Final evaluation of the Finnish-Pacific project

adapting to climate change in Oceania (Finpac)

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SUSTAINABLE DEVELOPMENT GOALS

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Preface

This final evaluation was undertaken by a team of 3 consultants:
SatuiBentin, BaponFakhruddin, JossSwennenhuis. Quality assurance was provided by Danish Management A/S and EcoConsult.

The lead writer for this final evaluation report was Joss Swennenhuis, with main inputs provided by Satui Bentin and further inputs by Bapon Fakhruddin. This report draws its findings from the field reports, the first draft report and additional information obtained through further interviews with key staff from FMI and SPREP, as well as further analysis of relevant documents and reports.

The evaluators would like to express their gratitude for the support received from all stakeholders: from Finland, from the regional and national levels, and down to the community level, in facilitating the review and sharing information and insights with the team. They would also like to thank MFA Finland for their flexibility with regards to deadlines, which has allowed the team to provide an evaluation report of the highest quality.

The findings, conclusions and recommendations presented in this report are those of the evaluators and do not necessarily reflect those of the FINPAC stakeholders and beneficiaries who were interviewed and provided their feedback to the evaluation team.

Contents

Acronyms

AWS	Automatic Weather Station
CEWS	Community Early Warning System
COSPPac	Climate and Oceans Programme for the Pacific
CROP	Council of Regional Organizations of the Pacific
CROP Agency	Agency of the Council such as SPREP USP etc
DRR	Disaster Risk Reduction
DRM	Disaster Risk Management
ECROM	European Commission Results Oriented Monitoring
FINPAC	Finnish-Pacific Project
FE	Final Evaluation
FET	Final Evaluation Team
FMI	Finnish Meteorological Institute
FMS	Fiji Meteorological Service
FSM	Federated States of Micronesia
GFCS	Global Framework for Climate Services
GTS	Global Telecommunication System
HYCOS	Hydrological Cycle Observing System
IFRC	International Federation of Red Cross and Red Crescent Societies
ICAO	International Civil Aviation Organization
ICT	Information Communications Technology
ICSHMO	International Conference on Southern Hemisphere Meteorology and Oceanography
JNAP	Joint National Adaptation Plan
M&E	Monitoring and evaluation
MEL	Monitoring evaluation and learning
MFA	Ministry for Foreign Affairs of Finland
NAPA	National Adaptation Plan of Action
NDMO	National Disaster Management Office
NGO	Non-Governmental Organisation
NMS	National Meteorological Service
NMHS	National Meteorological and Hydrological Service
NIWA	National Institute for Water and Atmospheric Research (New Zealand)
NZ MetService	New Zealand national meteorological service (private)
PACMAS	Pacific Media Assistance Scheme
PMC	Pacific Meteorological Council
PMDP	Pacific Meteorological Desk Partnership

PNG	Papua New Guinea
PIC	Pacific Island Country
PICS Panel	Pacific Island Climate Services Panel
PCCR	Pacific Climate Change Roundtable
PICs	Pacific Island Countries, represents here the independent and free association island countries of Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu
PIFFACC	Pacific Islands Framework for Action on Climate Change
PIFS	Pacific Islands Forum Secretariat
PI-GCOS	Pacific Islands Global Climate Observing System
PI-GOOS	Pacific Islands Global Ocean Observing System
PIMS 2012–2021	Pacific Islands Meteorological Strategy 2012-2021
PMC	Pacific Meteorological Council
PMDP	Pacific Meteorological Desk Partnership
PMMM	Pacific Ministerial Meeting on Meteorology
QMS	Quality Management System
RBSN	Regional Basic Synoptic Network
RMSC	Regional Specialized Meteorological Centre
RMSD	Regional Meteorological Service Directors' Meeting
RMI	Republic of the Marshall Islands
SI	Solomon Islands
SMART	Indicators that are **S**pecific to the correct level of intervention logic **M**easurable at low cost, **A**chievable, **R**elevant and **T**ime-bound
SPREP	Secretariat of the Pacific Regional Environmental Programme
USP	University of the South Pacific
VMGD	Vanuatu Meteorological and Geo-Hazards Department
WMO	World Meteorological Organization

Executive Summary / Evaluation brief

This brief presents the results of the final evaluation of the Finnish-Pacific Project (FINPAC), carried out from July to November 2017. FINPAC was funded by Ministry of Foreign affairs Finland (MFA) and implemented from 2013 to 2017 in 14 countries in the Pacific region. It had as overall objective *Reduced Vulnerability of Pacific Island Country Villagers' Livelihoods to the Effects of Climate Change.*

The project focused on strengthening the capacity of the National Meteorological Services (meteo offices) in the Pacific region to improve weather and climate services to the end-users, communities in particular. It also worked directly with communities in developing early warning systems and disaster response plans and provided support to regional coordination structures related to meteorology and disaster preparedness.

The Secretariat of the Pacific Regional Environmental Programme (SPREP) was responsible for overall management of the programme, with the Finnish Meteorological Institute (FMI) providing technical support to meteo offices. The International Federation of the Red Cross (IFRC)implemented the community projects.

Results achieved

The evaluation finds it likely that the project has been successful in achieving most of its expected results but poor project design and poor monitoring and documentation makes this assessment difficult. The project has provided strong added value in the region by introducing innovative approaches and ensuring the project's activities were well aligned with regional and national policies and were complementing the work of similar projects and programmes in the region.

A clear success of the project, emphasised by all stakeholders, has been FINPAC's novel approach to engaging the meteo offices directly with communities through participation in community vulnerability assessments and subsequent development of community early warning systems and disaster response plans. It was the first time that meteo staff has been directly "exposed" to the communities and learnt how weather services and warning messages can be best tailored and communicated. Through media training they were taught how to use more local language, simplify the terminology used and to make more use of graphics. They have also been supported in diversifying their dissemination channels and now use social media like Facebook and SMS.

TV weather forecast Samoa, now also available on Facebook

Cyclone tracking map in Epau community, Vanuatu, using swaying palm trees to indicate wind strength

Improving the weather forecasts and severe weather alerts has also been improved from the technical side. FMI successfully installed software packages for meteo data analysis, weather forecasting and severe weather alerts at 5 national meteo offices: Vanuatu, Papua New Guinea, Samoa, Solomon Islands and Tonga. Although

there are still challenges in effectively using these packages they are already being used for better analysis of meteorological data and for improving the presentation of the weather forecasts and warning messages. The websites of the meteo offices now include more graphical features such as warning maps where previous text messages were used. In Samoa, the software has also been used to develop a weather/warning app for use on Android and Apple phones and tablets.

Whereas both the meteo offices and the communities are the direct beneficiaries of the project, it is ultimately at community level that the project will have its lasting impact. The improved weather forecasts and warning messages were at community level complemented with provision of simple low-cost equipment (like sirens, maps with evacuation routes and straps to tie roofs down) in support of early warning systems and disaster preparedness.

The impact potential in terms of reducing their vulnerability to severe events has already been demonstrated when an earthquake struck near the Solomon Islands in 2016. A tsunami warning was issued and directly communicated to the pilot community of Lord Howe. They immediately invoked their disaster response plan and were the first community to evacuate to higher ground.

FINPAC has also engaged actively at the regional level, supporting important regional coordination structures like the Pacific Meteorological Council (PMC), the Pacific Ministerial Meeting on Meteorology and the Pacific Island Countries Panel – a technical advisory body for the PMC. Through this engagement, FINPAC's best practices have been widely disseminated and other project and programmes are starting to replicate FINPAC's work on ensuring that weather forecasts and warning messages respond to the needs of the main end users: the communities that are vulnerable to severe weather events, which are expected to increase in severity and frequency due to climate change.

Challenges and recommendations

The project has also faced a number of challenges. Chief amongst these has been the poor quality of the project's logical framework, a key project design and monitoring tool. It has led to poor monitoring of activities and a mostly activity-based instead of results-based management approach. Furthermore, the project has not addressed the recommendations from the Mid Term Review (MTR) in a structured way which has left several recommendations unresolved. In future projects, these aspects should be improved upon.

Project management has also suffered from a lack of resources, with only one dedicated project management staff at SPREP and no fully dedicated staff at either IFRC or FMI. It has led to some coordination and communication challenges and to a relatively slow implementation progress, requiring a 1.5 year no-cost extension to complete the activities (although one activity on rehabilitation of regional synoptic network stations is still not completed).

While overall effectiveness of the project was good, some challenges such as limited internet bandwidth at the meteo offices (which need to download large amounts of meteo data daily) and difficulties sending out mass SMSs could have been mitigated by more actively engaging with the relevant private sector partners.

The project has also failed to effectively mainstream gender issues in all activities. While a wide range of gender mainstreaming actions were identified in the project document, most of these were not implemented. Development of a comprehensive gender mainstreaming strategy during the inception phase could have avoided this.

Table with overview of main findings, conclusions and recommendations

MAIN FINDINGS	CONCLUSIONS	RECOMMENDATIONS
DESIGN	**Deficiencies**	
• A good participatory approach involving most key stakeholders (except IFRC) • The logical framework does not cover all elements of the project, indicators are not SMART, some of the assumptions are not appropriate and are in fact factors that the project can control/mitigate.	The key design element, the logical framework has considerable flaws. Lack of good SMART indicators and targets means it could not be used effectively for RBM, nor for this final evaluation.	1. More attention should be given to project design and the design of the logical framework. 2. Design of projects, including of Theories of Change and Logical Frameworks, should involve all key stakeholders. This can be done before a project is approved, or during a project inception phase.
RELEVANCE	**Very good**	
• FINPAC is well aligned with regional and national policies related to weather and climate services, such as key documents like the Pacific Islands Meteorological Strategy 2012 – 2021, and SPREP's new strategic plan. • FINPAC contributes to the Agenda 2030, primarily to SDG 1 – target 1.5 and SDG 13 – targets 13.1 and 13.3 • The project is well aligned with both the 2012 and 2016 Finnish Development Policy, with the exception of the geographical focus which does not include the Pacific Region • The main beneficiaries of the project, the NMHSs and pilot communities, all expressed a high level of satisfaction with the project	The project is highly relevant for global, regional and national policies and strategies related to weather and climate services. It also addresses the needs of the beneficiaries as expressed through their high level of satisfaction with the project.	No recommendations.
AID EFFECTIVENESS	**Good**	
• Commitment and ownership is high at the level of the beneficiaries, thanks to participatory approaches in project design and in implementation of the community pilot projects. • FINPAC's support to regional work has ensured its activities are recognised by key regional bodies such as the PMC and PMMM and the PICS panel. Commitment is particularly high for the innovative approach to link NMHSs directly with communities. • At the national level, the project has promoted ownership amongst key stakeholders involved in weather services and disaster risk reduction through National Coordination Teams. • FINPAC's main added value has been its focus on linking NMHSs with communities for them to better understand the needs of the communities in terms of weather services and warnings for severe events. • FINPAC has avoided duplicating work already done by others through good coordination with sister projects such as COSSPac.	FINPAC has achieved good aid effectiveness through a mix of ensuring good ownership amongst beneficiaries, active involvement at regional level and finding "niches" where it could maximise its added value. Incorporating ICI approach into a broader project has increased its effectiveness.	3. Formalising complementarity with other projects the way FINPAC has done with COSSPac is something that could also be encouraged in other projects. 4. Broadening the ICI instrument to become part of larger projects such as FINPAC 5. Further strengthen regional coordination between the plethora of projects working on meteo services and early warning systems

MAIN FINDINGS	CONCLUSIONS	RECOMMENDATIONS
• Compared to a project under the ICI instrument, the FINPAC approach has helped ensure that the "ICI type of work" of FMI is not carried out in isolation. • A drawback inherent to the ICI instrument and also to FINPAC is that capacity building support provided by a remote institution is usually less effective than support provided by an organisation based in the project region.		
EFFICIENCY	**Problems**	
Efficiency - Outputs		
• The project has achieved most of its outputs it set out to achieve but only after a 1.5-year extension and with the main exception the rehabilitation of RBSNs which has not (yet) been done. • Quality of the outputs is generally good, although in particular the training of the NMHSs on SmartMet/SmartAlert has not been sufficient to ensure that they can all produce the software effectively for professional end user products. • The project has produced several outputs that were not originally planned. •	The project has delivered on most planned outputs and some additional ones with good quality in general. The main challenge has been delay in their completion. Without the no-cost extension of 1.5 year most outputs would have not been achieved.	6. Monitoring systems should be given more attention. They should be rigorous, based on results-based principles and should allow for effective adaptive project management. Thorough baseline and end line surveys should be part of these systems. 7. Project progress reports should be scrutinised more thoroughly and comprehensive feedback provided. Implementing partners should be held to results-based reporting principles including for reporting. Results-based planning and reporting templates should be provided. 8. Ensure governance structures like Steering Committees function effectively. This requires both sufficient budget for face-to-face meetings and an active role from MFA. 9. Projects should have sufficient budget and resources for project management and a specific budget line for M&E (including budget for baseline and endline surveys). 10. MoUs between implementing partners should spell out roles and responsibilities clearly and include communication protocols and reporting templates including a template and procedure for responding to a MTR
Efficiency - Project Management		
• Project management was weak in terms of results-based M&E, coordination and communication between implementing partners and procurement. Overall progress was slow. • Project management was strong in adaptive management, changing the project focus where needed based on where the "niches" were (such as not pursuing ENSO outlooks but instead supporting more regional work) and based on new insights such which communities to choose for the pilot projects based on their vulnerability. • All implementing partners had a role in both the strong and weak points of project management. • The Steering Committee meetings were organised in different manners, taking into consideration logistical challenges. • The SC has shown mostly a reactive approach and has not picked up on issues such as lack of results-based reporting.	Project management had both strong and weak elements. Governance by the Steering Committee took place but could have been more pro-active.	
Efficiency - Value for Money		

MAIN FINDINGS	CONCLUSIONS	RECOMMENDATIONS
• A comprehensive Value-for-Money was not possible, but there are good positive signs, such as the strong complementarity between components and with other projects, the use of low-cost technology for community projects, use of free software, and leveraging of co-funding for some activities. • FINPAC had relatively low overhead cost but this may have contributed to issues such as slow implementation progress and overlap of activities	Based on the qualitative assessment done for VfM, it appears to be good. It should be realised that low overhead cost does not imply good VfM.	
EFFECTIVENESS	**Good**	
• QMS: The roving audit team has only been called out once. NMHSs cite financial constraints as the main issue why they don't make use of this team. • SmartMet and Smartalert are fully operational in 4 countries and partly in 1 country (Tonga). Their effective use ranges from good in Samoa / PNG / Solomon Islands to "not very clear" in Vanuatu to "limited" in Tonga (which has no functional website). Overall quality of the end user products still needs further improvement and feedback indicate that more training may be required. Internet issues limit effective use and the option to address this through engagement with the relevant private sector partners was not picked up by the project. • RBSNs: an assessment of all RBSNs was done and main needs for rehabilitation identified. Actual rehabilitation has not started due to issues with contracting and procurement. • The community early warning systems (CEWS) and disaster response plans (DRPs) are working as evidenced through successful simulation exercises and good maintenance of the equipment, indicating communities are convinced of the importance of these systems. • Media training of NMHSs has been used to ensure weather and warning messages are more suited to end user needs. More use of local terminology and of simple graphics such as on community posters and on Facebook pages. • Regional support and documenting lessons learnt has created awareness amongst a broad range of stakeholders on the importance of *appropriate* (for the end users) weather and warning products and on FINPAC's approach to link NMHSs with communities.	FINPAC's outputs such as operational SmartMet/SmartAlert systems, CEWS and media training are effectively used by the beneficiaries for improved weather services and community preparedness, although at NMHSs level more training will further increase this. QMS output has not been used very effectively, while RBSN output was not (yet) achieved. The strong complementarity between the various FINPAC components has strengthened overall effectiveness.	11. The MoU between SPREP and FMI for continued remote support by FMI needs to be completed and signed as soon as possible. 12. Support for IT should not only be reactive but also pro-active, for example identifying and supporting opportunities for the better dissemination of weather and warning products (like the Samoa weather app). 13. Future projects should consider engagement with private sector more closely, including through co-funding arrangements to develop ICT solutions related to building resilience to climate change and disasters. 14. Media support to NMHSs should be continued, focusing in particular on ensuring the right use of terminology. 15. Impact based end to end EWS for multi-hazards system design should be adopted/promoted based on WMO impact based early warning principles
IMPACT	**Good**	
• Developed early warning and DRR systems and plans are maintained and kept operational by the beneficiary communities, indicating good prospects for impact. • Actual impact on resilience for disasters has already happened with the SI pilot community effectively using the CEWS and being the first community to evacuate to higher ground after a tsunami warning. • Impact of weather services on day-to-day livelihoods is also happening, with the improved weather products helping fisher folk and women-who-weave to better plan their activities.	The project has shown to have direct impact at community level, both for disaster preparedness and for direct livelihoods activities. Replication of best practices is already happening but much wider	16. An ex-post evaluation of FINPAC in 1 or 2 years' time should be considered to be able to assess in how far the achieved results are sustainable and being scaled up. 17. Other programmes / projects should be introduced to SmartMet / SmartAlert to encourage replication to other NMHSs in the region. 18. Follow up visits to the pilot communities will be very useful for lessons learning. Such visits could be done by

MAIN FINDINGS	CONCLUSIONS	RECOMMENDATIONS
• Broad impact in terms of replication of FINPAC best practices seems to be happening already in some countries and several regional stakeholders and pipeline projects have included the FINPAC approach to NMHSs-community engagement in their plans. • Replication of SmartMet / SmartAlert use to other NMHSs is likely to be limited due to the fact that most NMHSs of the other PICs do not have the IT capacity to run such systems, or they may already have other systems in place.	replication is likely for the community-related work. This is less likely for SmartMet/SmartAlert.	governments or included in donor funded projects that aim to replicate the FINPAC community outreach model. 19. Emergency communication is essential in terms of rapid disaster management. A robust rapid alert notification system should ultimately be developed for each Pacific country/
SUSTAINABILITY	**Good**	
• While no exit strategy (recommended by the MTR) was developed, FINPAC has adopted some good measures to improve sustainability prospects such as limiting number of pilot projects and not pursuing the work on lightning feeds. • SmartMet / SmartAlert long term IT support has been secured, but risks remain with regard to internet issues and still limited capacity of NMHSs staff in using the systems. Both could lead to less motivation to fully use the systems. • There is a strong sense of commitment and ownership of communities for the CEWS and DRPs, but this may slowly erode if no severe events occur in the coming years. • Regional work supported by FINPAC will likely be supported by other projects / donors in future.	Sustainability prospects are good, but there are some risks that commitment and motivation both at the NMHSs and at community level could erode and these need to be addressed.	20. Other programmes / projects (like the regional CREWS project and the GCF project for Vanuatu) should be encouraged to support the use and further development of these systems at the NMHSs in the 5 countries through capacity building. 21. Simulation exercises should be held regularly in the pilot communities to ensure the early warning systems and disaster response plans are functional and to maintain awareness at village level of the importance of maintaining these systems (even if there is a long period without disasters).
CROSS-CUTTING OBJECTIVES	**Problems**	
• Gender has not been effectively mainstreamed in the project in spite of much attention in the prodc. A gender action plan (recommended by the MTR) was never developed, a proposed "women in meteorology" network was not created, and few disaggregated data are available. • Some positive gender findings include the 65% women amongst community beneficiaries and the production of a brochure on "Women in meteorology". • HRBA is an inherent aspect of FINPAC with duty bearers NMHSs supported to improve their services to the rights holders, the communities. • At community level, IFRC's involvement has ensured good attention for human rights such as the inclusion of the interests of vulnerable groups. • No environmental / climate change issues found.	The project has a HRBA approach "by design". Gender issues have received very little attention and recommendations from the MTR to improve this have been largely ignored.	22. FINPAC's project document included a list of gender action points. Such action points should in future projects be developed into a gender mainstreaming strategy and monitoring of the implementation of this strategy should be included in the M&E systems 23. SPREP should actively utilise its gender policy and continue to promote mainstreaming of gender issues in regional coordination bodies and networks.

1 Introduction

This report presents the results of the final evaluation of the Finnish-Pacific Project (FINPAC), undertaken in the period July to November 2017. The evaluation was carried out by a team of 4 consultants, with home office support and quality assurance provided by Danish Management A/S and ECO Consult.

1.1 Evaluation objectives and scope

The objective of the evaluation, as per the Terms of Reference (ToR), wasto provide guidance to the Ministry for Foreign Affairs of Finland (MFA) and the Pacific Regional Environmental Programme (SPREP) in planning and implementing projects addressing meteorology related capacity building and/or climate change adaptation.

FINPAC is a regional climate change project covering 14 Pacific Island Countries (PICs) implemented in the period January 2013 to September 2017.The project's objective was*Reduced Vulnerability of Pacific Island Country Villagers' Livelihoods to the Effects of Climate Change*, and focuses on strengthening the capacity of the National Meteorological Services (NMSs) to improve weather- and climate-services to the endusers, communities in particular.

The main rationale of this evaluation is to provide objective information to the MFA and SPREP about the effectiveness and efficiency of the project and the results achieved in meteorology services related climate change adaptation, and whether the cooperation has provided a platform for commercial opportunities and cooperation.

The geographical scope of the evaluation covers all fourteen Pacific Island Countries: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. The time span covered by the evaluation is the full duration of the project from 2013 to 2017.

The evaluation comprised all OECD criteria plus Aid Effectiveness, with consideration for cross-cutting aspects. The evaluation questions for each of these criteria are:

Relevance

- To what extent has the project contributed to fulfilling the objectives of international, regional and national policies and strategies?
- How satisfied are the beneficiaries of the project to the results, both at levels of meteorological services and the end users of their meteorological services in pilot areas?

