

**Report of the
End-of-Project Evaluation of the Sudan NAPA
Follow-up Project: Implementing NAPA Priority
Interventions to Build Resilience in the
Agriculture and Water Sectors to the Adverse
Impacts of Climate Change in Sudan**

April 2015

**A Project of the Government of Sudan, the United Nations Development Programme
and the Global Environment Facility**

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End-of-Project Evaluation Report

Undertaken during February – March 2015, by Dennis Fenton and Abdel Rahman Khidir Osman

Government of Sudan
United Nations Development Programme
Global Environment Facility/Least Developed Countries Fund for Climate Change

Country: Sudan	PIMS Number	3925					
	Atlas Project Number	00057783					
	Project Type	FSP	x	MSP		EA	
Implementing Agency	Higher Council of Environment and Natural Resources						
GEF Focal Area	Climate Change						
UNDAF Outcome (2009 – 2012)	Outcome 1: By 2012, the environment for sustainable peace in Sudan is improved through increased respect for rights and human security with special respect to the communities directly affected by the conflict. Outcome 3: By end of 2012, poverty, especially among vulnerable groups is reduced and equitable economic growth is increased through improvements in livelihoods, decent employment opportunities, food security, sustainable natural resource management, and self-reliance.						
UNDP CP Output (2009 – 2012)	Strengthened capacity of national, sub-national, state and local institutions and communities to manage the environment and natural disasters to reduce conflict over natural resources.						
UNDAF Outcome (2013 – 2016)	Outcome 2: Populations vulnerable to environmental risks and climate change become more resilient and relevant institutions are more effective in the management of natural resources;						
UNDP CP Output (2013 – 2016)	2.1 Needy communities to climate change and climatic risks adapted comprehensive sets of adaptation measures						

Project timeframe:

Project Budget:

Project Document Signature Date: December 2009	Total budget: US\$6,800,000 ¹ of which:
Original Planned Closing Date: December 2013	GEF funds: US\$3,300,000
Current Planned Closing Date: April 2015	UNDP funds: US\$500,000
Planned Project Duration: 48 months	Government of Sudan funds: US\$3,000,000

¹ Figures from CEO Endorsement Request.

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During the Evaluation, the experts had the opportunity to interact with many State government officers, technical experts, farmers and community representatives, who all gave their valuable time in order to contribute to this Evaluation. This was greatly appreciated.

Acronyms and Abbreviations

ALM	Adaptive Learning Mechanism
ARC	Agricultural Research Corporation
AWP	Annual Work Plan
CBA	Cost Benefit Analysis
CIDA	Canadian International Development Agency
CO	UNDP Country Office
ET	Evaluation Team
FAO	Food and Agricultural Organization (of the United Nations)
HCENR	The Higher Council for Environment and Natural Resources
IFAD	International Fund for Agricultural Development (of the United Nations)
INC	Initial National Communication to the UNFCCC
IRR	Internal Rate of Return
LDCF	Least Developed Countries Fund
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MEFPD	Ministry of Environment, Forestry and Physical Development
MFNE	Ministry of Finance and National Economy
MIC	Ministry of International Cooperation
MTR	Mid Term Review
NAPA	National Adaptation Plan of Action
PCU	Project Coordination Unit
PIR	Project Implementation Reviews
PPG	Project Preparatory Grant
SC	State Coordinator
TC	Technical Committees
TE	Terminal Evaluation
ToR	Terms of Reference
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VDC	village development committees
WFP	World Food Programme (of the United Nations)

Executive Summary

Background and Context

1. Sudan's Initial National Communication to the UNFCCC was submitted in July 2003. It provided an assessment of the likely impacts of climate change in several sectors. It concluded that climate change was contributing to decreasing annual rainfall, increasing rainfall variability and increasing average annual temperatures. It found that these factors, in turn, were leading to many challenges, and in turn leading to increased risks of food shortage and famine and contributions to poverty.
2. Subsequently, during 2005 – 2007, the Government of Sudan, with support from GEF/LDCF and the United Nations Development Programme, prepared its National Adaptation Plan of Action (NAPA). This identified the five 'highest priority interventions' and twenty-seven 'high priority' interventions, and it identified the more vulnerable regions. The Project *"Implementing NAPA Priority Interventions to Build Resilience in the Agriculture and Water Sectors to the Adverse Impacts of Climate Change in Sudan"* (hereafter referred to as "the NAPA Implementation Project", or simply the "Project") was designed to respond to the NAPA and to address several of the highest priority interventions.
3. The Project was implemented in a challenging context. The adverse socio-economic conditions, the strained natural environment, the complex political situation, security challenges and overall weak governance in the agriculture sector made it very challenging to effectively support natural resource management in remote and marginalized areas in Sudan.
4. The Project Objective was *"to implement an urgent set of adaptation-focused measures that will minimize and reverse the food insecurity of small-scale farmers and pastoralists, thereby reducing vulnerability of rural communities resulting to climate change, including variability"*. It has three Outcomes:
 - Resilience of food production systems and food insecure communities in the face of climate change;
 - Institutional and individual capacities to implement climate risk management responses in the agriculture sector strengthened;
 - A better understanding of lessons learned and emerging best practices captured and up-scaled at the national level.
5. The Project design initially covered five locations representing the dominant agro-ecological zones with visible climate change impacts and the areas the most affected by recurring food insecurity. The five concerned States were Central Equatorial, Gedarif, North Kordofan, River Nile and South Darfur. However, following the secession of the Republic of South Sudan from Sudan, Central Equatorial State no longer lies in Sudan and the related Project activities were stopped.
6. The Project was financed by the Least Developed Countries Fund for Adaptation to climate change (USD 3,300,000), UNDP (USD 500,000). Committed co-financing from the government of Sudan totalled USD 3,000,000. The Project was implemented by the Higher Council for Environment and Natural Resources. The Project Document was signed in late 2009 and was planned to run for 48 months, until end-2013.
7. The latest available financial data (20 March 2015) is that USD 3,273,618.03 of the LDCF US\$ 3.3 million funds and US\$515,200 of the UNDP US\$500,000 funds have been expended. Hence funds are almost entirely liquidated. A total of US\$1,527,313 was raised in co-financing - only 44% of the

committed amount. The Project ran until early 2015, almost 18 months over schedule (at no extra cost).

8. This is the report of the independent Terminal Evaluation of the Project. The purpose of this Evaluation is to determine whether the Project has achieved its intended Outcomes. The Evaluation focuses on the effectiveness, efficiency and timeliness of Project implementation. It also highlights issues requiring actions for implementation in similar programmes and presents lessons learned about project design, implementation and management.
9. The goal of the project was to contribute to reducing the vulnerability and to increasing the adaptive capacity of Sudan's agriculture sector to climate change impacts. In order to reach this goal, the Project implemented a set of adaptation-focused measures with vulnerable, poor small-scale farmers and pastoralists in four different regions in Sudan. The Project also included an emphasis on lessons learning, sustainability and up-scaling.

Conclusions – Project Design

10. The Project was nationally driven from the very outset, and, as it followed on from the NAPA process, it was prepared through a largely scientific and participatory process. Overall, the approach to the Project design is considered successful. The main weakness was the amount of time between conception and Project inception.
11. The approved Project design documents have many strengths. They provide a general problem analysis and they describe the Project's approach. They include a logical framework that has many strong points and has very relevant targeted results. They clearly set out the management, decision-making and financial management arrangements. They also properly describe the approach to monitoring and set a foundation for results-based, adaptive management.
12. However, in other ways, the Project documents were incomplete. The problem analysis was incomplete, and in particular, it provided no details of the situation at the target sites. The logical framework is formulated too vaguely and does not include adequate inadequate indicators with targets.
13. The articulation of the Project strategy is also incomplete. It does not define what should be considered a successful intervention at the state or site level, nor does it clarify what should be considered a desirable end-point for the Project. The strategic links between Outputs and Outcomes, and across sites, are not elaborated. The documents are unclear as to whether the Project is about *implementing* climate change adaptation or *piloting/demonstrating* climate adaptation activities. And, to the extent that it is about piloting, the approach to piloting is not elaborated or defined. With regards to gender, the Project document does describe how, at the site level, women were to make up a large number of the beneficiaries. However, the Project document does not provide an analysis of the gender situation nor a gender strategy.
14. An important issue during Project design was to determine the number of sites and States to be involved in the Project. The final decision was to work in five States, each with several sites. This proved to be too ambitious.
15. Notwithstanding those gaps and weaknesses, the Project design process and the Project design documents provided a good basis for implementing the Project. A serious effort was made to address the remaining weaknesses during the inception period; some improvements were made, but this effort was not fully successful.

Conclusions – Project Implementation Approach

16. The implementation approach has to be considered overall to be highly successful.
17. The Project successfully reached and helped a large number of beneficiaries in poor and vulnerable communities. It generated a strong engagement and interest amongst the community members and a strong support from the State level participants. It also created strong coordination at the state level and good partnerships with necessary stakeholders. The main successful implementing factors were:
- The delegation of decision-making and Project momentum to the State and site levels;
 - The emphasis on reaching communities and achieving change ‘on-the-ground’, and both of these from the outset;
 - The motivated and well organised state level Technical Committees;
 - The motivated and well anchored and dynamic state level coordinators;
 - The active and highly supportive central Project Coordination Unit; and,
 - The smooth and mostly efficient financial planning and management (despite initial challenges).
18. However, there were weaknesses in the implementation approach, notably:
- The Logframe was used mostly as a reporting tool (to prepare overall reports on Project progress to UNDP and to GEF) and not as a management tool;
 - The Project ran almost 18 months over schedule (although at no extra cost);
 - The low involvement of key decision-makers (i.e. State Ministers and those in charge of budget allocation) in the State Governments;
 - The absence of the main Federal agency for implementing rural development;
 - The Project was unable to provide all the required advice and capacity building support to the States and sites; and
 - The Project Board’s high level membership, meaning it was not able to be fully informed about technical issues.
19. Monitoring was a particular challenge. During implementation, the national and State level staff undertook a great deal of technical activity monitoring. As a result they had a very good knowledge of the individual activities on the ground and of the beneficiaries. However, the weaknesses in the Project design, the lack of clear consolidated targets, the lack of a baseline and a measuring protocol and the absence of a strategic approach all contributed to undermining Project monitoring. As a result, there is lots of data related to the many Project achievements at the site level, but little information about overall Project progress.

Conclusions – Project Results

20. The Project results are mostly impressive. A large number of people in diverse socio-economic and ecological conditions have been helped by the Project, and now have improved lives and food security. New technologies, practices and approaches were introduced and generally adopted in all the Project target villages. In most villages this typically included a complex package of forestry, traditional agricultural crops, new horticultural crops, water management and harvesting, livestock management, sustainable energy and training. Both men and women benefited in large numbers. Numerous local community organizations have been strengthened and established, and there is evidence that, at the village level, there is increased capacity with regards to both natural resources management and organizational capacity.

21. Most of the evidence for results originates from self-reporting and there are few independently verified figures. Further, as there was no baseline survey, it is not possible to either measure or define many of the achievements.
22. The Project was much less successful with regards to lessons learning, sustainability and up-scaling, although some capacity has been developed at State level and there is some evidence of policy change or changed practices by government agencies in two of the participating States.
23. To summarize, given the very challenging context, the Project was as successful as could be expected.
24. With regards to sustainability of the Project's impacts, this has to be considered at two levels: the site level and the State level. At the site level, only some aspects of the Project have reached sustainability. Likewise, at State level, many of the Project impacts are not yet sustainable. However, two follow-up Project started recently, and these provide a unique opportunity to sustain activities over the short term, and to develop a more credible long term sustainability strategy.
25. Several factors undermined sustainability and upscaling. One was the lack of a clear overall strategy: beyond aiming to help as many poor and vulnerable farmers as possible with their immediate challenges, it was not very clear just what the Project was to achieve. This weakness was never corrected. Second, the incomplete measuring and monitoring of the Project progress. If the costs and benefits of the Project interventions are not clear, it is not reasonable to expect sustainability, nor replication. Third, the level of support given to the sites. At least for some issues at some sites, the quantity or quality of technical support provided to villagers was not sufficient to ensure the new technologies were properly adopted. This is linked to the fact that the Project attempted to cover too many sites, too many farming systems, and its resources were spread out.
26. With regards to lesson learning, there is confusion on this issue. Many of the Project successes have been communicated, in a general manner, nationally and internationally, and this has raised awareness around the Project and UNDP. Yet, lesson learning is much more than that. Lesson learning would lead to a process where other stakeholders, in other areas or countries, could directly adopt some of the lessons learnt from this Project to adapt or to increase resilience. The Project has not attempted to develop products that could achieve this. Notably, to achieve this would require specific monitoring protocols and effective measuring and recording of the practices, technologies and achievements. Or the project could have developed a model or approach for replication – yet overall there is no evidence of the Project establishing such a model.

Lessons Learnt

27. The Project has demonstrated the following:
 - It is possible and desirable to deliver quality support *directly* to communities in Sudan. Doing this builds trust, increases efficiency, and improves the relevance of the activities designed;
 - It is essential to *build trust* with communities when working on natural resource management in poor and remote areas. This is challenging and takes time, but does deliver benefits;
 - It is also essential to invest in *developing partnerships* between project staff, experts, government agencies and communities;
 - *Sustainability is challenging*, and requires successful efforts in a diverse range of issues. Notably, if attention is not given to financial sustainability, sustainability will never be achieved. Further, if practices or technologies are to be sustained, *the associated costs and*

benefits must be precisely measured, documented and communicated – it is not sufficient to simply show examples of farmers generating income based on inputs provided by a project;

- It is *possible to work with women* in communities in Sudan, even in the more socially conservative areas. This requires patience and high levels of effort; and,
- High level of efforts are needed to provide sufficient technical support to remote communities in Sudan, and therefore *it is better to avoid spreading resources* across too many sites in too many distinct geographical areas.

