

3. Findings

3.1 Project design / Formulation

The project design is addressing climate change issues from different angles: (i) suboptimal centralised interventions’ implementation, (ii) lack of technical and managerial expertise of local Government staff to effectively deliver results, (iii) Laos’ increased vulnerability in times of greater weather patterns’ variability due to climate change in an ever more anthropic-induced degraded environment.

With a greater vulnerability to climate change in the South of the country, the project has focussed its efforts on adaptation and mitigation through removing several barriers¹: (i) increasing local planning capacities to better respond to higher climate change risks, (ii) increase availability of information about climate change issues and its consequences, so that the information can be directly interpreted and solutions applied at local level, (iii) increase the resilience of interventions - rural water infrastructures - through strengthening the infrastructures codes and standards, (iv) divulge information on the linkages between climate change, environmental degradation and extreme climatic/weather events and apply ecosystem-based adaptation measures, (v) increase efficiency and effectiveness of the intervention through taking advantage of an existing decentralised mechanism to allocate funds directly at district level (DDF).

One of the main characteristics of this project has been the combination of 2 different approaches to activities implementation by the 2 main participating ministries: conventional top-down project implementation by MoNRE and decentralised implementation by MoHA, following a previously similar program on local planning (National GPAR programme). This will however entail substantial coordination problems (see assumptions and risks) that will inevitably slow down implementation (see efficiency and effectiveness).

3.1.1 Analysis of logical framework / Results Framework

While the initial project rationale stated that the project would address the NAPA priorities, the review of the logical framework shows that the design was targeting local administrations’ capacities (knowledge on CC, planning, implementing, M&E) with a focus on small-scale rural water infrastructures and final beneficiaries with upgraded /reconstruction of small-scale water infrastructures

With three outcomes implemented by different stakeholders, the project design sets out clear responsibilities: outcomes 1 and 3 implemented by MoNRE and outcome 2 implemented by MoHA. Still, the project’s logic calls for integrated implementation with a decentralised outcome 2 linked to outcome 3 on EbA measures, hence requiring close collaboration between institutions.

In that respect, the project formulation seems to have adopted a simple design: 2 executing institutions (MoNRE, MoHA), 3 outcomes (capacity building, infrastructures and EbA measures) and the development of climate-resilient infrastructures by using a fast-track implementation mechanism (DDF fund) already in place.

¹ Source : PRODOC pg25

The analysis of the log frame and its set of indicators shows that most if not all of these are SMART with some reservations under outcome 1 and 3 on the Measurement criteria (sMart) for acquired knowledge from capacity building activities which might have been assessed in another way (e.g. by additionality of similar activities externally funded).

If the project can adequately assess its results, there is little if any information whether the targeted (final and institutional) beneficiaries will take advantage of the project’s benefits after closure either at local level (e.g. through integration of new knowledge into routine Government activities) or by a multiplication effect (copy-paste effect to other provinces) through similar donor-funded or own Government resources schemes.

The lack of a component supporting institutional ownership and Government empowerment was a risk implying that the project would only benefit its targeted population while Government would not take use the project’s benefits for the design and implementation of its domestic policies and strategies at national level.

Indeed, interviews showed that the project was seen primarily as a provincial infrastructure intervention without much activity to ensure that institutional beneficiaries would take advantage of its benefit from it by project’s closure.

The design lacked somehow ambition on how to empower central government with the future lessons learned from the project (e.g. institutionalisation of new construction codes, adoption of decentralised approach for small scale infrastructures, climate-proofing to other sectors, combination of EbA and infrastructures as a national policy...).

An additional project component with financial resources to support government into integrating lessons learned within relevant ministries through an updated national policy framework for climate proofing (improved legal frameworks, policies and strategies...) would have been welcome.

A detailed analysis is under Table 1.

Description	Description of Indicator	Target Level at end of project	Specific	Measurable	Achievable	Relevant	Time-bound
Objective: Local administrative systems affecting the provision and maintenance of small scale rural infrastructures improved through participatory decision making that reflects community needs and natural systems vulnerable to climate change	% change in number of districts development plans including climate change adaptation actions in targeted provinces	50% of district development plans in project area including over 5 specific CCA actions by project’s end	Y	Y	Y	Y	Y
	% change in the level of active local community participation in climate risk related planning in target provinces and districts	60% of District Development Support Committees record specific climate related concerns emerging from community level annual planning consultations	Y	Y	Y	Y	Y
Outcome 1: Capacities provided for local administrative institutions to integrate climate risks into participatory planning and financing of small scale rural water infrastructures provision	% change in the ability of local and some officials to apply methodologies to analyse climate risks and identify CC vulnerabilities in 12 districts	50% of sub-national officials and 10% of national officials able to analyse climate risks in their districts on a macro-level (V&A analysis) and able to identify specific vulnerabilities and adaptation options at village level (CRVA)	Y	N	Y	Y	Y
	Procedures in place to integrate CC resilient advice and investment for small scale rural water infrastructures into district planning	All 12 districts applying a climate resilient planning mechanism including project identification, site assessment, approval, execution and M&E	Y	Y	Y	Y	Y
	Number of district development plans available, reflecting costs for adaptation in the water sector	Annual district investment plans include evidence of incremental CCA costings for water sector projects by year 4	Y	Y	Y	Y	Y
Outcome 2: incentives in place for small scale infrastructure to be protected and diversified against climate change induced risks benefitting at least 50.000 people in 12 districts of Sekong and Saravane provinces	Number of district routinely investing in climate resilient measures to improve village level water harvesting, storage and distribution systems	By the end of project, all target districts are investing at least 2 projects per year in village level climate resilient water harvesting, storage and distribution systems, which are informed by CRVA	Y	Y	Y	Y	Y
	Number of people benefitting from investments in small-scale irrigation systems to increase their resilience against climate change risks	At least 50.000 people across 12 districts benefitting from climate change resilient small-scale infrastructure which has been informed by CRVA	Y	Y	Y	Y	Y
	District-level fiscal and administrative incentives introduced, incorporating climate resilient measures for small-scale rural infrastructure	At least 25% in additional CCA funds expended over and above baseline Districts Development Funding in at least 12 districts, based on a system that rewards district that perform well against predetermined criteria	Y	Y	Y	Y	Y
Outcome 3: natural assets - over at least 60.000ha - managed to ensure maintenance of critical ecosystem services, especially water provisioning, flood control and protection under increasing climate change induced stresses in Sekong and Saravane provinces	Number of management/action plans developed and under implementation, which protect natural assets through local scale ecosystems based adaptation measures to improve the resilience of small-scale rural infrastructure against floods and drought	At least 6 management and action plans covering at least 48 climate resilience small-scale infrastructure investments under implementation across both Sekong and Saravane provinces	Y	Y	Y	Y	Y
	Number of key project stakeholders aware of links between improved ecosystem management and sustainability of investments in small-scale rural water infrastructure	At least 250 nationals, provincial and district planners have received knowledge and learning approaches and materials produced by the project on ecosystem based management linkages to infrastructure provision	Y	N	Y	Y	Y

Table 1: SMART analysis of the logical framework

3.1.2 Assumptions and risks

The log frame contains several assumptions and risks: 1. Other risks more pressing than climate change are emerging, 2. Insufficient understand of climate change risks among stakeholders, 3. Districts replicate the conventional non-climate resilient planning procedures, 4. Decentralisation policies and approaches delayed during implementation, 5. Infrastructures design not based on sufficient consultations and not

valued by beneficiaries, 6. Local resistance occurs to the introduction of new water management techniques on sociocultural, 7. Land ownership issues in the vicinity of built infrastructure restrict possibilities in introducing new ecosystem based land management approaches grounds.

All those risks may have been well managed by the project if they did occur as they did not significantly alter the project implementation.

The project formulation process, however, failed to identify some critical technical and institutional risks.

These would include:

- (i) Coordination issues during implementation between MoHA and MoNRE resulting in delays: because of different implementation approaches by the two ministries and the need to implement concomitantly as outcomes 2 and 3 were closely intertwined, a significant risk to implementation would have been the disjunction of activities from outcomes 2 and 3 resulting in no longer linking infrastructures protection with EbA approaches to ensure sustainability but also no longer evidencing locally – with the final beneficiaries – the need to link environmental protection at watershed level with water-related infrastructures
- (ii) Inability of local government to follow-up infrastructures’ status resulting in unchecked degradation because of lack budget for transport or lack of human resources: if institutional ownership can be ensured through the decentralised approach – in terms of implementation - the local Government institutions remain financially dependent of central level for regular/routine district budgets; district authorities can ensure regular monitoring and follow-up of new/upgraded infrastructures only if additional financial means are being made available supposedly from central level. Else, this is a business as usual scenario with little or no additional means to ensure follow-up and ultimately infrastructures’ sustainability
- (iii) Difficulty for final beneficiaries to organise themselves and make available financial means to ensure a regular maintenance programme and unexpected repair of infrastructures: local ownership by the beneficiaries is traditionally viewed as the capacity to mobilise labour to ensure maintenance; however, with more extreme events in view, the recurrence of these becomes higher, hence the need for higher construction standards but also the need to ensure financial capacity to cope with infrastructures’ repairs; there is a risk that the added economic benefits of these infrastructures will not be sufficiently translated by the final beneficiaries into financial resources to ensure long-term infrastructures sustainability.

