



Solomon Islands Water Sector Adaptation Project (SIWSAP)

FINAL ANNUAL PROGRESS REPORT

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EXECUTIVE SUMMARY

Project Progress

December 2015 marks precisely one and a half year that the Solomon Islands Water Sector Adaptation Project (SIWSAP) is operational. Despite delays in bringing the required human resources, particularly the Project Manager and the Chief Technical Advisor (CTA); the project is on track in terms of implementation of its activities. The financial delivery although behind schedule due to delays in the procurement of a few big ticket items/equipment, the project is optimistic that delivery will be boosted in 2016 if adequate support is rendered in the purchase of various complex equipment and the implementation of construction works in all pilot sites . Overall project delivery against the annual target of USD1,750,665.34 stands at USD659,544.50¹.

Water Sector – Climate Change Adaptation Response Plans (WS-CCAR)

The fielding of a five member consultant team to undertake the Climate Change Vulnerability and Adaptation Assessment (CCVA) in the second half of 2015 is a positive step towards facilitating the process for the development of the Water Sector-Climate Change Adaptation Response Plans (WS-CCARP). The CCVA, which is a risk assessment planning tool that captures exposure, hazards, sensitivity and existing adaptive capacity of all pilot sites is expected to be completed by the first quarter of 2016. The formation of specific pilot sites WS-CCARP will be guided by the key findings and recommendations of the CCVA.

Improved quality of water supply in targeted areas

The project through support from a joint team of Water Resources Division's (WRD) officials, Ministry of Mines, Energy and Rural Electrification (MMERE) with Provincial Officers (PO) of the SIWSAP successfully completed the technical assessments of water sources in each of the pilot sites (6). Key recommendations alluded to immediate/urgent improvement to rain water harvesting (including water capture devices and storage tanks), hand dug wells and springs/surface water resources. Information gathered were used to quantify materials required to address water sources and infrastructures in the six pilot sites. Construction works were outsourced to private firms through an open competition tender process.

The project is also purchasing an Early Warning Systems (EWSs) and a ground water survey equipment (inclusive of data loggers and tough books) through a direct contract with the National Institute of Water and Atmospheric (NIWA) Research in New Zealand. The EWSs are essential in providing timely information to trigger appropriate action by communities during disasters and to assist communities/townships cope with water constraints situations. Similarly, the ground water survey equipment will help SIWSAP, key partners and beneficiaries better understand groundwater characteristics. Such information is useful in informing decision making on water collective management and on whether ground water can be considered a source of fresh water in any of the pilot sites.

Cost-effective and adaptive water management interventions and technology transfer

A key activity performed under this outcome is the finalization of specifications and tendering of relief and communication equipment. Due to the financial threshold of relief equipment which

¹ This amount was taken from the atlas generated Combined Delivery Report (CDR) which is the recommended report to be used in formal documents. Please note that it takes till end of March 2016 for the 2015 CDR to fully capture actual expenditure in 2015. The Office Resource Overview depicted a total delivery of USD965,369 against the overall budget for 2015.

almost reached USD500,000, the case was submitted to the UNDP Regional Assets, Contracts and Procurement Committee (RACP) in Bangkok in December 2015. Essentially, these equipment will provide water security at community and provincial level during disaster relief periods.

In addition to these hardware, a set of man pack series transceiver (HF radios) is also well underway to be procured and is with the UNDP Contracts, Assets and Procurement Committee (CAP) as at end of December 2015 for their endorsement. The man pack system will provide a reliable means of communication for remote communities in times of disaster when normal telecommunication infrastructures fail/damaged. These equipment will benefit pilot communities/townships including surrounding communities in times of disasters and water scarcity as they can easily be deployed. All specifications for equipment were compiled and finalised through support from the WRD of MMERE and the National Disaster Management Office (NDMO), Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM). The procurement process for these equipment will roll into 2016.

Improved governance and knowledge management for Climate Change Adaptation

Besides the recruitment of a Climate Scientist and the launching of the project's first newsletter capturing activities in the third quarter, a key focus in 2015 under this outcome revolves around building the necessary ground work through collaboration and collation of relevant materials/resources from key stakeholders/partners. This process is vital as it will guide the development of advocacy/promotional materials for the project in 2016. The project is also exploring the option of outsourcing the development of the project's Communication Strategy to a consultant. A bulk of activities under this outcome will be implemented in 2016.