Impact

- How well has the project succeeded in reducing the vulnerability of the fourteen Pacific Island Countries to the effects of climate change?
- How has the project contributed to the accessibility of various groups to meteorological information and weather services?

Effectiveness

- To what extent has the project contributed to measures taken in disaster risk reduction and increasing resilience?
- To what extent has the project improved the capacity of local, national, regional authorities to utilise the available meteorological data for disaster preparedness?

Efficiency

- Considering the resources used and results achieved to what extent has the project provided value for money?

Aid effectiveness

- How well has the project promoted commitment and ownership of relevant decision-making bodies in the Pacific Island Countries in providing accessible meteorological information?
- How the project is complementing other projects in the region?

Sustainability

- To what extent has the capacity in providing meteorological information and weather services improved?
- What are the main risks that are likely to affect sustainability of the results after the project completion, especially regarding the technical components of the project?

Coherence

- To what extent is the project coherent with Agenda 2030 strategies (including Paris Agreement) of the region?

1.2 Evaluation methodology

The evaluation was based on the OECD criteria Relevance, Efficiency, Effectiveness, Impact and Sustainability. Additional issues evaluated include project design, Aid Effectiveness and cross-cutting objectives related Human Rights Based Approach (HRBA), gender, environment and climate change.

The evaluation was based on an evaluation matrix developed during the inception phase (annex II) and used mixed methods to analyse data obtained through triangulation of multiple information sources.

Opinions and information were sought through:

- Desk review of key documents received from SPREP, MFA and websites.
- Discussions with MFA management, the SPREP and FMI team.
- Consultation and interview with senior officials of National Meteorological and Hydrology Services (NMHSs) and Ministers during the PMC-4 council and PMMM in Honiara, Solomon Islands, 14-18 August 2017.
- Discussions with those involved in the training course development.
- Consultations with the beneficiaries (community people), NHMS in project countries, and other stakeholders and partners.
- Visiting selected project localities and discussing the project with project personnel, government officials, community members and other stakeholders and beneficiaries.
- Seeking the views and aspirations of local stakeholders.

1.3 Limitations

The evaluation faced a number of limitations. First amongst these is the fact that the logical framework of the project has considerable flaws (discussed in the next chapter). It does not cover all aspects of the project and most indicators are not SMART[1] and could not be used in assessing results achieved against results expected. Also, the project has not used the logical framework consistently for monitoring and reporting and has focused primarily on activity-based reporting.

These limitations make that the evaluation is primarily a qualitative evaluation and based on a general assessment of the performance in each of the main activities / components of the results areas 1 and 2, without the possibility to check in how far set targets have been achieved.

A further important limitation has been the time and budget constraints. Whereas the technical support to NMHSs was implemented in 5 (originally 6) countries and the community work in 9 communities in 8 countries, the evaluation team could only visit Tonga, Cook Islands, Solomon Islands and Samoa (SPREP). The evaluation team did manage to interview NMHSs staff of the 5 countries during the PMC-4 in Honiara, but time for each interview was limited due to very busy agenda of the PMC. Out of the 9 pilot communities, only 3 could be visited by the evaluation team.

Although triangulation of evidence was a guiding principle for the evaluation, the above limitations mean that the findings are based on a relatively limited amount of information sources.

A final important limitation has been the very slow response from SPREP to requests for information.

1.4 Report structure

The findings, conclusions and recommendations presented in this report are structured in line with the evaluation criteria. The evaluation questions from the ToR and the extended evaluation matrix have guided the findings and conclusions presented, but are not explicitly repeated in the report.

The evaluation question on Coherence has been incorporated under the Relevance criterion. Project design issues are also discussed in that same chapter.

The report ends with a set of lessons learnt and some general recommendations not linked directly to the evaluation criteria but may be useful for other projects, donors and stakeholders.

[1]Specific, Measurable, Attainable, Relevant, Time-bound

2 Background

2.1 Regional context

Climate change is leading to increased intensity and frequency of cyclones and more erratic rainfall which in turn is linked to short droughts or severe flooding. The Pacific is a region that suffers to a high degree from mortality, morbidity and economic loss linked to this. The project raises the question: Could better climate and weather information help to reduce vulnerability to climate change in terms of the effects of weather and linked disasters?

The Pacific Meteorological Council (PMC), a specialized subsidiary body of SPREP, established in 2011 by the SPREP meeting to facilitate and coordinate the scientific and technical programmes and activities of the Regional Meteorological Services[2], adopted the Pacific Islands Meteorological Strategy 2012–2021 to ensure that national meteorological services are sustained, andof the best quality possible, and have the capacity to fulfil their responsibilities over the next decade. The ultimate aim is to strengthen weather and climate services for all stakeholders through timely provisions of early warnings and information on weather and climate, especially climate change.

SPREP is an organization of the governments and administrations of the Pacific region. It has been established to protect the region's environment and to promote sustainable development[3]. SPREP promotes collaboration between the member countries and provides technical assistance related to environmental management and climate change. SPREP supports its members in planning and implementing national adaptation strategies, and integrating climate change considerations into national planning and development processes. The emphasis is on guidelines for the most appropriate and best practices in policy development and adaptation.

2.2 FINPAC project

The FINPAC project provided NMHSs of the PICswith trainings and tools to deliver and communicate accurate, appropriate and timely weather and climate services to their rural communities. The project worked together with the communities to strengthen their ability to use meteorological information to develop plans to address disasters and climate change.

FINPAC built on the work done under the MFA funded Institutional Cooperation Instrument (ICI) project “FPPICS - Finnish-Pacific Project for Increased Capacity of SPREP and PIC NMSs Staff to Meet the Growing Demand for Meteorological and Climatological Information in the Society”. This project was implemented in 14 PICs jointly by the FMI and SPREP in 2009 – 2011.

The project’s geographical coverage included the same 14 PICs as under the predecessor FPPICS project: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

[2]Report of the 1st Meeting of the Pacific Islands Climate Services (PICS) Panel

[3]SPREP Strategic Plan 2017-2026

SPREP was responsible for overall management of the project. The Finnish Meteorological Institute (FMI) was responsible for the technical support to NMHSs and had a dedicated part of the budget allocated for this.

Contingency planning on the islands was done together with local governments, non-governmental organizations and local communities. At local level, FINPAC has partnered with the International Federation of Red Cross and Red Crescent Societies (IFRC) and National Red Cross Societies to implement the community engagement component.

Representatives of the national meteorological services of the Pacific Island Countries have been involved in the preparation of the project. Moreover, partnerships included the Pacific Meteorological Council, World Meteorological Organization, and University of the South Pacific, Australia Bureau of Meteorology, Pacific Meteorological Desk Partnership and the Secretariat of the Pacific Community (SPC).

The project started on 2 January 2013 with a total budget of 3.7 million Euros. The project was scheduled to end by December 2015 but two no-cost extensions were approved up to September 2017.

The overall objective of the FINPAC was*Reduced Vulnerability of Pacific Island Villagers' Livelihoods to the Effects of Climate Change*. To achieve this objective the project was designed with two Result areas, namely:

Result 1 - Improved and new weather and climate forecasts and warnings by NMSs

Result area 1 aimed to build capacity in NMHSs. FMI was the main implementing partner under this result and was responsible for providing meteorological tools and related programmes, including users training to NMHSs. SPREP coordinated activities and provided some technical back-stop. Activities implemented under Result 1 include:

- Capacity building for the implementation of Quality Management Systems (QMS) for aviation;
- Provision of real-time lightning feeds to improve severe weather forecasting – this activity was halted after the Mid Term Review (MTR).
- Installation of, and capacity building for SmartMet, a versatile weather forecast analysis and visualisation tool developed in-house by FMI. This was done in a selected number of NMSs (6in total).
- Installation of, and capacity building for SmartAlert, a tool for development of warnings for severe weather events, also developed by FMI. This activity was not originally foreseen but replaced the initially proposed activity of setting up a regional MeteoAlarm system (which was considered part of result area 2).
- Rehabilitation of a number of “silent” (non-functional) meteorological stations that are part of the Regional Basic Synoptic Network (RBSN).

Result 2 - Improved ability of the NMSs to respond the needs of villages with regard to hazardous weather and climate change

Result 2 aimed to address the needs of communities in terms of weather and climate information. This was done primarily by:

- Facilitating engagement of the NMHSs directly with communities, through community workshops where NMHSs participate. The workshops result in Community Climate and Disaster Resilience Plans (CCDRPs), and FINPAC then provided support for their operationalisation, including provision of basic equipment. This component was led by IFRC and NRCs, and coordinated by SPREP.
- Facilitating engagement of NMSs with the media through trainings / workshops. It used the results from the community engagement work to improve the weather and climate services of NMSs e.g. by using more appropriate terminology. This component was led by media and communication staff of SPREP.
- Development and communication of climate services, through support to regional networking and coordinationplatforms like the Pacific Meteorological Council (PMC), the Pacific Ministerial Meeting on Meteorology (PMMM) and the Pacific Islands Climate Services (PICS) Panel, a technical advisory body for the Pacific Meteorological Councilwith its 1st meeting funded by FINPAC in partnership with WMO. This regional work was not initially foreseen to this extent, and replaced the initially proposed technical work on climate services such as ENSO outlooks.

The intended Beneficiaries in the project document were National Meteorological and Hydrological Services (NMHSs) of the Pacific Island Countries (PICs), however the latest annual report changed this to “The target beneficiaries of the project are the Pacific NMS and selected communities from across the project countries” (p.4).

3 Findings

3.1 Design& relevance

ToR questions:

Relevance:

- To what extent has the project contributed to fulfilling the objectives of international, regional and national policies and strategies?
- How satisfied are the beneficiaries of the project to the results, both at levels of meteorological services and the end users of their meteorological services in pilot areas?

Coherence:

- To what extent is the project coherent with Agenda 2030 strategies (including Paris Agreement) of the region?

3.1.1 Design

The project was designed through a highly participatory approach, involving key stakeholders such as FMI, the meteorological services / departments of the target countries and the regional level through the PMC. This approach was facilitated by the fact that FINPAC had a precursor ICI project in which these stakeholders were also involved. As the project unfolded IFRC became the main implementing partner for the community work on disaster risk reduction, but as they were not part of the original project design, they were also not involved at the design stage.

Although the design process was participatory, the resulting logical framework, which is the key design document for effective results-based management had considerable flaws. Some of these include:

1. Several of the indicators are not SMART, such as the indicator "At least 5 NMHSs have independent forecast verification processes in place by the third year of project implementation". It is not clear how this should be measured exactly and there are no indicator reference sheets to explain this.
2. There is no baseline available, while such a baseline is needed for indicators such as the very first indicator "Seasonal and inter-annual climate services, such as ENSO outlooks and TC genesis risk, delivered by 60% of NMHSs by end of project implementation". Without knowing in how far the NMHSs already delivered those services at the start of the project, it is impossible to assess the impact of the project in this respect.
3. Some of the assumptions like "NMSs work with installation team to support ground works" are not really assumptions. Assumptions are normally considered to be external factors that cannot be directly controlled by the project, where risks are factors that the project can directly influence i.e. can mitigate.

Another main problem with the logical framework is the fact that it does not cover the full scope of the project:

1. Results one and two represent only one outcome i.e. best practice adopted by NMHSs. It misses outcomes and indicators related to best practices adopted by communities, even

though work on disaster risk reduction with community involvement is explicitly mentioned in the project document (activity 2.4).

2. There is also a missed opportunity to include outcomes on the behaviour expected from other actors, such as regional stakeholders, national government bodies, the media, etc.
3. An indicator like "Regional roving Quality Management System auditing team of five persons from PICs trained and available to the countries by third year of implementation" is clearly an output related indicator. It should be complemented with an indicator at higher (effectiveness) level that this team is actually helping to improve the QMS systems of NMHSs.

The theory of change that is implicitly underpinning the project document and the logical framework appears to be that the resilience of the beneficiaries can be improved by better information and group working alone. Government constraints in terms of HR, public financial management, budget limitations and other institutional / organisational aspects are not considered to any great extent in the project design, yet they are important factors for long term impact and sustainability.

The inception phase would have been a good opportunity to review and improve the logical framework, but this was not done. The MTR recommended again to review the logical framework. Some improvements were made at indicator level (such as removing the indicator on seasonal and inter-annual climate services, which relates to an activity not pursued), but more fundamental aspects such as the above mentioned missing outcomes and the government constraints issues have not been incorporated. Feedback from SPREP indicates that they agreed with the recommendation for improving the logframe, but the recommendation that entailed SPREP and other partners to reformulate objectives, results and indicators, was nevertheless never adopted.

3.1.2 Relevance

Regional / national policy relevance

The FINPAC project is strongly aligned with regional and national policies of the PICs. It has contributed to achieving a broad range of regional and nationally defined objectives related to meteorology and providing *relevant* weather and climate services to the intended end users.

The main regional policy of relevance for FINPAC is the Pacific Islands Meteorological Strategy 2012 – 2021, which sets out the strategic context and direction for strengthening National Meteorological Services (NMSs) in the Pacific Islands region. The strategy identifies four priority areas:

- Improved weather services, in particular, aviation, marine and public weather services.
- Improved end-to-end Multi-Hazard Early Warning Systems (MHEWS).
- Enhanced infrastructure (data and information services) for weather, climate and water.
- Enhanced development of climate services.

FINPAC contributes to all of these priority areas. The project also supports the UN Sendai Framework for disaster risk reduction to which all these countries needs to report regularly the progress and achievements. FINPAC has contributed to target 7, developing national early warning system.

The new SPREP Strategic Plan for 2017 – 2026 makes explicit reference to the importance of capacitated NMHs in objective 1.3 – "Enhance National Meteorological and Hydrological Services capacity in weather forecasting, early warning systems, long-term projections, and improved climate services to support Members' decision-making and coordination through the Pacific Meteorological Council". Although the FINPAC project will not be continued, it has during its implementation already contributed towards this objective.

FINPAC also complements the World Meteorological Organization (WMO) Strategic Plan 2016 – 2019where two out of five strategic priorities focus on Small Island Developing States (SIDS). Priorities include improving public weather services (including aviation meteorology and marine weather services), contribution to a new disaster risk reduction framework and multi-hazard early warning systems for areas with increased vulnerability and capacity development with target on developing countries, Least Developed Countries (LDCs) and SIDS.

FINPAC also is aligned with and contributes to the fulfilment of national level policies and strategies of the individual PICs, as confirmed by NMHSs during interviews. Examples of these are provided in the box below.

- Tuvalu: National Strategic Action Plan for Climate Change and DRM (NSAP) and TeKaniva (CC Policy) 2011-2020 Goal 2: Early warning for disasters to improve communications
- Vanuatu: NDSD under environment pillar; CC Policy and Vanuatu Framework for Climate Services (VFCS)
- Kiribati: – Disaster Act; Kiribati Whole of Island Approach
- PNG: Vision 2050, which has identified early warning systems as priority. National Transportation Strategy which includes empowering of meteo services.
- Solomon Islands: The Development Action Plan & Ministry Corporate Planidentify 'improvement of weather services' as one of key indicators.
- Cook Islands: National joint action plan on climate change adaptation and disaster risk management (JNAP) 2011- 2015, National Sustainable Development Plan (NSDP) 2016-2020 national development goals, which reflect strengthening resilience to combat the impacts of climate change and natural disasters.

Agenda 2030

FINPAC contributes directly to Goal13– Climate Action of Agenda 2030, specifically feeding into targets:

13.1 strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

It also contributes to the achievement of the SDG 1 – End to Poverty, in particular target 1.5:

> 1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.

By working directly with government institutions for component 1, and involving government institutions (both at national and local level) for component 2, FINPAC has ensured good compliance with Paris Principles. Of particular note here is the fact that FINPAC set up National Coordination Teams in which key government institutions were represented and where coordination of FINPAC field activities took place.

Alignment with Finnish development policy

The MTR from 2015concluded that FINPAC was well aligned with the Finnish Development Policy of 2012. A new development policy was adopted in 2016. This new policy is strongly based on the SDGs of the Agenda 2030. It includes specific reference to climate change adaptation and disaster risk management in its section on main goals.

However, the geographical focus in the 2016 policy does not include the Pacific Island Countries, so in that sense FINPAC cannot be considered as being strongly aligned with this aspect of the policy. Furthermore, the new policy shows an increased focus on private sector development, which has not been a key element of FINPAC, with its focus on working with government institutions (NMHSs) and communities.

On the other hand, the policy indicates it will further strengthen the involvement of Finnish expert institutions in both the content and implementation of development cooperation. This was done in FINPAC through the involvement of FMI. Although FINPAC is not an ICI project, its precursor was an ICI project and the modality in FINPAC more or less followed the ICI project, with the major difference being the larger scale of FINPAC compared to ICI projects. The issue in how far projects like FINPAC could be suitable for funding under the ICI instrument is further discussed under Aid Effectiveness.

Level of satisfaction of beneficiaries

FINPAC has two main types of beneficiaries: the NMHSs, which are the primary beneficiaries of component 1, and the communities, which are the main beneficiaries of component 2.

Interviews with the NMHSs and other government stakeholders of Tuvalu, Vanuatu, PNG, Tonga, Solomon Islands, Samoa, Cook Islands and Kiribati indicate a high level of satisfaction with the support provided by FINPAC. In all these countries, FINPAC has worked on linking the NMHSs with the end-users in the communities, and on providing media training. This exposure was new for NMHSs and they indicated the relevance of this in terms of better understanding the needs of the end users, and having their capacity built to address those needs more effectively through tailored weather and warning products. While the highest satisfaction was reserved for those aspects, countries where the SmartMet and SmartAlert systems were introduced also saw this as very beneficial and complementing the other work by providing new tools to help produce clear understandable messages in a timely and appropriate manner to the end users.

Community feedback has also been largely positive. There is a clear need for communities to have access to relevant and appropriate weather information, both in terms of access to the weather products and in terms of the appropriateness of the weather products i.e. by using the right sort of language, use graphics instead of text etc. During a workshop on “Most Significant Change” organised by FINPAC, communities indicated the importance of the project and the perceived benefits, such as, inter alia:

- giving hope to communities
- improved communication and access to information
- development of community early warning system
- allowing an active role of communities in all the processes
- strengthening the community organisation (“community working as a team”).

3.2 Aid effectiveness

ToR questions:

- How well has the project promoted commitment and ownership of relevant decision-making bodies in the Pacific Island Countries in providing accessible meteorological information?
- How the project is complementing other projects in the region?

3.2.1 Commitment and ownership

At the level of community beneficiaries, the project has ensured a good ownership level by working as much as possible within existing community structures and using a highly participatory approach to the community work led by IFRC. Using national Red Cross societies as much as possible has helped ensure that there was a good understanding of the local context and to approaches of participatory community work. The strong level of ownership is exemplified for example by the visited community in Solomon Islands which is continuing to maintain the equipment received through the project. This increased the prospects for long term impact.

At the level of the NMHSs, ownership and commitment was promoted from the start by involving them in the design of the programme. Their active participation in new interventions like media training is a sign of good commitment. One limiting factor with regard to ownership is the fact that the NMHSs had no choice in the type of software that FINPAC supported, SmartMet and SmartAlert. Some NMHSs already have other systems in use, and, if given the choice, would have preferred further training on those rather than introduction of new systems. The training on this new software, however, has gone a long way in instilling a level of confidence in using it and this has improved the sense of ownership.

While the original FINPAC design did not include specific regional work, a decision was taken early on in the implementation phase to actively participate in, and provide support for, regional activities related to climate services. This has been a very fruitful decision. By supporting the establishment of the PICs Panel and playing an active role in regional meetings of the PMC and PMMM (including through co-funding), FINPAC has created a strong level of recognition at high-level decision-making bodies. This is most obvious in the praise expressed during the recent PMC-4 and PMMM meetings for FINPAC's approach to link NMHSs to communities. There are good signs of regional commitment to apply this approach more broadly. It is for example prominently presented in the Pacific Roadmap for Strengthened Climate Services, facilitated by SPREP and endorsed by the PMC and by the WMO. Implementing partner, IFRC, is also strongly committed to this approach (which was also new for them) and is advocating its replication in relevant fora.

At the national level, FINPAC has ensured good involvement of key government decision making bodies through the establishment of National Coordination Teams, where relevant government institutions such as the meteorological services, disaster risk management discussed FINPAC project issues with the implementing partner for the community work (usually National Red Cross Societies).

They were set up in each country to provide advice to project site selection, planning, and implementation, among other operational responsibilities.

> In Vanuatu, the NCT established a communications sub-committee based on lessons learnt from Cyclone Pam. The decision by the NCT to create this subcommittee was not part of the FINPAC 'directives' but rather in response to the impacts of an actual extreme event which is touted as one of the measurements of FINPACs success (i.e. how systems and structures created would respond during an extreme event). The communications and media trainings conducted by FINPAC helped strengthen the "what should be communicated" and the "how it should be communicated" but the ownership factor came from the NCT's decision to create a specific subcommittee to discuss how best to respond in preparations for another extreme event.

In Solomon Islands (SI), the NCT setup created under FINPAC has now been replicated by another NGO (World Vision) to implement its activities in Solomon Islands. SI DMO has also replicated this same setup to other communities in Solomon Islands to build CCA and DRR capacities of 6 other communities

3.2.2 Complementarity / added value

Given that there are many programmes in the region supporting meteorological and climate services, FINPAC has done well in finding "niches" to work in.

As mentioned in the Relevance chapter, the beneficiaries, both the NMHss and the communities, see the main benefit of FINPAC as the improved usability of the NMHSs weather- and warningproducts. This is something that was never done in a structural manner before and can be considered the most important added value of the programme. The consensus amongst NMHSs about this was remarkable.