Recommendations

28. Extension systems must be financially sustainable or they will stop functioning. Possible ways to create financial sustainability include:
 - Increased use of information technology. Following initial contacts in person, the extension workers can then provide extension using smart phones and visual imagery to remote areas, and this will greatly reduce transportation costs;
 - Use of farmer-centred extension approaches. The approach would be to develop ‘lead’ or ‘pioneer’ farmers in villages, who can then be the mechanism to extend to other villages and villagers. This may be more cost-effective. This is the farmer field school approach;
 - Clearly demonstrate the financial benefits from extension and use this to advocate to decision-makers for larger government budgets. This will require the accurate measuring of costs and benefits, and then communicating this information to decision-makers;
 - Farmers contribute to the costs of extension. If the farmer appreciates the extension service, and the extension service helps the farmer integrate into the national economy, the farmer will ultimately be willing to pay for it. This helps financial sustainability. It is recognised that this would be very innovative for Sudan, particularly because the farmers are often very poor, and so progress would only be incremental initially.
29. Recommendation 1 to UNDP and HCENR for future projects: Experiment and innovative with measures to create extension systems that are financially sustainable in poor and remote areas.
30. The project suffered from a lack of strategy, from having no clear starting point nor end point, and from not having a definition of what was meant by ‘piloting’ or ‘demonstration’. This Project is decentralized and so the strategies must be State specific, and they must encompass details of the approach to sties. Recommendation 2 to the managers of the 2 ‘follow-up’ projects: prepare strategies for each of the participating States for the follow-up projects, with separate state-level logframes, meaningful targets and sustainability strategies.
31. There is confusion around the term ‘lesson learning’. Globally, UNDP promotes lesson learning and links this to replication and upscaling. However, at the country and project level, many staff confuse lesson learning with creating publicity around a project. Recommendation 3 to UNDP globally: prepare a document clarifying what is meant by lesson learning, and what the aims of lesson learning are, and how to measure success.
32. The Project has supported sand dune fixing at several sites. However, these efforts are very small and isolated compared to the problem, and so the net effects on the sand dunes is only minimal. Sand dune shifting can only be addressed by a large, government funded, national effort. This cannot be done through micro-scale, community based initiatives. Recommendation 4 to UNDP and HCENR: advocate for a national programme to address the problem of sand dune shifting.
33. The Project Board was well intentioned and was helpful when it met. However, some of the members were high level and it was often challenging to create a quorum. Further, some of the

members were too busy to become familiar with the technical aspects of the Project. Hence meetings were irregular, and some of the guidance given was not the most technically appropriate. Recommendation 5 to UNDP for future projects: establish Project Boards that are of a technical nature, able to fully master the technical aspects, but sufficiently high level to make decisions and follow them through.

1. Introduction to the Project and the Evaluation

1.1 Background to the Project

34. Sudan's Initial National Communication (INC) was submitted to the UNFCCC in July 2003. It provided an assessment of the likely impacts of climate change on several sectors. It concluded that climate change was contributing to decreasing annual rainfall, increasing rainfall variability and increasing average annual temperatures. It found that these factors, in turn, were leading to many challenges, notably a reduction in ecosystem integrity, a decrease in biodiversity, a decline in crop and gum yields, frequent spells of drought, forced changes to planting dates and outbreaks of disease and insect infestations. It observed that these factors lead to increased risks of food shortage and famine and they contribute to poverty.²
35. The INC included an examination of Sudan's ecological zones and found that the majority of the country is quite vulnerable to changes in temperature and precipitation. It noted that such changes could lead to shifts in the distribution of the ecological zones as well as to declines in the productive capacity of rain-fed agriculture, and thus undermine the security of the nation's food supply. Moreover, the INC observed that over 80% of the population is directly dependent on agriculture or natural resources, and this means there are high levels of social vulnerability to climate change.
36. The INC identified agriculture, water and health as the three highest priority sectors. Further, it identified five vulnerable agro-ecological regions across the country, and identified one State in each region as a priority for intervention and demonstration. These States were River Nile State, North Kordofan State, Gedarif State, South Darfur State and Equatorial State.
37. Following on closely from the INC, during 2005 – 2007, the Government of Sudan, with support from GEF/LDCF and the United Nations Development Programme, prepared its National Adaptation Plan of Action (NAPA, 2007). The NAPA identified priorities for urgent and immediate action in each of the above-mentioned States and sectors. The NAPA identified five 'highest priority interventions' and twenty-seven 'high priority' interventions. The Project "*Implementing NAPA Priority Interventions to Build Resilience in the Agriculture and Water Sectors to the Adverse Impacts of Climate Change in Sudan*" (hereafter referred to as "the NAPA Implementation Project", or simply the "Project") was designed to respond to the NAPA and to address several of the NAPA highest priority interventions. This report is the report of the Terminal Evaluation (TE) of that Project.

1.2 Purpose of the Evaluation

38. In accordance with UNDP/GEF policies, all GEF-funded projects implemented by UNDP are subject to a final independent evaluation. According to the Terms of Reference for this evaluation (TOR)³, the purpose of this independent Terminal Evaluation is to determine whether the Project has achieved its intended Outcomes. The TE is tasked to focus on the effectiveness, efficiency and timeliness of Project implementation. The TE is also to highlight issues requiring actions for implementation in similar programmes and to present lessons learned about project design, implementation and management. Findings from this TE may be incorporated into similar projects in the future in order to enhance implementation.⁴

² It is noted that Sudan's second national communication (SNC) was issued in 2013. It confirms the findings in the INC, and provides a more detailed analysis of vulnerability in two sectors (water and coastal areas).

³ See Annex 1

⁴ The evaluation is to be undertaken in accordance with the "GEF Monitoring and Evaluation Policy" (see http://www.thegef.org/gef/sites/thegef.org/files/documents/ME_Policy_2010.pdf)

39. According to the TOR, the overall purpose of the evaluation is to measure the effectiveness and efficiency of the Project activities in relation to the stated objective, identify lessons learnt and to produce possible recommendations on how to expand and upscale the best climate change adaptation practices. Moreover, this Terminal Evaluation is to serve as an agent of change and play a critical role in supporting future climate change adaptation programming in the country. The TE main objectives are:
- To document the lessons learnt on project management and monitoring functions of the climate change adaptation projects;
 - To document the best lessons learnt for enhancing accountability for the achievement of the climate change adaptation objectives;
 - To enhance organizational and development learning; and,
 - To enable informed decision-making for future climate change adaptation programming;
40. Particular emphasis is to be put on the Project results and the extent that all outcomes have been achieved in the given timeframe, taking into consideration the speed at which the Project is implemented.

1.3 Evaluation Methodology

41. The Evaluation Team (ET) consisted of two experts with significant and pertinent international and national experience and expertise. The international expert (and team leader) was entirely independent of and external to the Project. The national expert was a retired agricultural researcher from the Agricultural Research Corporation (ARC), had participated in one Project workshop and edited the workshop proceedings, and had recently participated in a technical assessment of the Project for the Project implementing agency⁵.
42. Guided by the TOR, the ET followed a logical approach with distinct techniques and standard tools to assess the Project. It looked at relevance, connectedness and coherence of design elements and of performance. Based on the TOR and on an initial review of documents, a first step was to prepare a list of 'key questions' and to identify sources of data for these questions (see Annex 2). Henceforth, the TE data collection and analysis focused into two complementary structures: (i) the Project activities, output and outcomes as listed in the Project document and (ii) the list of 'key questions' in Annex 2. These structures were constantly referred to (at data collection phase, at analytical phase, and during report preparation phases), in order to ensure that adequate coverage was being given to relevant issues, and to ensure that nothing was overlooked.
43. The mechanisms to collect data were: a desk review of documents; semi-structured interviews with a comprehensive range of interlocutors and stakeholders at federal level; field visits to one of the participating states and a focus group meeting with the State Technical Committee and site visits to three of the participating communities; and a self-assessment workshop with representatives from all participating States. For the community site visits, participatory techniques were combined with other approaches to gather as much information and data as possible. Systematic triangulation⁶ was employed to verify hypotheses and findings.
44. The documentation review covered: (a) the relevant background documentation on the Project and its context; (b) the Project planning, management, design and monitoring documents; (c) Project outputs; and (d) documents pertaining to the Project's operational context. See Annex 3 for a full list of documentation reviewed.

⁵ The project implementing agency is the Higher Council for Environment and Natural Resources or HCENR.

⁶ All issues, minor and major, were explored through several pathways and several sources of information.

45. The list of partners and stakeholders interviewed is provided in Annex 4 and the evaluation mission itinerary is presented in Annex 5. At the federal level, stakeholder interviews were held with representatives of the National Government, with the Project Team and the Project Consultants, with experts from similar Projects, with representatives of international Organizations and with UNDP staff. In addition meetings were held with knowledgeable and informed national experts.
46. Given limited time, it was only possible for the ET to visit one of the participating states. North Kordofan was selected to be visited⁷. In North Kordofan, the ET (i) had a focus group meeting with the members of the State Technical Committee (ii) visited three of the seven communities participating in the project in North Kordofan. For logistical reasons it was necessary to select the communities to be visited in advance of the ET visit, hence the State Coordinator selected the villages to be visited: El Hamreit, Foja and Shagenom. In each village a short group meeting with 30-50 village representatives (and Project beneficiaries and participants) was held. This was the principal tool for obtaining the community's perspective of the Project.
47. A one-day self-assessment workshop was held with two representatives from each State. During this workshop, the participants were asked to review progress and to rate diverse achievements and provide associated evidence. This was an important data collection and analytical tool. The self-assessment tool is included in Annex 6.
48. Following data collection, the ET held a one-day internal session to review the data, to clarify and authenticate findings, to collate conclusions and lessons learned, and to formulate recommendations. This was followed by a substantive and lengthy de-briefing session with UNDP and a representative of the Project Coordination Unit (PCU). At the de-briefing session, the ET presented initial findings and held candid and critical discussions and collected additional insights.
49. When putting together the key elements of the report, due consideration was given to the context to the Project in the target areas. Notably the security situation in South Darfur continues to make it challenging to implement community-based projects.

Limitations

50. The authors are confident that the findings and conclusions reached in this report are accurate and fair. However, it is recognised that the evaluation was subject to the following constraints:
 - Time and human resources. The Project activities covered several villages in four States over several years and involved a vast number of participants and beneficiaries. The ET was only able to witness a small percentage of the activities and meet a fraction of the project beneficiaries;
 - Certain government agencies were not available for interview due to conflicting time schedules (notably the Department of International Cooperation under the Ministry of Economic Development and Finance and the GEF Operation Focal Point⁸);
 - The national consultant participating in this evaluation was identified late and it was not possible to issue his contract before the end of the evaluation mission. This is not an appropriate practice, in particular for an evaluation, as a consultant may not be able to act independently until the contract is issued;

⁷ North Kordofan was selected because the Evaluation Team leader had participated in the mid-term review and had visited the other three states.

⁸ Efforts were made to interview the GEF OFP by skype.

- For reasons beyond control, the issuance of the permit for travel to North Kordofan was delayed by two days. As a result, the self-assessment workshop took place immediately after the field visit. This limited the amount of time available to prepare for the workshop;
- The Project's indicators are incomplete and do not provide a good tool for monitoring impact and progress. Hence, to a large extent, monitoring relied on self-reporting by State Coordinators;
- Due to conflicting time schedules it was not possible to de-brief with the Government (The Higher Council for Environment and Natural Resources, HCENR) representatives at the end of the mission, or to obtain the initial HCENR feedback on findings.

1.4 Structure of the Evaluation

51. The TOR provide a draft outline for the report. The structure of the report respects that outline, with minor modifications to account for important issues that emerged during the evaluation. This evaluation report is structured into the following Chapters:

- This first Chapter outlines the Project background and the Evaluation purpose and methodology;
- The second Chapter presents the **Project Development Context** and background information on climate change, food security and poverty alleviation in Sudan. It also summarises the Project scope;
- Chapter three reviews **Project Formulation** – both the process and the Project's design documents;
- The fourth Chapter of the report assesses **Project Implementation** and the processes that affected the achievement of intended results. It also includes an assessment of the Implementing and Executing Agencies performance and a rapid assessment of the financial management;
- Chapter five reviews and evaluates the **Project Results** against each of the three Outcomes. It also assesses the overall result. It also comments on the prospects of sustainability and on contribution to upgrading national capacity;
- The final Chapters of the report provide a **Conclusion**, summarise **Lessons Learnt** and draw together the **Recommendations** in order to increase the likelihood of sustainable impact;
- **Gender** is treated as a cross-cutting issue and is discussed at many points in this report, notably in Sections 3.8.2, 4.1.1 and 6.1.1.

2. The Project Development Context and the Project Outline

2.1 The Development Context

2.1.1 The overall socio-economic context

52. According to the World Bank⁹, Sudan benefits from a strategic location at the crossroads of sub-Saharan Africa and the Middle East, as well as from fertile lands, abundant livestock, and a manufacturing base. However, and since independence, the country has been beset by several long-standing conflicts, some of which are still ongoing. These have greatly undermined and countered overall national development.

53. The early 2000s saw a sudden shift from a rather restrained national economy into an 'oil-boom' type economy and to an increased consumption of imports. The increased oil revenues were able to finance visible investments in physical infrastructure, although unfortunately little was done in support of other important sectors of the economy namely, environment, health, water and sanitation, agriculture, industry, education, trade and productive capacity building. In addition, many resources were allocated to strengthen the security sector in order to attend to various

⁹ Source: *Sudan Overview*, World Bank, October 2014 (<http://www.worldbank.org/en/country/sudan/overview>)

conflicts across the country. This lack of investment, coupled with the impacts of conflicts, low development and climate change led to the failure of many livelihoods and exacerbated poverty. Further, the limited ground and surface water resources have not been effectively used in the development of rural economies. This was exacerbated by the lack of resources and technical knowhow to put in place appropriate infrastructures and failure to adopt the right resource management systems. Finally, the secession of the Republic of South Sudan (in 2011) further complicated a difficult economic situation, with oil revenues dropping off steeply and inflation reaching over 46%.

54. The World Bank notes the following socio-economic issues and challenges through the Project implementation period:

- The near absence of inclusive institutions to mediate demand for power and wealth sharing, notably between the centre and the periphery;
- The unequal allocation of public resources and access to natural resources;
- a neglect of agriculture and livestock, despite the important roles they play in the economy, exports and employment;
- high levels of indebtedness;
- wide and deep swaths of poverty and stark inequality between regions; and,
- low Human development indicators (Sudan ranked at 166 out of 187 countries in the 2014 UNDP Human Development Index) and limited progress towards the MDGs.

2.1.2 The environmental context

55. In 2005 UNEP undertook a comprehensive post conflict environmental assessment of Sudan. This established that there is a strong two-way linkage between conflict and environment. On the one hand, there is evidence that the long history of conflict has left its toll on the state of the environment; on the other hand, overexploitation and poor governance of resources and poverty have also severely degraded the natural resources, presumably feeding to conflicts. This assessment indicated serious degradation of the natural resource base, namely, severe land degradation and loss of productivity over many areas, increasing soil erosion and sand shifting, massive deforestation, heavy competition for highly limited water and grazing resources, a poor supply of biomass energy and limited food security. Many of these are known to be compounded by the impact of climate change that undermines traditional adaptive strategies in rural areas.

56. One key impact of this challenging state of the environment has been the “resource displacement” groups – many large groups that have been forced to abandon agriculture and animal husbandry and seek permanent shelter in shanty areas on the periphery of the urban centers. This leads to unemployment. Many of these groups have remained at the edge of urban areas for several years, with still a number of unmet demands.

2.1.3 The political context

57. The political context under which the Project operated is both complex and unpredictable. The on-going conflict in Darfur and the Blue Nile areas have drained much of the national wealth, funds that could otherwise be used to address the food insecurity and widespread poverty (poverty rates are at 70%). Further, the secession of South Sudan has removed a large portion of the oil revenues - which constituted a large segment of the national budget. In these circumstances, the politicians held that the first priority is to settle the conflicts, whilst social scientists focus firstly on the provision of basic services and improved livelihoods through development interventions and adaptive research. And, on the other hand, NGOs and international actors promote consensus building, empowerment and shared understanding. In fact, all these are important.