Part A – NARRATIVE REPORT

I. Objective

The overall SIWSAP objective is to improve the resilience of water resources to the impacts of climate change in order to improve health, sanitation and quality of life, and sustain livelihoods in targeted vulnerable areas of the Solomon Islands. The project will achieve this objective through four outcomes:

1. Water Sector – Climate Change Adaptation Response Plans formulated, integrated and mainstreamed in water sector-related and in broader policy and development frameworks – using action at the Provincial level to mobilize national level policy frameworks;
2. The increased reliability and improved quality of water supply in targeted areas;
3. Investments in cost-effective and adaptive water management interventions and technology transfer, and
4. Improved governance and knowledge management for Climate Change Adaptation in the water sector at both the local and national levels.

The project also aims to develop synergies and partnership with a range of Non-Government Organisations (NGOs) and local partners both at the national and local level to ensure that the broader enabling environment is strongly supported in efforts to improve the resilience of targeted communities and townships to the adverse impacts of climate change in water sector management.

II. Resources

Financial Resources

Project Budget. The total donor contribution is USD6,850,000

Table 1. Total funding contributions and in kind contributions by partners in USD

Donor	Amount	Funding Modality
LDCF (GEF)	6,850,000	National Implementation with UNDP Country Support.
Co-financing:		
• Government parallel	37,222,462	
• UNDP parallel	6,400,000	
• Total Co-financing:	43,622,462	
TOTAL (Available funds)	6,850,000	

Total Cumulative Expenditure in USD for 2015 (January - December) against Annual Budget.

Project Output	2015 Annual Budget (in USD)	Actual Expenditure (USD) January – December 2015
Outcome 1 - Water Sector – Climate Change Adaptation Response (WS-CCAR) Plans formulated.	312,133.90	130,312.90
Outcome 2 - Improved quality of water supply in targeted areas	393,356.00	248,305.66
Outcome 3 - Investments in adaptive water management interventions and technology transfer	690,142.36	45,469.61
Outcome 4 - Improved governance and knowledge management for Climate Change Adaptation	256,449.99	78,437.61
Outcome 5 - Project Management	98,583.09	157,018.72
Total	1,750,665.34	659,544.50²

Project Human Resources

Project Staff (Service Contracts)	Designation	Start Date
1. Gloria Suluia	Project Manager	2/01/15
2. Lalith Dassenaike	Chief Technical Advisor (vacant since July 2015)	14/01/15
3. Ruth Ramoifuila	Technical Officer Communication and Community Engagement	8/07/15
4. Yancy Legua	Finance and Admin Assistant	16/10/14
5. Joshua Toren	Water Sector Adaptation Officer	2/11/2015

²This amount was taken from the atlas generated Combined Delivery Report (CDR) which is the recommended report to be used in formal documents. Please note that it takes till end of March 2016 for the 2015 CDR to fully capture actual expenditure in 2015. The Office Resource Office depicted a total delivery of USD965,369 against the overall budget for 2015.

6. Aubrey Saueha	Provincial Officer - Tigoa	22/04/15
7. Tema Wickham	Provincial Officer - Gizo	27/04/15
8. Philip Riogano	Provincial Officer - Taro	22/04/15
9. Freda Kofana	Provincial Officer - Ferafalu	22/04/15
10. Mannesh Irofimae	Provincial Officer – Santa Catalina	28/04/15
11. David Rauna	Provincial Officer - Tuwo	22/04/15
12. Eddie Meke	Procurement Officer	27/04/15
Consultants (Individual Contracts)		
1. John Taylor	Team Leader	19/08/15
2. Dale Young	Water and Sanitation Specialist	27/10/15
3. Sabrina Regmi	Gender Specialist	19/08/15
4. Joy Papao	GIS Specialist	21/10/15
5. Andrew Tait	Climate Scientist	7/09/15
6. Alexandre Borde	Cost Benefit Analysis Specialist	8/09/15

III. Implementation and Monitoring Arrangements

Project Management Arrangements

A Project Management Unit (PMU) exist within the Water Resources Division of MMERE and is led by a nationally recruited Project Manager, supported by a Chief Technical Advisor (CTA). In mid-2015, the project prematurely lost its CTA. In the absence of the CTA, technical backstopping support was sourced from the counterpart ministry, WRD, as well as from UNDP through the Environment team at the UNDP Sub-Office and the Regional Technical Advisor based at the UNDP Multi-Country Office (MCO) in Suva. Interim arrangements has been made for the Water and Sanitation Specialist to provide technical support to the project commencing February 2016 while long term measures are being discussed and facilitated for the CTA post. Also, during the reporting period, the Project Manager took 3 months maternity leave commencing July to September 2015. The loss of the CTA, coupled with the absence of the Project Manager, implicated on the smooth coordination and implementation of certain project activities in the third quarter of 2015.

