

completed right before the Midterm Review. All outputs marked with yellow are on target to be achieved, considering the current efficiency level of PMU and partners. Two outputs are however not on target to be achieved during the implementation period:

Output 1.1.2 Formulated and endorsed National CCA Strategy. The problem here is not lack of efficiency, but processes, procedures, and a recent institutional review outside PMU's control. There is a Draft Concept document, but the process has taken long due to many stakeholders involved. The Strategy would not be moved forward before the CC Adaptation Policy (CCAP) has been approved, because it has to build on the bill. *The Consultant recommends* an interaction with the political circles (through ACEO and CEO) so the project could support this important political process. At the same time a draft CCA Strategy should be developed. There is a risk that approval of the bill would take longer than the duration of the project, with the consequence that the CCA Strategy would not be approved before the project ends.

Output 2.2.1 At least 100 Village Disaster Risk Management Plans implemented through the Project. This target is quite high, if the complete 5 modules should be completed for all. The project is working towards a resolution, realigning work plan and activities, and seeking parallel funding sources *The Consultant recommends* requesting NEOC for a budget proposal to cover all the remaining 99 villages based on the lessons learned so far, including possible increased manpower in NEOC. Funds should be transferred in January 2018 from other components/partners that are not on track to use their available budgets. If budget transfers are not enough to complete all villages, MNRE with support from UNDP should explore possible additional public funds and co-funding agencies.

Fig. 8. Processing data at NEOC

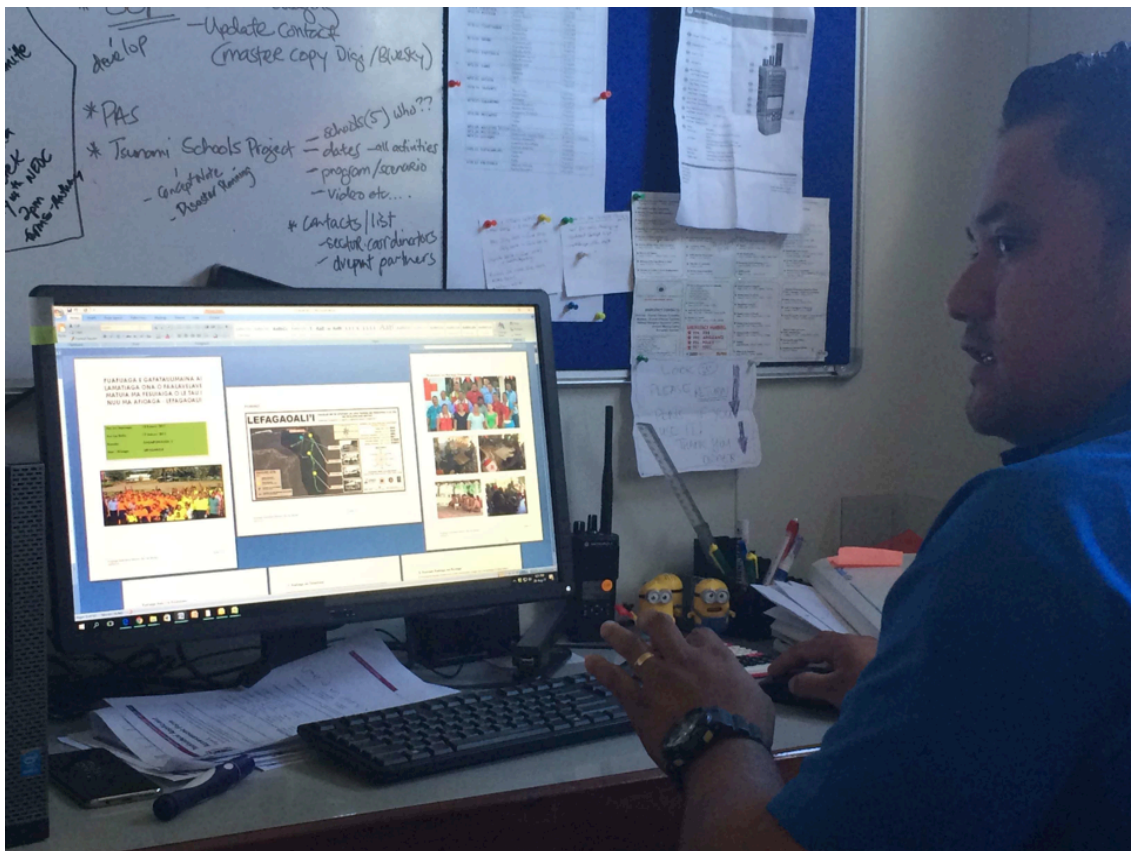


Table 6. Progress towards Outcomes Analysis

Project Strategy	Indicator	Baseline Level	Level in 1 st PIR (self-reported)	Midterm Target	End of Project Target	Mid-term Level & Assessment	Rating*	Justification for rating
Objective: Establish an economy-wide approach to CCA in Samoa, aimed for efficient integration and management of adaptation and DRR/DRM into national development planning and programming, and enhancing resilience of communities' physical assets and livelihoods across Samoa to CC and natural disasters	1. Increased capacity within GoS for coordination of cross-sectorial actions for CCA, including planning, budgeting, implementing and M&E.	1. Capacity for national coordination of CCA and DRM is presently limited (Level 3: Partially developed capacity).	3 project steering committee meetings and 4 Technical Advisory Group meetings. Main issues discussed and resolved, reallocation of component 1 (funds from 2.1) to include review of National Building Code. 3 TA's to carry out this work.	N/A	1. GoS will have sufficient capacity for effective coordination of cross-sectorial actions for CCA (Level 5: Fully developed capacity).	In progress	MS	Gradually improving capacity in GoS for cross-sectorial coordination on CCA
	2. Integration of CCA and DRM into the Strategy for Development of Samoa 2017–2021.	2. Integration of CCA and DRM in the Strategy for Development of Samoa 2012–2016 is limited.			2. Endorsed Strategy for Development of Samoa 2017–2021 that includes CCA/DRM	New National Environment Sector Plan 2017-2020 includes mainstreaming of CCA and DRM of this project.	MS	CCA and DRM is high on the political priority list and is expected to be integrated into the Strategy
Outcome 1.1 <u>Policy Strategies/Institutional Strengthening:</u> CCA and DRM mainstreamed in relevant policies, sectorial strategies, sub-national strategies and budgeting processes through enhanced coordination of government institutions	1.1.1. Sector plans that include specific budgets for adaptation actions	1.1.1. Four sector plans do not include CCA	New National Environment Sector Plan 2017-2020 includes mainstreaming of CCA and DRM of this project. Matrix of all adaptation projects in Samoa initiated	N/A	1.1.1. Updated and approved sector plans.	9 updated Sector plans: Community, Environment, Water, Agriculture, Health, Education, Public administration, Transport, Communication	HS	Target completed
	1.1.2. Formulation and endorsement of National CCA Strategy.	1.1.2 No National CCA Strategy			1.1.2. Formulated and endorsed National CCA Strategy.	Draft Concept to formulating NCCAS	U	See explanation page 13
Outcome 1.2 <u>Public finance management at the national and village level:</u> Capacity to access, manage, implement and monitor use of CC funds is enhanced at the national and village level.	1.2.1. Increase in number of community-managed projects for adaptation to climate risks.	1.2.1. Few community-managed projects for adaptation to climate risks.	ToR for benefit analysis tool prepared and consulted to guide procurement of a technical assistant to implement this activity. Initial preparations and discussions guided towards development of this output is aligned with the leading implementing agencies priorities so that it meets the proposed expected outcome. A draft TOR available for review by MNRE and MoF with assistance of UNDP before procuring the consultancy services. Not proceeded with recruitment of TA as the funding is being used for the building code.	N/A	1.2.1. At least 20 community-managed projects for adaptation to climate risks.	Communities trained, but no community-managed projects for adaptation to climate risks.	MU	Communities are gradually achieving knowledge and capacity to take on local projects
	1.2.2. Improved monitoring of government expenditure on CCA.	1.2.2. No monitoring of public expenditure on CCA			1.2.2. MoF-CRICU and MNRE-CCU have improved capacity to monitor expenditure on CCA	MoF initiated process of improving monitoring of Government expenditure on CCA	MS	Meeting with MoF showed that this ministry is in control, and monitoring expenses on CCA through agencies and NGOs