58. One result of the fragile political situation is the highly decentralized nature of decision-making in Sudan. As a result, the State level Governments play a very strong role in priority setting, policy

implementation and budget allocation. This makes State Governments the key partners in any development project.

2.1.4 The security context

59. The breakout of violence in a number of hot spots as a result of the failure to resolve outstanding issues and due to differences in interpretation and opinion, in addition to the international pressure, have curtailed the government's capacity to establish a post-conflict system of good governance system, both the structure and the practice. A Comprehensive Peace Agreement, signed in 2005, brought peace to the country, yet security skirmishes quickly re-emerged and were sustained, particularly in Darfur, South Kordofan, the Blue Nile and the North-South buffer zones. Unfortunately, such security upheavals have perpetuated tribal conflict over the already limited resources, to the detriment of sound environmental protection, rehabilitation, conservation and balanced use of available resources. This situation remained unchanged through the duration of the Project.
60. Three of the four locations for pilot activities in this Project are not directly affected by the conflict. Notwithstanding, it is a drain of resources and erodes the capacity of the government to allocate resources to poverty reduction and adaptation to climate change. At the fourth location for pilot activities, South Darfur, occasional security skirmishes impede the NAPA Project staff from having direct access to most Project sites.

2.1.5 Governance of the agriculture sector

61. The challenging political and economic contexts have had major negative impacts on governance of the agriculture sector in Sudan. At the national level, capacity to develop and implement policy is particularly weak. Nationally, the sector is plagued by inefficient regulation, inappropriate monopolies, entrenched interests, inadequate research, weak links between research and investment, and largely nonoperational extension systems. At the State level, capacity varies from State to State, and in some States the ministries and technical departments have developed more effective policy implementation capacity and extension systems.
62. In summary, all the above create a challenging context for Project implementation.

2.2 The UNDP Country Programme

63. The *UNDP Country Programme (2009 - 2012)* and the *UNDP Country Programme Document, 2013 – 2016* both present UNDP activities in Sudan as supporting the transition from post-conflict to a classic development situation. Accordingly, an increasing number of standard 'development' projects are supported, with a decreasing emphasis on humanitarian or early recovery projects. Notwithstanding, UNDP and other development partners, and some government partners, still operate to some extent in a 'humanitarian' mode – i.e. focusing more on provision of direct support to beneficiaries rather than on long-term capacity development.
64. Another aspect of the previous conflicts and humanitarian situation was the focus by UNDP on downstream and grass roots. In response, the latest Country Programmes contain an increasing emphasis on 'upstream' activities, meaning more emphasis on national institutions, capacity development and policy support. It is in this context that this NAPA Implementation Project was developed and is implemented. Managerially, in the UNDP Country Office (CO), the NAPA Implementation Project was managed by the Climate Change Unit under the Crisis Prevention and Recovery Programme during the *Country Programme 2009 – 2012*. However, an *Environment and Energy Programme* was established under the *Country Programme 2013 – 2016*, and this Programme is now responsible for climate change and for this Project. The establishment of this Programme demonstrated both UNDP's commitment to environmental issues – including climate

change, and the ‘normalization’ of the UNDP programme following many years of post-conflict interventions.

65. This Project is designed to contribute to the UNDP Country Programmes in many ways. In addition to helping adaptation to climate change, it is to alleviate poverty, support governance, develop management capacity and improve food security. Finally, the Project is one of only a very few UNDP Projects in Sudan implemented through the national implementation modality (NIM) – almost all other projects are directly executed.

2.3 Overview of the Project

66. This Project responds to the NAPA and addresses many of its highest priorities. The goal, objectives and outcomes of the Project are summarized in Box 1.

Project Intended Results
The <u>goal</u> of this project is to contribute to reduce the vulnerability and increase the adaptive capacity of Sudan’s agriculture sector to climate change impacts. The <u>objective</u> is to implement an urgent set of adaptation-focused measures that will minimize and reverse the food insecurity of small-scale farmers and pastoralists, thereby reducing vulnerability of rural communities resulting to climate change, including variability. The <u>Outcomes</u>: • Resilience of food production systems and food insecure communities in the face of climate change; • Institutional and individual capacities to implement climate risk management responses in the agriculture sector strengthened; • A better understanding of lessons learned and emerging best practices captured and up-scaled at the national level. Source: Project Document

Box 1: Summary of Project Logical Framework

67. According to the Project Document, the Project is financed by the Least Developed Countries Fund (LDCF) for adaptation to climate change (USD 3,300,000), the UNDP Sudan Country Office (USD 500,000) and the government of Sudan (USD 3,000,000, in-kind). The Project is implemented by the HCENR. In terms of project ‘supervision’, UNDP is the GEF Implementing Agency and provides strategic, technical and administrative support to the HCENR. The Project Document was signed in late 2009 and the Project Inception workshop held in March 2010. The Project was initially planned to run for 48 months until end-2013. In early 2013, subsequent to the mid-Term review, a no-cost extension until end-2014 was approved. This was finally extended, again at no-cost, to end-April 2015.
68. The Project design covered five locations representing the dominant agro-ecological zones with visible climate change impacts and the areas the most affected by recurring food insecurity. The five concerned States were Central Equatorial, Gedarif, North Kordofan, River Nile and South Darfur. The Project budget was initially allocated equally across these five States. However, following the secession of the Republic of South Sudan from Sudan¹⁰, Central Equatorial State no longer lies in Sudan (it is now within the Republic of South Sudan). Accordingly, Project activities

¹⁰ July 2011

in Central Equatorial State stopped and the funds allocated to Central Equatorial State were re-allocated across the four other States^{11, 12}.

69. In each of the five States, a number of interventions were designed to support highly vulnerable populations in need of urgent and immediate adaptation to increasing climate vulnerability and to climate change. Potentially the Project was to create other and more systemic benefits, such as: strong and viable grassroots institutions capable of running/sustaining the main project activities; income generation that would lead to increased local investment potential and encourage further engagement of the private sector; and a visible impact of adaptation to climate change and a replicable model for dissemination.

FINDINGS AND CONCLUSIONS

3. Project Formulation

70. This Chapter looks at the Project formulation phase and at the outputs of the Project formulation phase. This Chapter looks at the approach to Project design; the problem analysis; the Project strategy; the Project's logical framework; the Project's ownership, partnerships and linkages; the management arrangements (including monitoring); and the approach to sustainability and replicability. The Chapter finishes with an assessment of the Project Inception period – which is considered the final step in formulation.

3.1. Approach to the Project Design

71. The Project idea grew from the process to develop the National Adaptation Programme of Action (NAPA, 2007). The NAPA preparation was nationally driven and is considered to be a largely scientific and participatory process. It assessed the context, identified key issues, identified representative zones and outlined immediate measures to respond to climate change.
72. A GEF PPG grant was secured to support the detailed Project design following approval of the NAPA in 2008. The PPG grant funds were used to select priorities, to perform more in-depth background studies and consultations, to validate the Project approach, to develop the Project's financial package and to develop the detailed Project design. This Evaluation saw no evidence of weaknesses in the process during this phase. Final approval, including by GEF and signature of Project Document, was completed by end 2009.
73. One significant aspect is the length of this design phase. In effect, a major part of the studies and consultation were undertaken during 2005-2006, almost five full years before Project activities commenced, meaning many factors on the ground had evolved significantly. And, the Project concluded in 2015, a full ten years after the initial design activities. This goes against the spirit of LDCF funds, which are often cited as being used for *immediate* or *urgent* adaptation measures.
74. **Overall, the approach to the Project design can be considered successful, the main weakness being the time taken from conception to inception.**

3.2. The Problem Analysis

75. The design documents provide a concise overview of the political and socio-economic context, the rural development context, the changing climate and the interactions between these factors. This

¹¹ South Sudan joined the GEF in April 2013 and ratified the UNFCCC in February 2014, and was able to receive LDCF funds until that time.

¹² In line with a decision of the Project Board, in consultation with GEF, and approved by the mid-Term Review.

overview is provided at the national level and for the five Project States/sites. The design documents introduce the challenges facing farmers and pastoralists and the links to climate change and climate variability. They provide an initial discussion of the impacts of climate change on agriculture and food security. They also introduce the *root causes* of these impacts and of the *barriers* to progress. One missing element is a description of the federalized nature of governance in Sudan, and of the respective roles/responsibilities of the various levels of government.

76. Hence, almost all the required elements are present. However, these are provided in an unstructured manner: elements of the problem analysis can be found at different places in the Project documents. Further, the linkages between the problems are not clarified. No hierarchy or tree of problems is provided. Moreover, the problem analysis is very general. There is no detailed description or analysis of the situation at either village, state or national level. **The problem analysis in the project documents can be considered adequate**, but did require consolidating and deepening during the Project inception phase (see Section 3.9 below).

3.3 The Project's Strategy

77. The Project documents provide many elements of the Project strategy. Firstly, the Project aims to implement the findings of the NAPA, and the NAPA is a quasi-strategic document. Secondly, clear information is provided on how the Project is aligned to national policy and priorities, as well as to the approaches and priorities of UNDP. Thirdly, the documents clearly set out the approach to geographical targeting. This ensures that appropriate communities will benefit from the Project and regions, notably poor farmers and pastoralists in areas affected by climate change. This also ensured the *representative* nature of the project – it is to cover sites in each of the five eco-regions of Sudan, meaning lesson learning could be representative of the entire country. Further, the Project strategy to *directly target grass-roots* and vulnerable communities is clear and strong. Finally, the documents clarify how the Project will address adaptation to climate change and build resilience to climate variability at the community level, amidst the many other development challenges faced in the target areas.
78. However, many aspects of the Project strategy are not clear in the design documents. The Project document states that this Project is the “first step” towards a programme approach, but there is no elaboration of this approach and no understanding as to how this Project lies within it. Also, given the federalized nature of Sudan, more clarity should have been provided as to which levels of governance are to be targeted by the different elements of the Project. This should have included a justification for the role of HCENR as implementing agency, as HCENR is mandated as a national ‘coordinating’ body. Next, at the State level, there is no statement of what should be considered a successful intervention in one state – what was considered a desirable end-point? Likewise at the village level, there is no statement of what should be considered a successful end-point. That is, the Project documents fail, at both State and village level, to provide a logical framework or theory of change – they simply set out a list of important activities. One example is the lack of clarity as to whether it is about *implementing* climate change adaptation or *piloting/demonstrating* climate adaptation activities - these are two different and possibly exclusive strategies and would influence the choice of sites, the number of sites, the technologies to be used and the approach to monitoring¹³. Finally, the Project Document establishes insufficient linkages between the problem analysis (the root causes and barriers) and the activities: several of the barriers described are not addressed through the activities.
79. Overall, **the articulation of the Project strategy has to be considered inadequate**. This should not be considered a major weakness as it could have been addressed during the Project inception.

¹³ The title includes the word ‘implementing’. The Narrative on the cover page refers to ‘pilot demonstration activities’.

3.4 The Project's Logical Framework

80. Table 1 provides a summary analysis of the main elements of the Project's Logical Framework.

Table 1: Review of the Project Goal, Objective and Outcomes

Result	Summary Analysis
Project Goal: to contribute to reduce the vulnerability and increase the adaptive capacity of Sudan's agriculture sector to climate change impacts.	The Goal is very relevant, as it covers both ecological and socio-economic issues. It is in line with the government and LDCF objectives. The Goal is sufficiently clear. However, as stated, the goal is very general and arguably can be achieved very easily. Consequently, it would have been essential to develop indicators for this goal.
Project Objective: to implement an urgent set of adaptation-focused measures that will minimize and reverse the food insecurity of small-scale farmers and pastoralists, thereby reducing vulnerability of rural communities resulting to climate change, including variability.	The Objective is very relevant. It covers both ecological and socio-economic issues. It is in line with the government and LDCF objectives. The targeting is also clear. However, as formulated, this is neither quantifiable nor precisely defined. No information is provided on what is meant by 'set of' or by 'minimize' or 'reducing'. Consequently, it would be essential to develop indicators and targets for this objective. Finally, the concept of <i>sustainability</i> is missing from this objective.
Outcome 1: Resilience of food production systems and food insecure communities in the face of climate change.	This is the central pillar of the Project and is very relevant. As formulated, Outcome 1 is neither quantifiable nor well-defined. No information is provided on how many communities are to be supported, the baseline situation in the communities, and what level of resilience will be achieved. Consequently, it would be essential to develop indicators and targets for this objective.
Outcome 2: Institutional and individual capacities to implement climate risk management responses in the agriculture sector strengthened.	This Outcome is relevant. However the Outcome is not well defined. Given the broad range of capacity deficits in Sudan, there is a need for more description of <u>which</u> capacity is to be targeted. Improved indicators would also be needed. The description of the Outputs under this Outcome suggests some confusion or overlap with Outcome 1.
Outcome 3: A better understanding of lessons learned and emerging best practices captured and up-scaled at the national level.	As formulated, this Outcome is relevant. Adaptation is a relatively new sector, and it is essential to learn lessons and capture best practices, both for national and international dissemination. However, it is noted that this Outcome also contains 'national upscaling'. This is different to lesson learning. Further, the outputs and activities do not provide a clear approach for national upscaling.

81. From Table 1, it is noted that, as formulated, Outcome 1 would be sufficient to achieve the Objective and (in turn) the Goal. Hence, in the logical framework, the roles of Outcomes 2 and 3 are not clear or appear somewhat peripheral.

82. **To summarize, the logical framework has many strong points and the Results are relevant. However, formulation is often too vague, with inadequate indicators and targets. Further, the Project starting and end points are not sufficiently clear, and it is not clear how the Outputs collectively lead to the Outcomes, or how the Outcomes collectively lead to the Objective. Finally, the logical framework does not align to the problem analysis.**

83. Some stakeholders and some references in the Project document provide for an alternative interpretation of the Project's logical framework. For some, the aim of this Project was to develop and pilot *models* of adaptation to climate change/increased resilience to climate variability. If this interpretation is accepted, it can be understood that: Outcome 1 is the piloting/demonstration; Outcome 2 aims to ensure sustainability of models; and Outcome 3 aims to ensure dissemination/replication of models. Yet, the Project document does not provide a clear description of this nor a discussion/definition of what is meant by 'model'. The Project document does touch upon many aspects of this approach, but many others are missing, as are methods to monitor the model and capture results.

3.5 The Project's Ownership, Partnerships and Linkages

84. As described above, the Project design emerged from the nationally driven and participatory NAPA process, thereby ensuring good ownership. This driveness/ownership applies both technically (i.e. the Project is aligned to national and local priorities) and procedurally (i.e. all the concerned national and local decision-makers were involved). **This ownership and driveness is clear and strong in the Project design.** The design creates a role for most concerned State level agencies as well as key national bodies. The Project is also designed to involve beneficiaries – farmers and pastoralists – in an appropriate manner. The sites had been identified and representatives of the farmers and pastoralists had been consulted through the NAPA and the PPG.
85. Notwithstanding, the depth of the analysis of the potential partnerships or linkages with some stakeholder groups in the Project document was limited. More consideration of linkages could have been provided for the following: related international projects including those supported by other UN agencies; national government agencies, notably the Federal ministries responsible for agriculture, livestock and water management; international and national NGOs such as Oxfam or the Sudanese Environment Conservation Society; and, the Locality Governments.