These risks, although analysed *a posteriori*, have had significant constraints for the project (see findings and in particular sustainability).

3.1.3 Lessons learned from other projects incorporated into project design

The LDCF2 took into consideration the lessons learned from other projects both in terms of intervention approach and sectors to consider:

- (i) Many donors and the Government support the water and sanitation sector in the selected provinces including the construction/rehabilitation of small-scale rural infrastructures (SIDA, UNICEF, CARE, Concern, Red Cross, WB...) through numerous projects

- (ii) Often, the centralised implementation approach by relevant ministries results in a dilution effect of financial resources made available at local level, which is seen by Government as a suboptimal utilisation of resources
- (iii) The GPAR programme supported small-scale infrastructures in the water sector in the incumbent provinces but using a more efficient decentralised implementation approach (direct spending at district level through a fund - DDF-).

A common issue of these current and past interventions is the low durability of infrastructures for reasons linked to superseded standards of construction in relation to the current trend of accrued occurrence of more extreme events and the lack of a sustainable M&R policy which may be linked to the lack of perceived value addition in terms of economics and beneficiary participation (ownership) in relation to these infrastructures.

These resulted in the design of a project that had to integrate the following:

- Invest in infrastructures that are durable through higher standards of quality (climate proofing), maintenance/repairs policy (ownership), ensuring capital investment protection with an ecosystem based adaptation approach at watershed level
- Design a project that will primarily benefit the participating districts through using the same decentralised implementation approach as for GPAR (more efficient and effective implementation)
- Make sure that the infrastructures have a high enough RoI so as to create sufficient wealth to reduce the poverty level of the targeted populations (pro-poor policy), generate financial resources and community appropriation for their maintenance.

3.1.4 Planned stakeholders’ participation

The planned stakeholders and an estimate of their actual contribution to the project are indicated in Table 3.

The actual core stakeholders of the project in addition to the final beneficiaries (villages’ communities) are at national level MoNRE, MoHA and within the selected provinces DONRE and DOHA. As mentioned above, MoNRE was responsible for the outcomes 1 (climate proofing capacity building activities) and 3 (EbA activities) while MoHA was implementing outcome 2 (infrastructures construction through DDF mechanism) with their representatives at provincial/district levels actually implementing the activities as required.

Overall, the final beneficiaries were very receptive to the project with active participation in awareness raising sessions, feedback and discussions on the potential benefits of the project.

The involvement of the provincial level was overall adequate with anticipated supervision and monitoring of activities implemented by district authorities. This would have been most critical as the provincial level had substantially more technical expertise than district levels.

It is surprising to see that MAF’s contribution was very limited (only at board level) while a large proportion of the infrastructures’ rehabilitations were to benefit farmers through increased irrigation areas or farming intensification during the dry season.

Key institutions / stakeholders	Outcome 1	Outcome 2	Outcome 3	Active Board member
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MoNRE	✓		✓	
MoHA		✓		✓
MPI				✓
MAF		✗		✗
PONRE/DONRE	✓	✓	✓ (not as expected)	
District Development Support Committees	✓	✓	✗	
River Basin Committee			✗	
Local decision makers (village representatives, local mass representatives)	✓	✓	✓ (partially)	
Development partners (WB, UNCDF, ADB, GIZ...):	-	-	-	
Lao Women’s’ Union		✓ (at local level) ✗ (at national level)		
NGOs	On a contractual basis			
Service Providers (consulting firms / construction firms)	On a contractual basis			
✓: participation as planned; ✗: no/little evidence of participation as planned ; - not reviewed				

Table 2: Planned / actual stakeholders participation

3.1.5 Replication approach

As mentioned in the PRODOC, the potential for replication of the intervention is very high:

- (i) The project is linked to the National GPAR programme which is part of the Government strategy to deconcentrate responsibilities to the subnational level.
- (ii) The thematic, while being implemented in the 2 provinces of Sekong and Saravane as they are most prone to extreme climatic events, can be applied just equally in any other province of Lao DPR.
- (iii) The adopted methodology to integrate climate proofing in existing procedures is relatively straightforward as it implies upgrading existing procedures and practices
- (iv) The project has wagered on policy influencing to upscale similar interventions or projects that might adopt a similar approach to development

Still, it is even more important to enable the right conditions for replication by 1. empowering central Government in adopting a nation-wide legal framework for climate proofing infrastructures and integrating EbA approaches to rural infrastructures, 2. dedicating time and resources on policy influencing (as mentioned above under (iv)).

It is hard to see that the project did provision enough activities and resources for that purpose; it is the opinion of the team that a component for that purpose was missing in the PRODOC (see lessons learned).

3.1.6 UNDP comparative advantage

UNDP has been committed to building up the capacity of the country through mainstreaming environmental and climate change related considerations in the development processes at national, subnational and community levels.

The main advantage of UNDP is its capacity to mobilise financial resources on behalf of Lao DPR and to prepare with the Government project proposals that are endorsed and implemented.

The UNDP’s comparative advantage is several-fold: (i) UNDP is a neutral platform for development and has been able to build a trustful relationship with Government; (ii) UNDP is seen by Government as a multipurpose agency that favours a multisector approach to development while other (non-)UN agencies/donors are more sector-based (UNDP is active in most sectors like agriculture, economy, energy and mines, finance, governance...); (iii) UNDP’s strategy favours a pro-poor approach focussing on the most vulnerable – a focus on the population living under the poverty level - while many other donors will support large-scale interventions that will benefit large swaths of the population; (iv) UNDP will support preferably small-scale investments (e.g. small scale rural infrastructure under this project) benefitting primarily isolated and vulnerable people instead of large scale nation-wide infrastructure programs; (v) UNDP has the ability to bring together specialised UN agencies for a common intervention.

Under the Laotian context, UNDP has acquired extensive experience with GEF through implementing over 6 GEF-funded interventions, all of them under the climate change focal area and has lead with UNEP the PEI that supports the integration of environmental concerns of poor and vulnerable groups into policy, planning and implementation processes for poverty reduction, pro-poor growth and achievement of the MDGs.

Finally, UNDP can bring valuable expertise – including directly through its country office HR – in RBM & efficient M&E methods to support interventions’ implementation as a mean to raise implementation efficiency and effectiveness. This is most crucial as the Lao DPR staff capacity at the subnational level is limited. UNDP’s support is also valuable for optimising projects’ annual planning exercises during Board meetings.

3.1.7 Linkages between project and interventions within the sector

The project design took into consideration other existing interventions:

- The ‘Poverty Reduction Fund’ implementation method is similar to this project with direct access to budgets for small infrastructures but they do not integrate climate proofing yet
- The ‘River Basin Committee support’ projects could benefit from this project as well as they do not take into consideration climate change adaptation requirements
- The ‘National Integrated Water Resources Management Support Program’ supports data collection in the area of IWMR which might be critical for this project for the design of upgraded small-scale infrastructures (infrastructures design calculations)
- The ‘Capacity Enhancement for Coping with Climate Change Project’ has supported the development of climate change working groups mostly at national level but with some developments at the subnational level and would have brought lessons learned on the effects and effectiveness of project implementation at both national and subnational levels
- The ‘Land Management – Rural Economic Development Project’ has worked on revising the national guidelines for district planning including mainstreaming climate change aspects into district planning processes
- The World Wildlife Fund was subcontracted by the WB to assess the national Ecosystem-based Adaptation framework

- The ‘Enhancing Agriculture Resilience’ project contributed to increasing the knowledge basis on climate change and its impact in relation to agricultural production, food security and vulnerability, including in the Sekong province

Still, it remains to be seen how climate proofing could be integrated into routine Government and donor-funded initiatives while the project did not include a policy component focussing at national level.

3.1.8 Management arrangements

The 4-year project has been implemented under UNDP’s NIM modality (eventually extended by one year).

The planned management arrangements as per PRODOC are illustrated in the organisational chart shown in Figure 1.