Outcome 2.1 Protection of communities' physical assets and livelihoods: Increased resilience, and decreased exposure and susceptibility of communities to CC and natural disasters by protection of household and community assets and promoting resilient livelihoods.	2.1.1. Number of people benefitting from improved flood management through implementation of hard and soft measures for protection of community assets.	2.1.1. No people benefit from improved flood management from climate-resilient flood protection measures introduced in Vaisigano River catchment for protection of community assets.	6 Consultants to develop integrated Watershed Management Plans (IWMP) for Apia city. Consultations and data collection as well as format of IWMP completed (Experts on Flood and drainage, Environmental engineering, Data analysis, GIS, Socioeconomics, and Climate change). In-country mission for the team Feb 2016, Stakeholders consultations and data collection. Inception report from the team. Design of flood protection wall completed. Report from 3 community consultations. MOU with this community in progress. Tender for wall construction in progress.	N/A	2.1.1. At least 12,000 people benefit from improved flood management from climate-resilient flood protection measures introduced in Vaisigano River catchment for protection of community assets (6,000 male and 6,000 female).	<ul style="list-style-type: none"> Revised Nat. Building Code English version, incl. Standard Plans. Trainings on use of Building Code Final draft IWMP and Validation workshop (100 participants) Final designs River Wall Segment 1 + parts of Segment 2-3. Community consultations (300 people) Segment 1 Contractor and Supervisor 	MS	Review of products and technical documents, incl. river wall design; Field inspection together with Contractor and Supervisor companies
	2.1.2. Number of people with increased income – compared to the control group – as a result of diversified livelihood practices and more secure access to livelihood assets, disaggregated by age and gender	2.1.2. No difference in income between targeted and control groups owing to diversified livelihoods and secure access to livelihood assets.			2.1.2. At least 600 beneficiaries adopting diversified livelihoods have demonstrable increases in income compared to the control group, owing to more secure access to livelihood assets (at least 400 women irrespective of age and 200 youth irrespective of gender).	<ul style="list-style-type: none"> No beneficiaries data CDCRM Household Survey completed in 100 villages Ministries, NGOs, civil society, trained on database access 		Feasibility study completed indicate that the component could be finished as planned, however the Consultant suggests several modifications to improve impact (see 5.4.2)
	2.1.3. Number of people adopting household level processing facilities transferred to targeted groups disaggregated by age and gender	2.1.3. No people have adopted and utilised household-level processing facilities to support diversified livelihoods			2.1.3. At least 600 beneficiaries in project interventions adopt and utilise household-level processing facilities to support diversified livelihoods (at least 400 women irrespective of age and 200 youth irrespective of gender).	METI training in 15 villages (50 beneficiaries) MWCSO: No number on beneficiaries yet, but could reach higher number than target		Meeting with METI; Field trip to villages including conversations with local beneficiaries and field staff

Outcome 2.2 CCA/DRM plans and implementation: Increased adaptive capacity of communities for implementation of effective risk management and protection of household and community assets.	2.2.1. Number of villages covered by Village Disaster Risk Management plans to reduce risks of and respond to climate variability	2.2.1. No Village Disaster Risk Management Plans implemented by the project.	Contracting of consultancy service to carry out household analysis and survey for CCA and DRM disaster risk management completed. Principal officer for community preparedness and DRM coordination has commenced his services.	N/A	2.2.1. At least 100 Village Disaster Risk Management Plans implemented through the project.	Information collected is useful for design of village plans for DRM & Climate Resilience. 1 Village Disaster Risk Management Plan (Tafua) awaiting DAG approval	U	See explanation page 14
Outcome 3.1 Knowledge about CCA and DRM is captured and shared at the regional and global level.	3.1.1. Increased capacity of government staff to access information on climate and disaster risks as well as M&E on CCA.	3.1.1. Low capacity of government staff to access information on climate and disaster risks as well as M&E on CCA.	Reports from consultants to technical advisory group on community consultations and the reporting. PMU initiated discussions on platform for project results to be uploaded and shared as discussed.	N/A	3.1.1. Key officials from MNRE-CCU and MoF-CRICU will have sufficient capacity for accessing information on climate and disaster risks as well as M&E on CCA (Level 5: Fully developed capacity).	<ul style="list-style-type: none"> EWACC website with links and reports Much info from IWMP Awareness campaign River wall Awareness campaign Building code EWACC Facebook EWACC publications: (i) Management reports; (ii) Technical reports; (iii) Field reports Awareness material: Advertisements, leaflets, DVD and CD toolkits, posters, banners, vests, etc. 	HS	Meetings with MNRE, MoF and PMU; Review of M&E System; Review of publications, reports and other information material on CCA

*6 point Progress Towards Results Rating Scale: HS, S, MS, MU, U, HU

Indicator assessment key:

Green= Achieved	Yellow= On target to be achieved	Red= Not on target to be achieved

Regarding the information tracked through the GEF Climate Change Adaptation Monitoring and Assessment Tool, only seven targets were defined from the start, and several of them did not have baselines. This makes it nearly impossible to review compliance. Regarding the mid-term results, a lot more information has been registered in the GEF CCA tracking tool, mostly corresponding with the project outputs. However, since they don't correspond to any targets, they have not been included in the following table. The Consultant's comments are given in the right column.

The most important EWACC issue that is monitored through this tracking tool is the level of integrated disaster response measures to extreme climate events. The tracking tool mentions disaster risk management plans but not the target number, however the project's results framework defines the target of 100. As mentioned previously in this chapter, only one plan has been finished, and NEOC is lacking both human resources and funds to be able to comply with the target. This requires transfer of project budget funds or additional funding from other sources.

Table 7. Summary of compliance with targets in the GEF CCA tracking tool.