The recruitment of all (six) Provincial Officers (POs) by April 2015 provided key linkage points between beneficiary communities and the provincial government. The Technical Officer Communication and Community Engagement and the Water Sector Adaptation Officer also joined the SIWSAP team in July and November 2015 respectively. The PMU is now fully operational and provides technical, administrative, and management functions to coordinate and implement the project on a day-to-day basis, in close collaboration/partnership with MMERE-WRD, Ministry of Health and Medical Services (MHMS)-Environment Health Division (EHD), MECDM and the Provincial Administrations and Provincial Officers. The PMU administers the project in accordance with the rules, policies, and procedures of UNDP, the Global Environment Fund (GEF), Least Developing Countries Fund (LDCF), and the Solomon Islands Government as agreed to by the Project Board.

In the reporting period, the Project Board has met once in April 2015. Key outcomes of the meeting included the endorsement of SIWSAP's: revised Annual Work Plan (AWP) for 2015, revised implementation schedule, and the Reduce Daily Subsistence Allowance MOU. The Project Board is chaired by the Permanent Secretary for MMERE and its membership consisted of the Permanent Secretary of MECDM, the UNDP Deputy Resident Representative, Director (EHD) of the MHMS, and the Director of Aid Coordination Division, Ministry of Development Planning and Aid

Coordination (MDPAC). A Project Board meeting proposed for mid-2015 failed to eventuate due to lack of matters requiring Board's endorsement.

IV. Implementation Progress by Outcomes

Outcome 1: *Water Sector – Climate Change Adaptation Response (WS-CCAR) plans formulated, integrated and mainstreamed in water sector-related and in broader policy and development frameworks – using action at the Provincial level to mobilize national level policy frameworks.*

Output 1.1. *Vulnerability assessments of water supplies (in terms of quantity and quality) to climate change in targeted critical areas refined or formulated.*

A Climate Change Vulnerability and Adaptation Assessment team was fielded in the second half of 2015 comprising of the: Team Leader (international), Water and Sanitation Specialist (international), GIS Specialist (local), Climate Scientist (international), and Gender and Livelihood Specialist (international). A kick off meeting led by the Team Leader took place in September 2015 with the objective to gather SIWSAP's national institutional partners and to announce that the planning phase of the CCVA Assessment has started. The Team Leader also introduced the expert team members to SIWSAP partners, shared methodologies; and finally, solicited feedback and inputs from SIWSAP partners to help the CCVA Assessment get started. The Team Leader visited Santa Catalina and Gizo following the kick off meeting. This first mission provided valuable background and lessons that guide the design of the CCVA and Adaptation Planning (AP) methodology. Highlighted below are key observations during the mission³:

a. Ownership is limited/lacking

There has been a significant amount of development assistance from international partners in some of the communities and this has contributed to ingraining a sense of dependency. The result is that there is often minimal ownership felt for projects and development processes, which can lead to their downfall following the completion of the project, or a lack of adherence during the process. Efforts must be made to ensure that the CCVA and AP processes involve high levels of community participation. If successful this can help to ensure better maintenance, awareness and the continuation of project goals beyond the duration of the project.

b. Climate change and public goods are poorly understood

Due to limited access to information and the relative newness of the climate change concept, very little is understood about it. Also there is little awareness, or value, given to shared public goods, such as water supply, and people continue to think of it as a limitless resource. There is therefore a need to demonstrate what climate change is and how it impacts people's lives, how water is delivered and what responsibilities people have to do so.

c. Not seeing the bigger picture

Even those who are familiar with climate change and its impacts, there is little understanding about how existing trends, such as the growing population or economic development, might intersect with, or combine with, climate change and have an impact on society. Linkages between, for example, issues like housing, water use, public health, the lack of regulations and functioning institutions, are

³ Extracted with slight modification from the CCVA Team Leader's Kick-Off Report, 2015.

important for stakeholders to make, to help them better understand the scale and complexity of problems and needed solutions.

d. A need to connect resilience with institutional structures and policy

A clear designated institutional responsibility for water management and climate change impacts in the Solomon Islands remains a grey area. This is important to understand because it is a contributing factor to a sense of powerlessness to put forward change, both by civil servants and the public. In order to promote adaptive capacity it is important to connect the ideas of resilience, governance and the development of adequate policies, and demonstrate how they can connect. This will require access to information, that can make these connections explicit, as well as training the provincial officers as the messengers of this thinking.

e. Committees are mostly made up of people from the government

At the moment the local climate change/ water committees are fairly limited in their membership. There is a need for greater diversity (to include women and other minorities) and generally more awareness in other sectors of the local population (for example school children, etc). Climate change and issues related to water management should be understood by a wider cross section of the population in order for the project to have an impact.