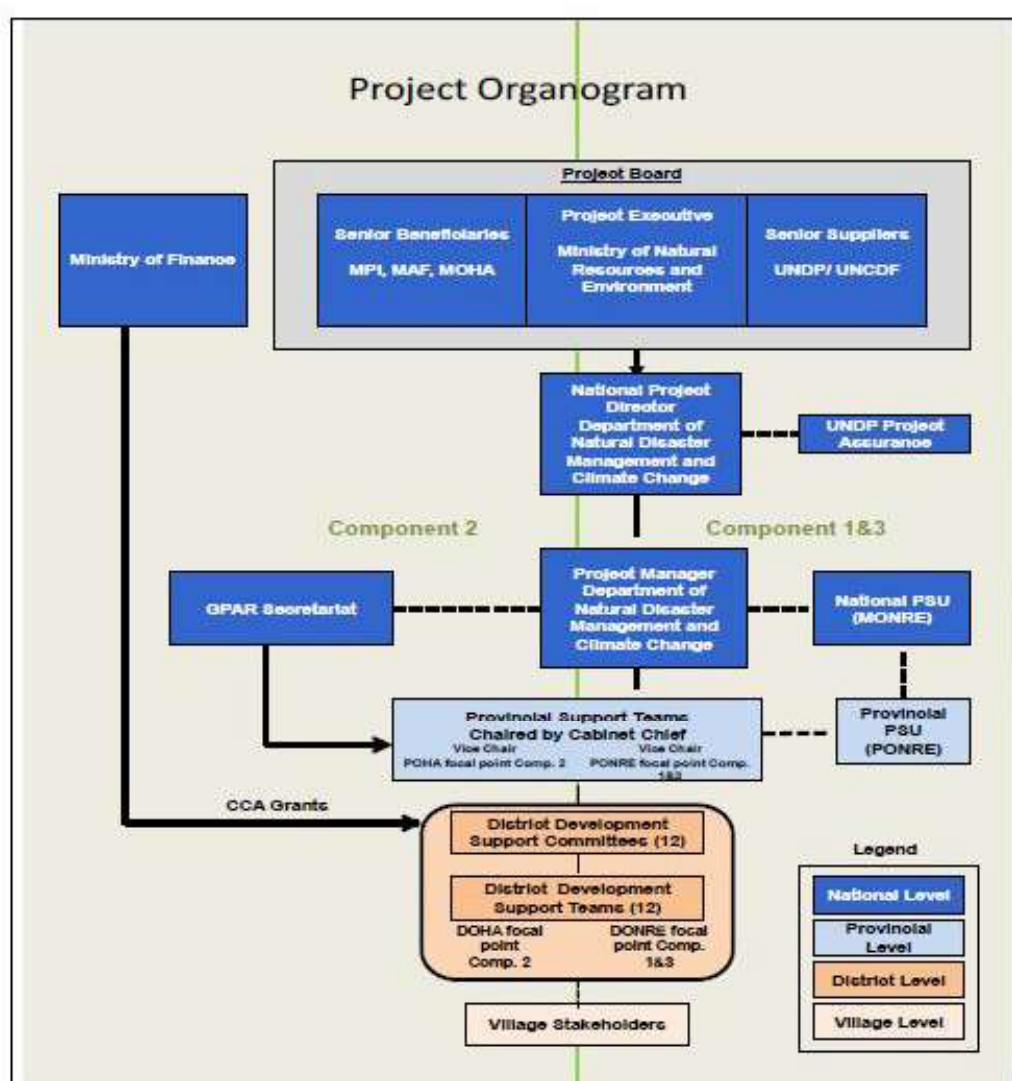


Figure 1: Planned project organisational structure

With the overall responsibility of the project laid with MoNRE, the implementation arrangements of the project were the following:

- Project Board assessing periodically the execution and performance of the project and possibly address unresolved issues presented by the Project Manager
- National Project Director for overseeing the overall project implementation and ensuring that the project and outcomes are achieved
- Project Manager running the project on a daily basis (management, administration, coordination, technical supervision...), ensuring that the project's results will be achieved
- GPAR Secretariat under MoHA in charge of outcome 2, ensuring that all the activities and infrastructures' funds are carried out and made available in due time
- National PSU under MoNRE supporting outcomes 1 and 3

There were no significant modifications of the project structure during implementation despite coordination issues encountered by the stakeholders.

3.2 Project implementation

3.2.1 Adaptive management

The project under the NIM modality was due to be implemented from December 2012 to December 2016. Mobilisation of HR was slow with a 6 months inception phase actually starting 6 months late (May – October 2013). It culminated with an inception workshop conducted by the end of Year 1 (November 2013) focussing on stakeholders' understanding of the project's goal, results, planned activities and the NIM modality.

The project was significantly constrained at the start with much delayed initial recruitment processes (e.g. international advisor) resulting in little or no activities implemented during 2013 (Year 1). In addition, successive resignations and recruitments further slowed down the implementation (EbA advisor, infrastructure advisor, M&E specialist).

The governance structure of the project was the following:

- *Annual meeting* (Board members: UNDP, MoNRE, MoHA, MPI, MoA, UNCDF): the project implementation was based on AWP's formulated by the project team and reviewed/endorsed by the Project Board. Annual planning was divided on a quarterly basis as per log frame structure.
- *Quarterly meetings* (UNDP, the project team [MoHA and MoNRE] and UNCDF) to (i) review the delivery of activities as per annual/quarterly plans, (ii) plan activities for the next quarter and (iii) monitor the delivery rate (quarterly project financial transfers authorised when the delivery rate is > 80%). Fund advances authorisations experienced significant delays from a normal 2 weeks lag to more than 1 month, principally due to a slow internal clearance system within MoNRE. There were also delays in the production of UNDP's CDR. Once budgets were approved, there were no more delays transferring the funds from central to provincial/district level.
- *Monthly meetings* (UNDP, the project team [MoHA and MoNRE] and UNCDF): to discuss technical issues and coordinate activities between stakeholders.

The monthly meeting was the main governance body for the day-to-day analysis of the project; the Project Board was merely the officialising decision taking body; minutes confirmed that most technical issues were solved during the monthly meetings.

Delays affected the implementation of the project with activities postponed or sometimes cancelled (e.g. workshops); seasonal activities were also affected (e.g. grass/tree replanting postponed from one rainy season to another).

A 12 months no-cost extension was granted due to slow delivery, just before the MTR (see feedback from M&E). Based on the review of project achievements, the evaluation found that the project worked towards project goal, objectives and outcomes but the due linkages between component 2 and 3 were not achieved as expected.

Still, the overall focus of the project (project goal, objective, and outcomes) remained unchanged over the whole project period; quantitative results were however modified to reflect better the capacity to deliver outputs.

3.2.2 Partnership arrangements

While there was little evidence of official partnership arrangements during implementation, the project worked in close collaboration with (i) the GPAR Secretariat/UNCDF to ensure a smooth delivery of funds through the DDF mechanism, (ii) the Ministry of Agriculture at local level through DAFO to support the design of irrigation/agriculture-related infrastructures, (iii) the ministry of transport for road-related infrastructures. It was unusual to see that there was little or no technical support from central level by the ministry of agriculture or transport.

The partnership with IUCN eventually did not materialise: the anticipated CRVA study could not be granted to IUCN as an open bidding process had to be undertaken. It was eventually won by a specialised consulting firm based in Vietnam (ICEM).

The partnership with UNCDF consisted of financial monitoring of DDF grants while the actual monitoring of results was carried out by the GPAR Secretariat as part of the project’s regular activities.

3.2.3 Feedback from M&E used for adaptive management

Feedbacks from regular monitoring and evaluation of the project as well as from UNDP oversight were incorporated into changes of planned project activities, results and log frame by early Year 3 just before the MTR; these consisted of the following:

- Reduction in the number of infrastructure projects: from 48 (4 x 12)² projects, to 28 (4+12+12)³ projects: with extensive delays in Year 1 and 2, it soon became evident that the original 48 infrastructures’ objective was no longer achievable
- Inclusion of ecosystem considerations into the CRVA process
- Change ecosystem indicators: from ‘area of ecosystems’ to ‘number of EbA interventions’ / ‘number of micro-watersheds’: the initial PRODOC called for extensive linkages of outcome 2 and 3 covering significant areas; initial infrastructures constructions showed that (i) not all infrastructures required an EbA response and (ii) funds for outcome 3 were too limited to ensure large area protection as planned in the PRODOC

² 12 projects per year for 4 years

³ 4 projects on Year 3, 12 on Year 4 and 12 on Year 5

- Project Extension: from Dec 2016 to Dec 2017 in order to reflect the extensive implementation delays and change in the number of rehabilitated/new infrastructures

3.2.4 Project finance

The total cost of the project (including Q3 2017) from 2012 to 2017 is explained under Table 3.

Co-financing (type/source)	UNDP CO (mill. US\$)		IUCN (mill. US\$)		GEF (mill. US\$)		UNDP parallel (mill. US\$)		Government parallel (mill. US\$)		Government in-kind (mill. US\$)	
	Planned ⁴	Actual ⁵	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	planned	Actual
Total	0,28	0,24	4,15	?	4,70	4,43	21,86	?	4,21	?	0,38	?

Table 3: Planned vs actual project expenditures⁶

As with other GEF projects, there is no recording of actual spending by co-financers; hence it is not possible to assess their contribution. This is mostly due to the fact that the project finance officer has no leverage to collect any data from other interventions.

Table 4 shows that the project initial operationalisation was spread over 2 years (2013 and 2014) with a PRODOC much too optimistic about project resources mobilisation: a lot of assumptions were made at project formulation stage like immediate infrastructures construction by Year 1, DDF updated guidelines at the start of the project; this was clearly unachievable. It became evident by 2015 that a project extension was needed (0,70M\$ spent against 2M\$ planned as per PRODOC in 2013/4).