Indicator	Target at CEO endorsement		Baseline		Mid-term Results			Comments
1.1.3 For each action listed under 1.1.1, indicate to what extent targets set out in plans have been met	2 = Significantly		-		2			No targets listed in 1.1.1 (Adaptation actions implemented in national/sub-regional development frameworks), still 2 mid-term results.
1.2.11 % of population with access to improved flood and drought management (disaggregated by gender)	Female: 45	Male: 45	-	-	45	45		Target could be understood as at least 45% female and 45% male, but mid-term result should total 100.
1.2.15 % of targeted population benefitting from improved flood management through implementation of hard and soft measures for protection of community assets	Female: 100	Male: 100	Female: 0	Male: 0	Not mentioned	Not mentioned		Target probably meant to be all female and all male.
1.2.18 Type and level of integrated disaster response measures to extreme climate events introduced to increase no. of lives saved	Type: Disaster risk management plans	Level: Local (village)	None	N/A	Type: Simulation and response toolkits introduced to communities through CDCRM	Level: Community		According to Results framework, the target should be 100 village disaster risk management plans, and according to QPR so far 1 plan is finished (not yet approved)
					Village disaster management plans	Community		
1.3.1 Households and communities have more secure access to livelihood assets	Female: 4 = Secure access to livelihood resources	Male: 4 = Secure access to livelihood resources	Female: 2 = Poor access to livelihood assets	Male: 2 = Poor access to livelihood assets	Female: 1 = No access to livelihood assets	Male: 1 = No access to livelihood assets		According to the figures the situation is worse today than at the project start, probably not right.
2.2.1 No. and type of targeted institutions with increased adaptive capacity to reduce risks and response to climate variability	No: 100	Type: Local communities (villages)	0	Local communities (villages)	5	Not mentioned		The indicator "targeted institutions" does probably not consider villages.
3.1.1 % of targeted groups adopting adaptation technologies by technology type	House-hold level processing equipment for agric. products	Female: 70, Male: N/A	Female: 0	Male: N/A	Type	F	M	The results are not related to the planned types of technology. The female and male does not sum 100 (probably understood as % of the females and % of the males)
					QGIS manual	60	50	
	Sewing machines for handicraft production	Female: 70, Male: N/A	Female: 0	Male: N/A	CDCRM	40	40	
					Infrastructure	30	70	
					METI	70	40	

As mentioned, project design might have affected effectiveness (as well as efficiency), including the lack of joint efforts in the territory. There is transparency in the Project's effectiveness based on defined strategies and goals with broad public information. A reallocation of component 1 was done in agreement with MOF to include the unanticipated result Review of National Building Code, requiring funding from output 2.1 (see financial management).

The remaining barriers to achieving the Project objectives are:

- Institutional capacity on different levels, especially capacity to efficiently and timely carry out procurement processes
- Enough staff to carry out large tasks (like national household survey)
- Lack of sufficient coordination between the project partners in the territories (even though Technical Advisory Group encourage coordination)

The Consultant reviewed aspects where the project has already been successful, and found the following ways to further expand these benefits:

- **Immediately encourage use of lessons learned through the project**, not waiting for final evaluation. This could be done e.g. through: (i) National and local inter-institutional seminars and workshops with the participation of all project partners, and other organizations/projects working in the same areas; and (ii) Coordinated efforts in the territories.
- **Implement environmental and social recommendations from IWMP** on local level. That means not only focus on the river wall, but on an integrated watershed approach based on priority sub- and micro-watersheds, where participatory processes should be encouraged with the villages to improve their environment (and therefore also protect the whole Vaisigano watershed).
- **Encourage collaboration with the GCF financed project** both during the feasibility study and implementation of this project, based on information and lessons learned from EWACC/IWMP. This would also assure an integrated watershed management approach to planning and implementation in the whole watershed, to the benefit of both projects.

5.2.3. Efficiency

Efficiency: How economically the resources and inputs (funds, expertise, time, etc.) have been converted to outputs

The results achieved until Mid-term (defined in 2.4) reflect the efficiency or lack of efficiency with the use of available resources, including time, human resources, equipment and budget resources. The available budget seems adequate, considering the tasks to be carried out, but another question is if the project should have been designed differently (see 2.1). Financial management has been relatively efficient (considered in 2.8).

Reviewed strictly as a relation between inputs and outputs, the project has *achieved much with limited resources*, however a higher % output progress and more disbursements should have been expected at mid term. This is a reflection of the delay in the beginning, however the Consultant considers that with the current effectiveness and efficiency (2017) the project would soon achieve a more normal % of progress compared with the timeline.

The majority of funds are allocated to the design and construction of the river floodwall. This is an issue that could be discussed from a technical point of view (considering the project title), but in this chapter only the efficiency aspect would be discussed. From the start of the mission, the Consultant was worried about the high % of funds going to the

river wall, compared with other components, and also the priority given to infrastructure in the lower part of the Vaisigano watershed, since it is well known that investments in the upper part of watersheds are the most cost-efficient. These worries were reduced learning about the new GCF funded project of US\$ 57 million that would cover the rest of the watershed, and partly build on the results from EWACC.

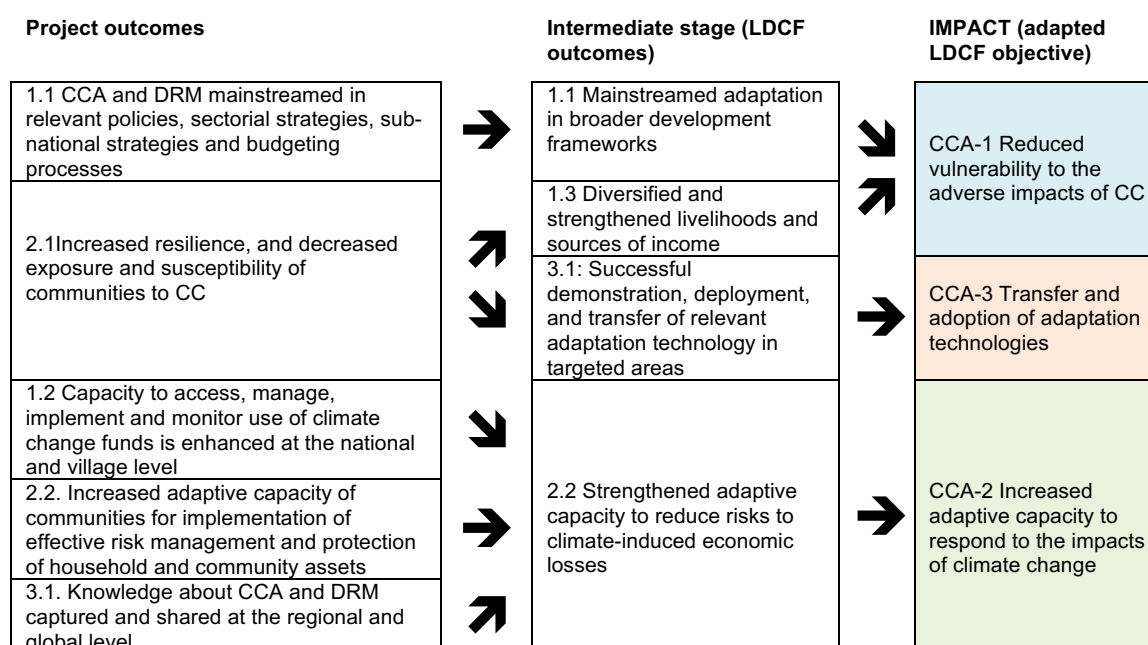
From the moment the PMU achieved its core staff of 6 persons, the project has been efficiently managed on central level, however the degree of efficiency among implementing partners is variable. In general terms the experience is that contracting of firms take time during the procurement period, but once contracted the efficiency is higher than for the activities carried out by most public or private implementing partners. The timeliness of funds has not been any problem, since the project and implementing partners work based on a rotational fund. Problems with procurement delays have been reduced thanks to daily follow-up from PMU and especially the administrative-financial officer. PMU has also complied with the regularity of quarterly progress reports on activities and costs.