The intervening period between the kick off meeting in September 2015 and the second mission in early November 2015 hinges on information gathering from each of the pilot sites through desk top review, focus group discussions and household surveys. Relevant information were used to analyze community water resource governance and to promote better maintenance and decision-making practices. The CCVA is fundamental to the overall SIWSAP process as it provides key stakeholders both at national and provincial level (including communities) with a better understanding of the nature of vulnerability at the pilot sites' level. It is also a useful advocacy tool that sets out recommendations and insights into what adaptive capacity and mechanisms are needed to increase resilience. The first draft of the CCVA report is expected to be submitted by late February 2016 for circulation to key stakeholders for their review.

This reporting period also witnessed the completion of the National Inception Workshop (February 2015) in Honiara, and six Provincial Inception Workshops in all pilot sites (April to early June 2015). Key objectives of the inception workshops were to provide a project overview of the SIWSAP, update all stakeholders on what has evolved since the Project Preparation Grant ; identify key stakeholders (besides those already identified); their respective roles and contributions to the projects in order to strengthen existing networks and partnerships by identifying synergies and areas for further collaboration; review key deliverables for 2015 (Annual Work Plan (AWP), Implementation Schedule and Management Arrangement, Monitoring & Evaluation (M&E) for SIWSAP. The outcome of these workshops were crucial in the scheduling of project activities and in the allocation of necessary resources to implement them.

Other activities implemented included the establishment and operationalization of three Pilot Project Committees and three Community Water Committees in all sites. A few committees (e.g in Santa Catalina and Ferafalu) were constituted building on existing Community Committees but with an expanded scope to cater for water sector management mandate. To date, the various committees with support from the POs have been instrumental in helping scope out interventions needs, capacity needs and also provide knowledge and experience of dealing with water and climate change impacts in their communities/townships. Committees are ultimately beneficiaries which is

crucial in grooming a sense of ownership in the implementation of project activities. The need for inclusiveness in terms of committee composition is something that the project is working closely with communities/townships on to ensure greater diversity through the engagement of more women, youths and other minority groups. This requires investment in awareness raising regarding the importance and benefits of embracing an inclusive approach.

This period also welcomed the recruitment and deployment of six Provincial Officers, beginning April to July 2015. The arrival of POs provided needed support to the PMU to coordinate and implement project activities at the pilot sites level. With a multi-functional role, the Provincial Officers are working closely with beneficiaries (communities and provincial governments as well as other stakeholders) in ensuring that interventions are appropriate, and activities are technically compliant and consistent with national and provincial government policy. Provincial Officers have a dual reporting line to the PMU/WRD and to the provincial governments (Provincial Secretaries).

Under this outcome, the project also purchased communication and audio visual equipment such as digital hand held still/video cameras with the required accessories. These equipment will be used to capture delivery of activities in the pilot site under all outcomes. Photos and videos are useful baseline data which can be used by the project for result based management reporting.

Output 1.2. WS-CCAR plans prepared in the context of IWRM and in line with and integrated into existing local and national policy and development planning processes.

The commencement of the CCVA process in September 2015 will inform suggested approaches for each of the pilot sites that can reduce vulnerability and/or enhance water resource resilience. Aside from demonstrating adaptation planning and response needs (actions on the ground), the WS-CCARP will demonstrate how additional activities in the water sector are required to future proof natural and built water storage and reserves for many different sectoral needs. These plans will also take into account uses of water beyond drinking and sanitation needs as per the national level IWRM commitment to include food production, preparation, and cooking. The planning phase and development of the WS-CCARP will commence in the first quarter of 2016.

Output 1.3. Government budgets allocated to support implementation of key components of WS-CCAR plans.

The project is yet to fully embark on this output besides the recruitment of the Cost Benefit Analysis (CBA) Specialist which took place in the latter part of 2015. A key deliverable of this consultant is to assist provinces and communities make informed decisions on the different water sector adaptation options they should invest in that will yield maximum water resource resilience with the least cost. More activities under this output will be implemented in 2016 and onwards.

Outcome 2: The increased reliability and improved quality of water supply in targeted areas

Output 2.1.1 Community-level WS-CCA soft and concrete measures implemented to improve sanitation and water supply in times of scarcity, that may include, but not limited to: diversification of water sources; protection and restoration of ecosystems that protect critical water resources; improvements in water-use efficiency and overall demand-side management; use of innovative instruments; building on traditional knowledge; protection of freshwater lens through better sanitation practices in small islands (e.g., composting toilets) (in about 6 sites).