NMHSs also acknowledged the added value of SmartMet / SmartAlert. While some of the NMHSs are also receiving software / hardware support from JICA and others such as Korea (the Republic of Korea-Pacific Islands Climate Prediction Services (ROKPI-CLIPS)), that support is more focused on modelling, while the NMHSs see the FMI support primarily helping them with producing user-friendly end products.

FINPAC has also complemented other programmes by focusing on regional coordination aspects, where most other projects have a more national focus (even if the support is to more than one country). The co-funding provided for regional meetings like the first PMMM meeting in 2015 has been instrumental in strengthening the regional coordination on climate services at policy level, and has been acknowledged as such by the Ministerial Statement issued during that meeting. The PICS panel that has been created with financing support of FINPAC is similarly playing an important regional coordinating role at the technical level.

FINPAC has coordinated activelywith other projects, such as the Australian funded Climate and Ocean Support Programme in the Pacific (COSPPac)[4], theRepublic of Korea Pacific Islands Climate Information and Prediction Services (RoK-PI CLIPS) project and DRR projects of the UNDP, Australia and New

[4] As the MTR noted, COSPPac and FINPAC have an explicit agreement on complementarity. According to the agreement COSPPac focuses on national level, longer term climate services and FINPAC complements this work with improving the shorter-term weather services, and linking NMSs with community level.

Zealand. This has contributed to complementarity and to effective collaboration such as the combined workshop organised with the Korean project in Cook Islands in 2016.
For the work on QMS, FINPAC partnered with WMO to deliver this result, given QMS is part of WMO's core work for countries to meet the International Civil Aviation Organisation (ICAO) requirements. This partnership was strengthened through the involvement of both FINPAC and WMO as members of the Pacific Meteorological Desk, which is hosted by SPREP.

3.2.3 Comparison with Institutional Cooperation Instrument (ICI)

FINPAC as the successor of an ICI project that linked FMI with the NMHSs in the region. FINPAC itself is not an ICI project: it is a much larger project, and has more components than only twinning collaboration between a Finnish institute and local institute.

The evaluation team only had the opportunity to discuss the comparison with the ICI instrument with FMI. To them, the work done under FINPAC did not differ much from how they would work under an ICI cooperation, and they see no reason why such larger projects could not be considered under the ICI instrument.

The evaluation of the complementarity of the ICI instrument in Finnish development cooperation commissioned by MFA in 2014[5] concluded that the instrument is well suited for building specific technical expertise in partner organisations (exactly what FMI has been doing under FINPAC). It also mentions that the drawbacks of the IKI instrument have been that it acted too much in isolation, and that interventions were spread too thinly over too many countries. It concludes that the ICI instrument has therefore failed to reach its full potential. FINPAC shows that by embedding ICI-type cooperation in a larger project, the effectiveness of the ICI support provided was increased. With the NMHSs better understanding the needs of end users for weather forecasting and warning products, the SmartMet and SmartAlert tools can be used to produce weather-forecasts and -services tailored to the needs of the communities.

A limitation of all ICI instruments and also of FINPAC is the fact that the recipient beneficiaries are not "free" to decide on the type of support to be received. E.g. in the case of FINPAC, the software to be used was primarily defined by the fact that FMI uses SmartMet and SmartAlert, rather than by a detailed assessment of which software would best suit the NMHSs. Also, providing capacity building support through a remote institution (as FMI in the case of FINPAC) can lead to reduced cost-efficiency and effectiveness compared to capacity building by an institution located in the project region.

[5] Complementarity in Finland's Development Policy and Co-operation; A Case Study on Complementarity in the Institutional Co-operation Instrument, MFA Finland, 2014

3.3 Efficiency

ToR questions:

- Considering the resources used and results achieved to what extent has the project provided value for money?

In this Efficiency analysis, we consider how well and timely activities and inputs were used to produce physical outputs and the quality of these outputs. We also look at project management & governance efficiency aspects. An assessment in how far this all represents value for money is provided in the Conclusion chapter.

3.3.1 Outputs

Annex III provides a detailed assessment of the achievement of the outputs defined in the logical framework for the results areas 1 and 2.

The summary finding is that the project has achieved most of the direct outputs it had set out to achieve:

- SmartMet and SmartAlert were installed in 6 countries and are in principle operational in 5 of these countries (they are not operational in Fiji and not fully operational in Tonga due to lack of a website). Relevant staff was trained in the use of these systems.
- Communities and NMHSs were brought together through community-level workshops on early warning systems and disaster risk reduction.
- NMHSs staff received media training on how to produce more appropriate weather and warning messages and on how to disseminate these.
- QMS roving teams were established.

Results were not always achieved within the expected timeframe e.g. SmartMet was supposed to be operational in 5 countries within three years, but thiswas only achieved in 2016.

The main physical output not yet achieved is the rehabilitation of RBSN stations. This was initially delayed due to the need to do a thorough assessment of the RBSNs (resulting in 14 country reports) and subsequently by delays in contracting and tendering procedures and in supply and installation. Also, the output on lightning feeds for use in severe weather was discontinued based on an MTR recommendation. The recommendation was based on both technical and cost challenges. The MTR recommendation was approved by the Steering Committee and adopted by the project .

The project has also achieved a number of outputs that were not originally planned and are not covered in the logframe. Key amongst those are:

- At community level, the project has gone beyond developing early warning and DRR plans with involvement of NMHSs. It has implemented comprehensive community early warning systems that include related small infrastructure and equipment installation. This was done in 9 communities in 8 countries and was managed by IFRC.

- The project supported a number of regional activities and meetings, leading amongst others to the establishment of the PICS panel, a panel where regional meteorologists discuss mostly technical aspects. It has also led to regional recognition of FINPAC's work.
- The installation of an important automatic weather station at Niue was added to the RBSN work.

A further unexpected output is that NMHS staff from Solomon Islands indicated that their workload has lessened considerably when a severe weather event is forecasted. The forecasters are usually bombarded with phone calls and visits by the general public if there is an anticipated cyclone. Since SmartMet and SmartAlert were installed and utilised (with website and Facebook messages), staff have noticed they have spent less time answering queries through telephone and personal visits.

The quality of outputs produced, in as far as could be established by the evaluation team,has generally been good. Reports produced with FINPAC support such as the Compendium of Climate Service Case studies and the Pacific Roadmap for Climate Services are of high quality and have regional relevance. Feedback on the various trainings provided by the project (media trainings, technical training on SmartMet / SmartAlert and IT, training of communities in disaster response) has been largely positive, with the main criticism relating to the fact that the technical trainings by FMI were considered too short by some participants.

At the community level, the project has ensured that the physical outputs related to the early warning systems are simple and cost-efficient solutions such as community hazard maps with evacuation routes, community sirens based on empty gas cylinders, megaphones to warn about extreme weather events, etc. Materials, labour and technical expertise were sourced locally where possible.

Figure 1 - Community Hazard map in Epau community, Vanuatu

3.3.2 Project management & governance

The overall project was managed by SPREP, with implementation supported by the two implementing partners FMI (for the technical work under component 1) and IFRC (for the community work under component 2). In this section we present the findings on various aspects of project management.

Inception phase

The project had a very slow start: an 18-month inception period with what was originally intended as a three-year program is excessive. Originally the project management within SPREP was carried out by the Meteorology and Climatology Adviser (who left SPREP in early 2014, and the post wasn't filled). It appears that the first six months were almost totally lost in preparations for the PMC-2. The Project Manager's post was advertised in April 2013, but she only was recruited in September 2013 (nine months after the contract signing). FINPAC was officially launched during the PMC2 (July 2013), and the first SC meeting was held (face-to-face) at the same time.

The inception phase could have been used to improve the project's design, in particular the flawed logical framework, but this opportunity was not taken.

Implementation phase

The implementation of activities started at a relatively slow pace and combined with the long inception phase it means the project was always behind the original planning. The MTR report expressed major worries with regard to the delays in implementation of both component 1 and component 2.

Since the MTR however, the project has made much better progress and many outputs were in the end achieved, helped by a no-cost extension period of around 1.5 years.

Under component 1, FMI not only completed the work on SmartMet, but also managed to install SmartAlert in 5 countries and provide the necessary training for NMHS staff.

Component 2 has also seen good progress. In line with MTR recommendations, the project refrained from expanding the community work to another 5 countries and instead focused on completing the work in the 9 pilot communities that had already been identified.

A constant challenge for SPREP and IFRC has been the limited staff available for project management. SPREP, as overall manager, had only one person fully dedicated to the project. IFRC did not even have a full-time project manager, but had to rely instead on senior staff that also had other responsibilities. Combined with limited capacity at the national RC societies, this led to delays in all aspects of the community component. The SPREP project manager has been forced to use much of her (now his) time to logistics and admin manners, which meant that issues such as providing strategic guidance and quality control and developing and implementing thorough M&E systems have suffered.

Coordination & communication

The coordination between the 3 implementing partners has been challenging. No clear communication protocols were ever established and the partners did not always effectively communicate to each other on aspects such as planning of activities, delays in implementation of activities, delays in reporting etc.

This has led to the simultaneous planning of activities by FMI and SPREP, which targeted the same NMHS participants. This was the case for example when FMI wanted to do a two week SmartAlert training during their Oct – Nov 2016 mission for NMHS forecasters. SPREP had organized a training (another work package in FINPAC) for the forecasters at the same time. During that same mission, the IT training was hampered by another (non FINPAC) training organised by SPREP. It seems that both FMI and SPREP would communicate directly with NMHSs on the planning of training sessions but not always with each other. The fact that FMI was largely independent, having its own budget for its activities, and the fact that in the precursor ICI project they were also used to dealing directly with the NMSs, may have contributed to this lack of coordination.

The coordination with IFRC was complicated by the fact that the work in communities was done by the National RC societies. To compile its progress reports, IFRC depended therefore on all the different societies submitting their updates. Some of these national societies were relatively weak and not very experienced in project management and reporting. Financial reporting was further complicated by the fact this was done through the IFRC office in Kuala Lumpur.

Communication challenges were also felt directly by the evaluation team, which received very delayed responses from SPREP to requests for information

Coordination of the work within each country was however good thanks to the establishment of National Coordination Teams where community early warning projects were implemented. The limited capacity of the NCT's, in particular the National Red Cross Societies in some countries, did lead to delays. In several cases SPREP and IFRC had to invest more in in-country support to the NCT to push activities forward.

Adaptive management & internal learning

The project has shown a good propensity for adaptive management, based on internal learning and on good coordination with other projects in the region working in the same fields. Examples of this include, inter alia:

- The decision not to pursue the climate services work related to ENSO outlooks and TC genesis risks. The Australian-funded COSSPac project also works on these issues, and anMoU was agreed with them indicating that COSSPac would focus on long term forecasts and FINPAC on shorter term forecasts. In terms of climate services, FINPAC still produced an important output namely the compendium with case studies on climate services.
- Early in the implementation the project realised the need for more regional coordination, and this has led to activities such as the support for the PICS panel and for regional meetings of the PMC and PMMM. This support has not only been much appreciated, it has also helped to disseminate FINPAC best practices, increasing long term impact prospects.
- The work on community early warning projects was not initially foreseen, at least not at the scale it was ultimately implemented. It has proven to be one of the main successes of the project, and also enhances the effectiveness of the other project components that deal directly with the NMHSs. The outsourcing of the community work to IFRC, with its network of national societies, is also showing good adaptive management, as was the establishment of

NCTs to coordinate this work and ensure good ownership within the country, including at national and local government level.

- For Solomon Islands, the original site was Santa Cruz (outer island). After 2014 floods which killed 26 members of the Lord Howe community living near river mouth (River Mataniko), Solomon Islands advised FINPAC to change project site to focus on Lord Howe based on its vulnerability (displaced as well as impacts suffered during flooding). This advice was adopted.
- When it became clear that not enough information was available for the rehabilitation of RBSN stations, it was decided to first undertake a thorough assessment of the stations in all 14 countries. This has made it possible to identify the problems with each of the stations and identify the exact requirements for their rehabilitation, needed for a quality tendering process.
- The post assessment of Cyclone Pamthat hit Vanuatu in 2015 identified traditional houses as more resilient and recommended communities to revive traditional building designs. FINPAC used the recommendations in the community project in Epau-Vanuatu.
- One of the main risks identified for FINPAC was the occurrence of disasters. And indeed, several disasters did occur such as the cyclone Pam in Vanuatu in 2015, cyclone Winston in Fiji in 2016, and the 7.9 earthquake that hit near Solomon Islands in 2016. The project reacted to these by putting activities on hold and "allowing" countries time to recover and do post-disaster assessments.

In some respects, project management was not able to adapt. This goes especially for the recommendations in the MTR that involved reformulating the logframe, setting up monitoring plans and developing a gender action plan.

Financial and procurement aspects

Procurement relating to technical equipment has been a challenge for the project. SPREP does not have the technical expertise to define specifications for equipment such as work stations for NMHSs or the equipment needed for rehabilitation of RBSNs. Although ultimately these issues were resolved through inputs from FMI and from others like WMO, this had led to delays in procurement processes.

The limited capacity of national RC societies also led to some procurement challenges and delays for the early warning projects. An example of this is the delivery of CB radios in Kiribati, where lack of technical knowledge at IFRC and RC society led to delays in ordering and when finally delivered they turned out not to be suitable for the distance between the islands where the CB radios were supposed to operate.

Financial reporting has been acceptable (no qualified audits) but could have increased its usability by also tracking costs per output produced, as part of results-based management. This would also support a good value for money analysis.

Management overhead has remained within budget. However, there was a significant difference in actual expenditure vs. budget when it came to equipment procurement. It is not clear if this difference had been accepted by MFA.

While a regional programme as FINPAC that operates in up to 14 countries will always have a relatively high level of expenditure related to travel (both of project staff and of NMHS-beneficiaries), the overhead costs have been relatively modest compared to other regional projects like COSSPac that also used overseas support.

Technical and capacity building support provided by a remote institution, as in this case FMI, will always be relatively costly compared to the provision of such support by a regionally located partner, and this was inherent to FINPAC's design.

M&E and reporting

The level of monitoring and evaluation in the project was very poor. There were no baselines reported for key logical framework indicators and no counterfactuals in operation, nor any endline surveys conducted. Although it seems baselines such as capacity assessments of NMSs were done under the precursor ICI project, this is not referenced anywhere in the project document or logical framework. The opportunity provided by the MTR to review the logical framework was not really taken up with only a few minor changes made (see under Design & Relevance).

No dedicated M&E framework was ever developed for the FINPAC project that would clarify the exact roles of implementing partners in M&E or any approaches like participatory M&E with beneficiaries. There are no reference sheets that explain how the indicators in the logframe should be measured and reported against.

While FMI utilised the ICI reporting template, SPREP and IFRC utilised their own as there was no specific guidance provided on the need for implementing partners to use the same reporting template. Until 2015, overall progress reports produced by SPREP were very much activity-based rather than results-based. This improved after the MTR, with reports now including an assessment of progress against logframe indicators. Given however that the logframe itself was not thoroughly reviewed and improved, it means that this results reporting is not covering all aspects of the project. E.g. the regional work does not feature at all in the logframe and so is also not mentioned in the tables with progress against the results.

Governance

FINPAC is governed through a Steering Committee. Apart from MFA Finland and the main 3 implementing partners it includes other stakeholders such as WMO and the COSSPac project.

Given the obvious difficulty of getting all SC members together in one room, the SC has adopted a flexible approach with face-to-face meetings (2 held) complemented with Skype meetings and email correspondence; an acceptable cost-efficient solution. Analysis of the minutes shows that the SC members were good at informing key Met Officers in the region of progress say in relation to training but missed the opportunity to obtain and capitalise on information linked to policy windows and other opportunities. In general, the SC also does not seem to have played a very pro-active role. Rather, it has reacted to reports and recommendations / proposed actions contained therein.

The role of MFA Finland in overseeing FINPAC seems to have been quite limited. MFA did not participate in all SC meetings, nor have they ever reflected on key issues such as the lack of results-

based monitoring and reporting. An MFA representative has participated in some of the regional meetings, which has helped the visibility of the FINPAC project at the PMC and PMMM level.

On the financial side MFA's role has been efficient, ensuring timely disbursement of funds.

3.4 Effectiveness

ToR questions:

- To what extent has the project contributed to measures taken in disaster risk reduction and increasing resilience?
- To what extent has the project improved the capacity of local, national, regional authorities to utilise the available meteorological data for disaster preparedness?

Under Effectiveness we evaluate in how far the outputs produced by the project have led to (behavioural) changes amongst FINPAC's stakeholders and beneficiaries. The primary focus is on assessing in how far the outputs have led to NMHSs adopting best practices for weather and warning forecasting (NMHSs) products, and the communities adopting best practices for early warning and disaster risk reduction. The scope of effectiveness evaluation is broader than only assessing in how far the project purpose[6] of FINPAC has been achieved, due to the fact that the project has evolved since the start and has included interventions that were not part of the original design.

The effectiveness analysis is structured in line with the main elements (sub-components) of component 1 and component 2.

3.4.1 Component 1: Improved and new weather and climate forecasts and warnings by NMSs

Quality Management Systems (QMS)

The project provided further trainings for QMS Managers who have also satisfied the standard requirements through past trainings with the Australian Bureau of Meteorology and WMO. Any members of the team can be deployed to the countries should they need training and technical advice in this area. This output was already completed in 2015. So far, only Samoa called upon the assistance of Solomon Islands, in July 2017. Other NMHSs cite financial constraints as the main reason for not utilising this opportunity. They would have to pay for the services of the roving team and they don't have a budget for this.

SmartMet and SmartAlert

The SmartMet and SmartAlert systems were installed by FMI in the 5 countries Vanuatu, Samoa, PNG, Solomon Islands and Tonga. The installation of the software was complemented with a number of training workshops for the use of these software packages, which have been developed in-house by FMI.

Fiji was also on the list for SmartMet and SmartAlertand the software was installed but due to issues outside FINPAC's control, the project did in the end not manage to deliver an operational set-up in Fiji.

[6] The project purpose was: Improved capacity of the Pacific Island Country National Meteorological and Hydrological Services to deliver weather, climate and early warning services in cooperation with and for the benefit of villagers in Pacific communities

Evidence on the effective use of the systems in the 5 countries has been collected through site visits to the NMHSs in Solomon Islands and Tonga, complemented with feedback from NMHSs staff from the other countries and from FMI, as well as visiting the websites of each of those countries.

In Solomon Islands, the demonstration by the staff on how they use both SmartMet and SmartAlert clearly showed they were able to use the equipment and software effectively. See below.

Figure 2 – Solomon Islands Meteo Office

The staff of the SI Met Office conducted a demo showing how the Early Warning System is linked to SmartMet (weather forecasting from SmartMet and simplified using SmartAlert). The site showed 3,000 locations (including Lord Howe community) and visitors are able to easily read and understand weather forecasts and climate information available through the website. Although there is no visitor counter for the website, the staff were able to check their network system which showed 533 guests were online during the site visit.

The visit to Tonga Meteorological Services showed a somewhat different picture. The systems have been installed but are currently not used optimally due to the fact that their website is down. It appears though that the systems are in principle operational and are feeding their twitter account. It is assumed they will use SmartMet/SmartAlert for the website once it is active again, although staff interviewed indicated they may need a refresher training course.

In the other 3 countries, the software is working in the sense that they are installed and functional and meteo data required for forecasting- and warning-products are regularly uploaded according to FMI. The websites of the respective NMHSs show that SmartAlert is being used to produce end products for severe weather warnings, with more focus on graphical products like maps instead of text-based messages, following the insights gained from the community engagement and the media training. The effective use of SmartMet is more difficult to assess through the websites since it is not only used for development of weather forecasting end products, but also for analysis of weather data that might happen in the background.

Feedback from the NMS director in PNG indicates that they are using both SmartAlert and SmartMet and are now, thanks to the project, capable of writing their own scripts for the forecasts and warning alerts. Their website includes a warning map produced with SmartAlert and an interactive weather forecast map which is likely developed with SmartMet.

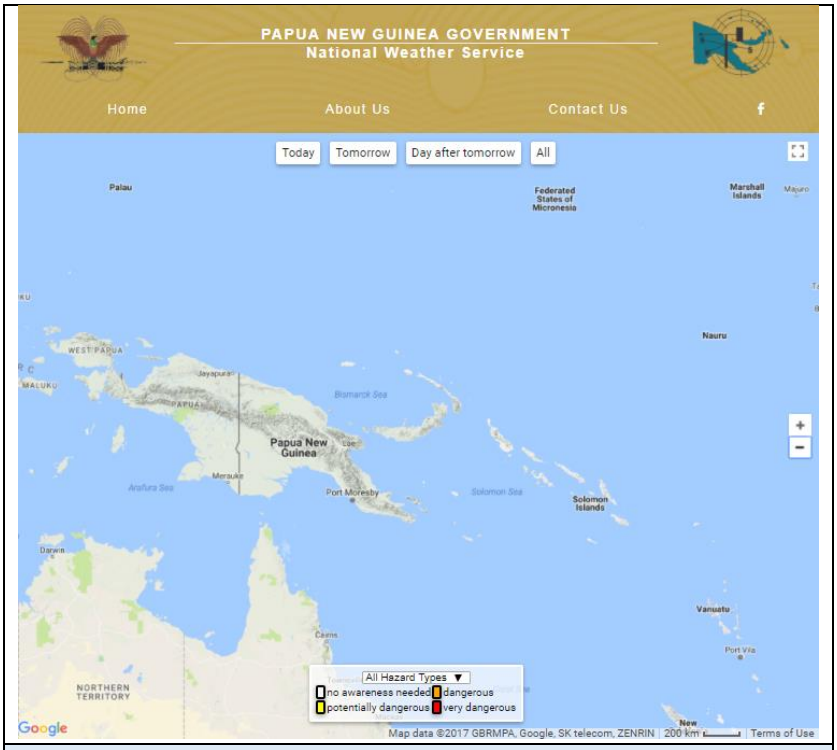

Figure 3
Hazard warning map on the PNG website, produced with SmartAlert

The website for Vanuatu is using a SmartAlert produced map for their warnings (complementing text warnings), but it is not clear in how far they are also using SmartMet. Feedback from staff from the Vanuatu Meteorology & Geo Hazards Department (VMGD) indicated that they had rather seen more flexibility in the choice of software to be used. Vanuatu has recently received funding from the GCF to support their weather and climate services and it remains to be seen whether they'll continue to use the SmartAlert and SmartMet products or switch to other tools.