5.2.4. Impact

Development impact: Positive and negative, primary and secondary, long-term effects produced by the Project, directly or indirectly, intended or unintended

The project's objective, to establish an economy-wide approach to CCA in Samoa, is aiming for efficient integration and management of adaptation and DRR/DRM into national development planning and programming, and enhancing the resilience of communities' physical assets and livelihoods to CC and natural disasters. The objective is in fact a summary of what the project intends to achieve, but it is not the real impact. A flow diagram from outcomes to impacts is more related with the **contribution toward higher-level development changes** defined in the GEF-LDCF objectives, as shown in the following figure.

Fig. 9. Process from outcomes to impact



Regarding the target groups of each component during the period covered by the review, compared with the indicators in the project framework and results framework, the household survey would have been an excellent baseline for the assessment, i.e. before and after any project activities take place, and that as also the idea according to the Project document. The survey collects important demographic and socio-economic data

including outcome variables of interest such as income, child and family health indicators, and enterprise data profits. Since the data from the household survey is being processed and not yet available, it has not been used during the MTR to evaluate impacts of on-going project activities. Once again it is necessary to highlight the importance that all project field activities take place in villages covered by the household survey, so the final evaluation can be able to review impact of activities that have taken place. However, that would also require an additional survey, at least in a sample of selected villages, to compare with the baseline.

Due to the mentioned limitations, the Consultant has used official statistics and figures from the IWMP as sources to estimate the beneficiary population. According to Samoa Bureau of Statistics the population of Samoa was 194,899 in 2016, divided by 157,527 in rural areas and 35,957 (18.5%) in urban areas. That makes Samoa one of the least urbanized countries in the world. The urban population had a declining population rate of 0.5%/year 2001-2011 (and probably after that), while the rural population is increasing slightly. With only one city, the urban population corresponds with the Apia Urban Area ('AUA'), and the beneficiary population of the project for the IWMP and river wall would be not more than 40,000, considering also the rural villages. According to the IWMP there has been significantly increase in migration 'up the hill' and to the suburban areas west of central Apia.

The population of Samoa is divided in 360 villages, of which the Household survey will cover 100 (27.8%). Please note that "villages" are found also in the urban area. The household survey would therefore cover approximately 54,000 people. This population should however not be regarded as beneficiary population is only the survey has been carried out. What is important for community resilience is to continue the process with mitigation planning, response planning, simulations and training.

Considering the same population density, METI would cover a direct and indirect beneficiary population of approximately 8,120 with project funding, and MWCSO a direct and indirect beneficiary population of approximately 7,580. Additional beneficiaries could be reached through scaling up the same activities, with or without EWACC funding.

The beneficiaries on national level would of course be the total population of Samoa through improved institutional capacity on climate change adaptation and disaster risk management, as well as nation-wide products like the new building code. The project is participating in improving the institutional capacity of MNRE, MOF, MWCSO, MWTI and the Land Transport Authority regarding mainstreaming of CC resilience and DRM in their daily work, and in reaching out to beneficiaries around the country.

Table 8. Target population for partner agencies

Partner agency	No of villages	Estimated population (2016)
MNRE, MOF, MWCSO, MWTI (national level)	360	194,899
MNRE-IWMP implementation and river wall		40,000
NEOC (EWACC funded)	100	54,138
MWCSO (EWACC funded, local level)	14	7,580
METI (EWACC funded)	15	8,120

If successful, the EWACC project could in the future catalyse beneficial development effects, especially on mitigation of climate change and natural disasters, since it is a well-known fact that prevention and mitigation is more cost-efficient than emergency aid and reconstruction. Other potential long-term impacts of the project have to do with governance and institutional strengthening in the public sector, employment and income generation directed against women and youth through MWCSO's company incubator, and improved agricultural production and health through METI's focus on permaculture and healthy diet. It is important that all partner agencies assure a good baseline and maintain monitoring of results and impacts throughout the implementation process, at

least on an annual basis.

5.3. Project Implementation and Adaptive Management

Project management: Organization and administration of the resources to permit finalizing on time, complying with the results, time and cost planned initially

5.3.1. Management structure

The project has a relatively top-heavy structure compared with its size:

1. The Cabinet Development Committee (CDC) is the highest-level authority for development projects in Samoa, chaired by the Prime Minister. It further includes all Cabinet Ministers and Associate Ministers, Government CEOs and Assistant Chief Executive Officers (ACEOs). CDC approves all new projects and endorses all progress reports provided by the Project Board.

2. The National Steering Committee (NSC) is a common steering committee for the main climate adaptation projects, financed by GEF-LDCF, the GEF Adaptation Fund (AF), Pilot Programme for Climate Resilience (PPCR) and the Pacific Resilience Programme (PREP), but other projects could be included. NSC is fundamental for the supervision of the project, and consists of (i) The Executive Agency: CEO of MNRE assisted by the ACEO; (ii) UNDP; and (iii) Partner agency representatives: MoF, MWCSO, MWTI, NGOs and Chairs of District-level Committees. The Steering Committee is the main executive decision-making body of the project, and provides oversight and guidance for project implementation.

3. The Technical Advisory Group (TAG): This group is specific for EWACC and consists of different divisions in MNRE, UNDP, all project implementing partners (MoF, MWCSO, MWTI, Land Transport Authority, METI), Disaster Management Office, Scientific Research Organization of Samoa, and main project contractors. The committee is important for exchange of technical information about the project components and their progress, and should also encourage inter-institutional coordination. The committee reviews and approves annual work plans, quarterly work plans, quarterly progress reports, and project implementation reports (PIR), all with financial statements, to be endorsed by MNRE and UNDP. If the project has used more than 80% of last disbursement, the committee would request transfer of more money from UNDP.

4. The Implementing Agency: MNRE's Chief Executive Officer (CEO) is the implementing agency's person in charge as Project Director, and the following in line is the ACEO whom is the Deputy Project Director. MNRE also appoints the Project Coordinator (PC) who is directly in charge of overall planning and implementation of the project based on the project document and results framework, as well as coordination of the PMU.

5. Project Management Unit (PMU): The project is managed by a small Project Management Unit, consisting of the Project Coordinator, three technical officers and an administration assistant. PMU may also incorporate short-and medium term consultants.

5.3.2. Performance

As mentioned, the project had a slow start and a weak project performance in terms of outputs and disbursements during the first period. From the moment of the complete PMU was on board, the implementation has improved a lot, but the level of disbursements is still low (see below). The project monitoring carried out by PMU is results-based, focusing on outputs and outcomes. Considering the relatively good percentage of compliance during the last year, and especially during the last months, the Consultant concludes that there is a relatively good possibility of finishing most targets on time. The Consultant considers that the PMU now is organizing and administrating the resources efficiently, including:

- The performance of key functions and the ability to act as a facilitator of processes at local and national level
- Monitoring plans, activities and results of the implementing partners, and the beneficiaries in these activities
- The budget and procurement plans, and organization/administration of resource use, as well as planning and follow-up of procurement processes
- Production of technical reports, awareness raising and production of information material for the general public.