3.6 The Project's Management Arrangements (including Monitoring)

86. **The Project document clearly sets out the management arrangements.** It sets out roles/responsibilities for government agencies, notably the national Ministry of International Cooperation¹⁴ (MIC) and HCENR, but also the five concerned State governments. It sets out the roles/responsibilities for UNDP, the Project Manager, the five State or regional Coordinators, and the five State Technical Committees. The decision-making and financial management is clear. The document also states that UNDP's national implementation procedures are to be followed, and these were well understood by all concerned. The document sets a clear foundation for results-based and adaptive management.
87. **The Project document also clearly and thoroughly describes the approach to monitoring.** The key monitoring events and activities are elaborated: for example the inception workshop, the quarterly and annual reporting and planning, the tri-partite process, learning and knowledge management etc. It allocates adequate funds to this.
88. The absence of suitable indicators is a major weakness in the Project monitoring framework. Section III of the Project document provides indicators, baseline values and target values for the Project Objective and the Outcomes. However, almost all of these indicators seem poorly selected¹⁵. Further, several of the indicators bear little relation to the result they are supposed to indicate. Moreover, there is confusion across the indicators, baseline values and targets in many

¹⁴ MIC's roles and responsibilities have since been taken on by the Department for International Cooperation, inside the Ministry of Finance and National Economy.

¹⁵ Some additional discussion of these indicators, and examples, is provided under the relevant Sections in Chapter 5.

cases. These indicators cannot be used to assess progress, nor as an input to project management and decision-making.

3.7 The Approach to Sustainability and Replicability

89. LDCF projects have a mandate to implement NAPAs and to address *urgent and immediate adaptation needs*. It may not therefore be necessary to ensure replicability if the targeted communities are assisted to adapt. Further, it may be acceptable to limit sustainability to the community level, that is to ensuring that the communities can continue after the project with a development that is adapted to climate change, and are not subject to political changes nor over-dependent on support at higher levels.

90. However, many LDCF projects do address sustainability and replicability. To do so would also be in line with UNDP Sudan's strategy of moving upstream and addressing governance at various levels¹⁶. In addition to sustainability at the village level, this would mean, at a minimum, that the Project's interventions at State level leave local governments able and willing to continue essential support to villages and to undertake some replication. The Project document does not discuss this. Outcomes 2 and 3 seem to be concerned with sustainability and replicability, but the details of this are not articulated. There is no clear budget allocation to sustainability or replicability. The Project document has short sections on sustainability and replicability, however these provide general statements and few specifics.

3.8 Other Issues of the Project Design

3.8.1 The Number and Diversity of Participating States, Sites and Systems

91. An important issue during Project design was to determine the *number* of sites and States to be involved in the Project. UNDP and some stakeholders felt that the Project should focus on one State, arguing that otherwise the limited resources would be spread too thinly and make it too difficult to have a meaningful and sustained impact. This noted that Sudan is a large country, with poor transport infrastructure and that the target communities are mostly remote. On the other hand, the Government and other stakeholders felt that the Project should cover *all* of the five States that were identified as top priorities in the NAPA, as they all require urgent support for adaptation. Ultimately it was decided to work in five states, and in several sites in each State¹⁷. **Based on the evidence presented, this Evaluation finds that it was too ambitious to work in five States, in many sites and on several technical issues** (see Box 2).

Key implementation question: Was it correct to cover four states – or was this too ambitious?

Evidence was collected related to this question. Most stakeholders were consulted and overall the responses were mixed. An analysis of the approach and its implications was undertaken, and the counter-factual case was considered.

- On the one hand, in order acquire knowledge and experience, there is a need to work in different states, on different farming systems, in different socio-ecolo-economic contexts, and thereby gain diverse experience on adapting to climate change;
- On the other hand, the country is vast and diverse, and working on different farming systems in different states is costly. This notably is highly demanding on the project management and leads to a large demand for technical advice and services;
- Hence, and in consideration of budget, there is a need to balance: (i) covering enough diverse sites and issues and (ii) having enough resources to make a significant intervention at each site.

¹⁶ See the Country Programme (2009-2012) and the draft Country Programme (2013-2016).

¹⁷ It is noted that activities in Central Equatorial State did not proceed due to the secession of South Sudan soon after project start up.

- A related question is whether the Project was about *piloting* or *implementing*. If *piloting*, it is important to work in several locations, to ensure representative coverage, and so develop models for replication or upscaling that can be applied broadly. This includes a thorough lesson learning – a task that requires significant resources to monitor at several sites. If *implementing*, the aim, purely, is to reach and sustainably impact as many people as possible. There is nothing to be gained by covering different sites within a single project structure. It makes sense to focus into one geographical area and reduce logistical and management and other costs;
- The evidence suggests that the Project was over-stretched. The evidence is presented in appropriate sections of this report and includes: the Project was not able to provide sufficient technical and managerial support to all states and sites; the Project was not able to systematically monitor the Project, or collect and capture lessons in a systematic manner; and little was gained by having actions in four different States.

Box 2: Evaluation Implementation Question - How Many States to Cover

3.8.2 Gender

92. The gender dimensions of climate change, adaptation to climate change and increasing resilience are well known. Further, Sudan has many gender challenges, including a large number of women headed households. Hence, attention to the gender dimension is essential for climate change adaptation in Sudan. The Project document response is to describe how, at the site level, women are to make up a large number of the beneficiaries. However, the Project document does not provide an analysis of the gender situation, it does not provide details of an approach to gender, and it does not describe how the Project will enhance the role of women as decision-makers.

3.8.3 Alignment to LDCF

93. The Project document gives a clear justification as to how this Project is aligned to LDCF and contributing to overall LDCF objectives. Notably, it explains how the key LDCF criteria are met.

3.9 The Project Inception Phase

94. According to Project documentation¹⁸, after Project start up there was to be a nine month inception phase. This included the following steps: the inception workshop; identifying changes to the Adaptation Plan; pre-implementation consultations; launching of the implementation phase; identification of key limitations and potential risks; comprehensive field visits; and reaching agreement on main recommendations.

95. A three day Inception Workshop was held in March 2010 and was attended by over 50 key participants from the state governments concerned, the respective National Government entities and UNDP/GEF. The Workshop covered the following issues: the essence of NAPA; review of the main design elements of the NAPA document in order to tally the strategic key objectives with the implementation strategy and to streamline the main activities, outputs and outcomes within the context of NAPA; developing simple, adequate, measurable and quantifiable programme performance indicators; consolidating the five pilot programmes; reviewing the Project logical framework; synthesizing the NAPA implementation strategy; introducing the art of best practices; and preparing an annual workplan.

96. The inception Phase did, in part, address some of the design weaknesses identified in sections 3.1 – 3.8 above. In particular the following improvements can be noted:

- An attempt was made to improve the strategy behind the Project, notably to understand an overall approach to activities in each of the five States, and then to understand how the five state components should combine into an overall strategic approach. This does contribute to clarifying the strategy, but does not remove the weaknesses discussed in previous sections;

¹⁸ Project Inception Report, October 2010

- The indicators were completely revised. An improved set of success indicators was developed in line with *thematic areas*¹⁹ - these were to be usable and used by each of the five State Coordinators, thereby creating a set of nested indicators that would facilitate combination of the reporting of results. It is understood that it was decided that these indicators, and only these indicators, were to be used henceforth for Project reporting. In addition, two templates for recording progress at State level and reporting were prepared.
97. **This evaluation finds that the Inception phase included a valiant attempt to address some of the weaknesses in the Project design.** This also confirms that the Project management during inception was indeed aware of these weaknesses. However, the efforts were insufficient to significantly overcome the weaknesses.

3.10 Conclusion

98. Overall the Project design phase was relatively good. Moreover, the Project design documents have many strong points, and cover all essential issues and are adequate for implementing this Project. Although the above sections highlight many gaps and weaknesses, it is recognized that a project development process, particular in the GEF context, is complicated, and project documents are never ideal. Ideally, some issues would have been addressed more thoroughly during the design phase. Perhaps the most important ‘weaknesses’ in the Project design were its lengthy duration and as the ambitious number of States chosen.
99. **This Evaluation concludes that the Project design activities and the Project design documents provide a good basis for implementing the Project. However, some important weaknesses should have been addressed during inception and were not.**

4. Project Implementation

100. Chapter 3 assessed the Project design phase and the Project design. Chapter 4 discusses the approach to Project implementation and how this may have affected Project success. Note, given that one State, Central Equatorial State, did not participate in the Project, *from this point onward this Evaluation refers to only the four remaining States.*

4.1 Overall Approach to Implementation

101. The implementation approach entrusted a great deal of the Project decision-making and Project momentum to the State level. In each State, a full time, government-nominated State Coordinator (SC) was recruited. The SC was assisted by office staff. Multi-sectoral Technical Committees (TC), consisting principally of State government departments and experts, were established and supported in each State. The role of the TC was to comprehensively support and advise the project activities.
102. Based on the assessments previously undertaken in the NAPA, in each State the TC’s first identified the villages or communities to participate in the Project. The TC’s then consulted with the communities in these villages, and, based on the NAPA assessments, proposed a series of modified technologies and/or practices to the concerned communities. In this framework, consultations between the community, the TC and the SC led to the preparation of annual and quarterly workplans for each State. The SC submitted these workplans to the national Project Coordination Unit (PCU). Subsequently, and in consultation with HCENR and UNDP, the four individual State workplans were finalized. Then, the required funds were advanced to the States.

¹⁹ These were defined as: Water Resource Development and Management; Food Security, Poverty Alleviation and Income Generation; Awareness Raising and Capacity Building; Natural Resource Management and Development; Energy and Environment; and Institutional Building and capacity Support.

Then, the State Coordinator managed the funds in order to mobilize the necessary human resources, materials and equipment required by the communities. Ongoing technical support was provided to the communities, mostly by State level extension services, but with some support from national sectoral experts.

103. This approach efficiently prepared workplans that responded to the needs of villagers. This is a considerable achievement given the number of layers and stakeholders involved.
104. The workplans consisted of a set of good support and activities to the communities. However, it is not clear how the different support mechanisms and activities link together in a given community, and it is not clear how work in different communities was linked. Further, at community level, and there is no clear end-point nor long term objective²⁰. Hence, the approach seems to have been less effective at ensuring that the workplans had a *strategic* nature. In addition to the inputs of the SC and TC, developing this strategic nature, whilst maintaining the participatory nature and community drivenness, would have required additional resources, possibly with more inputs from a range of national level experts and the PCU, and could have benefitted more clearly from international and national best practices. The limited staff in the national PCU meant they could only play a minor technical role in the development of workplans and in bringing international and national best practices to the Project sites.
105. Two further observations on the overall approach are pertinent. First, some stakeholders stated that the approach was not sufficiently science-based in the first three years, and did not draw on the best scientific knowledge. This could be because the Agricultural Research Corporation (ARC) was not sufficiently involved in an institutional way, although individual ARC experts were present on most TCs. Second, it is noted that the approach is ‘top down’ to some extent, from State to village. State level experts made technologies and practices available to the communities. There was no full rural assessment of the situation in the communities and no full rural planning exercise.
106. **Overall this implementation approach has to be considered highly successful in the way it successfully reached a large number of beneficiaries in poor and vulnerable communities and generated a high level of engagement and interest amongst the community members and a high level of support from the State TC members. However, weaknesses in the strategic and participatory nature are noted, and it could have been expected that these would have been addressed in the Project’s final years.**

4.1.1 Implementation Approach to Gender

107. Women are key Project stakeholders – potentially as both beneficiaries and decision-makers, and at all levels: village, State and national. The Mid Term Review (MTR) found strong evidence that women had been involved as beneficiaries at the village level in all states. Further, it found good evidence that women had been involved as village level decision-makers in two states (i.e. South Darfur and North Kordofan). It found much less evidence that women had been involved as decision-makers at State level – the vast majority of the TC members were men and there was little evidence of gender awareness or gender assessments at the State level.
108. Subsequent to the MTR, the Project hired a gender expert with the aims of: assessing the gender dimension of climate change impacts; identifying the impacts of the project activities on gender; and proposing activities to improve the gender aspects. Unfortunately this assignment came rather late in the Project and with too few resources²¹. It was not able to fully deliver on

²⁰ The long term or strategic aspect should notably be in the annual workplans, less so the quarterly workplans.

²¹ A total input of approximately 3 weeks, with time spent actually at the state level less than 2 days per state.

these objectives. This Evaluation findings are that: the Project has impressively reached a large number of women beneficiaries, in all States, including in areas and States where this is known to be very challenging; the Project decision-makers are almost entirely men; the Project is not based on a proper gender assessment nor gender-based analysis, and there is no overall strategy for addressing gender concerns or mainstreaming gender.

4.2 Logframe Used During Implementation – for Management and for M&E

109. As described above, most planning for the Project took place at the State level in consultation with the villages. This planning was *activity focused* – to determine and design activities that would lead to improved rural livelihoods in the face of climate challenges, and therefore increase resilience to climate change. This planning approach ensured that each activity fell clearly under Outcome 1 of the Project, even if the planners did not explicitly refer to, or were of, the Project logframe. Indeed, there is little evidence that State or site planners referred to the overall logframe during management, although this may not have been greatly necessary. Likewise most monitoring was activity based.

110. A small number of activities and inputs were planned at the national level, and these, particularly after the MTR, were more clearly referenced to the Project logframe, and they attempted to ensure a contribution to Outcomes 2 and 3. However, as described in Chapter 3, there were important weaknesses with the Project logframe. Beyond this, most Project reports prepared by the PCU and UNDP were structured around the log-frame. **Accordingly, the evidence suggests the Logframe, to the extent it was used, was used mostly as a reporting tool - to prepare overall reports on Project progress to UNDP and to GEF.**

4.3 Effective Partnership Arrangements Established for Implementation

4.3.1 Partnership with Communities

111. **The community members have greatly participated in the Project as beneficiaries and as partners.** Mostly, this participation was through the village development committees (VDC) and the community/farmer leaders. Farmers, in particular VDC members and community representatives, have been involved in Project planning and decision-making. This Evaluation met with many community members who impressively had a clear understanding of the Project and its objectives.

4.3.2 Partnership with State Governments

112. State Governments play a key role in developing policy and implementing policies, plans and projects. Hence, they are a critical partner for projects of this nature. The four concerned **State Governments and their technical departments** (in particular those responsible for agriculture and livestock) **have been involved as technical partners** – involved in technical decision-making and also benefitting from some capacity building. Much of this was through their involvement in the TC. Also, many government technical departments have been involved as sub-contractors, thereby developing their capacity by on-the-job learning. **However, high levels of State Government** (i.e. the state level financial decision-makers and Ministers) **have been much less involved.** The main exceptions were in South Darfur where the incumbent Minister of Agriculture was closely involved for over one year.