Samoa is using SmartAlert not only for warning alerts on their website, but also to communicate warnings through SMS and through a dedicated weather app (developed with support from SPREP IT). As with Vanuatu, it is difficult to assess in how far SmartMet is effectively used. The website does include a (non-interactive) weather forecast map that could well be developed with SmartMet but this has not been verified. The map has replaced the previous text-based forecast.

While there is substantial evidence that most NMHSs are using the SmartMet and SmartAlert tools, the overall quality of the end products produced with SmartMet and SmartAlert, as assessed through their websites, is not all of professional standards yet. Most maps produced with SmartAlert seem to be based on standard Google Maps without much customisation. None of them were showing any warnings when the pages were visited (several times), but this could simply mean there were no warnings issued at the time.

The best weather forecast maps are those from PNG (interactive) and Samoa, but the evaluation team was not able to establish if those were developed with SmartMet. According to FMI the Samoa map may have been developed by the Japanese development worker who is based at the Samoa met

services and was trained by FMI[7]. As also confirmed by SPREP and some NMHSs staff, more training / support would help to make the most effective use of SmartMet and SmartAlert. An indication of this is the fact that the most professional application to date appears to be the Samoa weather app, which was developed with support from SPREP IT staff.

One challenge for all NMHs is the need for good internet bandwidth for the required daily uploading of meteorological data from various sources (such as satellite data). This is not a specific SmartMet / SmartAlert problem but may affect their effective use. FMI has tried to mitigate this problem by configuring the systems with the internet capacity in mind i.e. where there is limited bandwidth, less data are uploaded, trying to find a balance between the need for good data and the limitations of the internet connection. An opportunity missed is FINPAC liaising with the internet service providers in the respective countries to see if they can also support improved weather services by providing more bandwidth at reasonable costings.

The fact that the project has not been able to have Fiji successfully useSmartMet and SmartAlert is disappointing. A success in Fiji would have been particularly effective since their station serves as a regional hub for weather forecasting and warning services. It provides these services to countries which do not have their own NMHSs, such as Nauru and Tokelau.

Regional Basic Synoptic Network (RBSN)

Effectiveness of the RBSN sub-component cannot be assessed this point in timesince the stations have not yet been rehabilitated. If and when all stations are up and running again this should represent a significant contribution for improved quality of meteorological observations across the region. Given the Pacific's high occurrence of severe weather events like cyclones, this should contribute to improved disaster preparedness of the population in these countries.

Under this sub-component the project also supported the rehabilitation of the automatic weather station of Niue. This is considered a strategically important station for the region and is now functional again.

3.4.2 Component 2 - Improved ability of the NMSs to respond to the needs of villages with regard to hazardous weather and climate change

Community Early Warning projects

All 9 communities in the 8 countries where the project, through IFRC and its national RC societies, has worked on pilot projects now have Community Early Warning Systems and Disaster Response Plans, and the communities have been trained in how to use and maintain them. The field visits indicate that

7 It is crucial to note here that countries already had prior relationships with key countries such as Japan in terms of meteorology and weather forecasts prior to FINPAC's inception. The involvement of the Japanese volunteer in FINPAC should be seen as a bonus in that he could manipulate data from SmartMet which made it easier and quicker for Samoa to launch their weather app. This is an added value benefit from FINPAC.

the work has led to a good understanding of the importance of these and that villagers have adopted best practices for early warnings and disaster risk reduction:

- The target community visited by the evaluation team in Tonga is maintaining the VHF radio and linked siren, is making use of roof rafter straps, undertakes practice drills for evacuation and disaster response and has shown an ability to articulate constructive criticism of messages from NMHSs.
- In Cook Islands, signage and capacity building based on the early warning systems increased the understanding of weather information at the community level and improved the community's resilience. The community was provided with a more practical disaster resilience plan, grassroots level learnings on weather and climate products and dissemination of information related to weather and climate information.
- In Solomon Islands, the community products (solar powered siren & lights) were tested during the site visit and the products (including the noticeboard) had been maintained by the community. Batteries had also been replaced by the community without any external assistance or reliance on instructions from the SI Met Office. All these are indications that the results from the project in terms of physical outputs, awareness raising and capacity building have led the community to internalise and adopt the early warning and DRR measures.

Figure 4
Simple siren system in Lord Howe, SI

While other communities were not visited, feedback from communities during the Regional Practitioner Workshop indicate that the project has succeeded in changing the way the communities are preparing for potential disasters. Some quotes from communities with regard to what they see as most significant change brought about by the project:

- "to have a community early warning system and having people participate and be part of the process"
- "strong relationship between the partners and communities with the project bringing community to work together as a team"
- "we are aware of how we can prepare for disasters such as tsunami and the upcoming cyclone season".

From the field visit evidence and the feedback from other communities it can be inferred that the approach used by SPREP, IFRC and the NRCs has contributed to the overall effectiveness of the community projects. The participatory approach, combined with the fact that the NRCs have a very good understanding of the local community context are prime factors in this. The focus of IFRC on using appropriate (simple) technology for the physical outputs related to the early warning systems and disaster response plans has also considerably helped to ensure that these outputs are effective and can be maintained by the communities. It shows that the choice of IFRC, and through them the NRCs, as implementing partners was a good one.

Community – NMHS – media engagement

Almost all stakeholders interviewed have indicated that the most innovative and most value-added aspect of FINPAC has been to link NMHSs with the main end users i.e. the population in the PICs, which, within the FINPAC context, was primarily done by bringing NMHSs into the community projects. All community projects were launched with a first workshop in which NMHS-staff participated and where the needs of the community members for weather forecasts and warnings were presented and discussed. This was the first time that NMHSs were directly exposed to the main end users of their weather- and warning-products. This approach has created awareness amongst the NMHSs of the importance of adapting their products to the needs of the communities i.e. the importance of using terminology that can be understood by the communities and using a range of dissemination channels that allow communities to access the information.

Once the NMHSs had a better understanding of the end users' needs, the process of improving their messages and their dissemination was supported with media training where the NMHSs have learnt to use more appropriate terminology in their products, with a focus on using local languages. In addition, the media training has provided them with better communication skills in general, which further improves their capacity to deliver appropriate weather forecast and warning messages. Through these trainings, all NMHSs now have a draft glossary of terminology to use in communicating with their end users at community level.

Figure 5 – Community poster Vanuatu
In Vanuatu, communities indicated that they did not understand various cyclone categories (e.g. Category 1 to Category 5) so the Met Service now uses graphics in the community posters to represent each Category (e.g. used coconut tree as a metaphor. During Category 1, coconut fronds will be swaying, Category 5 coconut tree will fall etc)

Feedback on this training from NMHSs has been positive: it has helped them better understand how forecast and warning messages can be delivered to maximise their usability, and has equipped them with the skills to do so. NMHSs staff interviewed indicate that they have changed their products. They are now using simpler language in their forecast messages and have reverted to using more graphics in their products to replace text messages. They have also developed specific products such as in SI where posters have been developed in pidgin language for use on community boards. It has also led to the more effective use of other media like Facebook and SMS, with Samoa being most advanced by having developed a dedicated weather app.

The NMHSs have also faced some challenges in trying to disseminate their messages more broadly. Most notably, Solomon Islands had plans to issue warnings (produced with SmartAlert) through SMS messages, but this has been hampered by technical faults with the provider TELEKOM upon which this service is reliant. An earlier involvement of such private sector partners like mobile network and internet providers could have helped mitigate these issues and could also possibly have led to a "deal" where such important messages are issued at no cost and treated with priority.

Access to the weather and warning products for communities has been improved by providing communication equipment such as VHF radios in Tonga as part of the early warning systems. Where internet is available, such as in Cook Island community, communities can access the products through the websites, Facebook or even directly by receiving it through email.

In Tonga, it was noted that thanks to exposure to the community/NMHS project activities, the town officer has started to work with youth groups and schools and helps the school to collect and send accurate data to the NMHS. This can be considered an unexpected but very useful result, which will help create awareness amongst the youth of the importance of quality weather data. It will also directly help the NMHSs improve its forecasts and warnings.

A further unexpected result is the fact that through FINPAC involvement, IFRC now has a better understanding of the importance of appropriate weather- and climate-services for the communities in which they work.

Regional coordination support

When it was concluded early in the implementation phase that work on long term outlooks (like ENSO outlooks) was already covered through other projects like COSSPac, FINPAC decided to instead focus more on supporting regional coordination work, an area that was not well covered through other programmes and projects. Where the original project document only foresaw the organisation of one regional ministerial level meeting, FINPAC has supported several meetings of both the Pacific Meteorological Council (consisting of the heads of the meteo services in each country) and of the Pacific Ministerial Meeting on Meteorology (one in 2015, one in 2017). The project has also facilitated and supported the PICS panel, a regional coordination and discussion panel at the more technical level, and has co-funded the first and second Pacific Climate Outlook Forums in 2015 & 2016.

Through all these activities, the project has raised the awareness of stakeholders across the region on the importance of ensuring weather forecasts and warning alerts are tailored to the needs of the end users.

The importance of this work was explicitly recognised during the recent PMC (see box).

Part of the PMC statement on FINPAC:
The meeting:
[..]

- recommended NMHSs to support the national IFRC societies and other community mobilizers to ensure strong collaboration developed under FINPAC can continue;
- recognised that the MoU signed between Solomon Island Red Cross and the Solomon Island Meteorological Service is a great example of sustainability and collaboration to get information to the last mile;
- recommended NMHSs and their regional partners engage national red cross societies or other NGO's early in program design processes to ensure public weather information can be easily understood and used to inform early actions at the community level;
- recognised existing tools and processes developed under the FINPAC;
- encouraged NMHSs to work closely and strengthen relationships with their National Media (print and broadcasters) to provide wider access to public weather information; and
- recommended that donors and partners continue support to NMHSs and their partners to replicate the community early warning system activities piloted under the FINPAC to other communities.

(Source: draft PMC-4 report)

During this PMC, Tonga also explicitly noted that FINPAC had a great impact in the region and addressed the challenge of working with communities and the media.

As part of its support to the PICS panel, the Pacific Roadmap for Strengthened Climate Services was developed. This roadmap, endorsed by WMO and approved by the PMMM, includes a presentation of FINPAC's approach to working with communities and NMHSs to deliver information "to the last mile". This is already creating, and will continue to create, awareness amongst a broad range of stakeholders involved in meteorology of the importance of not only focusing on technical meteo aspects (like the quality of analysis of meteo data) but also on effectively conveying messages to the end users.

The above is further promoted through the Compendium of Climate Services Case Studies developed as part of the PICS panel action plan. It includes a broad range of case studies including FINPAC's work on linking NMHSs with communities for improved end user products.

3.5 Impact

ToR questions:

- How well has the project succeeded in reducing the vulnerability of the fourteen Pacific Island Countries to the effects of climate change?
- How has the project contributed to the accessibility of various groups to meteorological information and weather services?

The overall objective of FINPAC is "Reduced vulnerability of the Pacific Island Country villagers' livelihoods to the effects of Climate Change". This impact section explores in how far FINPAC has

contributed towards the long-term achievement of this objective. As with the effectiveness-section, the scope of analysis is a bit broader than the formulation of the logframe's overall objective. The logframe only addresses vulnerability to the effects of climate change, whereas here we also address improved resilience in general against severe weather events as well as improvements in livelihoods activities like agriculture and fisheries thanks to better weather information (as also covered in one of the original indicators in the logframe). We distinguish between potential and concrete impact on direct beneficiaries, in this case the 9 communities where the project undertook activities, and on the potential for wider impact of FINPAC beyond these direct beneficiaries, i.e. at the level of all PIC villagers as mentioned in the overall objective, through replication of best practices.

Impact on the beneficiary communities

There are promising signs that the project will have a lasting impact on reducing the target villagers' vulnerability to severe weather events and disasters. As discussed under effectiveness, the evaluation team found during field visits in selected villages that the early warning- and Disaster Risk Reduction (DRR) systems and plans are maintained and kept operational by the beneficiary communities. How far the systems will actually help reduce vulnerability can only be assessed when severe weather / disaster events occur.

Such an event occurred recently when a strong 7.9 earthquake struck near Honiara on the Solomon Islands. This happened one week after the beneficiary community (Lord Howe) had done a simulation exercise to test the early warning systems. After the earthquake, the community was immediately able to activate the Community Response Action Plan for Tsunami Alert developed under the FINPAC project. The warning was issued by the Early Warning Team which includes the SI meteo office and National Disaster Office. The Disaster Risk Committee of the community received and assessed the warning and magnitude of earthquake and moved swiftly to the Red Alert stage of the response plan. It is crucial to note that without the linkage provided through FINPAC, the Lord Howe community would have not been contacted directly by the Solomon Islands Met Service.

The leader used the siren and warning system procured through FINPAC to sound the Tsunami evacuation alarm and Lord Howe ended up being the first community to evacuate to safer grounds. This is unmistakable evidence that the early warning system and the Disaster Response plan have led to increased resilience of Lord How community against severe events regardless of whether such events are climate change-related or not.

While (luckily!) no other severe weather events have taken place since the completion of the community projects, there is no reason to assume that the situation in the other communities is much different from Lord Howe community, given that a similar approach has been used across all 9 target communities.

Through the project the communities now also have better access to better weather forecasts and climate outlooks (more appropriate and more accessible). Some examples of this, as relayed to IFRC during community workshops:

1. Samoa community project: women in the beneficiary village need at least 3 days of good weather (sunny days) for weaving mats. Improved forecasting from Samoa Met Office helped them track the weather and plan their weaving activities accordingly.
2. Tonga community project in outer island (Ha'apai): fisher folk are now able to plan "less risky" fishing behaviour through improved weather forecasting information made available to the community through installation of VHF radio in island connected to a communication network including Haapai Met Services, Haapai Town Council and Red Cross branch
3. Tuvalu community project: the community utilises the 65 transistor radios provided by FINPAC to listen to weather information through the Tuvalu radio station (i.e. community did not have access to radios before so could not determine specific weather for particular days especially climate forecasts on drought which has major implications on community livelihood activities such as planting and harvesting time for crops).

The community engagement was not just limited to weather and climate related activities, but included other DRR related activities areas such as water harvesting methods, sanitation and hygiene, community first aid, community health, etc. which also have a positive impact on the community livelihoods.

Broader impact& replication

Within the 8 countries where the pilot community projects were implemented, there is already some level of replication to other villages happening. The FINPAC model has been duplicated in 8 other villages in Solomon Islands for instance, while the NMHSs in Kiribati indicated that the FINPAC approach is being duplicated under a new EU-funded project managed by the Pacific Community (SPC).

The work of FINPAC, and in particular the novel approach of linking the NMHSs with communities, has been presented at all relevant regional fora such as the PMC, PMMM and PICS panel. Given the high praise for this work as expressed up to the highest levels of regional meteorological coordination, the PMMM, as well as the call for replication of the FINPAC model at the last PMC meeting (see box under Effectiveness), the prospects for broader replication of the FINPAC NMHSs/community outreach approach are good, and are further enhanced by the fact that IFRC is also actively disseminating the best practices from the FINPAC project in relevant regional fora. Other projects and donors (e.g. WMO during interview, COSSPac in their presentation at the recent PMC-4) have also stated that they plan to replicate the model by using the Community Engagement Guidelines developed by the project.

Another example is Vanuatu, which is expected to receive funding through the Green Climate Fund for a climate services project (the first country in the region to do so). The funding proposal makes explicit reference to FINPAC best practices with regard to community outreach and states that this best practice will be replicated through the project.

With regard to SmartMet and SmartAlert it is difficult to assess whether the software will in future also be used by other NMHSs in the region. Most other NMHSs already have their own software in place, often acquired and supported through other development partners (like JICA or Australian ODA) and it seems unlikely that they will switch to SmartMet or SmartAlert without external support, adequate IT capacity (mainstreamed into government budgeting process) and incentives (like

training). The quality of most of the end products produced with SmartAlert and SmartMet, as incorporated on the websites of the respective NMHSs, is at present also not really good enough to convince others of the usefulness of these systems. If these products become more appealing (more like the Samoa weather app) and if, as planned, FMI will release SmartMet and SmartAlert as open source software, prospects for wider use could increase in the future. This is further helped by the fact that SPREP can provide IT support to all NMHSs and that remote support from FMI will also be available (see under Sustainability).

3.6 Sustainability

ToR questions:

- To what extent has the capacity in providing meteorological information and weather services improved?
- What are the main risks that are likely to affect sustainability of the results after the project completion, especially regarding the technical components of the project?

Overall findings

FINPAC was designed as a very ambitious project especially when considering the initial planned duration of only 3 years. The long inception period furthermore meant that, at the time of the MTR, the prospects for completing all activities and ensuring the sustainability of the results were not very good, and a no-cost extension was already recommended at that point together with measures to reduce the scope of the project.

The situation by the end of the project changed quite dramatically compared to the situation at the time of the MTR. Thanks to a no-extension of about 1.5 years, the project has been able to complete all its activities (except the rehabilitation of RBSNs). The project decided after the MTR to not engage more communities and has instead focused on delivering sustainable results for the 9 pilot communities. Work on the lightning feeds was stopped (also due to cost issues) whereas SmartAlert work was accelerated and completed.

The MTR recommended the elaboration of a comprehensive exit strategy. This recommendation was not adopted, but proposed key elements of such a strategy to promote sustainability were in fact adopted, such as not expanding to more communities, having clear go – no go decisions on lightning feeds and SmartAlert work as well as documenting lessons learnt.

In the below sections, we explore sustainability aspects with regards to the main results achieved at NMHSs level, at pilot community level and at the regional level, looking at financial, institutional, technical and policy environment issues.

3.6.1 NMHSs

QMS

The roving audit team is still available to the NMHSs to provide audits of their QMS and help them on their way to certification. However, as discussed earlier, financial constraints at NMHSs have meant that, so far, the team was only called in once to provide QMS support. There is no indication that this will change much in the near future, unless external funding will be available. This means there is a sustainability risk since an audit certificate cannot be maintained without continued experience and this experience can only be obtained if others pay for the service on a regular basis.

SmartMet / SmartAlert

As discussed in the Effectiveness chapter, the SmartMet / SmartAlert systems are operational at at least 4 of the 5 NMHSs where they have been installed (Tonga more difficult to assess due to not

having a website). As mentioned earlier, it was also installed in Fiji but for reasons outside FINPAC's control, the work in Fiji could not be continued.

One of the main risks with regard to sustainability of these systems is the possible lack of dedicated IT support, with weather forecasters at NMHSs often responsible themselves for IT aspects. The project has recognised this risk and has established IT support for the NMHSs within SPREP. Where NMHSs have IT problems that they can't solve internally, SPREP IT staff, trained in specific SmartMet / SmartAlert issues by FMI, will be their first port of call for support. Where SPREP staff can also not solve the issue, they will be able to fall back on remote support from FMI. This is currently being institutionalised through a MoU between SPREP and FMI, and covers all aspects of SmartMet / SmartAlert use, not only IT aspects.

In Solomon Islands, the trainings conducted under Component 1 gave rise to the importance of having a dedicated IT person to support the SmartMet and SmartMet activities. This IT position was created and is embedded into the government budget and will for the SI meteo staff be their first port of call when they have IT issues. The evaluation team is not aware of any other NMHSs having created dedicated IT positions so they will likely depend on the IT support from SPREP and FMI which is less sustainable than having their own IT support.

Financial sustainability of the systems appears not to be a major issue. The SmartMet / SmartAlert software is provided to the NMHSs free of charge, including any future updates. In fact, FMI is planning to make this in-house software open source, meaning it would be provided free of charge to any NMHS worldwide that is interested in using it. Vanuatu NMHS expressed a worry about the high cost for any additional systems they may want to install, but with the software free and hardware for a work station amounting only to a few thousand Euros, the costs are manageable.

With the IT risk addressed, two main other risks to sustainability remain: The first one is a financial / technical issue, namely the limited internet capacity and reliability at some of the NMHSs. High quality weather forecasting requires daily uploads of considerable amounts of meteo data, easily amounting to several GBs/day. It should be noted that this issue probably applies as much to SmartAlert / SmartMet as to any alternative software used for forecasting and warning alerts so it is not a specific FINPAC issue. It may however lead to reduced commitment from NMHSs to continue to use the systems if they can't be used to their fullest.

The second risk is related to this and concerns the technical capacity of the weather forecasters. While NMHS staff have been trained on both SmartMet and SmartAlert, some of them have expressed the need for more training to be able to fully utilise the systems and customise them for their own specific needs. The staff turnover rate is also very high in the Pacific and continuous capacity building is necessary. Reference was made to the JICA support to some NMHSs, where TA is embedded in an NMHSs for a considerable period (several years), allowing for on-the-job training. With FINPAC not being continued, this is not an option. The alternative option provided, i.e. remote support for SmartMet / SmartAlert development from FMI (and partly also from SPREP, which has already helped Samoa develop a weather app based on SmartAlert outputs) is the best available alternative, but in how far this will be sufficient to train and motivate NMHS staff to continue to use and develop SmartMet / SmartAlert remains to be seen.