As mentioned under Outcome 1, an inception and awareness raising workshop conducted in all pilot sites in the first half of 2015 was necessary in explaining the project and verify project activities, and where appropriate make adjustments based on changing circumstances. Essential to these discussions were specific interventions identified during a Rapid Vulnerability Assessment

during the Project Preparatory Grant Period (PPG). Activities identified for each pilot sites were revisited with stakeholders to ensure they remain appropriate. These includes the constructions of additional rainwater catchment and rehabilitation of existing water sources and infrastructures. A technical team from MMERE was mobilized to the various pilot sites between July – September 2015 respectively to carry out the detailed assessments. Data collected were used to quantify materials required and based on these a public procurement notice was issued in October 2015, attracting a total of 12 contractors. As at end December 2015, two contractors were selected to undertake construction works in Santa Catalina, Tuwo and Gizo. Contracts for the remaining three sites will be processed in early (Jan) 2016. Provided below is a snapshot of key findings and recommendations for each of the pilot sites based on the technical assessments:

Gizo – Western Province (7th to 15th September 2015)⁴

The Gizo assessment involved an inventory of selected buildings including offices, recreational buildings, churches and the Gizo primary and secondary school. It was concluded that for rainwater harvesting, the MSG Building, Women’s Resource Centre, Netball Stadium and Official buildings, Churches and the Gizo Community High School buildings need repairs to water capture components; gutters, spouting and down-pipes. Some of these buildings also need additional storage tanks.

A water quality analysis on hand dug wells was also carried out for their conductivity, total dissolved salts and temperature. The majority of wells have reasonable quality based on WHO water quality guidelines. These wells are suitable for washing and bathing but not drinking as there was no microbiological analyses undertaken to ascertain the quality of water for human consumption. There are short term tasks to rehabilitate current hand-dug wells along the back road of the Gizo access to the school and residential houses.

Similarly, few springs around Gizo town needed rehabilitation work. These include ones at Babylon, Malakerava, Banana Valley and the District areas. These have been confirmed by the Gizo Water Crisis Committee, of which SIWSAP is party to. The Tisi water source should also be rehabilitated to help alleviate Gizo’s water scarcity in the short term. Further monitoring of the Tisi water source is required by installing water level gauge and measuring stream-flows on quarterly basis. A long term plan to develop the Tirokoqu source about 6km from Gizo will still be investigated by the SIWSAP under its adaptation measure for the water and sanitation sector.

Taro – Choiseul Province (19th to 27th August 2015)⁵

The assessment for Taro identified the priority needs that urgently need attention to include repair, replacement and new installation of water capture devices, and water tanks for rainwater harvesting. In particular the following buildings should be targeted; Provincial Chamber; Women’s Resource Centre; Provincial Works Office; Churches; Market and Lock-up shops; and the Sports Centre.

There are also options for more hand-dug wells at 3 locations around Taro Island; the light industrial (NE), commercial area (SE) and along the airstrip parallel to the residential area. Wells are for washing and bathing only because they have lower water quality based on samples analyzed. It is recommended that all hand-dug wells should be installed with new hand-pumps. Some wells also need new culverts.

⁴ Extracted from the Gizo Technical Assessment Report written by Mr Isaac Lekelalu, Deputy Director, WRD.

⁵ Extracted from the Taro Technical Assessment Report written by Mr Isaac Lekelalu, Deputy Director, WRD.

The Choiseul Bay Provincial Secondary School's water supply on the mainland should also be rehabilitated to prevent leakage and improve pressure in the system. During times of extreme water shortages at Taro, Sipozae and nearby communities, this has always been a reliable source of water supply to the Taro township and surrounding communities.

Santa Catalina – Makira/Ulawa Province⁶

Rain water was identified as the only source of fresh water on Santa Catalina, and this is mainly used for drinking and cooking. For the eight zones, one tank is assigned per zone. Zone 8 is the most populated, thus frequently experience drinking water shortage. Rainwater collection system (RWCS) is a problem on the island as they are not properly designed to capture adequate rainfall. There seem to be sufficient storage tanks but rainfall catchment is the limiting factor to supplying adequate drinking water.

Since there are no surface water source on the island, hand dug wells are mainly used for washing and swimming due to their quality. The general poor water quality in wells are attributed to the lack of proper well construction. As such, wells are open to surface pollutions and contaminations. Based on the assessment, the following were identified as high priority interventions in Santa Catalina: a) setting up RWCS for the school, clinic and church; b) building of additional RWCS in the highly populated zones to cater for water demand; and c) establishing water management framework through enforcing rules for water takes as per capita/day and continual monitoring of reservoir and adjusting water takes/allocation to discourage/limit misuse.

