaboration with the MDG-F Secretariat)
 - Provide clear specific advice and support to the evaluation manager and the evaluation team throughout the whole evaluation process

- Connect the evaluation team with the wider programme unit, senior management and key evaluation stakeholders, and ensure a fully inclusive and transparent approach to the evaluation
- Take responsibility for disseminating and learning across evaluations on the various joint programme areas as well as the liaison with the National Steering Committee
- Safeguard the independence of the exercise, including the selection of the evaluation team

2. The programme coordinator as evaluation manager will have the following functions:

- Contribute to the finalization of the evaluation TOR
- Provide executive and coordination support to the reference group
- Provide the evaluators with administrative support and required data
- Liaise with and respond to the commissioners of evaluation
- Connect the evaluation team with the wider programme unit, senior management and key evaluation stakeholders, and ensure a fully inclusive and transparent approach to the evaluation
- Review the inception report and the draft evaluation report(s);
- Ensure that adequate funding and human resources are allocated for the evaluation

3. The Programme Management Committee that will function as the evaluation reference group, this group will comprise the representatives of the major stakeholders in the joint programme

- Review the draft evaluation report and ensure final draft meets the required quality standards.
- Facilitating the participation of those involved in the evaluation design
- Identifying information needs, defining objectives and delimiting the scope of the evaluation.
- Providing input and participating in finalizing the evaluation Terms of Reference
- Facilitating the evaluation team's access to all information and documentation relevant to the intervention, as well as to key actors and informants who should participate in interviews, focus groups or other information-gathering methods
- Oversee progress and conduct of the evaluation the quality of the process and the products
- Disseminating the results of the evaluation

4. The MDG-F Secretariat that will function as a quality assurance member of the evaluation in cooperation with the commissioner of the evaluation

- Review and provide advice on the quality the evaluation process as well as on the evaluation products (comments and suggestions on the adapted TOR, draft reports, final report of the evaluation) and options for improvement.

5. The evaluation team will conduct the evaluation study by:

Fulfilling the contractual arrangements in line with the TOR, UNEG/OECD norms and standards and ethical guidelines; this includes developing an evaluation matrix as part of the inception report, drafting reports, and briefing the commissioner and stakeholders on the progress and key findings and recommendations, as needed

7. EVALUATION PROCESS: TIMELINE

Evaluation Phase	Activities	Who	When
Design	Establish the evaluation reference group	CE*	6 months before the end of the programme
Design	General final evaluation TOR adapted	ERG**	
Implementation	Procurement and hiring the evaluation team	EM***	
Implementation	Provide the evaluation team with inputs (documents, access to reports and archives); Briefing on joint programme	EM, ERG	7 days
Implementation	Delivery of inception report to the commissioner, the evaluation manager and the evaluation reference group	ET****	7 days
Implementation	Feedback of evaluation stakeholders to the evaluation team. Agenda drafted and agreed with evaluation team	CE, EM, ERG	10 days
Implementation	In country mission	ET, EM, CE, ERG	15 days
Implementation	Delivery of the draft report	ET	10 days
Implementation	Review of the evaluation draft report, feedback to evaluation team. Fact-checking revision by MDG-FS, to be done at the same time as the ERG (5 business days)	EM, CE, ERG MDG-FS*****	15 days
Implementation	Delivery of the final report	EM, CE, ERG, MDG-FS, ^NSC	8
Dissemination/ Improvement	Dissemination and use plan for the evaluation report designed and under implementation	EM, CE, ERG, NSC	10

*Commissioner of the evaluation (CE) **Evaluation Reference group (ERG) ***Evaluation manager (EM)

****Evaluation team (ET) *****MDG-F Secretariat (MDGF-S) ^National Steering Committee

8. USE AND UTILITY OF THE EVALUATION

Final evaluations are summative exercises that are oriented to gather data and information to measure to what extent development results were attained. However, the utility of the evaluation process and the products goes far beyond what was said during the field visit by programme stakeholders or what the evaluation team wrote in the evaluation report.

The momentum created by the evaluations process (meetings with government, donors, beneficiaries, civil society, etc) it's the ideal opportunity to set an agenda on the future of the programme or some of their components (sustainability). It is also excellent platforms to communicate lessons learnt and convey key messages on good practices, share products that can be replicated or scale up in the country as well as at international level.

The commissioner of the evaluation, the reference group, the evaluation manager and any other stakeholders relevant for the joint programme will jointly design and implement a complete plan of dissemination of the evaluation findings, conclusions and recommendations with the aim to advocate for sustainability, replicability, scaling up or to share good practices and lessons learnt at local, national or/and international level.