Year \ Budget/expenditure ⁷	PRODOC work plan	AWP (mill. US\$)	Actual expenditure (mill. US\$)	% spent (actual/AWP)
2013	0,62	0,07	0,16	>200
2014	1,38	0,56	0,54	96
2015	1,56	1,78	1,68	94
2016	1,43	1,68	1,73	103
2017	-	0,90	0,56	62

Table 4: Annual Work Plan budget and actual expenditures (UNDP & LDCF)

The delivery rate has been well controlled (around 100% in 2014, 2015 and 2016) and interviews showed that this trend would continue for 2017, implying a good financial management system and planning capacity of the project team.

The analysis of the cumulative delivery rate (see Figure 2) show a typical S-shaped curve (sigmoid) against a straight line (linear trend) for the cumulative spending as anticipated at formulation stage; this is more evidence for the need to take into account an extended inception phase to resolve operationalisation difficulties like recruitment and initial involvement of all stakeholders, and to lengthen the project cycle to ensure a smoother implementation.

⁴ Source : project document

⁵ Combined Delivery Report

⁶ Situation as of September 2017

⁷ Combined UNDP TRAC and LDCF funds



Figure 2: cumulative planned and actual delivery rate

As shown under Table 5, the financial resources allocated and actually spend are very different for outcomes 1 (capacity building +50%) and 3 (EbA -40%).

Outcome 3 was significantly constrained by the recruitment process of the project technical team members (infrastructure, EbA, international advisors) well into 2014 (over 1 year late). Combined with the different implementation approaches by MoHA (through GPAR Secretariat) and central MoNRE, it resulted in disjointed implementation of outcomes 2 and 3 with less EbA resources allocated to protect infrastructures. These were selected and rehabilitated without systematic EbA projects that were developed at a later stage. Excess outcome 3 resources were logically siphoned to capacity building activities - outcome 1 - also implemented by MoNRE.

The project management budget was contained within the planned envelope despite its very low amount (8%); more common values for similar projects have higher management budget (10-15%).

Component	PRODOC Budget (mill. US\$)	2013	2014	2015	2016	2017 (excluding Q4)	Total spent	% delivery
Outcome 1 – capacity building	0,89	0,02	0,18	0,29	0,51	0,29	1,30	146
Outcome 2 – infrastructures	2,23	-	0,19	1,02	0,94	0,04	2,18	98
Outcome 3 – EbA	1,47	0,09	0,15	0,26	0,15	0,19	0,84	57
Project management	0,39	0,05	0,02	0,10	0,13	0,04	0,34	87
Total	4,98	0,16	0,54	1,68	1,73	0,56	4,67	94

Table 5: Project's fund disbursement status (UNDP & LDCF)

3.2.5 Monitoring and evaluation: design at entry and implementation

A comprehensive M&E system was designed at the start of the project. It consisted of the following:

- Inception Report with AWP and summary of the inception phase

- Annual Progress Review/Project Implementation Review (APR/PIR)
- Periodic Monitoring through Site Visits: UNDP and regional GEF staff conducted monitoring visits to assess project progress
- External mid-term and final project evaluations
- Audits as per UNDP Financial Regulations and Rules

An M&E plan was also formulated at the start of the project - based on the log frame and performance indicators - but progressively disused with subsequent changes of M&E experts. Data was to be combined under the project M&E specialist but staff rotation (at least 3 different M&E specialists were contracted) resulted in actually having 2 separate monitoring systems providing data to the project team. While this did not significantly alter the course of the project, it may have accentuated the dual (separate) approach to implementation (outcome 2 by MoHA and outcomes 1/3 by MoNRE).

A Learning and Knowledge Sharing plan (sharing lessons learned) was devised but few communication activities were carried out prior to the MTR.

The MTR conducted in 2016 rated the overall performance of the project as moderately satisfactory. The project implemented most recommendations including (i) the need to link infrastructures and EbA initiatives including the speeding up of EbAs, (ii) increase the engagement of final beneficiaries to ensure ownership, (iii) increase communication on the project, (vi) develop an exit/sustainability strategy.

A document on an exit strategy was produced with clear references to the need to mainstream project's benefits into national processes through the “Sam Sang” (decentralization) strategy, climate resilience in building codes, guidelines for ecosystem-based adaptation for rural infrastructures or as an add-on for new donor funded interventions focussing on an extended/upgraded pilot DDF mechanism.

Still, the difficulty to operate design changes during implementation has made it very difficult for the project team to (i) effectively link infrastructures and EbAs as per initial project proposal (having separate MoHA and MoNRE implementation approaches) and (ii) to implement an exit strategy other than ensuring that lessons learned are incorporated into new donor-funded interventions which should be the case as indicated below.

UNDP brought new momentum to the project in terms of communication and creating linkages between the project and new similar interventions (GPAR phase II funded by UNCDF/UNDP/SDC, Adaptation Fund project due to be implemented by UN-HABITAT) as a way to develop an exit strategy. The lack of resources to incorporate lessons learned within the institutions at central level has limited however the added value of the project in terms of Government empowerment. Regarding UN-HABITAT Project, the LDCF 2 Project was consulted to help to inform the project design before submission to the Adaptation Fund.

M&E design at entry RATING: Satisfactory (S)

M&E at implementation RATING: Moderately satisfactory (MS)

Overall quality of M&E RATING: Moderately satisfactory (MS)

3.2.6 UNDP and Implementing Partner implementation / execution coordination and operational issues

Both UNDP and the designated IP (MoNRE) were involved in project implementation with UNDP having a supervisory and oversight role with the provision of technical advice and monitoring.

Implementing Partner:

The project was supervised by MoNRE. Its Department of Disaster Management and Climate Change (DNDMCC) hosted the project team throughout the duration of the project. DDMCC had a change of name to DCC (Department of Climate Change) with a change of mandate in 2017 as the mandate for disaster response and recovery was shifted to another ministry.

One of the main characteristics of the project was the asymmetrical implementation approach by MoHA (decentralised) and MoNRE (centralised), leading to almost independent implementation of outcome 2 by MoHA and outcome 1 and 3 by MoNRE that inevitably resulted in disconnecting outcome 2 and 3 results. This is mostly due to the innovative approach of the project and the fact that decentralisation has not been mainstreamed in technical ministries. This hybrid implementation mechanism resulted in long delays when infrastructures go-ahead at district level lead by (D)OHA was waiting for technical clearance by central MoNRE. This project constitutes a testbed for analysis for combining decentralisation of functions with specific technical capacity strengthening at local level. Still, over the course of the implementation, efforts were made to correct this issue through bringing more integration between the three components.

In 2016, the disaster management mandate for response, relief and recovery was moved back to the Ministry of Labour and Social Welfare. Despite this institutional change, there was no alteration in the project’s implementation as the mandate for climate change adaptation and mitigation as well as disaster preparedness remained with DCC in MoNRE. The project remained with MoNRE as the Implementing Partner. Under this unique implementation mechanism, MoNRE has been able to facilitate dialogue with MoHA in order to ensure a smooth implementation of outcome 2 resulting in the upgrading/reconstruction of planned rural infrastructures. Still, the difficulty for MoNRE was the inability to implement the project as by MoHA because de-concentration of technical ministries is not on Government’s agenda.

As per interviews at the subnational level, MoNRE brought very positive effects on both outcomes 1 and 3, in particular for all activities related to enhancing the technical capacity of MoNRE and MoNRE staff; the subnational level was much less enthusiastic about the ability of MoNRE under this particular implementation approach to effectively deliver timely results (substantial implementation delays).

Quality of implementing partner execution RATING: *Satisfactory (S)*

Implementing Agency:

The added value of the implementing agency (UNDP) in Lao DPR has been its ability to provide regular support to the project team: UNDP was present at monthly and, quarterly meetings and as a Project Board member; hence it had comprehensive knowledge of the project’s level of implementation and was in a prime position to provide advice to Government for key decision making either during technical monthly meetings or during Project Board meetings.

The support of UNDP has been pivotal in enhancing the visibility of the project’s results including press articles, photo-stories, collaboration with UNDP Timor Leste for South-South Cooperation, presentation at UNFCCC COP23, CRVA publications, raising awareness of the project at various fora including the national Sector and Sub-Sector Working Group,, especially after the MTR.

Also, it contributed to supporting the formulation of new interventions (e.g. GPAR phase II ‘GIDP’ funded by UNCDF/UNDP/SDC that will incorporate LDCF2 results) and through its networking ability has created awareness amongst partners (donors) to emulate LDCF2 results in terms of both participatory and decentralisation approaches.

Quality of implementing agency (UNDP) execution RATING: *Highly satisfactory (HS)*

Overall quality of implementation / Execution RATING: *Satisfactory (S)*

3.3 Project results

3.3.1 Overall results

The assessment of project progress or and review of overall results of the project is presented in Annex 4. A brief assessment of project overall results is presented in the following paragraphs.