Tuwo – Temotu Province (4th September 2015)⁷

The assessment in Tuwo was mainly carried out on rain water catchment. This involves the measurement of buildings identified as suitable for rain water harvesting. Four buildings were assessed and quantified to be addressed urgently. This includes the Tuwo primary school buildings, the church building, Luke Lapoe, and John Bakila's residence. Unfortunately, due to some unforeseen circumstances, hand dug wells were not assessed. Similar to Santa Catalina, there are no surface water sources on Tuwo. Hand dug wells are predominantly used for bathing and washing, except for one in which people use for cooking and drinking. Due to lack of testing apparatus, it was not possible to ascertain the quality of water in this particular well. However, this has been earmarked for testing together with the other wells once the necessary resources (human and equipment) are available.

Tigoa – RenBel Province (18th -23rd July 2015)⁸

The assessment in Tigoa was carried at the New Place Secondary School and the existing water supply system in Tigoa township. The water supply system needs urgent attention. The reticulation system has not been maintained and is insufficient to cater for the current population. Some parts of the current pipe lines for the water supply needs replacement and improvement, due to damages caused by a road construction works some years back. Currently, residences get water from nearby wells for bathing and drinking. Rainwater is

⁶ Extracted with slight modifications from the Santa Catalina Technical Assessment Report written by Mr Mannesh Irofimae, Provincial Officer for Makira, WRD/SIWSAP.

⁷ Extracted with slight modifications from the Tuwo Technical Assessment report written by Mr David Rauna, Provincial Officer for Lata, SIWSAP.

⁸ Extracted with slight modifications from the Tigoa Technical Assessment report written by Mr Jack Kaobata and Mr Ronnie Houanipata, WRD.

also a main source of water supply but this is only reliable from November to April each year. Good water management practices have been identified as an urgent need so that residences have sufficient water during the dry season.

Rainwater catchment and groundwater supply improvement were identified an urgent need in Tigoa to solve the current water problem. Rainwater harvesting was recommended for the New Place Secondary School. Improvements will also be carried out on the existing groundwater supply to ensure that residences of which the majority are public servants have reliable water supply for bathing, drinking and sanitation.

Ferafalu – Malaita Province (30th August to 4th September 2015)⁹

Water resources in Ferafalu are limited to ground water and rainwater harvesting. The community face on-going water supply problem because the hydrology of the island does not favour surface water sources like streams and spring that can be piped to the village. In addition, although hand dug wells are present they are not properly designed, developed and constructed to protect well water from contamination. Thus wells are considered unfit for bathing and washing. However, people still use wells as this is the only available source of water. The hand dug wells are not sustainably maintained and people seemed to have limited knowledge to sustain the hand dug wells. During the assessment, two key adaptation measures were identified as urgently requiring attention namely: increase proper storage capacity and roof catchment to capture water, and rehabilitation of existing well using culvert and concrete slab to properly secure it from waste from roaming animals and provide a proper hand pump system.

In addition to the technical assessment carried out by the WRD/SIWSAP to identify immediate and urgent quick fixes in the various pilot sites, a CCVA assessment is ongoing since September 2015 to further identify and guide specific immediate, medium to long term soft and concrete measures.

Output 2.2. Community-based Climate Early Warning and Disaster Preparedness Information System tailored for water resources management developed and implemented in targeted areas.

An Early Warning System (EWS) is vital for the project to generate and disseminate timely and meaningful warning information that enables at-risk individuals, communities and organizations to prepare and act appropriately; most importantly in sufficient time to reduce harm or loss. To date, three rain gauges (two manual and one automatic) has been installed in Ferafalu, Tuwo and Gizo. Twelve (12) manual rain gauges, six (6) Automatic Hydro meteorological Stations (AHS), a ground water survey equipment (inclusive of data loggers and tough books) will also be purchased through a direct contract arrangement with the National Institute of Water and Atmospheric (NIWA) Research, a Research Institute in New Zealand. NIWA was selected at the request of the Solomon Islands Government (SIG) through the Solomon Islands Meteorological Services, Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM). SIG has previously sourced similar equipment through funding support from another UNDP Climate Change Project (SWoCK) as well as EU funding support utilizing its existing bilateral agreements with NIWA. Such arrangement, according to the government has significantly benefited them through knowledge exchange, compatibility in data exchange, data and quality exchange and regional standardization. Additionally, traditional ties with NIWA provided ongoing capacity development and maintenance support to SIG, tracing back a few decades. NIWA will supply, install, test and train appropriate SIG officials as well as community members on the use and maintenance of equipment. Building on existing local systems and knowledge, these equipment will contribute to develop both an effective community-based climate early warning and disaster

⁹ *Extracted from the Ferafalu technical Assessment report written by Richard Molea and Michael Maehaka, WRD*

preparedness information system for water resource management that is both top-down and bottom-up. The availability of information (e.g projected dry spells) will inform communities well in advance to take corrective measures through water conservations efforts as they cope with existing water resource constraints.