Other programmes are likely to continue to provide technical support to the NMHSs, such as the CREWS (Climate Risk and Early Warning Systems) initiative which has a Pacific region project that aims to modernise forecasting capabilities of the Pacific NMHSs. This may provide opportunities for additional support for SmartMet / SmartAlert use. Based on ongoing discussions there is also a possibility that FMI itself may receive some funding through other development partners or programmes to continue to provide capacity building support to the NMHSs.[8]

With regard to NMHS capacity to deliver meaningful messages by using appropriate terminology and dissemination channels, the risks for sustainability are considered low, with SPREP staff being able to continue to provide support in this area. NMHSs are already sending draft press releases to SPREP media staff for editing and advice, while SPREP IT staff has supported the creation of a weather app for Samoa (which is receiving positive reviews from users), which represents a new form of getting weather and warning messages out to the end users.

3.6.2 Pilot communities

Visits to the pilot communities indicate that they have taken ownership of the early warning and disaster risk reduction and response systems and plans. All communities have disaster committees that have been trained in overseeing, maintaining and operating the Community Early Warning Systems.

Simulation exercises were undertaken in all pilot communities and indicate that the systems are working as confirmed by the rapid evacuation of Lord Howe community in SI during the tsunami alert in 2016. Having used low-cost / low-maintenance solutions for the early warning systems and disaster response plans, communities should be able to maintain this equipment as confirmed during the field visits. The example of Solomon Islands, where the community has replaced batteries themselves, is an encouraging example of this.

By using an inclusive approach for the community work, such as the establishment of National Coordination Teams involving key local and government stakeholders, broader ownership has also been created. The main implementing partner for the community work, IFRC, can be expected to continue to be involved at community level through its permanent presence in the countries in the form of the national RC societies, although there is a risk that the communities were the project is completed will be “forgotten” and attention will go only to replicating the model to other communities.

The main risk to sustainability may, ironically, be the absence of severe events. This may lead to a gradual erosion of the community’s vigilance, in particular of the community disaster committee, in ensuring that all aspects of the early warning systems and disaster response plans are still functional and fully understood by all community members. There is at present no enabling policy that for example prescribes regular simulation exercises in all communities under coordination of the national disaster management offices.

[8] Information provided by FMI during the debriefing presentation meeting on Monday 29 January 2018

3.6.3 Regional work

The regional work of FINPAC has primarily focused on supporting regional meetings of PMC and PMMM (by providing co-funding) and supporting the creation and functioning of the PICS panel.

PMC and PMMM meetings are established coordination mechanisms and it is highly likely that they will be continued in future without further FINPAC financial support, with SPREP playing an important role in this. It serves as the lead regional agency and hub for meteorological services and climate and weather early warning systems (as per the Strategic Plan 2017-2026) and its Pacific Met Desk acts as the secretariat for the PMC. The fact that the FINPAC project itself was managed by SPREP will increase the sustainability prospects of FINPAC's regional results, and in particular the PICS panel. Funding for the PICS panel has already been secured by SPREP through other organisations and projects.

3.7 Cross-cutting objectives

ToR: no specific questions. But states that "The cross-cutting objectives of Finland's development policy are to be taken into consideration when studying the evaluation questions"

Gender

Gender has not been receiving much attention and it was difficult to track in how far the list of action points on gender included in the project document were applied in the project's activities. There are no quantitative targets provided in either the project document or logframe on gender so it is not possible to assess progress against targets like the level of participation of women in project workshops or in supported coordination mechanisms like the PICS panel. The latest project progress report elaborated by SPREP (2016 annual report) gives very little information on any gender specific approaches or activities. The MTR recommended the elaboration of a Gender Action Plan with clear timelines, targets and responsibilities, but this recommendation was not adopted.

Assessment of the community projects indicate that some gender considerations were incorporated in the community projects, based on IFRC's gender strategies. This included for example tracking gender disaggregated data on beneficiaries, which show that 65% of beneficiaries in the 9 pilot communities are women (IFRC final report, March 2017). However, no thorough analysis was done on how weather and severe events impact differently on men and women. There are also no gender disaggregated data available on the composition of decision making bodies like the community disaster committees, although a WMO rep interviewed indicated that there were communities where women sat on decision making groups such as in the SI Lord Howe community where the leader is a woman. The Community Engagement Guidelines developed on the basis of best practices in the pilot communities make reference to guiding principles for resilient development which includes gender: " Integrate gender considerations, advocate and support equitable participation of men and women in the planning and implementation of all activities", but this is not further detailed.

For the work with NMHSs it was foreseen to create a network of "women in meteorology" to promote meteorology as a career path for women, but this was not achieved. According to the 2016 FINPAC progress report this was due to financial limitations (there was no separate budget for this). Instead,

the project has developed a number of brochures on "Women in Meteorology", an activity that was proposed by the MTR as one of the elements of the recommended Gender Action Plan.

Lack of data makes it difficult to assess in how far trainings for NMHSs staff, such as the SmartAlert/SmartMet trainings by FMI and the media trainings organised by SPREP, have managed to have a balanced representation of men and women. The scope for the project to influence these numbers significantly is admittedly limited given that it has to work with the relevant staff in NMHS, whether man or woman. Weather forecasting positions for example are dominated by men, which makes it almost impossible to ensure a good participation of women in SmartAlert / SmartMet trainings.

Human Rights-Based Approach (HRBA) – governance

In a general sense, the project is working directly on HRBA by linking the main duty bearers in meteorology, i.e. the NMHSs, directly to the main rights holders, i.e. the communities as the users who have the right to receive usable weather and warning products that help strengthen their resilience to extreme events and climate change and their livelihoods in general. Exposure to the communities has increased the NMHSs understanding of the needs of these rights holders and all work with NMHSs has been directed to better satisfying those needs. The communities now have *better* access to weather and warning products that they can *better* understand.

The partnership between SPREP and IFRC in its community engagement process by default brought onto the table activities such as participatory development and attention for human rights. IFRC has very clear guidelines for these and those have been applied in the community projects. Other stakeholders have underlined the importance on the involvement of IFRC and its national RC societies to help ensure that in the design of early warning systems and disaster response plans, the needs of vulnerable groups are considered. Concretely, the needs of women, elderly and people with disabilities were included in the consultation process through focus group discussions as part of the vulnerability assessments undertaken at the start of the community projects. As a result, disaster response plans include for example specific guidance to ensure people with disabilities will be helped to evacuate during an emergency. During the participatory assessments (using the Vulnerability and Capacity Assessment tool developed by the NGO, CARE), the project also respected and assessed indigenous knowledge in terms of weather prediction approaches.

Environment / climate change

Consideration of environment and climate change are inherent in the FINPAC design, and therefore the evaluation team could not find any major issues in relation to this. Provision of the wrong type of boats can have minor negative environmental impacts in areas with coral reef but this was avoided.

4 Conclusions and recommendations

4.1 Introduction

This chapter presents the conclusions based on the findings presented in the previous chapter. Like the findings, the conclusions are structured in line with the evaluation criteria. Based on the conclusions, a colour-coded grading is provided on the performance of the project in relation to each criterion:

	Very good
	Good
	Problems
	Deficiencies

Since this is an end evaluation, recommendations for changes to the project itself are not required. Hence recommendations formulated in this chapter refer primarily to follow-up aspects that are relevant for the main implementing partners SPREP, IFRC and FMI and/or to MFA. Some broader recommendations, not directly related to the evaluation criteria, are included in the next chapter on lessons learnt.

4.2 Design& relevance

4.2.1 Conclusions

Design

While the findings indicated the FINPAC design was based on a good participatory approach involving key stakeholders including the NMHSs, the main design element itself, the logical framework was found to contain major flaws, in particular at the level of indicators, with most indicators not formulated in line with SMART principles and not having clear end-of-project targets. The results and indicators in the logframe also don't cover all aspects of the projects such as changes at the level of communities and at the level of other stakeholders like regional players. They only refer to changes at the level of the NMHSs. Some of the assumptions in the logframe are in fact risks that the project should be able to mitigate.

These flaws in the logframe are a crucial design shortcoming, making it difficult to effectively monitor the project and comply with results-based management principles. It also makes external evaluations more difficult since there are no clear targets against which the project's results can be evaluated.

Grading for design	**Deficiencies**

Relevance

Relevance of the project has been evaluated in terms of regional / national policies and strategies in the Pacific, Agenda 2030, alignment with Finnish Development policy and relevance for beneficiaries. For all of these, the findings show that the project is highly relevant. Feedback from NMHSs and other stakeholders confirmed the alignment with national policies in the countries where FINPAC was active.

The project contributes directly to the Sustainable Development Goals of the Agenda 2030 and in particular achievement of the target 1.5 of the SDG 1 – End to Poverty, which relates to resilience building and reducing vulnerability to extreme climate-related events.

Alignment with Finnish development policy was found to be strong, both with the 2012 policy and with the new development policy adopted in 2016. The latter is itself strongly aligned with the Agenda 2030, including the aspects of climate change and disaster risk management. The only aspect where FINPAC is not strongly aligned with is the geographical focus of the Finnish policy, which does not include the PICS.

The high level of satisfaction of the main beneficiaries NMHSs and communities also confirms the high relevance of the project for them. It is in particular the approach of the project to directly link NMHSs with the communities that is seen as very innovative and relevant.

Grading for relevance	**Very good**

4.2.2 Recommendations

Ref	Aspect	Recommendation	Relevant for
1	Project design	More attention should be given to project design and the design of the logical framework. A well designed logical framework (ideally based on a Theory of Change) will be able to guide the implementation phase, and will serve as the main reference framework for monitoring and for external evaluations.	MFA Finland SPREP FMI IFRC
2	Project design	Design of projects, including of Theories of Change and Logical Frameworks, should involve all key stakeholders. This can be done before a project is approved, or during a project inception phase.	MFA Finland SPREP FMI IFRC

4.3 Aid effectiveness

4.3.1 Conclusions

The findings assessed aid effectiveness in terms of commitment and ownership and in terms of added value.

The findings show that the project has managed to instil a strong level of commitment and ownership at all levels, from the community level up the regional level, by using highly participatory approaches in design and implementation, coordinating work in each country with key government agencies and by supporting important regional meteorological bodies and networks like the PICS panel, PMC and PMMM. Positive feedback from stakeholders at all these levels confirm this.

With regard to added value, the findings show all stakeholders agree that FINPAC's key added value has been its approach to link NMHSs with communities, something never done before by any other

project. FINPAC has also ensured good complementarity by actively coordinating with other meteorology projects, even formalising their complementarity through anMoU (as with COSSPac).

FINPAC has shown that embedding ICI mechanisms in a broader project makes it more effective by addressing the issue mentioned in the ICI evaluation report[9] that effectiveness of ICI projects is hampered by the fact they are implemented in isolation.

An important drawback to the ICI instrument, and also to FINPAC, is the fact that capacity building support provided by a remote institution is inherently less efficient and effective than support provided by a similar institution based in the project region.

Grading for Aid Effectiveness	**Good**

4.3.2 Recommendations

Ref	Aspect	Recommendation	Relevant for
3	Complementarity	Formalising complementarity with other projects the way FINPAC has done with COSSPac is something that could also be encouraged in other projects.	MFA Finland SPREP
4	ICI	Broadening the ICI instrument to become part of larger projects such as FINPAC	MFA Finland
5	Aid coordination	Further strengthen regional coordination between the plethora of projects working on meteo services and early warning systems	SPREP

4.4 Efficiency

4.4.1 Conclusions

Efficiency analysis looked at achievement of outputs and project management & governance aspects. It is complemented here with a conclusion on value for money.

Outputs - good

The project has achieved most of the outputs it had set out to achieve although not always within the timeframe defined, hence the need for a no-cost extension of 1.5 years. The analysis also shows that the project has delivered a few outputs that were not foreseen in the logframe, in particular the community level outputs and the work at regional level. The quality of the outputs has generally been good, although the training of the NMHSs on SmartMet/SmartAlert has not been sufficient to ensure that they can all produce the software effectively for professional end user products.

Project management & governance - problems

The findings show that project management has both strong and weak points.

[9] Complementarity in Finland's Development Policy and Co-operation; A Case Study on Complementarity in the Institutional Co-operation Instrument, MFA Finland, 2014

Weak points include:

- Planning, monitoring and reporting has generally been very activity-based instead of results-based, with the flawed logframe at least partly to blame for this.
- Progress during both the inception phase and implementation phase has been relatively slow, requiring the no-cost extension of 1.5 year.
- Coordination and communication between implementing partners was weak and irregular, leading for example to the simultaneous planning of training activities.
- Procurement processes have at times been the cause of considerable delays.
- Lacking budget lines and plans for baseline- and end-surveys.
- Lacking a structured response to the MTR concerning how recommendations were to be handled in terms of actions taken.

Strong points include:

- Adaptive management and internal learning have been very strong and has helped ensure the project has maximised its added value.
- The engagement of relevant expertise from "third parties" like WMO and other DRR initiatives (e.g. New Zealand and Australian Aids).
- Leveraging of co-funding for some activities.

Both strong and weak points are shared responsibilities between the implementing partners SPREP, IFRC and FMI. At the level of IFRC and SPREP in particular, more (human) capacity for project management would have helped avoid or mitigate the weak points.

Oversight of the project was provided by a Steering Committee (SC). The SC has been more reactive than pro-active and has not addressed critical issues such as the lack of results-based approaches. Efficient functioning of the SC was hampered by the difficulty to have physical meetings, given the limited budget for the SC and the complicated logistics of getting all members together in one place.

Value for money – difficult to evaluate

A comprehensive value for money analysis is not possible within the scope of this evaluation. It also requires data that are not directly available, such as expenditures per output achieved and benchmark data from other projects producing similar outputs.

There are a number of aspects that point to good value for money:

- The strong adaptive management and internal learning has led to good value for money, such as the decision to not implement any activities on technical climate services work like ENSO outlooks, since these are covered by other projects; the decision to change the target community in SI to one with higher vulnerability to floods; and the decision to first undertake an assessment of RBSNs before deciding on which ones to rehabilitate.
- The use of low-cost locally available technology and equipment for the community projects. A maximum of Euro 10,000 was spent on this per community, a very acceptable amount when considering it has helped create comprehensive early warning systems that can be maintained by the communities themselves.

- The SmartMet and SmartAlert software has been provided free of charge and updates will also be free.
- The leveraging of co-funding for activities such as the elaboration of the Compendium of Climate Services Case studies.

The low overhead costs of FINPAC are not considered good value for money since it is concluded that more project management staff would have helped to avoid the weak points on project management outlined earlier in this section.

Due to the severity of the problems in project management and project governance, and the fact that outputs was only achieved after a no-cost extension, efficiency is graded as "problems" even though the project has been efficiently managed in some areas.

Grading for Efficiency	Problems

4.4.2 Recommendations

Ref	Aspect	Recommendation	Relevant for
6	Project monitoring	Monitoring systems should be given more attention. They should be rigorous, based on results-based principles and should allow for effective adaptive project management. Thorough baseline- and end line-surveys should be part of these systems including a template and procedure for responding to a MTR.	MFA Finland SPREP IFRC FMI
7	Project reporting	Project progress reports should be scrutinised more thoroughly and comprehensive feedback provided. Implementing partners should be held to results-based reporting principles including for reporting. Results-based planning and reporting templates should be provided.	MFA Finland
8	Governance	Ensure governance structures like Steering Committees function effectively. This requires both sufficient budget for face-to-face meetings and an active role from MFA.	MFA Finland
9	Financial	Projects should have sufficient budget and resources for project management and a specific budget line for M&E (including budget for baseline and endline surveys).	MFA Finland SPREP IFRC
10	Implementing partners arrangements	MoUs between implementing partners should spell out roles and responsibilities clearly and include communication protocols and reporting templates.	MFA Finland SPREP IFRC FMI

4.5 Effectiveness

4.5.1 Conclusions

The picture that emerges from the findings of the individual FINPAC components with regard to effectiveness is as follows:

- SmartMet and SmartAlert are operational and are being used by at least 4 of the 5 countries where they have been installed for data analysis and developing more user-friendly end user products, although it is noted that not all products are of sufficiently professional quality yet and require more training. Issues with internet bandwidth and reliability are also limiting the most effective use of the systems. Conclusion: **Effectiveness is reasonable, but issues remain.**
- The rehabilitation of RBSNs should lead to improved data availability for weather forecasts and severe weather warnings, but the rehabilitation is yet to be done. Conclusion: **No effectiveness yet, but if and when the RBSNs are rehabilitated the prospects for effectiveness are likely good.**
- The community early warning systems and disaster response plans are being maintained by the communities and simulation exercises showed they are functioning. Conclusion: **Effectiveness is very good.**
- Overall, NMHSs have improved the quality of their messages and diversified their dissemination through their involvement at community level and the media training, but in how far this has been done differs significantly between the NMHSs. Also, glossaries of improved terminology prepared by the project are not yet very effectively used. Some technical issues like difficulties to send mass SMSs remain. Conclusion: **Effectiveness is reasonable to good**.
- Through the regional work, the project has raised the awareness of stakeholders across the region on the importance of ensuring weather forecasts and warning alerts are tailored to the needs of the end users. Conclusion: **Effectiveness is very good.**

Importantly, all these components complement and reinforce one another. The *exposure to communities* has created awareness amongst NMHSs about the need to make sure their forecast and warning messages can be understood by communities, avoiding too technical terminology and instead using graphics and metaphors to explain the messages. The *media training* then helped to build their knowledge and capacity about how to better communicate and disseminate their products. And *SmartMet and SmartAlert* provide the tools to actually produce the improved forecasting and warning products.

Where each of these components would be useful as stand-alone activities, the strong complementarity between the components means the overall effectiveness of FINPAC is higher than the sum of the effectiveness of each component.

Effectiveness could have been further strengthened by engaging more actively with the private sector. Issues that challenge overall effectiveness such as limited bandwidth and technical problems with sending out mass SMSs for early warnings require the involvement of internet and mobile network providers. Involving them can also encourage them to providing very cost-effective, if not free, capacity on their networks for important weather and warning messages and to ensure that internet

and mobile phone coverage reaches the most vulnerable communities. This could be considered part of their social responsibility role. These opportunities were not explored by the project.

Grading for Effectiveness	Good

4.5.2 Recommendations

Ref	Aspect	Recommendation	Relevant for
9	SmartMet / SmartAlert	The MoU between SPREP and FMI for continued remote support by FMI needs to be completed and signed as soon as possible.	SPREP FMI
11	IT	Support for IT should not only be reactive but also pro-active, for example identifying and supporting opportunities for the better dissemination of weather and warning products (like the Samoa weather app).	SPREP FMI
12	Private sector involvement	Future projects should consider engagement with private sector more closely, including through co-funding arrangements to develop ICT solutions related to building resilience to climate change and disasters.	MFA Finland
13	Media support	Media support to NMHSs should be continued, focusing in particular on ensuring the right use of terminology.	SPREP
14	Early warning systems	Impact based end to end EWS for multi-hazards system design should be adopted/promoted based on WMO impact based early warning principles	SPREP

4.6 Impact

4.6.1 Conclusions

Impact has been evaluated at the level of the pilot communities and at broader impact level i.e. possible replication of FINPAC's results beyond the pilot communities and beyond the targeted NMHSs.

Prospects for impact in the pilot communities in terms of disaster preparedness are good thanks to the use of appropriate technology and the highly participatory approach which has created strong awareness and a strong sense of ownership with regard to early warning systems and disaster response plans. These plans are backed up with improved delivery of weather services and early warnings through a partnership established by the project between civil society, government and communities. Actual impact was confirmed in Lord How community in SI, which was the first community to evacuate to higher ground after an earthquake struck in the area and a tsunami warning was issued.

Prospects for impact on livelihoods activities is also good and improved weather forecasts are already helping fisher folk plan their fishing trips and women to plan their weaving activities.

The chances for replication within the region are also good for the community projects thanks to the coordinated approach used at country level (through the National Coordination Teams involving key stakeholders in early warning and disaster management) and the support for and involvement in regional networks and institutions involved in meteorology. Political endorsement for FINPAC's community work was received from both national governments and regional bodies like the PMMM. Other projects have also endorsed FINPAC's community outreach approach and replication has in fact already started in 8 communities in SI, whereas pipeline projects like the Vanuatu GCF project have incorporated the FINPAC approach in their design.

Prospects for replication of the SmartMet / SmartAlert systems and applications are less positive because most other small PICs do not have the required IT capacity and some may be using other software already with support from other donors.

Grading for Impact	**Good**

4.6.2 Recommendations

Ref	Aspect	Recommendation	Relevant for
15	Ex-post evaluation	An ex-post evaluation should be considered in 1 or 2 years' time. It should assess in particularif the capacity building support provided by FMI has led to sustainable results, and what lessons can be learned, given the current Finnish development policy which states that "Finnish institutions active in various fields can play a significant role in improving local competences in e.g. the natural resource sector and in climate change mitigation".	MFA Finland
16	SmartMet / SmartAlert	Other programmes / projects should be introduced to SmartMet / SmartAlert to encourage replication to other NMHSs in the region.	SREP FMI
17	Community projects	Follow up visits to the pilot communities will be very useful for lessons learning. Such visits could be done by governments or included in donor funded projects that aim to replicate the FINPAC community outreach model.	SPREP IFRC
18	Communication	Emergency communication is essential in terms of rapid disaster management. FINPAC contributed to this by supporting UHF radios at community level. A robust rapid alert notification system should ultimately be developed for each Pacific country to ensure effective rapid warning systems.	SPREP

4.7 Sustainability

4.7.1 Conclusions

Overall sustainability prospects have increased significantly since the MTR thanks to the no-cost extension and some sound management decisions such as not pursuing the lightning feeds work and not expanding the community work beyond the 9 pilot communities.