9. ETHICAL PRINCIPLES AND PREMISES OF THE EVALUATION

The final evaluation of the joint programme is to be carried out according to ethical principles and standards established by the United Nations Evaluation Group (UNEG).

- **Anonymity and confidentiality.** The evaluation must respect the rights of individuals who provide information, ensuring their anonymity and confidentiality.
- **Responsibility.** The report must mention any dispute or difference of opinion that may have arisen among the consultants or between the consultant and the heads of the Joint Programme in connection with the findings and/or recommendations. The team must corroborate all assertions, or disagreement with them noted.
- **Integrity.** The evaluator will be responsible for highlighting issues not specifically mentioned in the TOR, if this is needed to obtain a more complete analysis of the intervention.
- **Independence.** The consultant should ensure his or her independence from the intervention under review, and he or she must not be associated with its management or any element thereof.
- **Incidents.** If problems arise during the fieldwork, or at any other stage of the evaluation, they must be reported immediately to the Secretariat of the MDGF. If this is not done, the existence of such problems may in no case be used to justify the failure to obtain the results stipulated by the Secretariat of the MDGF in these terms of reference.
- **Validation of information.** The consultant will be responsible for ensuring the accuracy of the information collected while preparing the reports and will be ultimately responsible for the information presented in the evaluation report.
- **Intellectual property.** In handling information sources, the consultant shall respect the intellectual property rights of the institutions and communities that are under review.

- **Delivery of reports.** If delivery of the reports is delayed, or in the event that the quality of the reports delivered is clearly lower than what was agreed, the penalties stipulated in these terms of reference will be applicable.

10. QUALIFICATIONS OF THE CONSULTANT/TEAM OF CONSULTANTS

- **Academic:** The work will be conducted by two consultants with complementary skills and experience. One of the consultants will be a technician and the other a social scientist. The technician will be the team leader. He/she will have (at least) an Msc. in agronomy, forestry, livestock, environmental science or any closely related natural resource based discipline. The social scientist will have a masters' level degree in social anthropology, economics, rural development planning or a closely related subject.
- **Experience:** Each consultant will have a minimum of five years of consultancy experience, including proven examples of evaluating large, complex, community based rural development projects of this type. Experience in evaluating environment or climate change projects in Mozambique will be considered a distinct advantage.

Both consultants will be fluent in English and Portuguese. The final report will be written in both languages.

Knowledge of how the UN system functions and experience of evaluating project or programmes implemented by UN agencies, especially joint programmes, will be seen as an advantage.

11. ANNEXES

I. Outline of the inception report

0. Introduction

1. Background to the evaluation: objectives and overall approach
2. Identification of main units and dimensions for analysis and possible areas for research
3. Main substantive and financial achievements of the joint programme
4. Methodology for the compilation and analysis of the information
5. Criteria to define the mission agenda, including “field visits”

II. Outline of the draft and final evaluation reports

1. Cover Page

2. Executive Summary (include also Glossary page)

3. Introduction

- Background, goal and methodological approach
- Purpose of the evaluation
- Methodologies used in the evaluation
- Constraints and limitations on the study conducted

4. Description of the development interventions carried out

- Detailed description of the development intervention undertaken: description and judgement on implementation of outputs delivered (or not) and outcomes attained as well as how the programme worked in comparison to the theory of change developed for the programme.

5. Levels of Analysis: Evaluation criteria and questions (all questions included in the TOR must be addressed and answered)

6. Conclusions and lessons learned (prioritized, structured and clear)

7. Recommendations

8. Annexes

III. Documents to be reviewed

MDG-F Context

- MDGF Framework Document
- Summary of the M&E frameworks and common indicators
- General thematic indicators
- M&E strategy
- Communication and Advocacy Strategy
- MDG-F Joint Implementation Guidelines

Specific Joint Programme Documents

- Joint Programme Document: results framework and monitoring and evaluation framework
- Baseline study reports
- Mission reports from the Secretariat
- PMC progress reports
- Six monthly reports
- Mid-term evaluation report
- Annual reports
- Annual work plan
- Financial information (MDTF)

Other in-country documents or information

- Evaluations, assessments or internal reports conducted by the joint programme
- Relevant documents or reports on the Millennium Development Goals at the local and national levels
- Relevant documents or reports on the implementation of the Paris Declaration and the Accra Agenda for Action in the country
- Relevant documents or reports on One UN, Delivering as One