Outcome 3. Investments in cost-effective and adaptive water management interventions and technology transfer.

Output 3.1. Strategic investments in water infrastructure in target areas, including but not limited to: new household and communal water storage systems and infrastructure provision of up to 4 portable water filtration and/or desalination systems for sharing across communities in times of extreme water scarcity.

Priorities identified during the six provincial inception workshops highlighted the urgency for the provision of additional water tanks to assist communities cope with water shortages caused by the 2015 El Nino. This has further been confirmed through a technical assessment carried out by the WRD and SIWSAP's POs. The project through outsourcing arrangements with various contractors will be supplying and installing additional water tanks in all six pilot sites commencing early 2016. The first shipment is proposed for January 2016 to Santa Catalina and Gizo, to be followed by, Taro , Ferafalu , Tuwo and Tigoa.

An open competitive tender process for the procurement of specialized equipment such as desalination and water treatment systems have also been facilitated during this reporting period. These included portable water filtration units (water system, a mobile solar treatment system complete and ready to deploy and Brackish System 3000 to generate freshwater), desalination equipment and a man pack series transceivers. These equipment will address the lack of available water security equipment at the Provincial and community level. A training component of national, provincial and community members is embedded in this procurement to ensure effective management, maintenance and support mechanisms during and beyond the life of the project. The specifications of all equipment were drawn in close consultation and collaboration with the National Disaster Management Office of MECDM, and the WRD of MMERE. Technical support was also sourced from procurement colleagues and the Regional Technical Advisor for SIWSAP at the UNDP Multi-Country Office in Suva prior to finalization. In addition to the water treatment systems, the procurement of a man pack series transceivers will improve current challenges in the communications of provincial situations and needs during disasters.

Output 3.2. Compilation of best practices on applicable technologies for dissemination and replication by project partners with support from the project.

The recruitment of Provincial Officers (POs) in the 2nd quarter of 2015 and the Technical Officer Communication and Community Engagement (TOCCE) in July 2015 contributed significantly to efforts by the project to collect and document lessons learnt and best practices from the various pilot sites. The TOCCE has the lead role in assisting Provincial Officers and key partners (including the various committees set up at the pilot sites) capture key lessons learnt and best practices. Best practices will later (2016/17) be translated into guidance documents, supported with training videos both in pidgin and english and where appropriate in the local dialect of pilot communities.

Discussion are also underway for the recruitment of a consultant to assist develop the project's communication strategy. Further discussions focused on the design of communication products anticipated under the project particularly the need to portray practical level issues happening at the pilot sites in relation to water, sanitation and hygiene. Additionally, the project has collected climate change jargons that local communities struggle to resonate with. The TOCCE with support from

key partners and beneficiaries in the local communities will attempt to translate these into pidgin and the local dialect using practical local example.

Outcome: 4. Improved governance and knowledge management for CCA in the water sector at the local and national levels.

Output 4.1. Overarching policy and legislation for the water sector that integrates CCA components in IWRM plans drafted and advocated, including guidelines for climate resilient water supply development in vulnerable areas.

A Climate Scientist was recruited in the third quarter of 2015 as part of the CCVA assessment team. The Scientist was fielded in November 2015, together with the rest of the CCVA team and had commenced work on data gathering. A key deliverable of this specialist is the production of a report on a systematic review and analyses of all available scenarios of rainfall, temperature and winds/storms, and will assess/quantify the confidence/likelihood of projected changes. Such information will empower stakeholders/partners so they can better understand current and predicted climate change impacts on water resources. This study where possible will inform the implementation of the National Water Resources and Sanitation Policy and ensure that climate change is integrated within national and local level water sector policies.