4.3.3 Partnership with Technical Specialist Organizations

113. **The majority of technical expertise in the Project was mobilized at the State level.** A number of technical specialists from stations under the ARC and from Government technical departments were involved in each State, mostly through the TC. Experts from some State level universities (North Kordofan and Gedaref) were also involved). **These experts regularly brought technical**

expertise on water management, agricultural crops, cultural practices, livestock practices, rangeland management and other issues to the Project activities in their State. The Project provided less expertise on the social, economic and business aspects of agricultural production/water management/climate change. Also, it has brought less expertise on knowledge management, lesson learning, and participatory planning to the States and the sites. It is therefore noted that knowledge transfer supported by the Project has been mostly *from State to site*.

114. Some national level technical specialists were involved, although the level of involvement was low. Over the lifetime of the Project, approximately 6-8 national experts spent 2-3 days in each State, in order to review progress and provide technical advice. This expertise notably covered issues such as water harvesting, livestock management, dryland agriculture and horticulture. Late in the Project, some expertise focused on gender, communications, monitoring and renewable energies. No international expertise was involved. **Overall, there were gaps and inadequacies in the transfer of knowledge from national (and international) to State, or from national (or international) to site level. This is probably a shortcoming.**

4.3.4 Partnership with Federal Government Agencies

115. Despite the federalized nature of Sudan, the national governments have a key role to play, on issues such as: national policy development, research, inter-state activities and programmes, resource mobilization, and budget allocation. However, it is generally acknowledged that inter-agency collaboration amongst national agencies is challenging, and also that national to state coordination can be challenging. The only national government agencies involved in this Project were: the HCENR, the Ministry of Environment, Forestry and Physical Development (MEFPD) and the Ministry of Finance and National Economy (MFNE). HCENR has been heavily involved as lead national implementing agency. The MEFPD and MFNE have been involved less by attending some of the Project Board Meetings. It is noted that national level Ministries responsible for agriculture, livestock and water resources were *not* involved in the Project. **This absence of the main Federal agency for implementing rural development is probably a shortcoming.**

4.3.5 Partnership with Development Partners

116. This includes national and international NGOs, UN agencies, and other donors, who could be involved at either site, State or national level. At the State and site level, there have been many linkages and even joint activities, for example with IFAD and WFP in North Kordofan. Also, UNEP was supporting the development of the National Adaptation Programme (NAP) during 2013-2014 through a State-driven process. There is evidence of interaction with the UNEP supported NAP process in the four States – participation in workshops, overlapping Technical Committees, etc. However, at the national level, UNEP stakeholders felt they were ill-informed about the Project, whereas UNDP provided several examples as to how UNEP had been informed and involved. Finally, there was no evidence of partnerships or exchanges with other development partners working on climate change – e.g. the African Development Bank, the Norwegian Government, Oxfam or FAO – although the extent to which this could have been beneficial is unclear.²²

4.4 M&E and Adaptive Management

117. **The M&E system in the Project design suffered weaknesses.** First, as mentioned, the indicators were poor. Linked to this there was no description of the baseline, no clear benchmarks nor targets. Further, there were no dedicated M&E staff in the Project officers, neither at national nor State level. Also, although new indicators were adopted during the inception phase, there is no evidence of these new indicators being used. Finally, the weaknesses in the strategic approach

²² UNDP CO reported that IFAD, AfDB and FAO team visited UNDP offices to share experiences and learn lessons before developing their projects, although this was not independently verified by the Evaluation Team.

(referred to above) make monitoring overall progress a challenge. As a result, overall Project monitoring of overall Project progress, even at State level, was weak.

118. During implementation, the national and State level staff (mostly the PCU and TC, but also UNDP, the Project Board members and the HCENR) undertook a great deal of technical activity monitoring in a systematic manner. **As a result the PCU, TC and SC had a very good knowledge of the individual activities on the ground and the beneficiaries.** As a result, for example, numbers are available for the beneficiaries supported by each individual technology or practice.
119. **There is lots of data related to the many Project achievements, but little information that could be of used for overall Project monitoring.** Further, on the whole, the data available is mostly collected anecdotally by the State Coordinators and has not been subject to independent verification.
120. Further to a recommendation from the MTR, in late 2013 a consultant was hired whose tasks included: review and assess existing baseline data and suggest improvements and collection of additional data; suggest what need to be collected (in terms of data) and suggest who is to collect data and information; and suggest needed capacity building at all levels to follow up on documentation and monitoring. The resources allocated to this assignment were limited, and given that it took place late during Project implementation, it was not able to strengthen the Project M&E framework.
121. The Project participants prepared many informative reports, although not always systematically. Reports from villages to the TCs/SCs vary greatly from village to village, and in many cases some written reporting was complemented with oral reports. At the next level, reports from the States (TC/SC) to the PCU are frequent and informative, but not comprehensive, and with many cases of reports being submitted late or orally, or both. The templates prepared during the Inception Phase were rarely used.
122. Reporting at the national level by the PCU consists of: (i) quarterly progress reports to UNDP; (ii) annual progress reports to UNDP; and, (iii) annual Project Implementation Reviews (PIR) to UNDP and GEF. This constitutes a large number of reports, some with complex formats, and overall this is considered a burden, especially as questions remain about the usefulness of these reports. The PIR does provide a mechanism for some interaction between UNDP Regional Office and the Project, but this could be achieved more easily through alternative channels. Critically, there seem to be few links between these reports and Project decision-making. Reports contain lots of description but little analysis. The reports seem to be prepared as a requirement, rather than as a useful management mechanism.
123. **There were many appropriate examples of adapting in the Project.** The decentralized nature meant that the TCs had the flexibility to modify activities in line with opportunities or the needs and requests of the village. Examples of this are: (i) changing the sites in Darfur in response to the security situation; (ii) changing the inputs to some villages in response to the requests from the villages; (iii) changing the Project design in River Nile State (in response to economic and ecological considerations) and in Gedarif State (in response to budget availability). However, true adaptive management means following indicators and using monitoring results to reflect upon Project progress at multiple levels, and then to identify shortcomings, challenges and opportunities, and then propose revised strategies and activities to decision-makers, and then to communicate all agreed revisions to appropriate project stakeholders. This **more formal approach to adaptive management, involving indicators, reports, the PCU and the PB, was not always evident.**

4.5 Financial Planning

124. The Project is nationally implemented following UNDP's quarterly advance procedures. At the end of each quarter, the PCU submits through the HCENR to UNDP a progress report for the previous quarter with financial figures, together with a proposed workplan for the coming quarter and a request for finances to cover the proposed activities²³. This request can only be processed by UNDP if at least 80% of the funds allocated to the previous quarter have been expended. After approval of the request, UNDP transfers the funds to a special Project bank account held by PCU/HCENR. Subsequently, national procedures are used to procure inputs with these funds. As most inputs are procured at the State levels, the funds are first transferred to the States, and the State procedures are used to procure inputs and services.

125. In addition, at the end of each year, the PCU submits through the HCENR to UNDP a progress report for the previous year, along with an Annual Work Plan (AWP) for the coming year. This AWP has to be approved for the year before the quarterly workplans of that year can be approved. The AWP is based on the Project Document. Hence, in the first quarter, both the AWP and Quarterly workplan (and associated progress reports) have to be approved. This led to important delays in advancing funds in each first quarter.

126. The MTR observed that great delays had been experienced in the transfer of funds from UNDP to PCU leading to major delays. This issue was not reported to the TE, and so must have been resolved. At the time of the TE, **the financial planning and processing was considered to be overall very smooth, the only issue was the delay in advance payment in the first quarter of each year.**

4.5.1 Financial Status, Delivery and Co-Financing

127. The original budget for LDCF/GEF and UNDP funds is summarized in Table 2. Expenditures (overall amounts and percentages of total expenditures) until 1 March 2015, by Outcome, are summarized in the third and fourth columns of Table 2.

Table 2: Original Budget Allocation across Project Outcomes (UNDP and LDCF funds only)

Outcome	Allocated in Project Document	Delivered (as of 1 March 2015)	%ge delivered
1. Innovative coping mechanisms..	US\$ 2,300,000	US\$ 2,269,900	99%
2. Institutional and individual capacities	US\$ 600,000	US\$ 463,042	77%
...			
3. Food security policies and programmes modified to scale-up ...	US\$ 400,000	US\$ 261,932	65%
4 Project management	US\$ 500,000	US\$ 481,442	96%
5. Support to National Implementation	0	US\$ 21,028	
Total	US\$ 3,800,000	US\$ 3,497,346	92%

128. As can be seen from Table 2, as of 1 March 2015:

- Almost US\$ 2.3 million, or 66% of the funds expended, were utilized for Outcome 1, the grassroots practices and technologies;
- Outcomes 1 and 2 account for over US\$2.7 million or almost 80% of expenditures, reflecting the fact that the vast majority of funds have been directed to the grassroots and vulnerable communities.

²³ Note, these documents are based on the planning and reporting documents prepared at the State level and submitted to the PCU.

129. Updated financial data issued on 29 March 2015 showed that: (i) of the LDCF US\$ 3.3 million, total expenditure is USD 3,273,618.03 or over 99%; (ii) of the UNDP (TRAC) resources, total expenditure is US\$515,200 of US\$500,000. i.e. there is a small over-expenditure).

130. Originally **the Project** was to be completed by end-2013, and hence it **has run almost 18 months over schedule at no extra cost**. There are several reasons for this over-run, both internal to the Project and external. External reasons include the instability in the country and the need to re-adjust the Project after the secession of South Sudan. Internal reasons include delays in the early years in advancing funds and making payments. **This over-run is considered large and all parties must make an effort to avoid this in future projects.**

131. Annex 3 provides information on co-financing. A total of **US\$1,527,313 was raised in co-financing**. Table 3 compares actual co-financing raised by the Project with the commitments made in the Project Document. As can be seen, UNDP raised slightly more than committed, whereas the national government raised a mere 3.4% of its commitment. This shortfall was somewhat offset by the impressive mobilization from local level governments. **Overall, only 44% of the committed amount was mobilised.**

Table 3: Co-financing Figures

Contributor/Contribution	Commitment in Project Document (US\$)	Actual Co-finance mobilized (US\$)	Percentage of commitment mobilized
National Government	3,000,000	101,370	3.4%
Local Governments	0	910,743	n/a
International Partners (UNDP)	500,000	515,200	103
Totals	3,500,000	1,527,313	44%

4.5.2 Efficiency

132. Annex 8 (Table 8d) provides information on the number and types of beneficiary. By the end of the Project, in total, an estimated 17,819 persons benefitted from the Project, for a total expenditure of US\$3.5 million. This means that, on average, the Project expenditure per beneficiary was \$213 (including both GEF/LDCF and UNDP funds, excluding other sources of finance).

4.6 Execution and Implementation Modalities

133. As mentioned previously, this Project is one of only a very few UNDP Projects in Sudan to be implemented through the national implementation modality (NIM). The organizational structure for the Project is illustrated in Figure 1 below²⁴. This section reviews the roles of the concerned entities.

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²⁴ Source: adapted from the UNDP Project Document

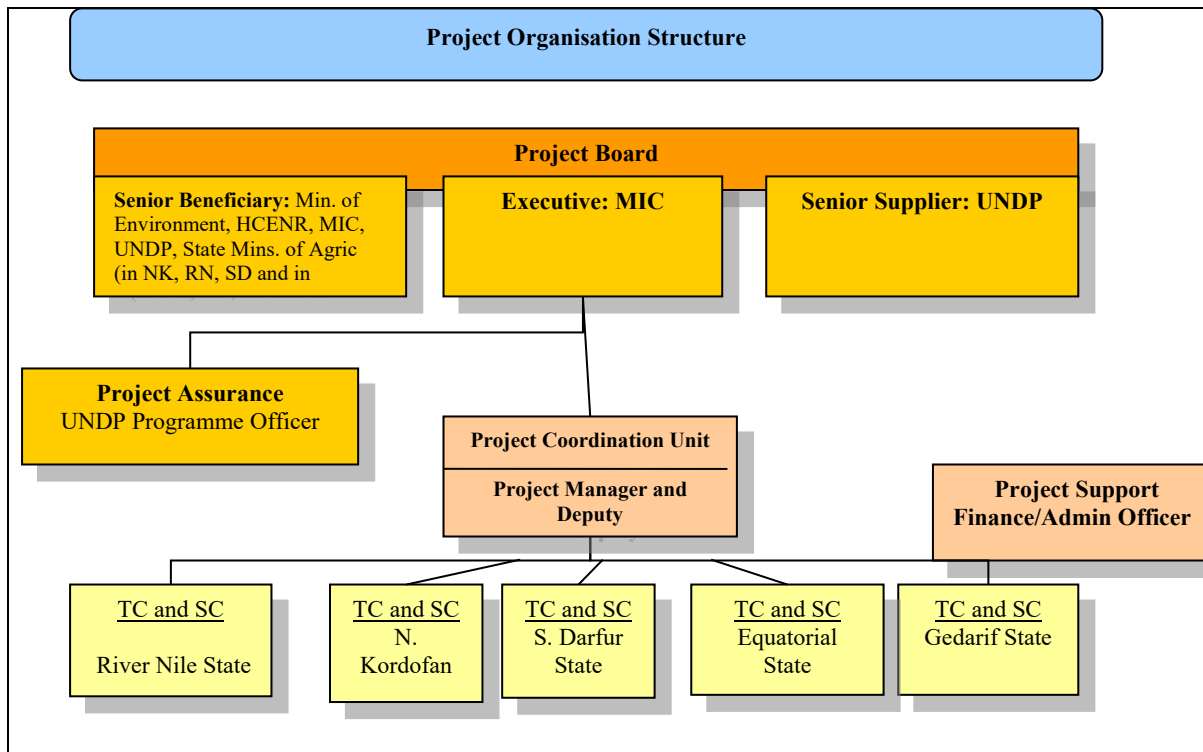


Figure 1: Project Organizational Structure

4.6.1 Project Board

134. The Project Board is the ultimate Project decision making body. It is chaired by the Ministry of Environment. Board members include UNDP, HCENR and the Ministry of Agriculture from each of the participating States. The high level and broad membership of the Board meant that (i) it could take decisions effectively and (ii) could be a vehicle for raising awareness on the Project's achievements. However, the Board's high level and broad membership also meant it was very difficult to organize meetings. Only two meetings were held after January 2013. Moreover, while the Project Board's meetings have been well organized, many stakeholders felt that the Board was not sufficiently informed about the Project's aim. Hence, there is a danger of the Board putting political factors ahead of technical factors. Finally, for the two final Board meetings, there is little evidence in the minutes of *decision-making*; it appears the meetings were more for information sharing.

4.6.2 HCENR

135. Although not clearly illustrated in Figure 1, the HCENR is the national implementing agency and is the lead Sudanese agency involved in the Project. HCENR is responsible to the government for the success of the Project. HCENR provides the Project with physical facilities. It houses and oversees the PCU. A senior HCENR staff member is responsible for approving budgets, workplans and payments. HCENR, on behalf of government, is also responsible for facilitating the Project's activities in the four states, ensuring good linkages with the State level HCENRs and with concerned State ministries. In the latter stages HCENR allocated a focal point to the Project.