Objective Outcome: Local administrative systems affecting the provision and maintenance of small-scale rural infrastructure will be improved through participatory decision making that reflects the genuine needs of communities and natural systems vulnerable to climate risk. Progress to date: Achieved. All 12 districts in the project target area of Saravane and Sekong Provinces in Southern Lao PDR have incorporated climate risks into development plans that include specific CCA actions related to a total of 28 infrastructure projects now completed (+ one extra), informed by previous climate risk and vulnerability assessments. Specific CCA actions include both engineered and ecosystem-based adaptation actions to support climate resilient communities and infrastructure. Climate resilient water supply in Kamkok Village, Thateng district consisting of deep-tube well, water tower and distribution pipe system (engineered adaptation), and ecosystem management plan for the adjacent upstream Phu Ta Yeune mountain forest (ecosystem-based adaptation), enabling long-term protection of the ground-water resources, for example. The community benefits through a more stable, year-round water supply, as well as better protection of ground-water resources, and better protection against flash floods and erosion during the monsoon season.

3.3.1.1 Outcome 1: Capacities provided for local administrative institutions to integrate climate risks into participatory planning and financing of small scale rural water infrastructure provision.

Progress to date: achieved. Local district planners of 12 project target districts acquired necessary skills and knowledge to undertake climate change risk assessment as part of their planning routine. The CRVA method has been used during the final round of infrastructure development planning in all 12 districts. The climate risk criteria for the infrastructure investment screening have been approved by MoNRE. The climate proofing related costs have been embedded into budgets of the DDF infrastructure investment plans for 2016-2017. All 12 target districts now have the skills and procedures in place to establish climate risk reduction measures and budget and implement them through the DDF planning and funding mechanism. A number of technical trainings including project design and management and on subjects

related to climate resilient infrastructure as well as roles of ecosystem-based approaches to reduce climate change risk at a level of sub-catchment where the physical infrastructure units are or are to be located were delivered to provincial and district planners sufficiently.

Output 1.1: Technical capacity in climate resilient planning, focusing on links between improved ecosystem management and sustainability of investments in small scale rural water infrastructure, enhanced for at least 250 national, province, district and village officials, as well as other community stakeholders. This output is designed to enable all other project Outcomes and Outputs by building in the necessary understanding of climate risks to strengthen local development planning from the project outset. The approach taken will be to build directly on the initial capacity assessment carried out during the PPG phase, and convert this into a detailed and fully costed capacity development plan. It will also provide a key collaboration point with the baseline ADB supported IWRM program which is providing capacity development for IWRM at both national and province levels, largely the same audience of individuals. In response to recommendations from the Environmental and Social screening, environmental and social risk considerations and assessment methods will also be incorporated into the government capacity development and training plans. Progress to date: Completed, 70 (10 females) provincial and district officers received on-the-job training on CRVA. 144 (22 females) District and Provincial officers from 12 districts of Sekong and Saravane provinces have been trained on the implementation small scale infrastructure through the training workshop on the revised five number DDF-CR guidelines (Performance Assessment Manual DDF-BBG and DDF CR Grants, CR Grants allocation, Planning, Financial management, implementation)

Output 1.2: Village level water harvesting, storage, and distribution infrastructure adaptation solutions (with associated ecosystem management options) identified, prioritized and integrated into district development plans. This output supports the annual planning exercise carried out by the District Development Support Committees. It will provide technical and organizational inputs to be arranged and delivered by MoNRE and its province and district level structures. It will help districts to secure an additional financial envelope for climate resilient investments, which will be delivered annually to districts bank accounts set up under Outcome 2. It will also provide the starting point for more detailed subsequent field analysis through CRVA, to be carried out under Outputs 1.3 and 1.4. Annex 8 already provides an initial list of potential adaptation solutions derived from the macro V&A analysis exercise carried out during the PPG. While these are not mandatory investments they demonstrate the most likely areas for climate resilient investment and districts may choose for some to be carried forward into detailed design, as presented. Progress to date: Completed. All 12 target districts have integrated climate resilient planning and projects into their district development planning. 37,049 villagers (18,412 female). They are the direct beneficiaries of the projects and will benefit from increased crop production, reduced crop loss due to flooding and drought, climate resilient water supply, and avoided flooding impacts which will contribute to disaster reduction and improve livelihoods through adaptation to climate change.

Output 1.3: Climate risk, vulnerability and adaptation assessments (CRVA) carried out at 48 project sites in 12 districts of Sekong and Saravane provinces and proposed climate resilient investments adjusted to take account of site specific adaptation concerns. This will support the detailed engineering design of the approved climate resilient investment projects. A fundamental premise is that adaptation solutions are location specific. While there is some value in generic or ‘model’ solutions they will always need to be fine-tuned to physical, environmental and social realities on the ground. In some cases this will lead to an adjustment upwards in financial resources. In all cases the process of introducing and revising an approach via CRVA, will increase local ownership and ultimately the long term sustainability

of the investment. Environmental and social screening questions should be incorporated into the CRVA process and tools used to review the small infrastructure projects as they are developed to ensure project impacts are properly considered and also take into consideration the cumulative impacts in the context of wider activities in the area. Progress to date: Completed. All 12 district development plans include climate resilient projects. 37,049 villagers (18,412 female). They are the direct beneficiaries of the projects and will benefit from increased crop production, reduced crop loss due to flooding and drought, climate resilient water supply, and avoided flooding impacts which will contribute to disaster reduction and improve livelihoods through adaptation to climate change.

Output 1.4: Detailed climate resilient project investments finalized and tender documents prepared in 12 districts, as well as associated dialogues to facilitate the implementation of annual district investment plans in 12 districts. Following on from fine tuning and building local acceptance and ownership, so investments will need to be tendered to contractors for which additional professional technical services will be required. In order cases this expertise will be found at the community level and the resources can be channelled directly from the district level against an agreed work plan and set of deliverables. Progress to date: Completed.

3.3.1.2 Outcome 2: Incentives in place for small scale rural infrastructure to be protected and diversified against climate change induced risks (droughts, floods, erosion and landslides) benefiting at least 50,000 people in the 12 districts of Sekong and Saravane provinces.

Progress to date: achieved. Over 37,000 men and women in the target 12 districts benefited from 29 climate-resilient infrastructure projects completed during the reporting period. They are: Irrigation system upgrades up to climate proofing standard (14 projects), climate resilient water supply (7 projects), flood gate improvements (2 project), community bridge (4 projects), and check dam upgrade (2 projects). These investments now secure safe and uninterrupted supply of irrigation and freshwater, improved flood protection and connectivity and mobility of residing population in the face of intensified hydro-meteorological hazards. The project has helped revise the DDF guidelines adding the climate risk elements and resilience performance criteria to facilitate the district and provincial planners and decision makers in the process for preparation and review of provincial/district plan proposals.

Output 2.1: An incentive mechanism, rewarding districts performing well in planning, budgeting and implementation of climate resilient, ecosystem based small-scale water infrastructure is developed, tested and under operation to drive the delivery of LDCF climate resilient infrastructure grants. This output will result in the tailoring and extension of a pre-existing local development fund mechanism (the District Development Fund) to incorporate all the necessary skills, and capacities to channel and report on additional climate adaptation funding through national systems. Through this approach the project seeks to ensure that the project can be easily replicated in other districts and can provide a means to access and channel other public resources in the future, both national budgetary resources and international funds. Progress to date: Completed. Revised DDF Guidelines including climate resilience considerations and criteria have been approved by the Project Board in December 2015. The five number of the revised District Development Fund (DDF) guidelines with the integration of Climate Change and Resilient have been official endorsed by Ministerial Agreement by MoNRE, issued No. 4654/ MoNRE, dated 8 September 2016

Output 2.2: At least 48 small-scale infrastructure investment projects (1 per district per year), including

components of water harvesting, storage, distribution and/or irrigation of the priority lists that have been CRVA assessed are implemented benefiting 50,000 people. Output 2 will follow a phased approach. In the first year 12 infrastructure investments will be selected from the V&A report for further analysis and funding, applying the detailed CRVA approach. From the second year onwards the selection of investments will follow the same technical approach (V&A and CRVA) but influenced also by the newly established performance based mechanism leading to differing levels of financial allocation from one district to the next. Progress to date: Completed. In 2015, four infrastructure and two EbA measures have been piloted in Sekong and Saravane (two projects per province). In the following year, 12 infrastructure projects have been completed, and an additional 13 projects have been completed during 2017. As a result, 37,049 (18,412 females) villagers get direct benefits from these projects.

3.3.1.3 Outcome 3: Natural assets (such as wetlands, forests and other ecosystems in sub-catchments) over at least 60,000 ha are managed to ensure maintenance of critical ecosystem services to sustain critical rural infrastructure, especially water provisioning, flood control and protection under increasing climate change induced stresses, in Sekong and Saravane provinces.

Progress to date: Partially Achieved. In total, the project intervened in 9 sub-catchment areas covering an area of 30,387 hectares to restore the vegetation, reduce/arrest soil erosion and stabilize the slope. The project provided district planners a specialized training in EBA methods of risk reduction and conducted some awareness activities on importance of EbA for local communities that their livelihoods are strongly associated with the health of these selected critical ecosystem.