With regard to SmartMet / SmartAlert sustainability the following can be concluded:

- Sustainability with regard to the SmartMet / SmartAlert systems being basically operational is good thanks to the arrangements for IT support with SPREP as first port of call and FMI providing further support.
- There are no financial issues that hamper sustainability with the software free and additional work stations not costing much.
- Limited internet bandwidth and reliability may affect sustainability by not allowing download of sufficient meteo data. This may lead to reduced effectiveness of SmartMet/SmartAlert and reduced motivation of NMHSs staff to use the systems.
- Motivation may also suffer if the NMHS staff does not have sufficient capacity to further customise and professionalise SmartMet / SmartAlert end products. Feedback indicates that this is likely the case for at least some of them. SPREP and FMI remote support may not be sufficient to overcome this.

Sustainability of the SmartMet / SmartAlert will ultimately depend on the capacity and motivation of the NMHS staff and this will vary from NMHS to NMHS. Whereas it is likely that the most advanced users like SI and PNG will continue to use and customise their SmartMet / SmartAlert applications, this is less likely for others like Tonga, unless additional support like on-the-job training can be provided.

The sustainability of the community pilot projects is good thanks to the same reasons as mentioned under effectiveness, i.e. use of low-cost technology and using a very inclusive approach at local and national level. However, the sustainability of the early warning and disaster response systems may be undermined if (ironically) no severe weather events or other disasters occur in the foreseeable future.

The regional work supported by FINPAC is well institutionalised. Sustainability prospects are therefore very good, also because there are a lot of other meteo projects in the region that can provide financial support to the functioning of the regional institutions and networks like the PICS panel, PMC and PMMM.

Grading for Sustainability	**Good**

4.7.2 Recommendations

Ref	Aspect	Recommendation	Relevant for
19	SmartMet / SmartAlert	Other programmes / projects (like the regional CREWS project and the GCF project for Vanuatu) should be encouraged to support the use and further development	SREP FMI

		of these systems at the NMHSs in the 5 countries through capacity building, e.g. through long term TA support based at SPREP. This could ultimately then also contribute to replication to other NMHSs.	
20	Community projects	Simulation exercises should be held regularly in the pilot communities to ensure the early warning systems and disaster response plans are functional and to maintain awareness at village level of the importance of maintaining these systems. (even if there is a long period without disasters).	SPREP IFRC

4.8 Cross-cutting objectives

4.8.1 Conclusions

The findings indicate that gender issues were not mainstreamed in the project in a structural manner and a gender strategy was never developed. There are few gender disaggregated data available making it difficult to assess in how far women were involved in for example the training workshops or included as decision-making members in community committees. There are also some positive findings: 65% of beneficiaries in the communities are women and a brochure of "Women in Meteorology" was developed and published.

HRBA is at the core of FINPAC, with duty bearers NMHSs exposed to the needs of the end users of their products (the communities) and supported to address those needs.

IFRC's human rights and governance principles guided the community work and has led to good participation of vulnerable groups in the participatory processes and incorporating relevant issues in the early warning and disaster response systems such as specific guidelines on evacuation of people with disabilities.

Grading for CC objectives	**Problems**

4.8.2 Recommendations

Ref	Aspect	Recommendation	Relevant for
21	Gender	FINPAC's project document included a list of gender action points. Such action points should in future projects be developed into a gender mainstreaming strategy and monitoring of the implementation of this strategy should be included in the M&E systems	MFA Finland SPREP
22	Gender	SPREP should continue to promote mainstreaming of gender issues in regional coordination bodies and networks.	SPREP

5 Lessons learnt

This section lists some lessons learnt from the experience of FINPAC that have the potential for wider application and use.

1) When a main element of a project design, such as in this case the logical framework, is flawed, it makes all aspects of monitoring and evaluation difficult and significantly reduces the benefit of a good participatory approach in designing a project. Development of a good logical framework requires specific expertise that, as FINPAC shows, is not always available amongst the proposed project implementing partners. Ideally, the final project design is done in a stakeholder workshop (ideally before project approval but alternatively during the inception phase) where a Theory of Change (or problem tree or similar approach) is developed, from which a logical framework can then be derived jointly by all stakeholders. Such a workshop will require a good facilitator with a strong expertise in Theories of change and logframes.
2) Linked to the above is the lesson that results-based monitoring and management is not something that comes about easily in projects like FINPAC. The tendency of the stakeholders involved in FINPAC was still to be very much activity-based in its monitoring and reporting. Switching to results-based approaches in similar development projects is likely to require capacity building of project stakeholders, supported with a good M&E and learning (MEL) framework, including templates for monitoring tools, reports that are results-based and a dedicated budget. Ultimately, it also requires the financial management of the project to be directly linked to results.
3) MFA should adopt a procedure for the aftermath of an MTR ensuring that conclusions and recommendations are followed up upon. In FINPAC, it seems that only the recommendations that SPREP agreed to or was able to follow up were adopted while more thorough revisions like reformulating the logframe and revising monitoring were not. Had MFA held the project accountable to respond to the MTR, these short comings could have been addressed and mitigated.
4) It is clear that FINPAC has been very good in adaptive management, which has gone a long way in mitigating the design flaws outlined above. FINPAC has shown how crucial adaptive management is to achieve real added value and value-for-money. The main reason for this good performance is the fact that the project was managed by an organisation, SPREP, which is a real regional "spin in the web" with regard to the project's main focus area, improved weather and climate services. Through SPREP's coordinating role it is very much aware of what is happening in the meteo field in the region, and where the niches are that FINPAC could fill. It confirms the importance of having projects managed by the right organisation. It also confirms that logical frameworks should not be considered static instruments. Changes to results and indicators may be required as a result of new insights gained during implementation. Guidelines for such changes should be included in contractual arrangements.
5) FINPAC has not taken the opportunity to collaborate to actively engage private sector stakeholders in the project. This is understandable since it was never included in the project design. However, the engagement of commercial partners like internet and mobile phone providers could have helped in solving the challenges with internet bandwidth and lack of mobile phone access in remote and often vulnerable communities. A mind shift is needed amongst

development practitioners to appreciate the potential role of the commercial sector in projects like FINPAC.

6) FINPAC has brought duty bearers (NMHSs) and rights holders (communities) together, an innovative approach appreciated by all stakeholders. It shows that duty bearers are open to change their behaviour and improve their services once they understand better the needs of those they serve. This is an HRBA-lesson that can be relevant for other similar projects.

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Final evaluation of the Finnish-Pacific project Adapting to climate change in Oceania (FINPAC)

Terms of Reference for an Evaluation

1. Background to the evaluation

1.1. Programme context

The Pacific Island States are particularly vulnerable to the climate change impacts due to physical characteristics, such as low-lying topography and reliance on natural resources. A large proportion of countries in the Pacific have complex social, environmental, economic and political challenges that may weaken their responses to climate change. These include rapid population growth, urbanization, geographic isolation, weak international lobbying power and issues associated with historical sovereignty. Pacific island countries are also highly disaster prone with all of them threatened by a variety of natural hazards of geological and meteorological origin including earthquakes, volcanic eruptions, tsunamis, cyclones, river and coastal flooding (including permanent coastal inundation due to sea level rise), landslides and droughts. In the past decade, social issues, including health and pollution hazards, and civil unrest have also increased as a result of population increase, urban drift, uneven wealth distribution and political pressures.

Disaster Risk Reduction (DRR) and climate change adaptation share common goals: reducing the vulnerability of communities and achieving sustainable development. A key common link between DRR and climate change adaptation is the need to provide early warning systems that are effective, integrated and people-focused and that are able to communicate information that is understood over vast ocean distances both within and between countries and to generally isolated populations.

The Pacific Meteorological Council (PMC) has adopted the Pacific Islands Meteorological Strategy 2012–2021 to ensure that national meteorological services are sustained and of the best quality possible, and have the capacity to fulfil their responsibilities over the next decade. The strategy presents the priorities for action and where Pacific Island Countries' and Territories' National Meteorological Services would like to be in the next three years if their capacities are strengthened. It aims to strengthen weather and climate services for all stakeholders through timely provisions of early warnings, information on weather and climate, especially climate change.

The Secretariat of the Pacific Regional Environment Programme (SPREP) is an organization of the governments and administrations of the Pacific region. It has been established to protect the region's environment and to promote sustainable development. The SPREP promotes collaboration between the member countries and provides technical assistance related to environmental management and climate change. The SPREP supports its members in planning and implementing national adaptation strategies, and integrating climate change considerations into national planning and development

processes. The emphasis is on guidelines for the most appropriate and best practices in policy development and adaptation.

The Finnish-Pacific project Adapting to climate change in Oceania (FINPAC) is a regional project funded by the Government of Finland and coordinated through the SPREP. It has been implemented jointly by the Finnish Meteorological Institute (FMI) and SPREP in 2013–2017. Although no continuation to the FINPAC is expected, the Ministry for Foreign Affairs of Finland (MFA) and SPREP can use the results of this evaluation to benefit ongoing and future cooperation on climate change adaptation through weather service support.

FINPAC is expected to complement the meteorological support to the region provided by WMO, Australia, France, Japan, New Zealand, UK and the US.

1.2. Description of the programme to be evaluated

The FINPAC project builds on the work done under the MFA funded Institutional Cooperation Instrument (ICI) project FPPICS - Finnish-Pacific Project for increased capacity of the Secretariat of the Pacific Region Environmental Programme (SPREP) and Pacific Island Countries' national meteorological services staff to meet the growing demand for meteorological and climatological information in the society. This project was implemented jointly by the Finnish Meteorological Institute and SPREP in 2009–2011 with a budget of 500,000 euros.

The FINPAC project provides national meteorological services (NMS) of the Pacific Island Countries more capacity and tools to deliver and communicate accurate, appropriate and timely weather and climate services to their rural communities. The project works together with the communities to strengthen their ability to use meteorological information to develop plans to address disasters and climate change. Overall objective of the project is to reduce vulnerability of fourteen Pacific Island Countries' livelihoods to the effects of climate change. The aim is to provide weather services that are easy to use and understand, so the villagers know how to prepare themselves in extreme weather conditions and know what to do in threatening weather conditions.

The project countries are:

- Cook Islands
- Federated States of Micronesia
- Fiji
- Kiribati
- Marshall Islands
- Nauru
- Niue
- Palau
- Papua New Guinea
- Samoa
- Solomon Islands
- Tonga
- Tuvalu
- Vanuatu

To achieve its objective the project was designed with two result areas:

- Improved and new weather and climate forecasts and warnings by NMSs with an aim to build capacity in NMSs. FMI is the main implementing partner under this result and is responsible for providing meteorological tools and related programmes, including users training to NMSs. SPREP coordinates activities and provides some technical back-stop.

- Improved ability of the NMSs to respond the needs of villages with regard to hazardous weather and climate change

The coordinating authority and the main implementing agency of the FINPAC project is SPREP. Finnish Meteorological Institute has provided technical assistance to the project. Contingency planning on the islands is done together with local governments, non-governmental organizations and local communities. At local level, FINPAC has partnered with the International Federation of Red Cross and Red Crescent Societies (IFRC) to implement the community engagement component.

Representatives of the national meteorological services of the Pacific Island Countries have been involved in the preparation of the project. Moreover, partnerships include the Pacific Meteorological Council, World Meteorological Organization, University of the South Pacific, Australia Bureau of Meteorology, Pacific Meteorological Desk Partnership and the Secretariat of the Pacific Community.

The project started on 2 January 2013 with a total budget of 3.7 million euros. The project was scheduled to end by December 2015 but two no-cost extensions were approved and the project will end in June 2017 with a final seminar in August 2017.

1.3. Results of previous evaluation

Mid-term evaluation was conducted in June-August 2015. It found FINPAC highly relevant and effective in strengthening quality management systems and improving climate services. Other technical subcomponents were found to have been less effective due to inadequate capacity building. Thus, the recommendation was to substantially increase capacity building under the result area 1. Achieving sustainable results was assessed as a challenge. Sustainability prospects were found generally good for the support for quality management systems, climate services networking activities, community engagement work, and media training, while for the technical subcomponents the sustainability prospects seemed relatively weak.

The mid-term evaluation included case studies in Aitutaki Island, the Cook Islands, and in Savaii Island, Samoa.

2. Rationale, purpose and objectives of the evaluation

The purpose of this final evaluation is to provide guidance to the Ministry for Foreign Affairs of Finland (MFA) and SPREP in planning and implementing projects addressing meteorology related capacity building and/or climate change adaptation. The main rationale is to provide objective information to the MFA and SPREP about the effectiveness and efficiency of the project and the results achieved in meteorology services related climate change adaptation, and whether the cooperation has provided a platform for commercial opportunities and cooperation.

The evaluation will focus on the following priority issues:

- How has the project succeeded in achieving sustainable results in increasing local capacity for meteorological services, improving disaster preparedness and accessibility of meteorological services, and reducing vulnerability to the effects of climate change?
- What are the lessons learned from support to weather warning systems and climate change adaptation?

In addition, the evaluation is expected to shed light on the prospects for increased commercial opportunities for local meteorological services.

3. Scope of the evaluation

The project’s geographical coverage includes fourteen Pacific Island Countries: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New

Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. The project has been coordinated from the SPREP office in Apia, Samoa. Geographical area to be covered in this evaluation is to be defined during the inception phase. Field work can take place in selected sites illustrating various aspects of the priority issues.

The time span to be covered is 2013–2017.

The evaluation will include relevant stakeholders which include *inter alia*: relevant public and private sector institutions and enterprises and civil society actors including relevant DRR actors. Other meteorological donors will be involved as well.

4. Issues to be addressed and evaluation questions

While the evaluation questions indicate the priority issues under each criterion, the evaluation team should not limit the evaluation to these questions only. The cross-cutting objectives of Finland's development policy are to be taken into consideration when studying the evaluation questions.

Relevance
- To what extent has the project contributed to fulfilling the objectives of international, regional and national policies and strategies?
- How satisfied are the beneficiaries of the project to the results, both at levels of meteorological services and the end users of their meteorological services in pilot areas?

Impact
- How well has the project succeeded in reducing the vulnerability of the fourteen Pacific Island Countries to the effects of climate change?
- How has the project contributed to the accessibility of various groups to meteorological information and weather services?

Effectiveness
- To what extent has the project contributed to measures taken in disaster risk reduction and increasing resilience?
- To what extent has the project improved the capacity of local, national, regional authorities to utilise the available meteorological data for disaster preparedness?

Efficiency
- Considering the resources used and results achieved to what extent has the project provided value for money?

Aid effectiveness
- How well has the project promoted commitment and ownership of relevant decision-making bodies in the Pacific Island Countries in providing accessible meteorological information?
- How the project is complementing other projects in the region?

Sustainability
- To what extent has the capacity in providing meteorological information and weather services improved?
- What are the main risks that are likely to affect sustainability of the results after the project completion, especially regarding the technical components of the project?

Coherence
- To what extent is the project coherent with Agenda 2030 strategies (including Paris Agreement) of the region?

5. Methodology

The choice of methodology will be left to the evaluation team to propose. With the aim of having an objective and independent evaluation, the team is expected to conduct the evaluation according to international criteria, and professional norms and standards adopted by the MFA. The methodology defines methods of data collection and analysis. It is expected that multiple methods are used, both qualitative and quantitative. Consultations with relevant partners and stakeholders will be conducted. Validation of results must be done through multiple sources. Data is disaggregated by relevant categories when appropriate.

The methodology for both collection and analysis will be presented in the proposal. The proposal will explain the roles and division of labour within the team. Furthermore, the proposal is expected to include methodology of integrating cross-cutting objectives into analysis.

6. The evaluation process and time schedule

The evaluation is expected to be conducted in phases during July–September 2017. It will include inception and desk study phases, field work and reporting. Field work will take place in August so that the evaluation team will be present during the final seminar.

The evaluation team will submit a tentative work plan with curricula vitae of the team members for MFA's approval. Work plan includes division of work within the evaluation team, the number of work days planned to each expert, how work days are divided among evaluation tasks, and a plan for quality assurance.

The assignment will begin with communication between the evaluation team, the MFA in Helsinki and SPREP. A meeting will be held before field work.

Background documents will be provided by the MFA.

7. Reporting

The evaluation team is requested to submit the following deliverables:

- Inception report
- Presentation on the field findings
- Draft final report
- Final report
- Presentation on the evaluation findings

Inception report: Before fieldwork and based on the desk study, the evaluation team shall present an inception report including detailed and updated work methodologies, a work plan including selection of field sites, detailed division of labour within the evaluation team, a list of major meetings and interviews planned for the field visits, and detailed evaluation questions linked to the evaluation criteria in an evaluation matrix.

Draft final report of the evaluation will be submitted to the MFA two weeks after the field work. It will combine the desk study and field findings. The MFA will submit comments to the report, which will then be revised based on these comments.

The final report shall be submitted to the MFA two weeks after receiving the comments on the draft final report.

Language of the deliverables is English.

Each deliverable is subjected to specific approval. The evaluation team is able to move to the next phase only after receiving a written statement of acceptance by the MFA.

8. Quality assurance

The evaluation team is expected to propose and implement a quality assurance system for the evaluation. The proposal must specify the quality assurance process, methodology and tools.

9. Expertise required

The evaluation team is expected to consist of:

- Three or four international experts, one of them nominated as a team leader, one can be an emerging expert, and
- national expert/s.

The evaluation team shall ensure solid experience and knowledge in the following fields:

- Proven experience of evaluations, especially final, ex-post or impact evaluations
- Team leader with a proven record of successful team leading of similar evaluations
- Experience in climate change adaptation through weather services and capacity building in development cooperation projects
- Experience in result based management of development cooperation projects
- Experience and knowledge in integrating cross cutting objectives in project planning, implementation, monitoring and evaluation: promotion of human rights and gender equality, reduction of inequalities and climate sustainability
- Quality assurance of evaluation in accordance to the quality assurance approach proposed in the tender

The team members must not have been involved in implementation of the programmes evaluated or in the implementing organisations.

Budget

The total available budget for this evaluation is 100,000 euros, excluding VAT. This budget cannot be exceeded.

10. Mandate

The evaluation team is entitled and expected to discuss matters relevant to this evaluation with pertinent persons and organizations. However, it is not authorized to make any commitments on the behalf of the Government of Finland.

Annexes

- Evaluation report quality checklist (OECD/DAC and EU standards), link: http://www.uneval.org/document/detail/607

- Result Based Management in Finland's development cooperation http://formin.finland.fi/public/download.aspx?ID=146690&GUID={5B479C3A-0703-45A4-BCDC-C90BC91FE5A4}

Annexes 1: Link to the MFA evaluation manual:
http://formin.finland.fi/public/default.aspx?contentid=288455&contentlan=2&culture=en-US

Annex 2: Outline of an evaluation report

The quality criteria of an evaluation report have been defined by the OECD/DAC and the EU (see table 11 of the manual). The main components of an evaluation report are outlined below. The outline is not compulsory, but intended as a guideline in defining the appropriate table of contents for a specific evaluation. It is recommended that based on this general outline, the evaluators propose a report outline e.g. in their Inception Report.

EXECUTIVE SUMMARY

- Providing an overview of the report, highlighting the main findings, conclusions, recommendations and any overall lessons.
- Includes a summary table presenting main findings, conclusions and recommendations and their logical links

  Relevance: findings – conclusions – recommendations
  Impact: findings – conclusions – recommendations
  Effectiveness: findings – conclusions – recommendations
  Efficiency: findings – conclusions – recommendations
  Sustainability: findings – conclusions – recommendations
  Etc.

INTRODUCTION

- Evaluation's rationale, purpose and objectives, scope and main evaluation questions

DESCRIPTION OF THE CONTEXT AND THE EVALUATED PROJECT/PROGRAMME

- Description of the broader context and its influence on the performance of the project/programme.
- Introduction of the intervention being evaluated: objectives including the cross-cutting objectives, implementation strategies, resources for implementation.
- Introduction of the stakeholders and their roles, including both final beneficiaries and involved institutions

KEY FINDINGS

- Empirical data, facts, evidence relevant to the indicators of the evaluation questions.
- Overall progress in the implementation.
- Findings by evaluation criteria / issue (e.g. Relevance, Impact, Effectiveness, Efficiency, Sustainability)

CONCLUSIONS

- The evaluators' assessment of the performance of the project/programme based on the findings in relation to the set evaluation criteria, performance standards or policy issues (e.g. Relevance, Impact, Effectiveness, Efficiency, Sustainability)

RECOMMENDATIONS

- Proposed improvements, changes, action to remedy problems in performance or to capitalise on strengths. Recommendations are based on the findings and conclusions. There should be a clear indication of
  - to whom is the recommendation directed (MFA, partner institutions, consultant providing support services, etc.)
  - who is responsible for implementing the recommendation, and
  - when the recommendation should be implemented..

NOTE: Findings, conclusions and recommendations are summarized in a table in the Executive Summary of the evaluation report.

LESSONS LEARNED

- Are there any general conclusions that are likely to have the potential for wider application and use?

ANNEXES

- the ToR
- description of the evaluation methodology used
- limitations of the study
- lists of information sources e.g. people interviewed, documents reviewed, etc.
- quality assurance statement produced by the quality assurance mechanism used
- 1-2 page evaluation brief for communicating the evaluation results, including
    - the key message of the evaluation,
    - who has benefitted and what are the most important positive results,
    - any unexpected impacts,
    - key recommendations and lessons learned.

Annex 3: Evaluation report quality checklist (OECD/DAC and EU standards)

Executive summary
- contains a clear and representative executive summary of the report
- summarises the main findings, conclusions, recommendations in a summary table
- presents overall lessons learned

NOTE: The executive summary is the part of the evaluation report that will be read most often. That is why its high quality is very important!