136. At the national level, HCENR faced challenges mainstreaming the Project. First, it is not fully clear how this Project is anchored into the HCENR workprogramme – this may be a result of the fact that most HCENR funding is project-based, and so partly donor driven and unpredictable. For example, HCENR is currently preparing a medium-long term National Adaptation Plan with support from UNEP, and the technical links between that and this Project do not appear strong. Second, collaboration across Federal agencies in Sudan is very challenging, and as a result, the HCENR does not seem to have effectively linked this Project with the initiatives of other national

agencies. Given the HCENR's mandate as a coordinating Council²⁵, it is not able to replicate nor sustain activities without cooperation with other federal and national agencies.

137. The HCENR leadership changed in late 2013 and hence the Government guidance to the Project changed. This reportedly led to a period of delays and uncertainty, during which it was difficult to take management decisions, mobilize inputs and implement activities. The PCU reported difficulties in organizing activities and it experienced instability for approximately six months. However, most site level activities were able to continue. Further, neither site level nor State level stakeholders referred to these delays, suggesting they were sheltered from the effects. The exact nature of this instability is unclear. The HCENR leadership reported that UNDP was too active in Project Management. UNDP reported that the HCENR leadership was not sufficiently familiar with the rules and procedures for UNDP/GEF projects.

4.6.3 Project Coordination Unit

138. The Project Coordination Unit (PCU) was housed in the HCENR and consisted of three full-time staff (a Project Manager, a Deputy Project Manager and a Finance/Administrative Assistant) and one part-time secretary for much of the Project. The PCU was responsible for day-day running of the Project. The PCU had substantive, managerial and administrative functions. In addition to organizing all activities, to processing procurements and payments, and to preparing financial reports, it took the lead in technically designing and technically overseeing many Project activities, and helping to identify/mobilize inputs, and coordinating stakeholders, and developing the networks. The PCU also participated in many activities and undertook regular visits to Project sites, holding a continuous dialogue with State stakeholders and local beneficiaries. **The PCU was greatly appreciated by all stakeholders, and considered a key factor in the Project successes.**

139. The PCU's had two full-time technical staff. The PCU's administrative tasks probably accounted for the time of more than one technical officer. Hence, the PCU probably had less than the equivalent of one technical officer to provide support to the four States and almost 20 villages. **This Evaluation finds that the PCU was greatly overstretched and understaffed. The PCU did mobilize some short term inputs, particularly during the second half of 2013, but this was not on the whole sufficient to cover for the weaknesses observed.**

4.6.4 State Technical Committees (TC)

140. Each of the four States established a Technical Committee, facilitated by the Project, consisting of representatives of the concerned technical government departments, local experts and community representatives. The TCs were responsible within the Project for discussing technical issues, setting priorities, preparing workplans, resolving conflicts, supervising activities etc. **The four TCs did an admirable job and have been a main agent in the Project's successful implementation.** Moreover, the TC members and the TCs as a group, are *beneficiaries* of the Project' capacity building. Consequently, the TC members are now all very familiar with climate change adaptation and increasing resilience to climate change, and of their roles in helping communities to adapt to climate change.

4.6.5 State Coordinators

141. The Project activities in each State were coordinated by a State Coordinator (SC), nominated by the concerned State Ministry of Agriculture, with costs covered by both the State Ministry and the Project. **The SCs have played a critical role in the Project implementation – facilitating, coordinating, advising, mobilizing, trouble shooting at the site and state level.** The role of the SC has been critical at both State level (facilitating the TCs and overseeing capacity development) and site level (continuously supporting site level activities). As the SCs were nominated by the State

²⁵ As opposed to implementation.

Ministers for Agriculture, they were well informed of State government processes and were able to mobilize State government support. However, frequently political changes lead to State level Ministers being changed, and, as a result, in some States, the SCs were frequently changed. For example there were six SCs in Gedarif State during the Project.

142. **To summarize sections 4.6.1 to 4.6.5, the Project implementation and management has been smooth overall, and this Evaluation feels the arrangements are the most appropriate possible.**

4.7 Management by UNDP

143. UNDP is ultimately responsible to GEF for the successful implementation of this Project. UNDP's involvement is through the UNDP Sudan Country Office with some support from the UNDP Regional Office in Istanbul. UNDP Istanbul's inputs are strategic. They played a critical role in getting the Project approved and started. Since start-up, UNDP Istanbul has undertaken three monitoring missions to Sudan to provide strategic guidance and support. UNDP Istanbul has also supported the successful process to mobilize follow-up funding (see later). UNDP Istanbul also oversaw preparation and finalization of the PIR – a process through which knowledge is shared. The role of UNDP Istanbul has been small but appreciated.

144. UNDP Sudan has several roles in the Project: (i) it takes the lead on Project supervision and technical back-up. This includes, for example, overseeing quarterly and annual reporting and attending annual planning/review meetings; (ii) it is a Project co-financer; (iii) it provides direct support to the Project's activities – attending workshops, mobilizing expertise, etc; (iv) it holds the project funds, releasing these on a quarterly basis to the Project in line with procedures and regulations; (v) it facilitates linkages with international development partners and other UN agency programmes.

145. Based on evidence provided by the National and Provincial Project Offices, and a review of Project reports, the involvement of the UNDP Sudan Country Office has been positive and adequate. As mentioned above, in mid-2013 the incoming HCENR leadership considered UNDP to be too active in the Project management. UNDP's response to this was that it was necessary to ensure the Project did not lose momentum. The Evaluation was unable to assess this issue in detail. Overall, this Evaluation finds that the level and intensity of UNDP involvement was appropriate.

4.8 Coordination Issues

146. **Coordination within each State at the State level has been excellent.** The TC's established by the Project have been able to build over any sectoral barriers within government departments, enhance cooperation between government technical departments and research institutes, and bring different research institutes to work together.

147. **There have also been efforts to provide coordination across the four states.** This includes several national workshops, and on two occasions stakeholders (including beneficiaries) from all four states met together at one of the Project sites. These efforts have contributed to some sense of unity across the Project sites and States. However, given the ecological and socio-economic differences, and the great geographical distances, between the four states, and given the highly decentralized nature of the Project, there is only a limited sense that this is one Project. The PCU is the main linkage point. Yet, mostly, it is four separate but linked Projects, and if one of the States was to stop activities for any reason, it would not greatly affect things in the other States.

148. **Coordination at national level is weak.** Although the HCENR has been greatly involved, there has been little involvement of other units in the Ministry of Environment, and no involvement of the Federal Ministry of Agriculture.

4.9 Identification and Management of Risks

149. UNDP introduced globally the 'Risk Log' as a tool to support Project Management shortly before this Project began. The tool is based on the risks identified in the Project Document. Annually, Project Management reports on the status of these risks. If necessary, it proposes remedial measures. Finally, new risks may be identified during Project implementation and added to the Risk Log. The Project document identified four risks. It is not clear how the selected risks were chosen, nor why other potential risks were not included.

150. UNDP and PCU reported that discussion on the Risks supported the general planning and decision-making process at the year-end, but there are no specific examples as to when this Risk analysis facilitated a decision or a management action. This seems to be undertaken as a bureaucratic exercise rather than a planning or management exercise. This is not levelled as a criticism - **the Risk Log may be superfluous to requirements given the other management tools available.**

4.10 Conclusion

151. Overall, the Project has been implemented effectively and efficiently, in accordance with the workplan and budget. Notably, implementation has been overall very strong and effective on a day-day basis, achieving impressive local results. Box 3 lists some of the keys to this success.

Factors behind the Project Success at Village and Site Level
• The initial focus was on grassroots action, rather than on planning and assessment; • There was a considerable focus on actions that have a <i>visible</i> impact for beneficiaries; • The project activities were designed to be simple and aligned to local needs and manageable; • The use of committed State coordinators, embedded in State government, to provide continuous support and to link villages to national Project management; • The use of multi-sector, State level Technical Committees to ensure good backstopping and linkages; and, • The continuous support and dialogue maintained by the PCU with all levels.

Box 3: Key Factors behind the Project Success at Village and Site Level

152. There are some minor weaknesses and these are described in the above sections. The main thrust of the Project has been outreaching to communities, consultation, and extending a maximum amount of packages of equipment, advice and materials to a maximum number of beneficiaries. The main weakness is that there is little evidence of the development of a Project strategy at either national, State or community level. There is little evidence of thinking about the starting point and end point of the Project, or of what is considered a desirable result, and of how the various interventions link together. Even if all activities were responsive and developed rapidly to address short-term needs, it is possible for the Project managers to have "hidden in their pocket" a long-term strategy that guides and gives coherence to the short-term activities. This issue was raised during the MTR, and subsequently an effort was made to undertake some strategic analysis, but the resources were limited and this came rather late.

5. Project Results

153. This Chapter reviews the Project's achievements under the 3 substantive Outcomes and against the overall Project Objective. It then reviews the prospects of sustainability and the contribution to upgrading the skills of national staff.

5.1 Attainment of Objectives

154. Annex 8 provides 3 tables summarizing the Project's progress. Annex 8a, based on all the information collected by the Evaluation Team, provides an assessment of progress against each Output, Outcome and the Objective. Likewise Annex 8b assesses progress against the indicators selected during the Project Inception period. Annex 8c provides the findings of the self-assessment undertaken by representatives of each State against a range of issues and variables.

5.1.1 Outcome 1: Resilience of food-production systems and food-insecure communities enhanced in five specific rural areas.

155. Outcome 1 is the central pillar of the Project. As stated in the Project Document, through Outcome 1, thousands of remote and marginalized people were to benefit from adaptation to climate change and increased climate resilience, notably through improved natural resource management and agricultural practices and technologies. The baseline situation, as stated in the Project Document, included declining rainfall and changing wet seasons and the subsequent direct impacts on agricultural production (including livestock) and food security, and indirect impacts on livelihoods, health, economic development and even conflict and security. The Project-driven alternative, as described in the Project Document, was sustainably increased agricultural production and improved livelihoods in the targeted communities and villages over four²⁶ different agro-ecological zones. As the detailed nature of the challenges varies from zone to zone, so the Project interventions were to vary from zone to zone.

156. Under Outcome 1, the Project provided support to 7 villages in North Kordofan State, 3 sub-villages in Gedarif, 7 villages in River Nile and members of many villages in South Darfur²⁷. In each village, based on the consultations with villages, and the support from State experts and extension workers, the villages were supported to develop new and improved natural resource management practices and technologies appropriate to the socio-ecolo-economic context.

157. **The evidence suggests that all six Outputs under Outcome 1 are considered achieved (see Annex 8a and 8c), in each of the four States. And, some additional achievements were also made in sectors not originally envisaged. New technologies, practices and approaches were introduced and generally adopted in all the Project target villages.** Table 4 provides data on the number of men and women who benefitted from the Project. **Men and women benefitted in approximately equal numbers**, and the original targets in the Project Document are met. Several thousand stakeholders are considered to have had their life improved through each of several project interventions. Yet, there is still some doubt over the extent of the benefits of the Project beneficiaries – was it life changing or marginal?

158. Table 4 also illustrates that the villages received diverse forms of support, with most villages benefitting from a package that included forestry, traditional agricultural crops, new horticultural crops, water management and harvesting, livestock management, sustainable energy and training.

²⁶ Initially five, prior to the secession of South Sudan

²⁷ The security situation in South Darfur meant that the interventions were not village based, but farmers were provided with support on plots and in demonstration areas in safe areas.

Table 4: Showing the Number of Beneficiaries by Gender and by Type of Input or Support

Type of input or support	Number of beneficiaries whose life - over the short term - <i>has been significantly improved</i> through the intervention	
	Male	Female
Forestry and tree related	n/a	n/a
Agriculture and crop related (including horticulture)	5,041	3,349
Veterinary and livestock	4,311	2,999
Energy and alternative Energy	7,244	11,574
Water and irrigation	3,528	2,736
Training	1,124	933

Source: see Annex 8c

159. Further evidence of the impact under Outcome was obtained on site visits and meetings with beneficiaries. The energy, commitment, knowledge and strength of the villagers is evidence of success under Outcome 1, including in many cases the evidence provided by women beneficiaries.

Outcome 1 (*resilience of food-production systems and food-insecure communities enhanced in five specific rural areas*) **is considered achieved.**

160. **However, it is noted that most of the evidence is based on self-reporting. There are very few independently verified figures. Further, as there was no baseline survey, it is not possible to measure or to define the actual achievements.**

161. During the visits of national technical experts to village sites²⁸, and the visit of the Evaluation Team, it was observed that the beneficiaries faced many technical challenges with some of the new practices and technologies. In some cases these challenges were observed late in the Project implementation, despite the fact that technical solutions are basic and well known. **Hence, it is concluded that, at least for some issues, at some sites, the quantity or quality of technical support provided to villagers was not sufficient to ensure the new technologies could be properly adopted** (see Box 4).

Did the communities receive enough technical advice and support during the Project?

Evidence was collected related to this question. The self-assessment workshop (Annex 8c) looked at this question. Most stakeholders were consulted. Observations at site level were made. Previous technical reports were reviewed.

In the self-assessment, the State Coordinators expressed confidence that the support provided to each village was sufficient. When asked “*how effective was the technical support to grassroots*”, the average response was 4.2 - on a scale from 1 to 5. When asked “*Did the technical support meet needs of villages*”, the response was 3.9. These are positive responses.

Other evidence suggests that the situation may not be so positive:

- The villages did receive regular visits from good State level experts – hence many technical issues were regularly addressed;
- Most villages also received occasional technical visits from ‘national’ experts, although at most 2-3 times during the project;

²⁸ See, for example, Mekki Abdellatif Omer, 2013

- These national experts identified many technical weaknesses in the practices/technology used at the village level. Examples include leaking water systems, inappropriate irrigation techniques, crop pests and diseases and low survival rates. Some of these related to quite basic issues, and some of these were still present late during Project implementation;
- The communities are poor and have low capacity. The packages provided were complex and integrated – encompassing water management, animals, crops, horticulture, bricks, fish, trees, finance, gender, organizational development. Hence a significant amount and diversity of technical support had to be provided to each village for the beneficiaries to master and fully adopt the technologies;

Conclusion: state level experts could, and probably did, provide enough guidance on issues such as livestock, agriculture crops and horticulture production. However, on other issues, such as water, gender, organizational development, the states probably did not have enough expertise and not enough advice was made available to villages. On financial issues, although there is capacity at the state level, there is no evidence that it was utilized.

Box 4: Evaluation Implementation Question – Was the Project Able to Provide Sufficient Technical Advice to Villagers

5.1.2 Outcome 2: Institutional and individual capacities to implement climate risk management responses in the agriculture sector strengthened

162. The Project Document was not fully clear on what was to be expected under this Outcome. In some parts it suggests that under this Outcome capacity will be built to help assure sustainability and replication of Outcome 1 achievements. However, a detailed look at the Outputs and activities implemented under this Outcome suggests that the scope of this Outcome is the capacity building required *at local levels* to ensure that the piloting/demonstration can take place. This Evaluation takes this latter interpretation – i.e. the aim of this Outcome is to build capacity at village and local levels of government to directly support the climate adaptation interventions in Outcome 1.