The decision-making process for the project is transparent, however the top-heavy structure might delay decision-making and activities in certain periods. Even though PM is given the authority to deliver expected project targets on a daily basis, a possible area of improvement would be to delegate stronger but simple decision-making rights to the Project Manager and focus on high-level supervision on compliance with outputs, impacts and budget allocation. Project monitoring and project supervision should concentrate on the targets defined in the Results Framework approved by UNDP and GEF, without giving so much importance to short-term (quarterly) planning and results.

The GEF Partner Agency (UNDP) has provided excellent support that is recognized by the PMU and MNRE, including monitoring the realism of planning and achieved results through review of Work plans and Quarterly progress reports, as well as meetings with PMU, ACEO/MNRE and MoF. UNDP has also played a proactive role in the meetings of NSC and TAG, and follow-up on meeting decisions. The UNDP Task Manager (TM) has monitored that the Executing Agency (through PMU) and partners after the initial delay had a mostly timely compliance with outputs according to work plans, complying with budgets and procurement rules. The TM also reviewed the quality of deliverables like reports and management plans.

To improve efficiency of implementation, UNDP provided Project Management training to MNRE/PMU. Risk monitoring was done based on the risks defined in the project document, reviewing PMU's responsiveness to the risks, however other risks appeared and were treated more ad-hoc in the QPR and TAG discussion (see 5.3.4). Other issues were also handled directly, partly in dialogue between UNDP and PMU and partly through TAG. Implementation problems, e.g. related to slow procurement processes in the initial period, were dealt with through advice to PMU and dialogue with the Government through TAG and other meetings. One area of improvement from UNDP's side would be to carry out more field inspection trips together with PMU and MNRE staff, which would give better basis for advisory to them, however the number of such trips might increase in accordance with gradual increase in local project activities from several implementing partners. The project results so far are partly the result of UNDP's continuous follow-up on MNRE/PMU. The strengths and weaknesses of the Executing Agency and partners are dealt with in other parts of the report.

5.3.3. Stakeholder engagement

The project has leveraged the necessary and appropriate partnerships with national stakeholders, especially the ministries MNRE, MoF, MWTI and MWCSO. The different degree of progress so far is therefore not a reflection of different degree of partnership but rather of the strengths and weaknesses of the different ministries, as well as the quality of project design. Regarding local stakeholders, these have so far only been integrated through several surveys (NEOC, MWCSO and community surveys as part of the IWMP), and a part from that in the METI public awareness and training activities at village level, focused on healthy diet and permaculture. This means that so far there have been no real local stakeholder activities on important topics for CCA and DRM, like micro watershed management, disaster risk mapping and early warning systems. This is an area of improvement through increased public awareness on these topics and implementation of the village disaster risk management plans.

5.3.4. Reporting

Adaptive management and management changes reported from the project partners were incorporated into the Quarterly Progress Reports (QPR) and PIRs prepared by the PMU. There have not been any PIRs with poor ratings. As mentioned in 5.3.1, TAG reviews, discuss and approves the PIRs and QPRs, as well as annual and quarterly work plans.

The QPRs included mostly information about implementation results, however some issues were reported that required action and adaptation:

(i) In 1st Quarter 2016 issues were reported regarding expenditure rate (logically related with activity rate). The defined measure was that PMU would “initiate and drive project objectives aligned with low burning rate of budget”. At the same time it was decided that “Preliminary M&E development for EWACC to be initiated within 2nd Quarter to support and catalyse implementation for the project”;

(ii) The 4th QPR 2016 reported that much of the delayed implementation within 2016 was due to wall design and construction. The defined measure was that a geotechnical assessment report would finalise costs of quantities for re-advertising the tender. The QPR included a schedule of dates, which proved useful for putting the process back on track, however the schedule was updated in 1st QPR 2017.

(iii) The 1st and 2nd QPR 2017 both mention that “reprioritising of project activities has been in discussion as two major infrastructure developments are to be implemented within this year”. However, the measure defined was not very concrete: “There is a need for some of the activities in other components to be developed faster”.

As mentioned in the review of the Quality of Project Design, the risk definition was not very good. However, some of the QPRs (2nd and 4th quarter 2016, 2nd quarter 2017) also included a risk matrix. Even though they are not directly related with the risks in the project document, and they are clearly on a shorter time horizon, most of them are real risks (7 out of 11) considering risks as something outside PMU’s control. Please note that some risks mentioned in 4th quarter 2016 are repeated in 2nd quarter 2017 with a slightly different approach for mitigation.

Fig. 10. Building code and standard housing models

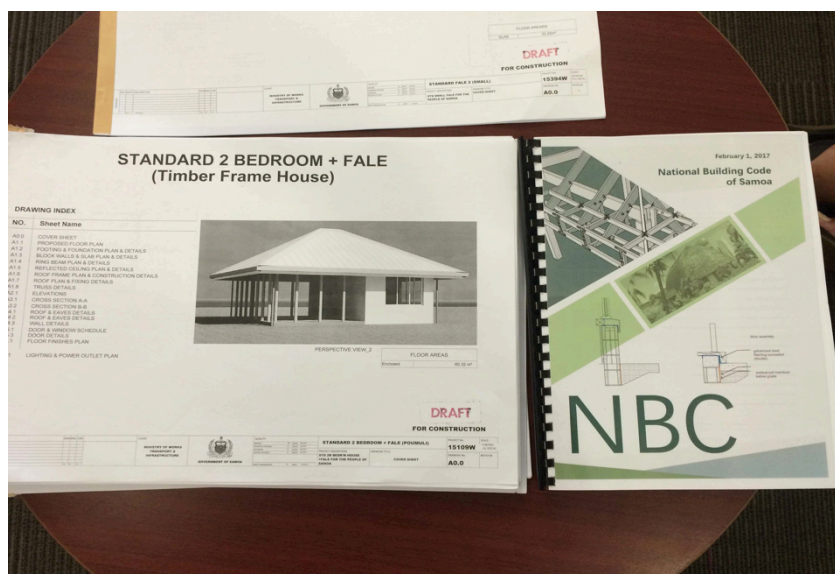


Table 9. Risks reported in the quarterly progress reports (QPR)

QPR	Risk type	Description (abbreviated)	Rating	Reduction strategy (abbreviated)	Observations
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2-2016	Operational	Internet connectivity problems	H	Sourcing reliable Internet provider	Not a risk
	Operational & Strategic	Unforeseen obstacles in the wall design and construction	H	In negotiations with Aggies Sheraton Managers with reference to undertaking liability for possible future damages due to their wall not being removed	
	Organizational	Community participation and obstruction of river wall	H	Consultations and signed MoU with communities residing along river wall	
4-2016	Political	Approval of winning contractor depends on Tender's Board	Not def.	PMU mobilizing MoU with Vaisigano residents and Chiefs, and make known presence of team responsible for investigation.	Risk and mitigation not strongly related
	Organisational	Mandates of other org impact delay of contracts	Not def.	Work in partnership through legal division	
		Limited PMU control of other ministries priorities	Not def.	Assist and facilitate follow-up to responsible agencies for clearance of contracts	
	Financial	Constructing all segments of flood wall has great impact on funding available	Not def.	Segment 1 to be budgeted and constructed first. Collaboration with EPC so part of the wall is built to allow penstock to be laid while waiting for extra funding.	Not a risk
2-2017	Organizational	Some project activities delayed compared with ProDoc	Not def.	Setup working groups for components 1 and 2 to advance implementation	Not a risk
		Mandates of other org impact delay of contracts.	Not def.	Work in partnership through legal division	
		Limited PMU control of other ministries priorities	Not def.	Deputy Director support to PMU and partners; and legal services of MNRE to finalize contracts	
	Financial	Constructing all segments of flood wall has great impact on funding available	Not def.	Segment 1 to be budgeted and constructed first. Segment 2&3 construction commissioned with EPC pipe alignment. Extra funding from GCF to complete wall construction.	Not a risk