Context
- describes the context of the development programme
- assesses the influence of the context on programme performance

Intervention logic
- describes and assesses the intervention logic (e.g. in the form of a logical framework) or theory
- describes and assesses the underlying assumptions and factors affecting the success of the programme
- takes into account the evolution of the programme

Sources of information
- describes the sources of information (documents, interviews, other) used so that the adequacy of the information can be assessed,
- explains the selection of case studies or any samples,
- cross-validates the information sources
- critically assesses the validity and reliability of the data

Methodology
- annexed to the report explains and justifies the evaluation methodology and its application, including techniques used for data collection and analysis
- explains limitations and shortcomings, risks and potential biases associated with the evaluation method

Analysis
- presents clear analysis covering findings, conclusions, recommendations and lessons separately and with a clear logical distinction between them.
- makes explicit the assumptions that underlie the analysis.

Answers to ToR evaluation questions
- answers all the questions detailed in the TOR for the evaluation
- covers the requested period of time, and the target groups and socio-geographical areas linked to the programme
- if not, justifications are given

Limitations
- explains any limitations in process, methodology or data, and discusses validity and reliability
- indicates any obstruction of a free and open evaluation process which may have influenced the findings
- explains any discrepancies between the planned and actual implementation and products of the evaluation

Differences of opinion
- acknowledges unresolved differences of opinion within the evaluation team

Stakeholders' comments
- reflects stakeholders' comments on the report and acknowledges any substantive disagreements

Annex II – Evaluation matrix

This table was used as a prompt to monitors to help them develop answers obtained for documents or key informant interviews

EU ROM questions	Questions from the ToR	Draft list of specific questions (Joss)
RELEVANCE		
Are the project purpose and overall objectives consistent with, and supportive of Partner Government policies?	To what extent has the project contributed to fulfilling the objectives of international, regional and national policies and strategies?	Are the developed approaches relevant to the small island states' policies? What is / has been the added value of FINPAC compared to similar programmes in the region like CosSPAC?
Does it support Finnish development and cooperation strategies in the concerned field (special consideration given to CSP/NIP, Paris declaration, EU effectiveness agenda)?		In how far is FINPAC aligned with the new Finnish development policy of 2016? In how far does FINPAC contribute to the SDGs?
Does the project still respond to the needs of the target groups?	How satisfied are the beneficiaries of the project to the results, both at levels of meteorological services and the end users of their meteorological services in pilot areas?	
As presently designed, is the intervention logic holding true?		
Does a logframe or similar tool exist? If yes, what is its present quality (does it clearly show how activities will achieve results and impact)? If not, why not?		Has the logframe been reviewed after the MTR? In how far has the logframe been used to steer the project's activities? How has progress been monitored?
Are the OO, PP and results clear and logical, and do they address clearly identified needs?		(check if key project staff are aware of the OO and PP)
Is the PP achievable in the project framework?		(team assessment or participatory self-assessment
Are there suitable and informative OVIs/ targets, e.g. are they Specific, Measurable, Achievable, Realistic and Time-bound (SMART)?		(team assessment or participatory self-assessment)
Are the activities, outputs and outcomes planned appropriate to achieve the PP?		(team assessment or participatory self-assessment)
Are the risks and assumptions holding true? Are risk management arrangements in place?		Which risks have materialised? Which assumptions did not hold? What corrective measures were taken? How did the project deal with extreme weather events like cyclone Winston?

EU ROM questions	Questions from the ToR	Draft list of specific questions (Joss)
Is sustainability an integral part of the design i.e. is there a phase out/hand over strategy?		Has an exit strategy been developed in line with MTR recommendation? If not, why not?
Is the current design sufficiently supported by all stakeholders?		
Have key stakeholders been involved in the design process?		How have relevant govt. ministries of all beneficiary countries been involved? Has IFRC as sub-contractor for community work been able to influence the design based on their community experience?
Are coordination, management and financing arrangements clearly defined and do they support institutional strengthening and local ownership?		How is the coordination between SPREP and FMI and IFRC? What have been the main challenges? How have government institutions been involved? How have community structures been involved?
Is the sustainability strategy (handing over strategy to partners) fully understood by the partners?		
Are the OO and PP clearly understood by the project partners?		
Is the timescale and/or range of activities realistic regarding the stakeholder's capacities?		Has there been any capacity needs assessment of key stakeholders? E.g. as part of exit strategy or as part of capacity building activities?
If applicable: How well has the project design been adapted to make it more relevant? Was it straightforward to do contractually?		What, if any, changes were made to the logframe and how were these approved?
Is the current design sufficiently taking cross-cutting issues into account?		
Have the relevant cross-cutting issues (environment, gender, human rights and governance, donor coordination or others) been adequately mainstreamed in the project design?		Have the MTR recommendations on cross-cutting issues been incorporated in the design?
EFFICIENCY		
How well is the availability/usage of means/inputs managed?		
To what degree are inputs provided/available on time to implement activities from all parties involved?		Has SPREP provided timely inputs (money, activity guidance, etc.) to IFRC? Has the work of FMI been affected by difficulties in obtaining inputs (e.g. hardware / software) timely? Any country-specific hurdles that led to delays in providing inputs? (E.g. tax issues, import permits). If so, how were these dealt with?
To what degree are inputs provided / available at planned cost (or lower than planned), from all parties involved?		Have overhead costs remained within budget? In how far have the complex logistics impacted on efficiency?
Are inputs monitored regularly to encourage cost-effective implementation of activities? By whom are they monitored?	Considering the resources used and results achieved to what extent has the	

EU ROM questions	Questions from the ToR	Draft list of specific questions (Joss)
	project provided value for money?	
Are project resources managed in a transparent and accountable manner?		Are budgets and expenditures shared between key stakeholders SPREP, FMI and IFRC? If not, why not?
Are all contractual procedures clearly understood and do they facilitate the implementation of the project?		Any issues with the MoUs between SPREP, FMI and IFRC?
How well is the implementation of activities managed?		
Is the logframe or similar tool used as a management tool? If not, why not?		
Is an activity schedule (or work plan) and resource schedule available and used by the project management and other relevant parties?		
To what extent are activities implemented as scheduled? If there are delays how can they be rectified?		
Are funds committed and spent in line with the implementation timescale? If not, why not?		
How well activities are monitored by the project and are corrective measures taken if required?		What are the mechanisms in place to take corrective measures; mechanisms between the 3 key implementing partners SPREP, FMI, IFRC?
If appropriate, how flexible is the project in adapting to changing needs?		Any examples of adaptive management?
If appropriate how does the project co-ordinate with other similar interventions to encourage synergy and avoid overlaps?		This question should be answered explicitly for some of the main other programmes in the region such as CossPAC.
How well are outputs achieved?		
Have all planned outputs been delivered to date? And in a logic sequence?		
What is the quality of outputs to date?		What is quality of any construction works done? How was quality ensured? How is the hardware provided to the NMSs functioning? Is it compatible with systems already in use? How appropriate is the software provided by FMI? Is it functioning? What is the quality of the community plans developed? Are they written / disseminated in a way that makes them understandable for community members?
Are the outputs achieved likely to contribute to the intended results?		(As part of design analysis, the causal pathways from outputs to outcomes should be made explicit; that will help answer this question)
Are they correctly reflected through the OVIs/targets?		
How well is the Partner Contribution / Involvement working?		
Do the inter-institutional structures e.g. steering committees, monitoring systems, allow efficient project implementation?		Does the SC meet at least twice per year as per MTR recommendation? How are recommendations / decisions from the SC followed up?

EU ROM questions	Questions from the ToR	Draft list of specific questions (Joss)
		Did SPREP provide sufficient HR and other resources for efficient management? Are progress reports results-based? How are results monitored? Is there any QA on results reported? Is the logframe being used to report against? Are lessons learnt documented? Are reports used for adaptive management? Examples?
Have all partners could provide their financial and/or HR contributions?		
Is the communication between MFA Finland and the project management satisfactory?		Has MFA Finland provided efficient and timely support where requested, including timely disbursement of funds? Has MFA Finland increased its involvement in the SC, as per MTR recommendation?
EFFECTIVENESS TO DATE		
How well is the project achieving its planned results?		
Have the planned results to date been achieved?		(to answer this question the logframe alone will likely not be sufficient as reference)
Are the OVIs/targets for the PP appropriate and are they being reported against?		Are results reported backed up with evidence?
What is the quality of the results/services available?		
Have all planned target groups access to / using project results available so far?		
Are there any factors which prevent target groups accessing the results/services?		
As presently implemented what is the likelihood of the PP to be achieved?	To what extent has the project contributed to measures taken in disaster risk reduction and increasing resilience? To what extent has the project improved the capacity of local, national, regional authorities to utilise the available meteorological data for disaster preparedness?	In how far have produced outputs under component 1 led to improved weather forecasting i.e. forecasting that responds to the needs of communities and that is readily accessible by communities? In how far are produced outputs under component 2 used by or likely to be used in future by the target communities? How satisfied are NMSs and communities with the support provided? What has been achieved along the Knowledge – Attitude – Practice nexus at the level of NMSs, at the level of communities and at the level of other national and regional institutions? Any clear behavioural changes evident?
To what extent has the project adapted or can adapt to changing external conditions (risks and assumptions) to ensure benefits for the target groups?		How has the project responded to the cyclone in Fiji?
To what extent are unplanned positive effects contributing to results produced / services provided?		

EU ROM questions	Questions from the ToR	Draft list of specific questions (Joss)
If any unplanned negative effects on target groups occurred, or are likely to occur through the project, to what extent did the project management take appropriate measures?		
Aid effectiveness (mentioned as separate criterion in the ToR)	How well has the project promoted commitment and ownership of relevant decision-making bodies in the Pacific Island Countries in providing accessible meteorological information?	
IMPACT PROSPECTS		
What are the direct impact prospects of the project at Overall Objectives level?		
What, if any impacts are already apparent?	How well has the project succeeded in reducing the vulnerability of the fourteen Pacific Island Countries to the effects of climate change? How has the project contributed to the accessibility of various groups to meteorological information and weather services?	What evidence is available to corroborate any claimed success in this area? What is otherwise still needed to ensure this impact will be achieved? How does the exit strategy (if existing) address these issues?
What impacts appear likely?		As above.
Are the current OVIs/targets realistic and are they likely to be met?		
Are any external factors likely to jeopardise the project's direct impact?		
To what extent does /will the project have any indirect positive and/or negative impacts? (i.e. social, cultural, gender and economic)		
Have there been/ will there be any unplanned positive impacts on the planned target groups or other non-targeted communities arising from the project? How did this affect the impact?		
Did the project take timely measures for mitigating the unplanned negative impacts? What was the result?		
Does donor coherence, complementarity and coordination exist and have any indirect impact on the project?	How is the project complementing other projects in the region? To what extent is the project coherent with Agenda 2030 strategies (including Paris Agreement) of the region?	What is the explicit added value of FINPAC for the region?

EU ROM questions	Questions from the ToR	Draft list of specific questions (Joss)
POTENTIAL SUSTAINABILITY		
Financial / economic viability?		
If the services/results must be supported institutionally, are funds likely to be made available? If so by whom?		What funds are needed for continued use of introduced technologies like SmartMet? Are NMSs budgeting for this?
Are the services/results affordable for the target groups at the completion of project?		Is maintenance of community level infrastructure related to resilience / EWS secured? E.g. through govt. budgets?
Can the benefits be maintained if economic factors change (e.g. commodity prices, exchange rate)?		
Are the beneficiaries and/or relevant authorities/institutions able to afford maintenance or replacement of the technologies/services introduced by the project?		
Is there a financial/economic phase-out strategy; if so how likely is it to be implemented?		If such a strategy exists, have funding sources been secured?
What is the level of ownership of the project by target groups and will it continue after the end of external support?	To what extent has the capacity in providing meteorological information and weather services improved?	What are the most noticeable improvements in weather services? What has been the result of the capacity building provided by the "QMS roving team"? In how far has FMI training addressed capacity gaps and needs of NMSs? What continued CB support is needed to ensure new skills can be effectively used?
How far the project is embedded in local structures?		
To what extent have target groups and possibly other relevant interest groups / stakeholders been involved in the planning / implementation process?		
To what extent are relevant target groups actively involved in decision-making concerning project orientation and implementation?		
What is the likelihood that target groups will continue to make use of relevant results?		**This is a key question!!**
Do the target groups have any plans to continue delivering the stream of benefits and if so are they likely to materialise?		
What is the level of policy support provided and the degree of interaction between project and policy level?		
What support has been provided from the relevant national, sectoral and budgetary policies?		See earlier question on NMS budget
Do changes in policies and priorities affect the project and how well is it adapting in terms of long-term needs for support?		
Is any public and private sector policy support likely to continue after the project has finished?		
How well is the project contributing to institutional and management capacity?		
How far is the project embedded in institutional structures that are likely to survive beyond the life of the project?		In how far will SPREP continue to provide support to NMSs and to communities to promote long term impact and sustainability?
Are project partners being properly developed (technically, financially, and managerially) for continuing to deliver the project's benefits/services?	What are the main risks that are likely to affect	Is SPREP now providing effective IT technical support to NMSs, in line with MTR recommendation?

EU ROM questions	Questions from the ToR	Draft list of specific questions (Joss)
	sustainability of the results after the project completion, especially regarding the technical components of the project?	
Will adequate levels of suitable qualified HR be available to continue to deliver the project's stream of benefits?		
Are there good relations with new or existing institutions and are there plans to continue with some or all the project's activities?		Which activities need to be continued beyond FINPAC and how will this be ensured? Have there been discussions with other programmes / donors for continued support to these activities?
CROSS-CUTTING ISSUES		
7.1) Have practical and strategic gender interests been adequately considered in the project strategy?		
If so how and to what effect? If not, why not? If n/a explain. Please consider the following aspects of gender mainstreaming: • Has the project been planned based on a gender-differentiated beneficiaries' analysis? • To what extent will / could the gender sensitive approach lead to an improved impact of the project? • What is the likeliness of increased gender equality beyond project end? • According to the OECD Gender Policy Marker how would you classify this project?		Has a Gender Action Plan been developed (as per MTR) and implemented?
Please comment on lessons learnt, if any.		
7.2) Is the project respecting environmental needs?		
If so how and to what effect? If not, why not? If n/a explain Please consider the following aspects of mainstreaming environmental aspects: • Has environmental damage been done or likely to be done by the project? What kind of mitigation measures has been taken? • How well does the project respect traditional, successful environmental practices?		
Please comment on lessons learnt, if any.		
7.3) Has (good) governance been mainstreamed in the project?		
If so how? If not, why not? If n/a explain Please consider the following aspects of governance: • Does it take into consideration the differential impact of poverty by disadvantaged groups? • Is the P/P designed in such a way that it considers potential conflict? • Is regular, transparent, financial reporting built into the P/P? Are its results widely circulated and understandable?		

EU ROM questions	Questions from the ToR	Draft list of specific questions (Joss)
• Are there effective anti-corruption monitoring tools in place?		
Please comment on lessons learnt, if any.		
7.4) Does the project actively contribute to the promotion of Human Rights?		
If so how? If not, why not? If n/a explain • Has there been an analysis of "winners and losers" regarding possible "discrimination" of target groups by the programme/project? • Will the P/P help to ensure respect for any relevant human rights and not cause them to be reduced in any way? • Do any interested parties and observers raise HR concerns?		Has the work with communities been inclusive? Have activities not been hijacked by community elite? Has IFRC applied a HRBA?
Please comment on lessons learnt, if any.		

Annex III – Analysis of logframe and assessment of achievement of results

Evaluator comments in italic font.

Logframe		Measurable indicators	Achievement according to SPREP Annual Report 2016	Assessment by evaluators	Assumptions with evaluator comments
Overall Objective	Reduced vulnerability of the Pacific Island Country villagers' livelihoods to the effects of Climate Change	• Communities and villagers are confident that their vulnerability to climate change has been reduced during the project lifetime • Communities and villagers feel that their communities are safer with regard to weather and climate related hazards following the project activities • Communities and villagers are able to better address weather and climate threats to fishing and agricultural practices			
Project Purpose	Improved capacity of the Pacific Island Country National Meteorological and Hydrological Services to deliver weather, climate and early warning services in cooperation with and for the benefit of villagers in Pacific communities	• Amount of agreements between NMHSs and NGOs for village-level activities to address weather and climate hazards • NMHSs participate in national disaster risk management mechanisms to a greater extent • Improved reliability and accuracy of weather and climate forecasts and warnings • New weather, climate and early warning services for the communities in use • Women are given priority for capacity building activities taking into account the small amount of women in the professional community and the traditional role of women in the community	Partially achieved – Pacific NMS (all staff including men and women) have demonstrated ownership of the project through their active participation and commitment to both components of the project. Women are treated fairly when it comes to training opportunities as trainings are awarded according to the respective roles of NMS personnel. Installation and trainings in SmartMet and SmartAlert have enable launching of new forecast and early warning services and products.	*Most of these indicators are not SMART and none have targets against which to assess.* *The assessment by SPREP is fair, with exception of the indicator on women being given priority. The assessment also does not address all indicators.* *Women have not been given priority in capacity building and this is symptomatic for the lack of gender mainstreaming. It is true however that it is not easy to given women priority since NMHSs have only a limited number of positions and most of those are held by men.*	Political endorsement for DRR activities received from national and regional government. *This assumption is OK, although political endorsement is something that the project can and has influenced.* *The assumption has held.*

Logframe		Measurable indicators	Achievement according to SPREP Annual Report 2016	Assessment by evaluators	Assumptions with evaluator comments
Result 1	Improved and new weather and climate forecasts and warnings by NMHSs	Lightning location data used in severe weather forecasting in at least five NMHSs within two years of project start	Activity terminated in December 2015 as per SC decision	*Correct decision, recommended by the MTR*	No disruptions in internet services *This assumption has not always held and internet issues continue to be a challenge for effective use of the SmartMet / SmartAlert systems. The project could have influenced this by engaging with the private sector e.g. the internet providers but this opportunity was not taken.*
		Automatically updated graphical products, such as a 5-day weather outlook, available on at least five PIC NMHSs websites within three years of project start	Achieved. Requires further investment in in-country trainings for NMS	*Indicator OK although should indicate something like "daily updated". And does not cover things like use of new dissemination channels like Facebook or SMS or apps.* *Partly achieved. Good evidence of achievement of automated warning alerts in PNG, Samoa, SI. Less so in Vanuatu, and not at all achieved in Tonga (and Fiji).* *Not all weather forecasts are graphical, and where they are it is difficult to assess whether this is thanks to the project (i.e. based on SmartMet).* *All achievements with delays.*	Participating PIC NMSs do not face cuts in ICT budgets *Good assumption. Not sure if it held (assumptions were never monitored in any structural way).*
		21 silent Regional Basic Synoptic or Climate Network stations returned to service by third year of implementation	On track but delayed Tender documentation delayed, however it allowed time to fully assess and	*SMART indicator.* *Not achieved by end of the project. While a good decision was made to first do an*	NMSs are not constrained from providing on-ground assistance

Logframe		Measurable indicators	Achievement according to SPREP Annual Report 2016	Assessment by evaluators	Assumptions with evaluator comments
			complete the requirements for each country.	*assessment of RBSNs, it is disappointing that contracting and tendering caused such delays that no rehabilitation has as yet been done.*	*Not a good assumption. Project should be able to ensure that this is the case.*
		Regional roving Quality Management System auditing team of five persons from PICs trained and available to the countries by third year of implementation	*Not in the list of indicators in the 2016 Annual Report. Not clear why removed.*	*SMART indicator, but should be complemented by an indicator at project purpose level on improved QMSs thanks to this output.* *Achieved, but used only once so very low effectiveness*	Roving team members remain committed and engaged *Not a good assumption. This is not an external factor but something that the project should be able to positively influence. Not sure if it held or not.*
Result 2	Improved ability of the NMHSs to respond the needs of villages with regard to hazardous weather and climate change	Increased level of service delivered by NMHSs in local PIC languages by end of project implementation	Achieved. Warnings, disaster plans and community awareness materials are developed in the local languages	*Not a SMART indicator. What is "increased level of service"? That would be more than just using local language How to measure? What counts towards it? What is the target?* *Not clear also f this refers to warnings and disaster plans as the annual report seems to assume. Could also refer to the new dissemination channels for example.* *All in all, yes, NMHSs have increased level of service, but indicator too vague to say if project has delivered what it was expected to deliver.*	
		Each NMHS has participated in the development of integrated Disaster Risk Management and Climate Change Adaptation Plans by the end of project implementation	Achieved. As key members of the NCTs, NMS have been actively participating at Climate and Disaster Resilience Planning consultations and pilot project implementations	*Not a SMART indicator. What does "each" stand for? How many? Participation at which level. National? Local?* *As with previous indicator, yes, NMHSs have participated, but indicator too vague to say if project has delivered what it was expected to deliver.*	Innovative solutions to end user needs developed in close collaboration by NMSs and users

Logframe		Measurable indicators	Achievement according to SPREP Annual Report 2016	Assessment by evaluators	Assumptions with evaluator comments
					Not an assumption. This is in fact core business of the project!
		Prestige and visibility of the NMHSs has increased in the eyes of the villages by the end of project implementation	Achieved. Pilot communities have recognised the role of NMS and developed a greater understanding and appreciation of weather, climate and early warning information.	*Not a SMART indicator. This would require a target in terms of satisfaction survey scoring or similar.* *It is nowhere explicitly measured whether pilot communities recognise the role of NMS. Even if they do, it doesn't mean prestige has increased.* *Visibility has increased through their participation in village level workshops.*	
		Role of women improved through the creation of a network for women in meteorology and promotion of meteorology as a career by third year of project implementation by SPREP and NMHSs	Reviewed and partially achieved. As a result of the MTE, more thinking has gone into how best the network can be established. Although this is a cross-cutting issue having separate funding is essential. As a way forward, building of awareness on the role of women in meteorology was recognised as a more feasible approach which the project has tried to implement through the compilation of a Series on Women in Meteorology	*Not a SMART indicator. No targets on how many women as minimum in such a network etc.* *This was not achieved. The Series on Women in Meteorology as per the SPREP assessment was achieved and is of good quality. Not clear how broadly it has been disseminated.* *The project should have changed this indicator to one related to the alternative activity adopted, rather than just simply do something else.*	Sufficient amount of women meteorologists join the network *Not an assumption. The project can and should directly influence this to achieve the indicator.*
		Gender is recognized as an important aspect of adaptation to climate change and visible in the planning of the NMHSs by the end of project implementation	Achieved. As a result of the MTE, the project team made improvements in the collection of gender	*Not a SMART indicator. How to assess "recognised" ??*	NMS directors motivated and engaged for development