163. It is noted that in many cases providing capacity development to target beneficiaries is the same as guiding the beneficiaries to develop new natural resource management technologies and practices. This latter was covered under Outcome 1. Hence there is overlap and confusion across Outcomes 1 and 2.

164. **Under Outcome 2, the Project** supported the same villages as Outcome 1. It supported technical experts and extension services at the State level in each of the four States **to provide services related to natural resource management and organizational development to the target villages**. As can be seen, in most States, each villages benefitted from regular visits from agriculture, water, forestry and livestock experts. Fewer visits were provided by State level experts in energy and forage/rangeland improvement. There were very few visits from experts in finance or management. Annex 8c provides information on the number of visits of State level experts and extension workers to each village

165. Under Outcome 2, seven VDC were strengthened, 31 were created, and a total of 53 sub-committees²⁹ were created. The concerned Committees now provide support to a total population of 21,861 in the concerned villages. In addition, 28 revolving funds were established, which may provide a service for approximately 4,311 vulnerable people in rural areas. In River Nile, North Kordofan and Gedarif States these institutions are considered to be well established, whereas in South Darfur they were only recently established and can be considered fledgling.³⁰

²⁹ After establishing VDCs, the aim is to establish thematic sub-committees covering typically: women, pastoralist, water and agriculture.

³⁰ Source: State Coordinators (Annex 7c)

166. There is evidence that, **at the village level, there is increased capacity with regards to both natural resources management and organizational capacity**. Notably, the capacity of women in the villages has been enhanced in all four states. Finally, **there is evidence at the State level of increased capacity**: notably in the Technical Committee member and with the staff involved in Project implementation. Consequently, **under Outcome 2, all three Outputs are considered achieved**, although this is somewhat dependent on the interpretation of the Outputs and the expected level of achievement (see Annex 8a).

167. It is noted that most of the evidence is based on self-reporting and there are very few independently verified figures. Further, **as there was no baseline survey, it is impossible to measure or define the actual achievements**.

168. **Overall, Outcome 2 (institutional and individual capacities ...strengthened) is considered mostly achieved**, although this is somewhat dependent on the interpretation of the Outputs and the expected level of achievement.

5.1.3 Outcome 3: A better understanding of lessons learned and emerging best practices, captured and up-scaled at the national level

169. As described in the Project Document, *“this outcome aims to ensure that the implementation of project activities ... provides important lessons on what does and does not work in improving resilience of vulnerable communities in Sudan to increased climatic variability and climate change. The systematic compilation of these lessons will form a crucial input to informing Sudan’s plans and strategies to adapt to climate change over the coming years. The project,, will play a pivotal role in involving relevant stakeholders, enhancing local knowledge and capacities, which will in turn enable Sudan to scale up and replicate these interventions. This knowledge management component will be implemented in close synergy with the UNDP ‘Adaptation Learning Mechanism (ALM)’ initiative.”* Hence there are two aspects to this Outcome: lesson learning and upscaling.

170. Table 5 provides information on the status of the Outputs under this Outcome.

Table 5: Assessing Achievement of Outcome 3

Output/Outcome	Status
Output 3.1 National menu of best practices available widely and mainstreamed into national development planning	• The ARC, through previous research, had already identified best practices. Hence a ‘menu’ was already available. The Project helped make these practices available to some villages; • The State Ministry of Agriculture in South Darfur has mainstreamed some of the practices that were disseminated by the Project related to land/water management; • There is no evidence of mainstreaming into national development planning, although this is not a Project role; • This is partially achieved.
Output 3.2 Preparation a national food security policy in the face of climate change	• There is no evidence the Project was involved in this – directly or indirectly; • This is too ambitious for this Project, it is not clear how it could achieve this; • This is not achieved.
Output 3.3 Lessons codified and disseminated through the ALM	• There was no measurement of baseline regarding adaptation or resilience, and no system for capturing lessons for dissemination – the absence of such baseline and measurements precludes the learning of lessons;

	• The Project has prepared some <i>communications</i> materials, these raise awareness of the success of the Project. These are available through the ALM. This does not constitute a dissemination of technology or lessons; • This is not achieved.
Output 3.4 Lessons codified and disseminated through throughout Sudanese institutions	• A booklet describing existing practices was prepared and circulated. Two workshops on resilience practices were held and the proceedings disseminated (2012, and 2013); • As there was no measurement of baseline regarding adaptation or resilience, and no system for capturing lessons for dissemination, there could be no proper learning of lessons; • There is to be one more related activity in cooperation with ARC³¹; • This is partially achieved.

171. Hence two of the four Outputs are partially achieved, two are not achieved.

172. In previous years to the Project, ARC has undertaken much research and developed technologies and practices suitable for most areas and farming systems in Sudan. These were already available. Through support to extension services, the Project has introduced some of these technologies and practices (related to water harvesting, improved varieties, livestock, etc) to the target villages. However, the Project did not develop new understanding, new knowledge or new technologies. Moreover, the Project did not attempt to establish or demonstrate a 'model' of technologies or approaches that could be captured and up-scaled. The Project baseline was never described, nor was progress measured. There was no system for capturing lessons. Hence the Project made only a little contribution to 'better understanding of lessons learnt and emerging best practices'.

173. The Project has no strategy for upscaling and replication. However, the Project Staff and UNDP have successfully supported the HCENR to mobilize additional and follow-up funding to two projects that have recently started. One, financed by CIDA, has a similar approach and focusses on similar technologies and practices in similar villages. The second, supported by LDCF and UNDP, focusses on insurance, finance and early warning systems and it covers vulnerable areas in the four States³². These two projects can be considered upscaling.

174. Hence Outcome 3 (better understanding of lessons learned and emerging best practices, captured and up-scaled at the national level) is partially complete.

5.1.4 Project Development Objective

175. The Project Objective is: "to implement an urgent set of adaptation-focused measures that will minimize and reverse the food insecurity of small-scale farmers and pastoralists, thereby reducing vulnerability of rural communities from increasing climatic variability and climate change."³³

³¹ At the time of the TE mission.

³² This Project also covers an additional two States in Sudan.

³³ This is taken from the text of the Project Document. The Results Framework has a variation, as follows: "to implement an urgent set of priority adaptation measures for improving food security in the face of climate change in five vulnerable zones in Sudan are implemented covering about 1 million ha"

176. In fact, the activities under Outcome 1 fully achieved this Objective (see Table 4). However, if we consider the target of one million hectares (as stated in the Results Framework of the Project Document), there is no data as to whether this has been achieved.
177. **As it is stated in the Project Document, the Project Development Objective has been fully achieved. Most impressively, a large number of people in diverse socio-economic and ecological conditions have been helped by the Project, and are greatly engaged in the Project, and have improved lives and food security. Numerous local community organizations have been established and/or strengthened. Capacity at State level capacity has also been developed, and there is some evidence of policy change or changed practices by government agencies in two States (South Darfur and Gedaref).**
178. The overall indicator for the Project Objective is: *“Food security policy has been modified to fully integrate climate change adaptation measures (e.g. climate-resilient crop and livestock production, and climate risk-sensitive rangeland and water resource management strategies).”* This indicator is not entirely relevant or appropriate. The target contained in the indicator is not reached.
179. **However, and as discussed in Chapter 3, the statement of the Project Development Objective does not fully capture the Objective of this Project.** In addition to implement measures with small-scale farmers and pastoralists, the Project was expected by most stakeholders to build capacity, or to pilot or demonstrate a comprehensive village-level model or approach to adaptation, or to influence plans and policy. **It is less clear that these aspects of the Project have been achieved.**
180. For many stakeholders, the key element is the role the Project had to play in piloting or demonstrating a comprehensive village-level model. If this was part of the Project’s aim, then more needs to be done. The village-level ‘model’ that was to be piloted has not been sufficiently elaborated. A model should be clearly defined, tested, measured and then readied for dissemination to other states. This has not happened, the achievements so far can be considered a first phase – the introduction of natural resource management measures and practices. A second phase would focus on organizational, economic and financial practices of the communities in the face of climate change, and may address issues such as credit, market access and insurance. All the interventions and practices and changes should be measured and recorded. A final phase would be the rolling out of this model across affected States in Sudan, for example as a main element in a ‘national adaptation programme’. This may be accompanied by capacity development and addressing weakness in the enabling environment, notably at the national level.

5.1.5 Inception Report Indicators

181. As mentioned previously in this report, during the Project inception period a revised set of indicators with targets was selected, based along the themes: Water Resource Development and Management; Food Security, Poverty Alleviation and Income Generation; Awareness Raising and Capacity Building; Natural Resource Management and Development; Energy and Environment; and Institutional Building and capacity Support. Progress against these is discussed in Annex 8b. It is not clear to what extent these indicators were reported on during implementation. Of the 17 indicators, 12 are rated ‘achieved’ or with ‘good progress’, two are rated ‘some progress’ and three are ‘not achieved’. Again, there is no baseline for most of these indicators, and insufficient data was collected.

5.2 Prospects of Sustainability

182. Sustainability has to be considered at two levels. First, at the site level, where sustainability means that the positive impacts on the lives and livelihoods of the beneficiaries will be sustained, and the revised practices and technologies will continue to be used by the beneficiaries. Second, at State level, where the capacity – individual and institutional – developed through the Project will be sustained, and will continue to support vulnerable villages to adapt to climate change.

5.2.1 Sustainability at the Sites

183. The State Coordinators are very optimistic about sustainability at the site level. The self-assessment (Annex 8c) yielded the following results:

- When asked what is the likelihood that the positive impacts (of the technologies and practices) would be maintained for at least three years, on a scale from 1 (very low) to 5 (very high), the overall average response was 4.1, so above 'high'. This ranged from 4.33 for energy and alternative energy technologies and practices to 3.75 for water and irrigation technologies and practices.
- When asked what is the likelihood that organizational and structural changes would be maintained for at least three years, on a scale from 1 (very low) to 5 (very high), the overall average response was again 4.1, ranging from 4.33 (for the VDCs) to 4 (for the Village sub Committees and the (revolving funds).

184. Notwithstanding, other evidence suggests that sustainability may not yet have been achieved for those technologies and practices in the targeted villages. Before presenting this evidence, it is worth noting the opinion of the the Evaluation Team that this should be considered a failure as it is well known that such progress requires time. First, the Evaluation observed some failures in the technologies and practices during the site visits. Although not very widespread, they were sufficient to cause concern at this early stage. Second, through the life of the Project, national experts have visited the villages occasionally to review and provide advice and guidance. In all cases these national experts have observed many weaknesses and failures in the use and adoption of technologies and practices. In many cases, the observations are somewhat straightforward and this suggests that all is not yet functioning smoothly in the targeted villages. Third, the Project Document³⁴ for the recently started LDRC-funded Project refers to the areas supported through this Project and states that they “*remain trapped in low-productive survivalist practices that are highly sensitive to climate change*” – an opinion held by many stakeholders interviewed during this Evaluation. This project is to implement an additional set of activities considered necessary to reach sustainability. Finally, past experience suggests it is very difficult to have vulnerable communities reach sustainability with newly adopted technologies and practices, or with new organizational structures. Further evidence of this sustainability challenge is that community members at all sites are requesting additional support, sometimes for basic things.

185. This Evaluation finds that site level sustainability depends very much on the practice and technology. Most aspects of the packages introduced to the village are now being used. In some cases, for some technologies, the investment costs are low and the benefits are high. And there is already signs of adoption by other villages. Based on previous experience, Project reports and rapid site analysis, it is considered likely that some technologies/practices will be sustained (livestock, gas cylinders, improved crop variety).

186. However, other technologies require significant funds to continue or to expand. Also, there are implementation problems, which the communities would not be able to overcome without sustained support. This applies to some of the introduced horticulture practices, the solar panels

³⁴ Project title: Climate Risk Finance for Sustainable and Climate Resilient Rain-fed Farming and Pastoral Systems, project document signed in September 2014

and pumps, and to the fish pond. It is considered unlikely that these technologies/practices would be sustained without additional help.

187. Further, the potential sustainability of the institutions – VDC, sub-committees and revolving funds - is not yet assured. These do respond to a need and can lead to livelihood improvements, and the majority have already been legally registered. However, experience shows that without an overall improvement in the village socio-economic condition, sooner or later an external shock will undermine the functioning of these.

188. Finally, the inadequate establishment of baselines, measuring, technical monitoring and recording do not help sustainability (see Box 5).

Sustainability, Understanding the 'Financials', and Monitoring.

The Project introduced a package of technology and practices to each village. The packages were specific and unique to each village. Each package had **costs** (equipment, material, time) and **benefits** (increased production, improved natural resources). However, in no case is there any detailed measuring or recording of these costs and benefits. There is no cost benefit analysis and there is no analysis of the internal rate of return for the technology/practice or for the package.

Sustainability would require either the village to sustain the package or the State government to sustain the support to the package. However, villages and State governments have very limited resources. If there is no information on the CBA or IRR, how can they be expected to allocate their limited resources to these technologies, practices or packages?

Likewise, replication would require either government or private sector to replicate the interventions, packages, technologies or practices to other areas and villages. How can this be expected to happen if there is no information on their CBA or IRR?

This is one example of how the Project could have measured, monitored, documented and learnt some very useful lessons.

Box 5: Sustainability, Understanding the 'Financials', and Monitoring

5.2.2 Sustainability at the State Level

189. The State Coordinators are equally optimistic about the sustainability of capacity built at the State level. When asked “*Has the Project built capacity for support and replication at State level*”, on a range from 1 (not at all) to 5 (greatly), the average response was 4 (see Annex 8c). Notably:

- When asked if other villages are adopting the practices, the response was ‘3.25’, suggesting this is not perceived to be common;
- When asked if the State Government departments are changing budget allocations or changing practices, the response was 3.5, recognizing that this is not too common;
- When asked if the Technical Committee members have changed their practices as a result of the Project, the response was 4.75, suggesting they feel this is a strong positive factor;
- When asked if the Technical Committee will continue after the Project, the response was a maximum ‘5’. This is partly due to the fact that the TC will continue to serve the two follow-on projects (see Section 5.2.3), but it may not have continued without such external support.

190. The Technical Committees have been a key factor in the Project success. To some extent they have helped establish a new, cross-sectoral, cross-agency approach to supporting vulnerable communities. They have helped remove the barriers to the linkages between research, extension and farmers. However, their operations are financed by the Project. Without the Project they may stop meeting. Also, they are very much dependent on individuals, without support from the

Project, when the individuals move on to new positions, it seems unlikely that they would continue to function as effectively.