5.3.5. Communications

The communication between PMU and national stakeholders is fluent and effective, mainly focused on the implementing partner agencies. For non-problematic implementation issues the communication is direct with the persons in charge in the ministries (including different divisions of MNRE) and agencies/NGOs, while issues that affect implementation progress are taken up through ACEO and TAG to receive support for resolution. Communication with local stakeholders is managed from PMU through the agencies (NEOC, MWCSO, METI) including field inspections. Another example where MNRE/PMU was directly in charge was the village survey in the Vaisigano watershed related with the IWMP. PMU has also produced a lot of information material to contribute to the stakeholders' awareness of project outcomes and impacts. Local events, like implementation of the P3D model approach, are also providing information and awareness rising on local level.

A lot of information data about local stakeholders, their households and environment has been collected through the NEOC and MWCSO surveys and IWMP village consultation. The village consultation also gave the opportunity of feedback to the plans for Vaisigano watershed, especially the river protection wall. Other feedback communication from local stakeholders is going from local level to the implementation partners (so far only METI) and is integrated in the partner's progress reports if they find it important. No specific stakeholder group is left out of communication, and the project's safeguards would not

allow that to happen. For open external information the project is using the Facebook page <https://m.facebook.com/ewaccproject/>. Information to the general public is also provided through the ministry website www.mnre.gov.ws, which recently was upgraded.

5.3.6. Project-level Monitoring and Evaluation Systems

The project monitoring tools and tracking system currently being used by the PMU are aligned with the national systems as required by the Government. The M&E system provides the necessary information on activities, outputs and outcomes, but not on impact. This is an area that should be strengthened to facilitate the work for the final evaluator. The implementing partners are involved through presentation of their quarterly work plans and reports. The PMU should review if all partners count on good and reliable baselines, and if they include the aspects of economic, social and environmental impacts (in short- and long-term). The Consultant considers that the reporting system being used is not efficient and cost-effective, because PMU and partners use too much time to prepare reports, however the quarterly plans and reports are UNDP requirements. Ideally, the monitoring and updating of information in the PMU project database should be online from each implementing partner.

5.3.7. Financial management

The project received a project preparation grant (PPG) of US\$ 200,000, approved May 29th 2013. The project grant approved by GEF October 15th 2014 is US\$ 12,322,936 (not including agency fee), with a committed co-financing of US\$ 90 million from Ministry of Finance, as well as Multilateral and bilateral agencies. The PMU does not track the level of actual co-financing, but the MoF has access to those data by individual organizations.

Until the end of second quarter 2017 the project had disbursed US\$ 2,307,114 (18.7% of GEF budget), but another US\$ 699,316 was disbursed in July-August until the moment of the Midterm Review, bringing the total disbursement up to US\$ 3,006,430 (24.4% of total). A further amount of US\$ 662,742 is committed until September 17th, showing that the level of disbursements is taking up speed.

Table 10. Project disbursements of GEF grant funding

Period	Disbursements (US\$)	% of project budget
07.11.2014-30.06.2017	2,307,114	18.7
01.07-25.08.2017	699,316	5.7
Total disbursed	3,006,430	24.4
Committed 26.08-17.09.2017	662,742	5.4
Total disbursed + committed	3,669,172	29.8

Despite the high level of co-financing (88% of total budget), both planning and monitoring of project activities are concentrated on the 12% GEF funds. This is partly a result of the fact that PMU has no control of the co-financing part, and also due to that the co-financing is in fact parallel financing that corresponds with other planning and reporting procedures for each financing agency. For these reasons co-financing is not being used so strategically as it could have been to support the project objectives. The Project Team meets regularly with the main co-financing agency (MOF), but with the other co-financing partners there is no regularity of meetings, more ad-hoc contacts in relation with seminars, etc., which makes it an area of improvement.

Table 11. Committed co-financing

Source of co-financing	US\$	% co-financing
Ministry of Finance	62,000,000	68.9
World Bank, ADB, NZAid, AusAid, EU	26,000,000	28.9

Enhanced Integrated Framework	2,000,000	2.2
Total committed	90,000,000	100

The project is financially well managed, and a few deficiencies in the first period have been solved. The project has the appropriate financial controls, including for planning and reporting, that allow NCS and UNDP to make informed decisions regarding the budget and allow for timely flow of funds. The PMU counts on financial supervision and advisory from both Ministry of Finance (MOF) and UNDP, and MOF is even a project partner. A reallocation of component 1 was done in agreement with MOF to include the unanticipated result Review of National Building Code, requiring funding from output 2.1. When the construction work for the river wall advances, a higher % of the budget would be required, and even budget restrictions could be the result. The Consultant considers however that possible reallocation of funds between components should be a product of which partners are most effective and efficient, considering both quantity and quality of outputs. No implementing agency should be permitted to reserve their budget for long times, and in case of low performance funds should be transferred to the more efficient partners.

Regarding **audits**, the Consultant had access to the MNRE Internal Audit Report June 2017 for the year 2016, including MNRE Management response to auditor's comments. The document mentions the following for the EWACC project:

- Lack of proper filing of Project documentation and accounting records.
- Five payments were not made within 14 working days required under the Government Payment Policy.

The overall risk assessment of the internal control system of the MNRE projects is considered as low. The Auditor recommends that MNRE should have a proper filing system to ensure all payment vouchers accounting records and documentations pertaining to the assessed projects are securely kept for future reference. Management Response: Recommendation duly noted. The Ministry will coordinate with the Project teams to establish a centralised project filing system within the Accounts Section and this will facilitate with audit requirement and easy access to accounting records. Regarding the five payments realized later than fourteen days, the Project Coordinator has given reasonable explanation for each.

5.4. Sustainability

***Sustainability:** The continuation of benefits from the Project after the development assistance has been completed and the probability of continued long-term benefits*

The Consultant would consider several dimensions of sustainability: (i) Technical, (ii) Social, (iii) Environmental, (iv) Institutional, and (v) Socio-economic and Financial.

5.4.1. Technical sustainability

The major part of the project budget goes to the construction of a Vaisigano river flood protection wall. The initial idea for this infrastructure came after Cyclone Evan (2013), but during the review mission no information was obtained regarding who came up with this idea. It is important to know if the decision to start building a river wall was taken based on broad high-level technical studies with several options, or if a decision was taken to build the wall and the studies concentrated on alternatives for how to do it. This might seem like an unimportant question, but it is very serious. In nearly all watersheds the most cost-efficient measures to reduce water-related natural disasters (landslides and flooding) are to concentrate on the upper parts of the watershed, and to combine vegetation with infrastructure measures.