A new version has been approved of the “Manual for the Assessment of Districts’ Performance under the SCSD Program – District Development Fund (DDF), MoHA-SCSD Guideline No 07/2012”, to include requirements for the climate resilience grant system.

Output 3.1: Up to nine ecosystem management and action plans with a coverage of at least 60,000 Ha to protect 48 small-scale climate resilient rural infrastructure projects are designed, implemented and monitored for effectiveness (revised down to 28 infrastructures). The management and actions plans, which will include budgeted field-based activities, will be developed during Year 1 and progressively implemented from Year 2 onwards through specific interventions on the ground, which will be selected and designed using the existing local planning dialogues and structures. This work will be carried out in close coordination with the ADB-IWRM planning being carried out for Sekong River Basin in the South. Progress to date: 29 completed construction works and 9 EbA related infrastructure projects and there are 18,412 people getting benefits from these watershed areas. Two ecosystem areas were identified in 2014, and the work on the development of ecosystem management & rehabilitation plans for both areas initiated with a participatory land use planning process, in collaboration with Department of Land Planning and Development (DLPD) under MoNRE completed in 2015. The CRVA process include an identification of ecosystem-based adaptation options for each infrastructure project, and this was the basis for further selection of ecosystem sites and EbA measures. In June 2016 an appropriate EbA measure was applied by transplanting the local grass (vetiver) on the earth dyke of Sa O wetland in Kongsedone district, Saravane province, to protect against soil erosion.

Output 3.2: Awareness-raising activities implemented, learning materials developed and disseminated and regular dialogues held between communities and tiers of the local administration on the linkages between ecosystems management and small-scale climate resilient infrastructure solutions. The main

aim of this output will be to provide clear guidance and direction on how ecosystem based approaches can be integrated into local development planning, using infrastructure investments as a starting point. The opportunities for achieving this are likely to vary considerably from one district to the next depending on prevailing land use and management practices. This Output will need to be delivered in parallel with Output 3.1 since it underpins the development of the ecosystem management and action plans. Much of the work will involve motivating local officials and other stakeholders to visit specific sites, view problems on the ground, and jointly identify solutions. The frequent repetition of this approach each year of the project will induce behavioural changes in the way planning is carried out, through the integration of more evidenced based information and through the involvement of a wider range of stakeholders in formulating and agreeing local plans. This work will build directly on the national water dialogues that have been carried out by MoNRE with support from IUCN. Progress to date: Completed. 146 (21 females) provincial and district officers have been trained on EbA. 685 (446 females) villagers have been participated and gain knowledge on EbA through awareness raising activities carried out by the project. In March 2016, the team assisted the local PONRE and DONRE staff of two districts (Thateng, Sekong province and Kongsedone, SLV province) to draft the EbA rule to maintain the ecosystem and the water-related infrastructure projects. The team had also done the village consultation for their feedback on its rule. After the EbA rules and regulations were developed, the teams conducted the workshop on dissemination of its rule and the combination with the raising awareness on EbA to the local peoples in 9 target villages of two districts, SLV and SK provinces.

Training was conducted for the provincial and district staff (PONRE and DONRE and other line agencies) from Sekong and Saravane Provinces who were directly involved with the EbA and rural infrastructure projects in October 2016 in Saravane province. A total of 94 participants including 17 women from various line agencies of 12 districts as well as from the project consultant team attended.

All 12 districts (Khongsedone, Lakhonpheng, Laongam, Samouay, Saravane, Ta Oi, Tumlan, and Vapi in Saravane Province, and Dakcheung, Kaleum, Lamarm and Thateng in Sekong Province) have incorporated climate risks into development plans that include specific CCA actions related to a total of 29 infrastructure projects now completed. Specific CCA actions include both engineered and ecosystem-based adaptation actions to support climate resilient communities and infrastructure. The 2017 PIR reveals that climate proofing related costs have been embedded into budgets of the DDF infrastructure investment plans for 2016-2017. All target districts now have the skills and procedures in place to establish climate risk, risk reduction measures and budget and implement them through the DDF planning and funding mechanism. The project exit strategy has been developed and put in practice as per the MTE recommendation.

Overall Project Outcome RATING: Satisfactory (S)

3.3.2 Relevance

As far as the relevance is concerned, the program concept and design are highly relevant to country policies, strategic objectives and priorities. The Team concludes that the Project is fully conforming to the country strategies, policies and programs related to climate change issues. This also includes all activities under the project, which are well in tune and fully aligned with the national development policy, including all three project outcomes on capacity building, small-scale infrastructure development, and ecosystem-based management.

The project is a direct response to the challenges identified in the project document. Indeed, it seeks to develop capacities for an “*Effective Governance for Small-scale Rural Infrastructure and Disaster Preparedness in a Changing Climate*”. It is focusing on the removal of barriers through a ‘three-pronged’ approach: (i) by strengthening the national, provincial and district capacities for planning for rural infrastructure that incorporates climate considerations; (ii) by providing direct financing for infrastructure projects to vulnerable districts through the existing District Development Fund (DDF) mechanism; and (iii) by implementing ecosystem-based adaptation measures that provide additional climate resilience at the watershed level of project infrastructure intervention.

The project is also relevant in the sense that it responded to GoL priorities that are well documented in sector policies, strategies and plans. It is part of the development strategy for Lao PDR, which includes the alignment of the project with the following relevant parts:

- Sam Sang Initiative (“3 Builds”) proclaimed by the Prime Minister Order 16/2012 with the objective to improve the delivery of public services.
- Five Year National Socio-Economic Development Plan VIII (2016-2020) – (8th NSEDP)
- MoNRE Vision toward 2030 (Natural Resources and Environment Strategy (NRES), 10 Years - 2016- 2025)
- National Adaptation Program of Action to Climate Change (NAPA - 2009) priority one and priority two.
- The Strategy on Climate Change of the Lao PDR (2010)
- National Governance and Public Administration Reform Program (NGPAR)

The project is also designed in alignment of GEF priority areas. GEF funds and support projects focused on climate change, biodiversity and land degradation issues. The LDCF2 project is, therefore, designed to be fully in line with these GEF priority areas.

RATING: *Relevant (R)*

3.3.3 Effectiveness and efficiency

Effectiveness (relation between actual outcomes and the project objective):

The initial project objective is to improve local administrative systems affecting the provision and maintenance of small scale rural infrastructure through participatory decision making that reflects the genuine needs of communities and natural systems vulnerable to climate risk. Three outcomes were formulated:

- Outcome 1: capacities provided for local administrative institutions to integrate climate risks into participatory planning and financing of small scale rural water infrastructure provision;
- Outcome 2: incentives in place for small-scale rural infrastructure to be protected and diversified against climate change induced risks benefitting at least 50,000 people in 12 districts of Sekong and Saravane provinces;
- Outcome 3: natural assets managed to ensure maintenance of critical ecosystem services, especially water provisioning, flood control and protection under increasing climate change induced stresses, in Sekong and Saravane provinces

Outcome 1 results: direct relationship to objective, however empowerment remains weak

The district technical staff has now the basic skills to mainstream climate change risks into planning processes: these include identifying innovative solutions to adapt to extreme climatic events and carrying out CRVAs.

They however still remain dependent on the DDF mechanism for implementation and still require external support for the actual design and technical solutions; moreover, there was little evidence that the skills were applied outside the DDF framework through direct Government implementation.

While there is theoretical understanding of the linkages between ecosystem management and infrastructures sustainability, the solutions on how to actually implement them remain somehow elusive for the district staff and even more so for the population.

Outcome 2 results: direct relationship to objective but less effective than planned

The DDF mechanism has been a very effective solution to mainstream climate change considerations into rural infrastructures: it had the advantage of direct implementation with (in theory) little or no central interaction.

However, the need to review the infrastructures’ designs by MoNRE was time-consuming (long process for approval – back and forth exchanges of information to improve the designs) and somewhat cancelling the effects of the decentralisation; this process improved drastically over the implementation of the project with little modification of design for infrastructures construction by the end of the project and evidenced the effectiveness of outcome 1.

The technical oversight should in some way be applied also at local level (e.g. provincial level), hence transferring technical expertise from central level to the subnational level.

Interviews showed that the updated guidelines for climate proofing of infrastructures are straightforward but may be too tailored to the DDF mechanism and would require extensive modifications for adoption by the Government⁸, an activity that was not integrated into the project.

Outcome 3 results: weak relationship to objective; ineffective as implemented by the project

Too little too late was implemented to create wide-ranging awareness on how to implement EbA measures to protect rural infrastructures.

This may have to do with the actual project design that created 2 separate lines of implementation for outcomes 2 and 3, supposedly a less complex solution because of the 2 ministries involved. The alternative of an integrated EbA-infrastructure package was not considered because deemed too complex to implement with two different ministries. This may be so but resulted in any case in not significantly improving the resilience of most infrastructures at watershed level. Another approach has to be sought to effectively link rural infrastructures with environmental protection for enhanced sustainability.