191. The Project has played an important role in activating the State level extension system. In general these extension offices existed before the Project – they had offices and knowledgeable staff. However, before the Project, they lacked operational experience and did not have the basic facilities (transport and fuel) to visit sites sufficiently regularly. The Project has helped provide operational experience and demonstrated the value of these offices. Yet, as they have not secured operational funding, it is unlikely they would continue to function without the follow-up projects.
192. Unfortunately there is little evidence of change with decision-makers - the Ministers or those involved in allocating budgets. Several stakeholders reported this. Unless decision-makers in the States are convinced, and either policy or financial allocations are changed, there is a danger that the State level impacts will ultimately fade.
193. Finally, at the national level, little has been achieved in terms of sustainable change. It is recognized that the national level was not a priority for this Project, however, ultimately, some work at National level is essential. This would be mostly related to collaborating with other national agencies, and to ensuring there is a proper lesson learning process, and on targeted efforts to facilitate follow-up and resource mobilization.

5.2.3 The Follow-Up Projects

194. As mentioned above, two similar Projects recently started, both of which follow-up on some of the Project activities.
195. *“Implementing Priority Adaptation Measures to Build Resilience of rainfed farmer and pastoral communities of Sudan, especially women headed households to the adverse impacts of Climate Change”* is supported by CIDA. It was signed in 2013 and has recently started activities. It will support similar technologies and practices in villages with similar vulnerability and similar farming systems in three of the States (North Kordofan, Gadaref and South Darfur). It will also support the TCs in the four states. Although the priority is to support different villages, all stakeholders hope that some support can continue to the original villages and thereby help sustainability. However, in River Nile State the focus is on a different area with different farming systems and there is a danger that the original villages will receive no support.
196. *“Climate Risk Finance for Sustainable and Climate Resilient Rain-fed Farming and Pastoral Systems”* is supported by the LDCF. It covers six states, including the four in the present Project. It will continue to provide support to the TCs in the four states. Together with the CIDA project it should facilitate sustainability of the TCs and State level capacity at least for the coming three years. This Project will also implement activities at the village level related to finance, early warning systems and insurance, and this may build on the work done in the present Project, and this may contribute to sustainability.
197. These two projects have a similar implementation structure³⁵ to the present evaluated Project and many of the stakeholders are the same. They do constitute a kind of continuation of the same strategy. However there is no overall elaboration of this strategy and how the various projects, components and partners inter-relate with each other.

³⁵ Notably with the roles of the Project Board, UNDP, HCENR, a national coordinating unit, state coordinators and state technical committees.

5.2.4 Conclusion

198. **This evaluation concludes that some impacts of the Project at the site level are sustainable, even without the follow-up projects. A smaller proportion of impacts at the State level are also sustainable without the follow-up projects. Amongst other factors, the lack of a clear overall strategy and incomplete measuring and monitoring undermine sustainability and replication. However, the two follow-up Project provide a unique opportunity to sustain activities and impacts over the short term, and provide the stakeholders with the possibility of developing a more credible long term sustainability strategy.**

5.3 Contributing to Upgrading Skills of National Staff

199. The Project has provided a lot of on-the-job training to vulnerable community members principally on resource management practices. However, it was not a priority of the Project to provide training to officers or experts at State or national level.

200. During the Project, several national experts undertook visits to all four states and spent time interacting with the TCs in the states. This includes national experts on water harvesting, dryland management, livestock management, gender, communications and sustainable energy. In each case it can be assumed that there was some knowledge transfer to the TC members through the interaction. However, transferring knowledge to TC members was not an objective of the visits, as time and resources were limited³⁶, and there was no dedicated training. Hence, it can be assumed that the amount of knowledge transferred to state level experts was limited and this may be considered a missed opportunity.

201. Likewise, at the national level, the staff and experts involved in the Project, including many ARC experts, will have gained experience and some knowledge through their involvement, including in the two national workshops which were a form of knowledge exchange. However, there has been no formal training for national experts.

202. **There has been no transferring of knowledge from outside Sudan to the Sudanese experts at either national or state level through this Project.** This is exceptional for an international Project and again can be considered a missed opportunity. It is important to remember that all countries, including the most 'technologically advanced' countries in Asia, Europe or North America, constantly benefit from an infusion of ideas and expertise from other countries. This constant infusion may even explain how they became technologically advanced. The infusion of ideas from other countries does not necessarily mean that other countries have better ideas or expertise, it is simply that a constant enriching of knowledge and expertise is essential to development, and new knowledge and expertise can often be found in both neighbouring and distant countries. Moreover, external experts are more likely to be 'neutral', and be seen to be neutral, sometimes making it more acceptable for national experts to embrace their knowledge. Through this Project, areas of expertise that may have benefitted from an infusion of knowledge or expertise from outside include: gender; creating financially sustainable extension systems; measuring, monitoring and evaluating rural development, and; social organization.

203. The Project was represented at two international meetings in Doha where it presented its achievements and lessons to the international community. Further, there was a plan to mobilize a large study tour to another African country but this did not come to fruition.

204. **In conclusion, national level staff, for example in HCENR or ARC, beyond those persons greatly involved in the Project, did not significantly benefit from any capacity upgrading.**

³⁶ The visits focused on assessing activities, assessing the needs of villages, and providing recommendations.

6. Conclusions and Lessons Learnt

6.1 Conclusions

205. The goal of the project was to contribute to reducing the vulnerability and to increasing the adaptive capacity of Sudan's agriculture sector to climate change impacts. In order to reach this goal, the Project implemented a set of adaptation-focused measures with vulnerable, poor small-scale farmers and pastoralists in four different regions in Sudan. The Project also included an emphasis on lessons learning, sustainability and up-scaling. However, the Project was implemented in a very challenging context – in ecological, political, economic and security terms.

6.1.1 Project Formulation

206. The Project was nationally driven from the very outset, and, as it followed on from the NAPA process, it was prepared through a largely scientific and participatory process. Overall, the approach to the Project design is considered successful. The main weakness was the amount of time between conception and Project inception.

207. The approved Project design documents had many strengths. They provide a general problem analysis and they describe the Project's approach. They include a logical framework that has many strong points and has very relevant targeted results. They also clearly set out the management, decision-making and financial management arrangements. They also properly describe the approach to monitoring and set a foundation for results-based, adaptive management.

208. However, in other ways, the Project documents were incomplete. The problem analysis was incomplete, and in particular, it provided no details of the situation at the target sites. The logical framework is formulated too vaguely and does not include adequate inadequate indicators nor targets. It is not clear how the Outputs collectively lead to the Outcomes, nor how the Outcomes collectively lead to the Objective.

209. The articulation of the Project strategy is also incomplete. It does not define what should be considered a successful intervention at the state or site level, nor does it clarify what should be considered a desirable end-point for the Project. The strategic links between Outputs and Outcomes, and across sites, are not elaborated. The documents are unclear as to whether the Project is about *implementing* climate change adaptation or *piloting/demonstrating* climate adaptation activities. And, to the extent that it is about piloting, the approach to piloting is not elaborated or defined. With regards to gender, the Project document does describe how, at the site level, women were to make up a large number of the beneficiaries. However, the Project document does not provide an analysis of the gender situation nor a gender strategy.

210. An important issue during Project design was to determine the number of sites and States to be involved in the Project. The final decision was to work in five States, each with several sites. This proved to be too ambitious.

211. Notwithstanding those gaps and weaknesses, the Project design process and the Project design documents provided a good basis for implementing the Project. A serious effort was made to address the remaining weaknesses during the inception period; some improvements were made, but this effort was not fully successful.

6.1.2 Project Implementation and Approach

212. Overall the implementation approach has to be considered highly successful. The Project successfully reached and helped a large number of beneficiaries in poor and vulnerable communities. It generated a strong engagement and interest amongst the community members

and a strong support from the State level participants. It also created strong coordination at the state level and good partnerships with necessary stakeholders. The main successful implementing factors were:

- The delegation of decision-making and Project momentum to the State and site levels;
- The emphasis on reaching communities and achieving change ‘on-the-ground’, and both of these from the outset;
- The motivated and well organised state level Technical Committees;
- The motivated and well anchored and dynamic state level coordinators;
- The active and highly supportive central Project Coordination Unit; and,
- The smooth and mostly efficient financial planning and management (despite initial challenges).

213. However, there were weaknesses in the implementation approach, notably:

- The Logframe was used mostly as a reporting tool (to prepare overall reports on Project progress to UNDP and to GEF) and not as a management tool;
- The Project ran almost 18 months over schedule (although at no extra cost);
- The low involvement of key decision-makers (i.e. State Ministers and those in charge of budget allocation) in the State Governments;
- The absence of the main Federal agency for implementing rural development;
- The PCU was unable to provide advice and capacity building support to the States and sites at the required levels; and
- The Project Board’s high level membership meant it was not able to be fully informed of technical issues.

214. Monitoring was a particular challenge. During implementation, the national and State level staff undertook a great deal of technical activity monitoring. As a result they had a very good knowledge of the individual activities on the ground and of the beneficiaries. However the weaknesses in the Project design, the lack of clear consolidated targets, the lack of a baseline and a measuring protocol and the absence of a strategic approach all contributed to undermining Project monitoring. As a result, there is lots of data related to the many Project achievements at the site level, but little information about overall Project progress.

Project Results

215. The Project results are mostly impressive. A large number of people in diverse socio-economic and ecological conditions have been helped by the Project, and now have improved lives and food security. New technologies, practices and approaches were introduced and generally adopted in all the Project target villages. In most villages this typically included a complex package of forestry, traditional agricultural crops, new horticultural crops, water management and harvesting, livestock management, sustainable energy and training. Both men and women benefited in large numbers. Numerous local community organizations have been strengthened and established, and there is evidence that, at the village level, there is increased capacity with regards to both natural resources management and organizational capacity.

216. Most of the evidence for results originates from self-reporting and there are few independently verified figures. Further, as there was no baseline survey, it is not possible to either measure or define many of the achievements.

217. The Project was much less successful with regards to lessons learning, sustainability and up-scaling, although some capacity has been developed at State level and there is some evidence of policy change or changed practices by government agencies in two of the participating States.
218. To summarize, given the very challenging context, the Project was as successful as could be expected.
219. With regards to sustainability of the Project's impacts, this has to be considered at two levels: the site level and the State level. At the site level, only some aspects of the Project have reached sustainability. Likewise, at State level, many of the Project impacts are not yet sustainable. However, two follow-up Project started recently, and these provide a unique opportunity to sustain activities over the short term, and to develop a more credible long term sustainability strategy.
220. Several factors undermined sustainability and upscaling. One was the lack of a clear overall strategy: beyond aiming to help as many poor and vulnerable farmers as possible with their immediate challenges, it was not very clear just what the Project was to achieve. This weakness was never corrected. Second, the incomplete measuring and monitoring of the Project progress. If the costs and benefits of the Project interventions are not clear, it is not reasonable to expect sustainability, nor replication. Third, the level of support given to the sites. At least for some issues at some sites, the quantity or quality of technical support provided to villagers was not sufficient to ensure the new technologies were properly adopted. This is linked to the fact that the Project attempted to cover too many sites, too many farming systems, and its resources were spread out.
221. With regards to lesson learning, there is confusion on this issue. The Project has achieved successes and many of these have been communicated, in a general manner, nationally and internationally, and this has raised awareness around the Project and UNDP. Yet, lesson learning is much more than that. Lesson learning would lead to a process where other stakeholders, in other areas or countries, could directly adopt some of the lessons learnt from this Project to adapt or to increase resilience. The Project has not attempted to develop products that could achieve this. Notably, to achieve this would require specific monitoring protocols and effective measuring and recording of the practices, technologies and achievements. Or the project could have developed a model or approach for replication – and some of the documents refer to this – yet overall there is no evidence of the Project establishing such a model.

6.2 Lessons Learnt and Best Practices

222. The Project has demonstrated the following:
- It is possible and desirable to deliver quality support *directly* to communities in Sudan. Doing this builds trust, increases efficiency, and improves the relevance of the activities designed;
 - It is essential to *build trust* with communities when working on natural resource management in poor and remote areas. This is challenging and takes time, but does deliver benefits;
 - It is also essential to invest in *developing partnerships* between project staff, experts, government agencies and communities;
 - *Sustainability is challenging*, and requires successful efforts in a diverse range of issues. Notably, if attention is not given to financial sustainability, sustainability will never be achieved. Further, if practices or technologies are to be sustained, *the associated costs and benefits must be precisely measured, documented and communicated* – it is not sufficient to simply show examples of farmers generating income based on inputs provided by a project;

- It is *possible to work with women* in communities in Sudan, even in the more socially conservative areas. This requires patience and high levels of effort; and,
- High level of efforts are needed to provide sufficient technical support to communities, and *it is better to avoid spreading resources* across too many sites in too many distinct geographical areas.

7. Recommendations

223. Extension systems must be financially sustainable or they will stop functioning. Possible ways to create financial sustainability include:
- Increased use of information technology. Following initial contacts in person, the extension workers can then provide extension using smart phones and visual imagery to remote areas, and this will greatly reduce transportation costs;
 - Use of farmer-centred extension approaches. The approach would be to develop ‘lead’ or ‘pioneer’ farmers in villages, who can be the mechanism to extend to other villages and villagers. This may be more cost-effective. This is the farmer field school approach;
 - Clearly demonstrate the financial benefits from extension and use this to advocate to decision-makers for larger government budgets. This will require the accurate measuring of costs and benefits, and then communicating this information to decision-makers;
 - Farmers contribute to the costs of extension. If the farmer appreciates the extension service, and the extension service helps the farmer integrate into the national economy, the farmer will ultimately be willing to pay for it. This helps financial sustainability. It is recognised that this would be very innovative for Sudan, particularly because the farmers are often very poor, and so progress would only be incremental initially.
224. Recommendation 1 to UNDP and HCENR for future projects: Experiment and innovative with measures to create extension systems that are financially sustainable in poor and remote areas.
225. The project suffered from a lack of strategy, from having no clear starting point nor end point, and from not having a definition of what was meant by ‘piloting’ or ‘demonstration’. This Project is decentralized and so the strategies must be State specific, and they must encompass details of the approach to sties. Recommendation 2 to the managers of the follow-up projects: prepare strategies for each of the participating States for the follow-up projects, with independent logframes, meaningful targets and sustainability strategies.
226. There is confusion around the term ‘lesson learning’. Globally, UNDP promotes lesson learning and links this to replication and upscaling. However, at the country and project level, many staff confuse lesson learning with creating publicity around a project. Recommendation 3: to UNDP globally: prepare a document clarifying what is meant by lesson learning, and what the aims of lesson learning are, and how success is to be measured.
227. The Project has supported sand dune fixing at several sites. However, these efforts are very small and isolated compared to the problem, and so the net effects on the sand dunes is only minimal. Sand dune shifting can only be addressed by a large, government funded, national effort. This cannot be done through micro-scale, community based initiatives. Recommendation 4: to UNDP and HCENR: advocate for a national programme to address the problem of sand dune shifting.
228. The Project Board was well intentioned and was helpful when it met. However, some of the members were high level and it was often challenging to create a quorum. Further, some of the members were too busy to become familiar with the technical aspects of the Project. Hence

meetings were irregular, and some guidance was not the most technically appropriate. Recommendation 5 to UNDP for future projects: establish Project Boards that are of a technical nature, able to fully master the technical aspects, but sufficiently high level to make decisions and follow them through.

Annexes