For the Vaisigano watershed this is even clearer, because the watershed has an uncommon shape, with a broad upper part divided into three sub watersheds, and a thin

lower part where the river passes through the urban area. This very special watershed gives a large water catchment area, short time for the water to reach the lower parts, and therefore huge water volume to pass through the populated area in short time. A river wall alone (if nothing else is done in the upper area) could in fact increase the danger for the urban population if a cyclone hits right in the watershed. The reason is that the wall would increase the energy and speed of the water instead of slowing it down. As mentioned, more cost-efficient measures would be to invest in the upper parts of the watershed, and define the priority areas for investments there (in dams, gabions, etc.).

This was probably something that went through the minds of the team that prepared the Integrated Watershed Management Plan for the Vaisigano River. The study that is a product of EWACC would be an important input to the feasibility study for a new GCF financed project that would finance part 2 and 3 of the river wall and study the feasibility of a multi-purpose dam that would receive water from all three sub watersheds. This is a very good idea, because if the dam is being built high and solid enough it would give sufficient protection for the Apia urban area, even during a large cyclone. As an example, when hurricane (cyclone) Mitch hit Central America in 1998 it was the second deadliest Atlantic hurricane on record. Honduras was hardest hit, but thanks to the hydroelectric dam “El Cajon” thousand of lives were saved. The multi-purpose dam that might be built in the Vaisigano River of Samoa could also help mitigate and adapt to climate change in other ways, through hydropower as a renewable energy resource, water reservoir for dry periods and potential eco-tourism activities. The GCF financed study would also review the option of rehabilitation of a second easterly watercourse additional to Vaisigano.

But these alternatives are still not situated in the upper watershed. The consultant would therefore recommend complementary and cheap measures in the upper part of the watershed, especially (i) to establish a protected area with the same shape as the watershed, from the ridge to the suburban area, where only eco-tourism and other non damaging activities would be permitted; and (ii) construct gabions in the priority micro watersheds, to slow down the water speed and reduce suspended sediment in the water further down in the watershed. These higher areas are difficult to access due to lack of roads, but wire for gabions could be brought in by foot, and stone material might be found locally. **To conclude:** The river protection wall *alone* would probably not be recommendable, but in an integrated watershed management scheme with several complementary components it can help reduce impact especially to urban properties and population.

Technical sustainability for other components of the project is built on well-known appropriate technologies. They are therefore not especially innovative, but safe and proven to give good results under Samoan conditions. The Consultant would especially congratulate the project team with building on lessons learned from other UNDP-GEF projects, like ICCRIFS that introduced a P3D model for village watershed planning, which showed to be a powerful tool to encourage local participatory learning and decision-making processes.

5.4.2. Social sustainability

As mentioned in table 7 the project has several target groups, and beneficiaries on national regional (watershed) and local (village) level. It is still too early to conclude whether the villages, rural organizations, rural families, women and youth are integrated in the project implementation, except for METI’s work that was able to build on the activities they already had on-going, as well as the different types of surveys the project has carried out. It is also far too early to conclude whether the local villages and the other stakeholder groups would be adopting the acquired knowledge and consider it in their plans for the future.

For METI, it is interesting that they have been able to obtain acceptance for their project within a climate resilience and DRM programme. METI does not have a watershed

approach; they don't work on climate change (except climate resilience through diversified production); and despite focusing on permaculture they don't work on renewable energy, which is a key aspect of the international permaculture movement. However, all aspects that can strengthen the villages would also be able to increase their resilience to climate change, natural disasters and other risks.

METI's priority activities focus on the serious health problems in the rural villages, with 60% of the population obese and 30% having diabetes (according to METI information). They carry out training activities and support groups for overweight people, introducing a strict vegan diet. So far they have found that 27% of the people attending their seminars later follow a healthy diet. This is complemented with permaculture agricultural production, especially kitchen gardens, where the participants can produce their own healthy diet, and introduction of "cooperatives". However, during the mission and field trip, METI staff could not explain what are the cooperative aspects of these organizations. They are groups where the peasants come together, talk about lessons learned and encourage each other to improve. That is not especially cooperative, however the established organizations could be the seed to become cooperatives, where the members e.g. could work together on buying inputs (getting better prices), transporting their products together to the market and also selling together, instead of being dominated by the outside buyers that come to the villages and dictate their prices.

For MWCSO, a survey was carried out in 2016, but they are only in the planning stage for the component, so no comments can be made regarding on-going activities. The slow pace of implementation is partly due to an internal reorganization in the ministry since one year ago. Before they had client-focused approach, and now focused on the whole community. This crosscutting approach seems in general positive, but all institutional changes take time and cause delays. For instance, before they had only one division focusing on youth and now that target group is divided in three divisions.

MWCSO is planning a small business incubator focused on women (independent of age) and youth (independent of gender). On central level (Apia) they are planning to construct a building that could work as a space for new start-up companies. These companies could stay there for 2-3 years and receive advice and encouragement, and leave when they "graduate". In the villages they would have a similar approach, but without the building. Some economic activities they have looked into are vegetable gardens (as METI), canteens (for village schools), carving, and printing, supported by an advisor (mentor) that had success with the same type of activity. Out of 100 families they identified the 50 most vulnerable that would be given start-up grants.

The Consultant considers that this design sounds more like social welfare than business development. Projects to support the poor, marginalized and disadvantaged should be supported in many ways, but this is not the way to do it. The MWCSO approach would not work because even in developed countries with strong support for new company upstart like in Europe, the US and large countries in Asia, most start-up companies go broke, *normally above 90%*. This percentage would be much higher when focusing only on the poorest and most vulnerable that would be less resourceful in many ways.

To be able to **integrate and benefit the poorer segments of the society** in the labour market, the following aspects should be considered: (i) Instead of limiting the participation to women and youth, all participants should be accepted, because new businesses need older people with experience of both sexes that could transfer their knowledge to the youth. This would also be aligned with the new MWCSO integrated approach; (ii) Instead of focusing on traditional production (that the stakeholders have tried before), it is a need for innovation and new ideas for what could work under Samoan circumstances. For products not currently produced in the country, market studies and trial phases could be financed from the project; (iii) Microcredit and rotational funds could be introduced to improve sustainability and make the money last longer. These funds

could be managed collectively, e.g. on village level. A type of credit with much success in rural areas “agro-credit” without cash transfers, e.g. to give seed or fruit trees to the producers in the beginning of the production cycle, and get back the same (with “interest”) at the beginning of the next cycle; (iv) The large Samoan expat community in New Zealand and other countries could be brought in. Instead of only sending remittances for consumption, they should be encouraged to invest in their motherland.

Gender: There is a good gender balance in the PMU (50%) and also in the implementing partner organizations. Among the people interviewed during the mission, 16 out of 25 (64%) were women, plus 100% of the field workers and 50% of the beneficiaries. Women are participating strongly in the METI component, with approximately 2/3 of the participants in their courses and permaculture activities. Also the MWCS initiative mentioned above is mainly focused on women and youth.

However, gender mainstreaming is much more than headcount, and maybe because of the high profile of women in the participating ministries and the project, the gender mainstreaming issue has been seen as “solved” and not given so much importance (with a few exceptions). Despite many positive aspects, the project has still not used the full potential for gender mainstreaming throughout the project implementation with focus on the women’s interests and empowerment. PMU should assess how to incorporate gender issues in all project activities and monitoring, and how to assure more benefits to women and girls.