Logframe		Measurable indicators	Achievement according to SPREP Annual Report 2016	Assessment by evaluators	Assumptions with evaluator comments
			disaggregated data from community and all remaining trainings. However more could be done with resources and clarity integrated in the project design.	*Not much has been achieved with regard to gender. And no signs/evidence it is visible in the planning of the NMHSs.*	
		Lessons learned from the pilot projects in use by all NMHSs by the end of project implementation	On track. A regional guideline on how to engage with communities in building climate and disaster resilience is an output that will be available at the end of the project	*Not a SMART indicator. Too vague on lessons. And how many lessons?* *The project has documented lessons learnt through a compendium on case studies. And the guidelines for community engagement have been delivered. Both are good outputs.*	

Annex IV – People interviewed

Name	Position	Organisation	Email	Phone	Place of meeting	M/F
Alexander Rilifia	Forecasting Officer	Solomon Islands Meteorological Services	m.siau@met.gov.sb	(677) 23029	Honiara, Solomon Islands	M
Arona Ngari	Cook Islands Meteorological Services					
Ben Kere	Senior MET Officer - IT	Solomon Islands Meteorological Services	b.kere@met.gov.sb	677) 24218 or (677) 23029	Honiara, Solomon Islands	M
Celine Dyer	Office of the Prime Minister					
Christian Slaven	IT Manager	SPREP	Christians@sprep.org	21929	Samoa	
Christina Leala-Gale	FINPAC Project Manager	SPREP	christinal@sprep.org	+685 21929 Ext 224	Tonga	F
David Gibson	Director	Vanuatu Meteorology & Geo-hazards Division (VMGD)	dgibson@meteo.gov.vu	(678) 534 4091	Honiara, Solomon Islands	M
David Shepherd	Director General	SPREP	davids@sprep.org	(685) 752 2185	Samoa	M
Kosi Latu	Deputy Director General		kosil@sprep.org	(685) 21929 ext 312		M
Doug Ramsay	NIWA					
Epeli Tagi	IT Network and System support engineer	SPREP	epelit@sprep.org	21929	Samoa	M
Espen Ronneberg	Acting Director, Climate Change Division	SPREP	espenr@sprep.org	21929		
Fred Ferah	Chief Forecasting Officer	Solomon Islands Meteorological Services	f.ferah@met.gov.sb			
Graham Elley	NIWA					
Henry Taiki	WMO Representative	WMO Office for the South-West Pacific	htaiki@wmo.int	(685) 25706	Samoa	M

Name	Position	Organisation	Email	Phone	Place of meeting	M/F
Ichikawa George Polovili	Previous FINPAC Officer		ipolovili_pcidrr@live.com		Nuku'alofa	M
Jerry Timothy	Manager	Forecasting Services, VMGD	jtimothy@meteo.gov.vu	(678) 534 4091	Honiara, Solomon Islands	M
Krystina Tatuava	Ministry of Finance and Economic Management					
Lesu Waqaniburotu	Manager Disaster Risk Reduction, Country Cluster Support Team Pacific	IFRC Suva	lesu.waqaniburotu@ifrc.org		Suva	M
Levu Anfalo	Senior Forecaster	Forecasting Services, VMGD	lantfalo@meteo.gov.vu	(678) 534 4091	Honiara, Solomon Islands	M
Luisa Malolo	Director, Climate Change Department	Ministry of Environment, Tonga (MEIDECC)			Tonga, Nuku'alofa	F
Mata Hetland	Cook Island Red Cross					
Matti Eerikäinen	Project Coordinator, SmartMet training	FMI	Matti.Eerikainen@fmi.fi	040 703 1434	Skype	M
Michael Siau	Principal Forecasting Officer	Solomon Islands Meteorological Services	m.siau@met.gov.sb	(677) 23029	Honiara, Solomon Islands	M
Móleni Tu'uholoaki	Senior weather forecaster	Tonga Met Service	molenit@met.gov.to		Tonga, Nuku'alofa	M
Mr Salesi Muli	Town Officer	Mo'unga'one		+676 726 8613 +676 7749949	Mo'unga'one	M
Mr Samiu Vaitaiki	Met Officer	Tonga Met, Pangai, Ha'apai			Pangai	M
Mr Sione Taumata	Youth representative	Moungaone Community		7733769 8441218	Mo'unga'one	M
Mr. Leveni 'Aho	Director	NEMO, MEIDECC		(676) 875 2500	Tonga, Nuku'alofa	M
Mr. Ofa Faanunu	NMS Director/Tonga	National Meteorological Services	ofaf@met.gov.to	(676) 771 3903	Tonga, Nuku'alofa	M

Name	Position	Organisation	Email	Phone	Place of meeting	M/F
Mr. Ueneta Toorua	Acting Director	NMS Kiribati				M
Mrs Akanesi Feke'ila	Women Representative	Moungaone Community		+676 7318472	Mo'unga'one	F
Mrs Lu'isa Langi	Officer in Charge	Tonga Red Cross Society	oichaapaitrcs@gmail.com	+676 8436323	Pangai	F
Ms. Janita Pahalad	CosPPAC project coordinator	BOM - Melbourne	J.Pahalad@bom.gov.au		Tonga, Nuku'alofa	F
Nanette Woonton	Media & PR Officer	SPREP	nanettew@sprep.org	21929	Samoa	F
Patrick Arioka	Cook Island Red Cross					
Philip Malsale	COSPPac Climatology Officer		philipm@sprep.org	21929	Honiara, Solomon Islands	
Polikalep Kefu	Communication officer	Tonga Red Cross			Tonga, Nuku'alofa	M
Polikalepo Kefu	FINPAC Project officer	Tonga Red Cross Society	kalepo149@gmail.com	+676 7776687	Nuku'alofa	M
Ravind Kumar	NMS Director/Fiji	Fiji Met Services	ravind.kumar@yahoo.com.au	(676) 673 6006	Tonga, Nuku'alofa	M
Rebecca McNaught	UNDP Pacific Center	former Red Cross Red Crescent Climate Center Advisor in the Pacific based in Vanuatu who is now with the UNDP Pacific Center	beckmcn@hotmail.com		Tonga, Nuku'alofa	F
Rere Mataiti	Aravra college					
Salesa Nihmei	Meteorology & Climatology Officer	SPREP	salesan@sprep.org	21929	Samoa	M
Sam Maiha	Director	PNG National Weather Service	smaiha@pngmet.gov.pg , samuelmaiha25@gmail.com		Honiara, Solomon Islands	M
Samuel Maiha	Director	NMS, PNG	samuelmaiha25@gmail.com	(675) 3245 9520	via phone to PNG	M

Name	Position	Organisation	Email	Phone	Place of meeting	M/F
Selu Finaulahi	Climatologist	NMS Tonga	seluf@met.gov.to			F
Tauala Katea	Director	Tuvalu Meteorological Services	tkatea@gov.tv , tauala.k@gmail.com		Honiara, Solomon Islands	M
Ueneta Toorua	Director	Kiribati Meteorological Services	uenetat@gmail.com			
Victor Iona	Head of EOC, Tautu community					
Viola Ulakair	Journalist/FINPAC media trainer/facilitator	Tongan Broadcasting Commission			Tonga, Nuku'alofa	F
William Tuivaga	Office of the Prime Minister					

Annex V – Documents consulted

FINPAC documents

Source	Time of publication/submission	Title	Organisation
Salesa	2016	Annual Progress Report	
Salesa	2012	Project Document: Reduced Vulnerability of the Pacific Island Country Villagers' Livelihoods to the Effects of Climate Change (13122012 Final)	SPREP
	2012	Project Appraisal Report	FCG
	January – October 2013	Interim Inception Report	SPREP
	November - December 2013	Progress Report	SPREP
	January – June 2014	Inception Report	SPREP
	July – December 2014	Progress Report	SPREP
	January – June 2015	Draft Six Monthly Report	SPREP
		Annual Work Plans 2014, 2015	SPREP, FMI
	2014	IFRC Annual Work Plan 2014 – 2016 (Final draft)	IFRC
		Steering Committee minutes April 2014 and June 2015	
		FINPAC Budget reports, spring and fall 2014	FMI, SPREP
	2014	Letter of Agreement between SPREP and IFRC	
		Mission reports	FMI
	2012	Community/Grassroots Engagement for FINPAC project	SPREP
	2013	Proposal for changing activity 2.3: Develop a joint platform for the sharing of warnings in the Pacific following the "MeteoAlarm" template	SPREP, FMI, MFA
	April 2014	Cook Islands Meteorological Service Media Guide	SPREP, NMS
	March 2014	Summary of Component 2 Partners Planning Meeting	SPREP
	July – December 2014	Pledge-based report - Reduced vulnerability of the Pacific Island country villagers livelihoods to the effects of climate change, FINPAC, Tuvalu	IFRC

Source	Time of publication/submission	Title	Organisation
	2014	Tautu Climate and Disaster Risk Management Plan	IFRC
	March 2015	Community Climate and Disaster Resilience Planning Workshop Report Lefagaoalii Village, Savaii, Samoa	FINPAC National Coordination Team
	January 2015	Pilot project proposal for Tautu Community at Cook Islands	Cook Islands Red Cross
		Draft Mounga'one Activity Plan	Tonga Red Cross
		FINPAC stories in media and SPREP's press releases	
		Lightning feed contract between SPREP and Vaisala Pty Ltd	

Selected other documents

Nr	Author(s)	Year of publication	Title	Organisation	Any additional reference information
1	David Sheppard, Reginald White et al	2012	Pacific Islands Meteorological Strategy 2012 - 2021	SPREP	
2	David Sheppard, Wari Iamo et al	2011	Pacific Regional Environment Programme Strategic Plan 2011–2015	SPREP	
3	Bruce Chapman, Atunaisa Kaloumaira, Bikenibeu Paeniu, Robert Brook	2010	Reviewing Weather and Climate Services in the Pacific	SPREP	
4		2012	Manual for Bilateral Programmes	MFA	
5		2012	Finland's Development Policy Programme	MFA	
6	Anne Sipiläinen et al		Evaluation Manual	MFA	
7		2010	RA V Strategic Operating Plan (SOP) for 2012-2015	WMO	
8		2012	MeteoAlarm Project Background - SmartMet – Software Tool for Visualizing and Editing Meteorological Data - Global Lightning Detection System Accurately Locates Lightning in Remote Areas	FMI	

Nr	Author(s)	Year of publication	Title	Organisation	Any additional reference information
10	Secretariat of the Pacific Regional Environment Programme		United Nations Development Programme Project Document Global Environment Facility - PIMS 2162 PACIFIC ADAPTATION TO CLIMATE CHANGE (PACC)	UNDP	
14		2005	An Investment for Sustainable Development in the Pacific Island Countries Disaster Risk Reduction and Disaster Management – A Framework for Action 2005 – 2015, Building the Resilience and Communities to Disasters	SOPAC	
15		2011 (2. edition)	Pacific Islands Framework for Action on Climate Change 2006–2015	SPREP	
16	Matti Eerikäinen	2014	FMI Annual Work Plan 2014, 2015	FMI	
18		2012	Cook Islands, Joint National Action Plan for Disaster Risk Management and Climate Change Adaptation (JNAP) 2011-2015	Government of the Cook Islands, SOPAC, UNDP PC	
23	Aliti Vunisea et al	2013	Pacific Gender and Climate Change toolkit Tools for practitioners	SPC, UNDP, UN Women, GIZ, SPREP	
24		2011	WMO Gender Mainstreaming - Report to Plenary on item 11.8	WMO	+ WMO Policy on Gender Mainstreaming and Monitoring indicators – Implementation of the WMO policy on gender mainstreaming
25		2013	PMC Report of the Second Meeting (PMC-2)	SPREP	
26		2011	Outcomes of the 14th RMSD and 1st PMC	SPREP	Annex 2 – WP 8.2.5 Outcomes of 14RMSD and PMC
29		2010	Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management 2010-2015	SOPAC, SPREP, Ministry of Environment and	

Nr	Author(s)	Year of publication	Title	Organisation	Any additional reference information
				Climate Change, National Emergency Office, Tonga	
30			Tuvalu National Strategic Plan for Climate Change and Disaster Risk Management 2012-2016	SPREP, SOPAC, Ministry of Foreign Affairs, Trade, Tourism, Environment and Labour	
32	Vladimir Tsirkunov	2013	Strengthening weather and climate service delivery in the developing countries – first lessons	GFDRR/World Bank	
33		2015	Nuku'alofa ministerial declaration for sustainable weather and climate services for resilient Pacific	SPREP, WMO	
34		2015	Key Recommendations for PMC Endorsement	SPREP (et. al.)	
35		2012	Community Disaster and Climate Risk Management (CDCRM) Program, Samoa	Australian Red Cross	
36		2001	A needs analysis for the strengthening of Pacific Islands Meteorological Services	SPREP	
37		2013	Climate Services Training, Capacity Development and Communications Team - Samoa Met Division / COSPPac	Commonwealth of Australia	
38			Whole of Island Approach, Kiribati	SPREP, SPC, GIZ etc.	
39		2014	Integrated Vulnerability Assessment Framework for Atoll Islands: A Multiple Partner Approach	SPREP, SPC, GIZ	
40	Dr. Walter Salzer	2014	LFEWS – Local Flood Early Warning System	GIZ	
41		2014	Community Disaster Plan – Naikelikoso Village	Fiji Red Cross	
42		2015	Pacific Islands Climate Story Book	USAid/NOAA	
43		2015	Independent Progress Review Climate and Oceans Support Program in the Pacific (COSPPac)		

Nr	Author(s)	Year of publication	Title	Organisation	Any additional reference information
44		2013	IT Capacity Mapping of Climate Services in the South Pacific Region (7 PICs)	COSPPac	
45		2010	Tonga – Join National Action Plan on Climate Change Adaptation and Disaster Risk Management 2010 – 2015	Ministry of Environment and Climate Change and NEMO	
46		2014	Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management 2014 - 2020	Government of Kiribati	
47		2008	Solomon Island – National Adaptation Programmes of Action	Ministry of Environment, Conservation and Meteorology, UNDP	

Annex VI – Quality Assurance Statement

Danish Energy Management (DEM) has established an extensive Quality Management System that has been implemented on all our contracts. As an organisation that believes in continual improvement to meet changing needs and addressing weaknesses that become apparent after putting systems into practice, we constantly update our approach towards quality management to enhance efficiency and effectiveness. The fundamental basis of our approach is two-fold: (1) to make the most of the strengths of our consortium; (2) ensure that quality is inherent in every step of the process.

The Quality Management System as a whole caters for internal and external reviews. It covers contract management, level of performance in the implementation of Technical Assistance assignments, reporting and general compliance with the contract terms. The quality responsibility and oversight is placed with Danish Energy Management & Esbensen as the consortium lead. It means, Danish Energy Management & Esbensen takes full responsibility for quality of the service under this contract. To this end, our proposed Contract Management Team includes a Head of Quality Assurance.

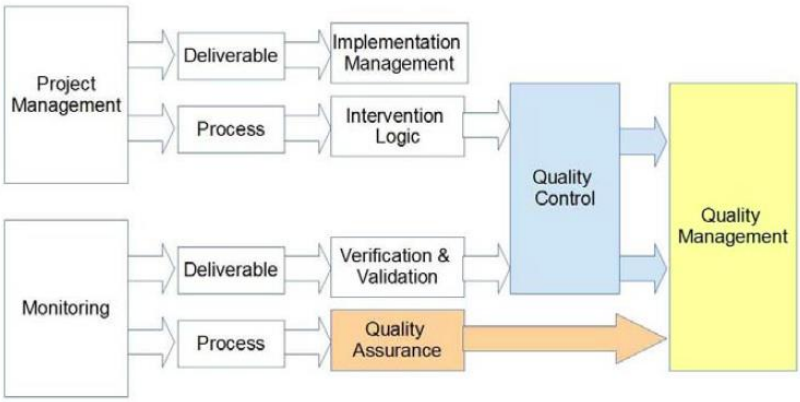

Figure: The Quality Management System

The Quality Management System is designed to facilitate a systematic approach that allows the project to continuously improve performance. Its primary aim is to ensure that project activities have been realised and the planned outputs have been achieved in a timely manner without compromising the quality of outputs.

The system rests on two pillars; Quality Control and Quality Assurance. While Quality Assurance applies to processes, Quality Control focuses on monitoring of project implementation and achievement of project results.

Quality Control and Assurance

Quality control is a combination of the assessment of the intervention logic, i.e. the achievement of the project/programme objectives, and verification and validation of project deliverables. While on the other hand, Quality Assurance focuses on the process of the implementation and whether the expectations of the Contracting Authority and beneficiaries are being met, both in terms of contractual obligations and client satisfaction. It is essential that those participating in these functions have a good understanding of the technical content of the project and its deliverables. The Head of QA and individuals nominated for providing the technical backstopping will play a crucial role in ensuring that the quality aspects of the project are well managed.

Quality Assurance, Home office coordination and Backstopping in the FINPAC-evaluation

We acknowledge that quality assurance is emphasized in ToR. In order to conduct a proper and high-quality QA, we always involve our permanent staff with spot-on experience. We began this assignment with DEM's internal staff, Annegrete Lausten, who came with long-term experience in QA of internal and independent monitoring & evaluation projects as well as peer-review of MFA Finland's evaluations. She also has provided QA in other projects funded by MFA Finland. She has been working in a large monitoring contract addressing climate and energy issues in ACP countries including the Pacific region, all of which makes her a best candidate for QA in this assignment. Kresten Kjær Sørensen, another internal DEM M&E-expert who had worked extensively with Miss Lausten for several years, took over her role when she changed employer during this assignment.

In addition to the traditional ex-post quality checkpoint control process of draft evaluation outcomes and deliverables, we have provided proactive and ex-ante QA throughout the mandate, not limiting our self to ex-post reactive control of outputs. We have applied this "proactive" approach in other mandates and have found that it significantly adds value to the overall coherency and reliability of the deliverables and it has also been pivotal in ensuring the quality of the final report of this evaluation.

Another permanent staff of DEM Mr. Keitaro Hara, who has 7 years of experience in supporting project implementation at DEM, has provided home-office coordination and backstopping. He has provided support in any ad-hoc issues and administrative and logistical issues and will ensure smooth closing of the contract. He has also been involved a couple of assignments funded by MFA Finland such as "Meta-analysis and impact evaluability assessment of Finland's support to rights and status of women and girls and gender equality" and "Meta-evaluation 2014-2015". He is an experienced researcher and analyst and has a good understanding of evidence-based evaluations and how to integrate cross-cutting issues.

Code of Conduct

Danish Energy Management's Code of Conduct is based on loyalty, impartiality and mutual respect. The staff is aware of its contents. DEM has a strong anti-corruption policy and the necessary procedures that ensure that it is implemented and practiced. Our strategy recognises that individual perceptions of corruption vary and it can be complex to provide clear guidance to ensure that our staffs protect the integrity of the company and that they are not placed in a compromising position. It also recognises that corruption takes several forms: bribery and extortion, collusion, other non-monetary incentives and other initiatives that provide the business with an improper advantage. The Danish Energy Management's policy ensures that:

- Increasing client, staff and investor confidence in the company's stability and performance,

- Business disruption is limited and staff time is not distracted from core business,
- Prevent the risk of litigation and prosecution,
- Hold employees and all agents of the company accountable to ethical standards.

Sustainability Management

Based on a passion for energy, at Danish Energy Management we strive to build a future where energy is applied efficiently and sustainably in an affordable way. Our sustainability strategy reinforces this passion, directly linking our services to the important work that we do both in Denmark and abroad.

To obtain greater impact for scarce energy resources, and strengthen climate efforts, we continuously develop innovative consulting approaches, methods and tools that improve sustainability. We help our clients, partners & stakeholders achieve sustainability – and now we can also measure it – in line with the United Nations Sustainable Development Goals (SDGs)! *O*ur passion for energy is also directly linked to four of the 17 UN Sustainable Development Goals, namely: 7,11,13 and 17.

Today, we are using our Sustainability Management & Measurement model as a tool for business development and business communication. Implementing this tool is helping our business to become even more sustainable in terms of people, planet and prosperity. This model also makes it easier to communicate work with sustainability within the organization, as well as to partners and all stakeholders.

Danish Energy Management is also a member of the Global Compact, and the principals of the Global Compact have a long tradition in the organization as a whole. In 2003 the Danish Management Group adopted a Code of Ethics and Business Integrity Management System, which was created following the ten (then nine) principals of the **United Nations Global Compact, and the OECD's Guidelines for Multinational Enterprises,** using these as a standard for business practice. In this way, our membership to the Global Compact builds upon more than a decade of work that has been done to systematically ensure that human rights are respected, labor standards are upheld, environmental impacts are minimized in all activities, and corruption is combated in all forms. As we move forward, participating in the Global Compact and working with the SDGs gives us a platform to take the Business Integrity Management System further, by adopting a company vision and strategy that addresses sustainability directly. It is an opportunity to create a clear picture for all of our employees and stakeholders regarding our passion and purpose for working with energy, and how we can measure and benchmark our progress.