Efficiency (project costs):

The 5 year-long project spent in total 4,98M\$ over 5 years (1M\$/year) to upgrade 28(+1) rural infrastructures and protect up to 9 sites with EbA measures (0,15M\$/subproject).

Interviewed experts considered that the infrastructures lifetime duration may well double/triple (up to 10-15 years instead of 5 years) although they will still lag way behind international standards.

⁸ e.g. upgrade the construction standards to make them climate-proof

This is also a best-case scenario as it will depend on the M&R strategies put in place by the final beneficiaries and district authorities. In that case, the efficiency may depend entirely on the actual ownership and empowerment by the local stakeholders (district authorities and infrastructures committees).

RATING for Effectiveness: Moderately Satisfactory (MS)

RATING for Efficiency: Satisfactory if there is evidence of a functional mechanism for M&R (S)

Unsatisfactory if there is no evidence of it (U)

Overall project outcome RATING: Moderately Satisfactory (MS)

3.3.4 Country ownership

The level of country ownership for project implementation is moderately satisfactory. The project was designed to implement strategic actions outlined in the Lao Government Climate Change Action Plan (2010), the National Adaptation Program of Action to Climate Change Impacts (NAPA) (2009), the NGPES (2003), the national five-year plans (NSEDV VII for 2010- 2015 and NSEDV VIII running from 2015 – 2020). These national sectoral and development plans recognize and contain climate change adaptation and mitigation and disaster preparedness strategies and plans that were meant to strengthen and reinforce activities to effectively support effective natural resources management and livelihood programs in line with the development plans of all joined project implementation agencies. The project was designed, planned and implemented jointly by relevant government agencies with active participation of representatives from concerned government officials and civil societies and communities representatives. The project management arrangement system and procedures have been set up and implemented through not only direct involvement and responsibility of two lead ministries of MoNRE and MoHA at central level and their respective branches at provincial and district level, but also with a wide range of other government institutions and partners including MPI, MAF, MPWTC, provincial and district governors, and District Development Support Committees.

In 2013, the Ministry of Natural Resources and Environment approved the Guidelines for Ecosystem-Based Adaptation Practices in Lao PDR as an effective resilience building measure for rural communities and the Ministry of Home Affairs has incorporated the CRVA approach and performance based criteria into the DDF mechanism for deliver climate resilient infrastructure grants to districts that are totally in line with the project’s objectives.

The current project supported stakeholder institutions at national and local levels to realize the ultimate goal for safeguarding of development benefits for rural communities from future climate change induced risks and sustain human well-being. With the support, institutional gaps have been addressed and the MoNRE in partnership with MoHA, Ministry of Agriculture and Forestry, Ministry of Planning and Investment were involved and demonstrated ownership at the national level. However, further support is needed to strengthen these ownerships.

3.3.5 Mainstreaming

Project mainstreaming into UNDP CPDs & UNDAF:

The project has applied a holistic Community Risk and Vulnerability Analysis (CRVAs) approach combined with poverty reduction and sustainable development to carry out the planned activities, which covered two UNDP country programs (2012-2016 and 2017-2021). The project is very well aligned with both documents. It is significantly contributing to sustainable natural resource and environmental management and adaptation to climate change under UNDP CPD’s outcome 2, UNDAF’s outcome 8 on climate change adaptation and mitigation, and natural disaster vulnerabilities. It is also aligned with the UNPF’s outcome 3 and UNDP strategic plan outcome 5 - Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change.

In particular, the project is directly contributing to one of the key intervention areas of UNDP on the increase of climate resilient of communities through small-scale infrastructure initiatives.

Gender mainstreaming:

The Evaluation Team found that gender considerations and ethnic group issues were acknowledged in the Project Document as important factors for success given the differentiated roles of men and women in natural resources management, disaster risks reduction and climate change resilient, and for the sustainability of the project. These considerations were especially taken into account when designing and implementing Community Risk and Vulnerability Analyses (CRVAs) at project site level, to ensure gender equal access to project resources that address the vulnerabilities and adaptation needs of all ethnic groups. Interviews showed significant changes in the daily task load for women especially (activity transfer but not role change) both for irrigation schemes and water supply systems (see gender impact pg. 49).

3.3.6 Elements of Sustainability

Sustainability is the likelihood of continued benefits after the project ends. As under GEF criteria, each sustainability dimension is considered critical, the overall ranking cannot be higher than the lowest one.

Overall project sustainability *RATING*: Moderately likely

3.3.6.1 Social & cultural risks to sustainability

Extensive efforts were undertaken to enhance project’s results ownership - especially at community level -.

Community ownership is variable but in general weak: while some communities developed a strong sense of ownership in relation to the infrastructures, the approach remained very classical with maintenance carried out by the communities and repairs by Government. When there is a breakdown, communities will expect the Government to assess the situation, make the necessary repairs or even ask for a community contribution; this means that it is up to Government to take the lead in case of repairs.

Interviews showed that there was no significant mind-set change of district authorities and local communities on how to approach the issue of infrastructures sustainability. Through climate proofing infrastructures life expectancy was just extended – possibly 2-3 fold – but when damages will eventually occur, it will be up to Government to resolve the issue (see recommendations on how to change this approach)

This has to do with the development approach adopted by Government/UNDP: (i) pro-poor activities do not create enough financial resources for the beneficiaries to design a functional local M&R mechanism,

(ii) there is no indirect system to collect part of the infrastructures accrued benefits and reinject it into the sector (see socio-political sustainability).

In certain cases, ownership can be weak as well (e.g. some water supply systems with free of charge access to pumped/tap water, committees that do not meet regularly for some irrigation dams). Once communities are used to utilise freely the system or leave it unchecked, it will be very hard to reverse policy and request fee and contributions.

Under such one case of water supply system, organising the committee was delayed because additional EbA activities were expected by the end of the project, evidencing again the issue of having two separate lines of implementation and not adopting a more holistic approach to climate proofing infrastructures by combining EbA and infrastructures construction using higher standards.

There are also notable exceptions (e.g. dam with floodgates favouring fishing and irrigated agriculture) where the community can organise itself to create a repairs/maintenance fund, meaning that local resources can be eventually made available when the stakes/potential benefits are high.

Socio-cultural sustainability RATING: moderately likely

3.3.6.2 Technical risks to sustainability

Interviews confirmed that the infrastructures are of much higher construction standards. This does not mean that they are on par with international standards for rural infrastructures. If their lifetime is 2-3 fold increased, they are still vulnerable to extreme events and poor design as was observed on several occasions.

This brings forward the issue of local capacity to correct initial design issues or engage Government/community resources for repairs to ensure long-term use.

Such mechanism does not exist and it is on a case by case basis that issues may be solved or not, depending on (i) community ownership to resolve the issue by own means, informing authorities when there is a problem (lack of community technical capacity and financial means), willingness (priority) and capacity (logistics) of authorities to assess the issues and come up with a solution (availability of financial resources and/or community mobilisation).

This may have been a missed opportunity to design a comprehensive mechanism to ensure long-term operational readiness of rehabilitated infrastructures.

In conclusion, if the horizon is limited to an arbitrary 2-3 times longer lifetime for climate proofed infrastructures, then the technical risks remain quite low if some basic maintenance is secured. However, even these infrastructures are not immune to serious damage in case of extreme events.

Technical sustainability RATING: Moderately likely (ML)

3.3.6.3 Institutional and organisational risks to sustainability

The institutional risks are very high for this project because it did not include a project component specifically designed to mainstream lessons learned at central level for replication and Government empowerment (e.g. adopting a new code/standards of construction, EbA-infrastructure linkages approach...). This is why the MTR urgently recommended the formulation of a comprehensive exit strategy to ensure that benefits are not lost by project's closure.

Eventually UNDP and the project team reduced substantially these risks by supporting/encouraging the mainstreaming of the project's results into new donor-funded interventions (UN-HABITAT, GPAR

phase II). This should however be considered as a stop-gap measure because it remains entirely donor-driven and not integrated into Government policies for deconcentrating further planning and technical responsibilities to the subnational level (see socio-political sustainability).

Moreover, institutional instability remains a risk with climate change/disaster management responsibilities’ transfer between ministries that can affect significantly any policy effort to integrate climate proofing into relevant institutions.

At this stage, these are the best options to ensure that the benefits of this project are useful and have some prospects of maintaining benefits over the next few years.

Still there are also some positive aspects:

- the upgraded DDF guidelines were officially approved, although there is little evidence of mainstreaming CR into Government routine procedures
- there is evidence of Government ownership for critical/strategic infrastructures with the release of national funds to complement project funds for some key infrastructures (including government taking-over of community mobilisation if needed), meaning that Government co-financing can be effective of the project’s results

Institutional and organisational sustainability RATING:

Moderately likely if results’ appropriation is confirmed through new donor-funded interventions (ML)

(Unlikely if there is no additional external support (U))

3.3.6.4 Economic and financial risks to sustainability

The economic and financial risks of the project are high because of the approach adopted in the project: its main focus is poverty reduction (reduce the poverty level and raise livelihood standards of final beneficiaries) through increasing the sustainability of infrastructures so that they can bring benefits on a more long-term basis for communities.