The Consultant recommends ensuring that gender aspects of the project are being monitored effectively, including sex-disaggregated SMART indicators. The PMU database that receives information from implementing partners should not only register gender participation, but also capture benefits and impacts to women. There are currently several project-financed surveys going on, and it is important to assure that they register all the data according to gender, and incorporating these data and other gender-related information into the project’s monitoring system. This information should not get lost when the project finalizes, so an inter-institutional effort is required to transfer and store gender-related data.

Indigenous peoples: The Consultant would like to highlight that most Samoans are indigenous. For that reason, all measures mentioned in this report are directed to benefit indigenous peoples, and when the term “villages” is being used, they are indigenous communities.

Social or socio-political risks: The Consultant has not discovered any social or socio-political risks that may jeopardize sustainability of project outcomes. There is strong stakeholder ownership from MNRE, key implementing partners and local stakeholders to allow for the project outcomes and long-term impacts to be sustained in the future. There is also sufficient public awareness (including among the local population) regarding the impacts of climate change and especially natural disasters, but this awareness is further improved through the PMU information work.

Lessons learned on social sustainability and other issues are being documented by the implementing partners through their Quarterly progress reports, and also shared with other agencies through the inter-institutional Technical Advisory Group.

5.4.3. Environmental Sustainability

The project, due to its nature, has many positive environmental impacts. Despite that, this is no guarantee that negative environmental impacts could not occur. The project should always follow the national environmental legislation and be especially careful with environmental and social impacts when infrastructure like the river floodwall is planned and constructed. When there is a requirement for environmental assessments or EIA’s for investments, these studies should be carried out as early as possible, and if possible combine several small studies into one consultancy to reduce costs.

5.4.4. Institutional Sustainability

This section deals only with institutional *sustainability*, while other institutional issues are covered by other parts of the text.

Institutional stability: Compared to most other developing countries, Samoa has an institutional stability that gives strength for planning and following through with what has been planned. The parliamentary system based on the traditional Matai structure seems to work for Samoa, but it is also a slow-moving and not very dynamic system. Certain negative effects of it are felt on project level especially regarding the slow procurement processes. However, for the sustainability of the project results this system may signify strength, because major proposals and decisions that have gone through the system are not so easily changed. Many other developing countries often have huge setbacks and can start nearly from scratch if the opposition party wins the election, while such radical changes would not happen easily in Samoa.

Staff: An important issue for the institutional sustainability is how the staff members are being recruited and trained. The salary level in the public sector has improved but is still not very attractive for highly educated and skilled Samoans, considering a relatively high cost of living. Since the country has a low population, there are often very few with certain specific education and training, and these specialists very often have their education from abroad. The result is that they will compare the salaries offered in Samoa with the international level, e.g. in New Zealand or Australia. When this is combined with high responsibilities in the Samoa public sector, it is easy to understand why MNRE and other ministries have difficulties recruiting highly skilled staff. To be able to recruit project staff for the EWACC project, MNRE needed to contract them as consultants. For the persons it means higher salary but also less or no social benefits, while for the institution it means less sustainability. This is not easy to solve, and it would definitively not be solved on project level. It must be part of an MNRE institutional review, preferably to end up with competitive salaries for skilled public staff within parameters of the Samoa job market.

A strongly related issue is the question if the project staff would be absorbed as staff for MNRE or other public institutions after the project finishes. The answer is no, not automatically. It lies in the meaning of the word “consultant” not to be permanent, and in the best-case scenario the ministry consultants would go from one project to another and transfer experience and lessons learned from one project to another. For establishing the EWACC PMU all staff was recruited under the government recruitment and selection process, and assimilated e.g. three project staff members from ICCRIFS..

Staff training: To strengthen the ministries and the project without too high costs, training is a key issue. It is often considered as “against the rules” to give training to consultants, because they are expected to come with all the required knowledge. This should however not be the rule for long-term consultants in Samoa, because training would improve the project results and strengthen institutional sustainability. This training should give emphasis to new methods and technology (for Samoa), and to interdisciplinary approaches between different sciences, which would give the staff members an improved profile and at the same time strengthen teambuilding and collaboration. During the project implementation Project Management training was provided through UNDP. Training opportunities in communications and postgrad certificate in R2R through James Cook University were offered to the project team but not taken up at the time due to pressing commitments and deliverables to be met.

South-South cooperation: Two EWACC PMU staff members that previously worked in ICCRIFS provided training in P3D modeling to the SRIC-CC and Ridge-to-Reef (R2R) projects in Cook Islands and the R2R project in Niue. Further exchange of experiences and lessons learned should be promoted through the regional R2R project network in the South Pacific Region, where EWACC is the R2R project for Samoa. Regional exchange experiences through SPREP and others, regional meetings and seminars, etc.

could also be opportunities for presenting the R2R/EWACC approach, results and lessons learned, and exchange experiences to the benefit of Samoa.

5.4.5. Socio-economic and financial sustainability

Even though Samoa has been able to obtain much donor financing in relation to the size of the country and the low population, this doesn't mean that this will be the case forever. However, the Green Climate Fund has appeared as a new and large funding source that (together with GEF) will manage climate financing, and also EU has started financing in the environment and climate area. But even so, there would gradually be more competition for the money and stricter requirements for co-financing. The important work carried out by the Samoan ministries in long-term planning and preparing and approving sector strategies like the environment strategy, should be followed up through a permanent institutional structure with programmes that are led by permanent staff members, and not project-by-project. This is a strategy that most donors would support, and where the externally financed projects could be included as part of the financing.

The parallel financing (co-financing in GEF terminology) for the EWACC project comes from several different sources (see 2.8). Since the PMU and UNDP at least for the moment are not being informed about financial statements of co-financing from the different donors, the contributions are in practice in-kind and linked to the different products in EWACC's results framework.

Regarding the potential financial risks to sustainability, there would be no important impact of the end of GEF resources to the specific EWACC outcomes once the project ends. The reasons are the mentioned large financing from GCF (US\$ 57 million) that would finance the continuation of the activities included in the IWMP, as well as other new donors like EU entering the country to support similar and complementary topics. The Government, through MOF, is also gradually giving more priority to climate change adaptation and disaster risk management, partly due to requirement of national co-financing from certain donors.

The Consultant has reviewed the on-going work with the Vaisigano river wall, including who would be the beneficiaries of this large infrastructure. A part from the general conclusion that it is the urban population, an interesting observation is that maybe the major beneficiary would be the Sheraton Hotel, situated along the coastal road next to where the river reaches the coast (see picture). The hotel has set up its own small protection wall that wouldn't give enough protection against a large flood. The reason for mentioning this in the section for financial sustainability is the potential for co-financing based on Payment for Environmental Services (PES).

Even though the hotel in Apia is a franchise, not owned by Sheraton, the possibility is there. Sheraton is part of the Starwood Hotels & Resorts Worldwide (recently bought by Marriott), which Environmental Sustainability Policy mentions the priority of sustainable, responsible behaviour. The hotel group is committed to pursuing a triple-bottom line approach of environmental, financial and social responsibility, driving sustainability efforts and building resilience into its properties in order to continue positively impacting the communities. There is a potential for the project or the Samoan Government to discuss with Starwood's Global Citizenship Programme (Global.Citizenship@starwoodhotels.com), or the new owner Marriott's corporate responsibility efforts (www.marriott.com/socialresponsibility), to look into opportunities for collaboration and co-financing, e.g. through a PES scheme.

Fig. 11. Vaisigano river and Sheraton hotel in August 2017