This social approach is largely valid for improving drinking water supply even though it has also brought indirectly some economic benefits (more household gardening as per evaluation interviews).

With regards to irrigation and flood protection, a pro-poor policy to development is insufficient because the potential for creating additional economic value has been largely overlooked with nearly exclusive support for the actual infrastructures. This may be logical to limit project’s scope (at least for financial reasons) but complementarities with other sectors then become critical and need to be sought at project formulation stage.

The project did not support the beneficiaries in taking advantage of these infrastructures beyond traditional use to create wealth and through a feedback mechanism ensure technical sustainability in addition to creating an economic impact (e.g. support farmers through expansion / intensification, invest into new activities because of added value of flood gates (fisheries, tourism...)).

Economic and financial sustainability RATING: moderately likely (ML)

3.3.6.5 Environmental risks to sustainability

The initial PRODOC clearly called for linking EbA measures with CR infrastructures. Due to a series of implementation issues, it was not possible to develop simultaneously projects that took into

consideration CV infrastructures and EbA measures to limit their degradation risks. Still, measures were taken *a posteriori* when most infrastructures were already completed. Interviews showed that this created some confusion on the part of both local district staff and final beneficiaries regarding the added value of these EbA measures that were seen more as project requirement (an add-on to be completed by project’s end) than being part of a larger-scale strategy to ensure long term sustainability of the infrastructures.

There was little understanding in securing EbA measures after infrastructures’ completion although capacity building training efforts proved their effectiveness with both district technical staff and local beneficiaries, aware of the need to link EbA with infrastructures.

This was most obvious for EbA measures taken nearly rehabilitated infrastructures (where beneficiaries are infrastructure users and have greatest responsibility on local land degradation), meaning remote environmental degradation affecting downstream infrastructures were not seen as relevant.

Environmental sustainability RATING: *Moderately likely (ML)*

Unlikely (U) for infrastructures that did not benefit from requested EbA measures

3.3.6.6 Socio-political risks to sustainability

At local level, interviews showed that autonomous decision making to take advantage of project’s results (e.g. apply updated guidelines locally for new infrastructures, integrate them into routine activities) is not yet on the authorities’ agenda as these still rely on guidance from the central level to use and develop/improve new concepts and initiatives. In that respect, the project has shown the limits of the Sam Sang Initiative on de-concentration and is evidence that empowerment will remain limited (hence the need for a more donor-driven agenda) as long as there is no clear policy to mainstream these project’s results into Government’ agenda as there might still be a perception that it is still difficult to move forward on development by combining climate resilience initiatives with economic development.

Socio-political sustainability RATING: *Moderately likely (ML)*

3.3.7 Potential impact

In this terminal evaluation, the impact of the project has been assessed in terms of changes or benefits achieved in social, economic, institutional, environmental areas as well as the changes achieved in terms of gender. An average rating for the impact was given.

Impact RATING: *Significant (S)*

3.3.7.1 Social Impact

Under component 1, a lot of activities were undertaken to raise awareness of communities (and district staff) on a number of issues (environmental degradation, accrued occurrence of extreme events, linking environmental degradation with drought/floods...). Activities were also carried out to ensure that communities are organised (through WUC and village committees) as a strategy to enhance infrastructures sustainability (maintenance mechanisms and sense of ownership) and mobilise communities to support EbA measures.

Interviews showed that there is, in general, a greater sense of community in supported communities: the project has facilitated the (re-)activation of community groups, community dialogue and cohesion

because of the need to participate in common decision-taking processes at project level (selection of infrastructure sites, in-kind contribution for infrastructures [mostly labour], support during CRVA and the development of EbA measures - full participation -).

Awareness on environmental degradation and infrastructure damage remains weak (but not the link with extreme events) and clearly additional support is necessary to support communities. There is still limited understanding of district staff in matching financial resources with CR criteria and the separate implementation of outcomes 2 and 3 did not help this process (e.g. district authorities still select infrastructures on a cost/economic basis with less attention to ensure CR, resulting in out of scope proposals that are inevitably rejected).

Social impact RATING: Significant (S)

3.3.7.2 Economic Impact

The project commissioned a purely economic analysis of a representative selection of infrastructures, concluding that there was a positive RoI for bridges and dams, and a negative RoI for water supply systems. This is not surprising but it did not consider indirect positive effects that the water supply systems may result into in terms of economics (less water-borne disease, more time for field works...).

For infrastructures related to agriculture (e.g. dry season rice fields, off-season vegetable production), there has been a positive impact of the intervention on poverty reduction through mainly increasing own consumption and creating surpluses for sale at markets.

The economic impact was nonetheless not so significant because farming supporting activities (expansion/intensification / diversification) were not included into the project or sought through complementarities (no income generation approach). This may be a lesson learned for future interventions as income generation is critical to ensure infrastructures sustainability and reduce pressure on environmental resources.

Economic impact RATING: Minimal (M)

3.3.7.3 Institutional Impact:

The impact of the project has been substantial on local institutions (district authorities and to a lesser extent at provincial/central levels).

Interviews showed a high degree of satisfaction of most if not all technical staff, in terms of capacity building activities with an increased understanding in (i) the general aspects of CR, (ii) the design of CR projects and technical specifications, (iii) upgraded standards for CR infrastructures.

It remains however very difficult to mainstream this knowledge outside of project limits.

A major issue that did affect this particular project has been the high turnover of technical staff (as well for the project team); while it may be a generic constraint outside of project's scope, it does affect negatively project's results – in particular its efficiency - and strategies need to be developed to work around this issue (e.g. support the development of a local HR policy within the State apparatus).

Institutional impact RATING: Significant (S)

3.3.7.4 *Environmental Impact:*

The environmental impact of the project remains very limited: 9 EbA measures were developed to address to reduce exposure of infrastructures to extreme events but these will likely have limited physical impact on the infrastructures as they are very area-specific.

The impact will likely be higher for EbA measures located closely to the infrastructures (immediate vicinity or within a small watershed), hence population can make the linkage between EbA measures and infrastructures protection.

Environmental impact RATING: Minimal (M)

3.3.7.5 *Impact on Gender:*

While the project did adopt specific methodologies to create awareness amongst men and women during implementation so as to generate more interest (hopefully resulting in increased ownership), the impact of the project is more obvious for the actual infrastructures:

- Travel time to carry water home from wells and ponds has been reduced, resulting in extended work in fields for women, more social interactions between women at home; frequency has been reduced as well.
- There has been also a (slight) increase in home gardening although it is difficult to assess whether the positive effects were more related to improved food security or income generation.

There was little evidence that EbA measures had any positive or negative direct effect on women.

Impact RATING for gender: Significant (S)

4. Conclusions, recommendations and lessons learned

4.1 Conclusions

Under conclusions are indicated the main achievements and strengths as well as shortcomings and weaknesses of the project.

The project has been ground-breaking for mainstreaming decentralised climate resilience at the subnational level in terms of:

- Design: the project was two-pronged by combining the rehabilitation of infrastructures with ecosystem-based adaptation measures
- Responsiveness: the participatory approach ensured widely accepted activities (selection of infrastructures, and ownership of the main results)
- Implementation approach: an existing mechanism (DDF) was successfully used a mobilizer so as to integrate climate resilience aspects into district planning for rural infrastructures

The project however failed i) to generate enough interest at central level so as to influence national policy making and ensure government replication / empowerment and (ii) to improve the sustainability model for infrastructures that still relies on a classical approach (maintenance by beneficiary population and repairs by the State).

If the combination of CR and GPAR is a model to follow, Government’s understanding is not up to par with the development opportunities that this model offers; this was however to be expected as the project did not carry out significant advocacy activities at central level to influence key decision makers to adopt this approach.

Overall, the project has been in line with Government and donor priorities but is also responding to a pressing need by populations: poor quality infrastructures combined with more extreme events result in damaged or obsolete infrastructures: the project managed to enhance substantially the lifetime of infrastructures and introduced ecosystem based adaptation measures although these were not really very effective and new interventions would require substantial fine-tuning of the approach.

With MoNRE overall implementing the project, a hybrid execution mechanism was used with centralised activity delivery by MoNRE for 2 components and decentralised execution by MoHA for infrastructures (1 component). This model resulted in a complex implementation that resulted in coordination difficulties (mainly at the start of the project), extensive delays and progressively an independent activity delivery by both ministries although critical to the success of the project was the need for combined implementation, in particular the need to link infrastructures with EbA measures: MoNRE was providing technical support from central level to DONRE/PONRE; these were therefore relying on MoNRE for approval (technical issues) of projects prior to using the DDF mechanism (fund disbursement).

Somehow, alternative mechanisms should be sought, should CR interventions be replicated again. Critical to this project’s success was the collaboration between UNDP and UNCDF so as to utilise the DDF mechanism that was sponsored under a previous intervention by UNCDF.

In operational terms, the project managed to enhance local capacity of district technical staff on DDF delivery mechanism, technical knowledge on CR, guidelines for infrastructures climate proofing