Output 4.2. Institutional and community capacities strengthened toward water-sector CCA formulation, implementation and monitoring at the national and local levels

Consultations have been made with the Environment Health Division (EHD) of the Ministry of Health and Medical Services focusing on sanitation technologies and practices. In particular, discussions focused on how both parties can better collaborate to provide sanitation services in the various pilot sites while at the same time protect primary and secondary sources of freshwater from contamination. Two SIWSAP's pilot sites (Tuwo and Ferafalu) are situated on atolls, thus discussions revolved around what sanitation technologies/ approaches would be most suited given the limited and unpredictability in water supplies. The WASH Policy was also discussed in detail including the Community Lead Total Sanitation (CLTS) approach, particularly zero funding for sanitation. A training, targeting 'Training of Trainers' for Provincial Officers with the Pilot and Water Committees is proposed for either the 1st and 2nd quarter of 2016. These trainings will help sensitize and provide practical tools to POs and key stakeholders on the CLTS. It is also an opportunity for the EHD to promote and carry out awareness on the WASH policy at the local level. The EHD has also extended an invitation to WRD/SIWSAP for a "look and learn" experience in early 2015 on the successful roll out of CLTS (No Open Defecation). The project will also partner with EHD in rolling out of the National Sanitation Campaign, particularly in provinces where SIWSAP operates.

Output 4.3. Multi-media knowledge products on CC, CCA, IWRM, lessons learned and best practices developed and disseminated extensively to communities, schools and the general population and through ALM.

With key responsibilities for generating multi-media information on lessons learned and best practices, the TOCCE has had initial and follow up consultation with UNICEF as well as the Climate Change Division of MECDM to gather information regarding possible media/communication tools that will yield maximum benefit to the projects. The acquisition of information will assist in the design and development of communication tools/products for the project. Further consultations will be carried out in 2016 with other key partners such as World Vision, Community Resilience to Climate and Disaster Risk in Solomon Islands Project, and the Rural Development Program who are implementing similar projects. The project has also launched

its first newsletter capturing key activities implemented in the 3rd quarter. A draft of the fourth quarter's newsletter has also been submitted for comments/review by the Project Manager before it is distributed widely to stakeholders for review.

Noting the importance of having a communication strategy to guide multi-media interventions under the project, SIWSAP through support from the UNDP Sub-Office and the UNDP Regional Team in Bangkok has facilitated the procurement process for the engagement of a consultant to develop SIWSAP's communication strategy. The consultant has a wealth of experience doing similar work for water projects in the South Pacific Region and will commence in February 2016. The first draft of the Communication Strategy is expected to be submitted for review by key partners in March 2016.

V. Cross Cutting Issues

Gender

A Gender and Livelihood Specialist came on board as part of the CCVA team in September 2015, on a 100 days contract over a 9 months period. Inputs from this specialist is crucial as the project has fundamental responsibility of proactively engaging women and men in all stages of project implementation. Noting the strong patriarchal context in all pilot sites, the realities of women's involvement are sometimes marred with stereotypes, thus restricts their proactive engagement in the implementation of certain activities. It is, therefore imperative to understand, analyse and incorporate the different needs and roles of women and men in the use and management of water resources, and in the protection of the environment. Such considerations comes into reality in the establishment of various Pilot Project Committees and Community Water Committees in all six sites which are predominantly male.

During the reporting period, a few practical actions were carried out including the establishment of sex disaggregated data, systematic involvement of women in project consultations and implementation although yet to meet the expectations of the project (but work in progress), selection of participants for workshops/trainings, recruitment of project staff, composition of interview panels and procurement panels, and the representation of women/women's groups in the Project Advisory Committee at the national level. A more strategic approach in addressing gender issues is envisaged under current work by the Gender and Livelihood Specialist specifically the need to dissect the dynamics of gender differences across a variety of issues critical for achieving adaptation and building resilience to climate change in the water sector in all pilot sites. Furthermore, the design and development of educational/awareness materials will be inclusive of men, women and people living with special needs. Current design and plans of promotional materials such as posters, videos and other visual aids portray men, women, youths and people living with special needs. Such visuals, it is hoped, will encourage beneficiaries to recognize the different sectors in their communities as active agents, capable of playing important roles especially in water and sanitation management.

VI. Future Work Plan

The SIWSAP Draft Annual Work Plan (AWP) for 2016 has been finalized with a total budget of USD2,531,000. The draft SIWSAP 2016 AWP will be presented to all partners during a proposed project retreat scheduled for mid-February 2016 for their deliberation and in principle approval. Based on feedback from key partners, the AWP will be revised for submission to the Project Board in March 2016 for their final endorsement. The Draft SIWSAP 2016 AWP outlined key activities to be implemented in that year.

VII. Key Lessons Learnt

Capturing key lessons learnt during the reporting period are fundamental to SIWSAP's learning process. Highlighted below are some of the key lessons captured during the entire 2015:

- Never undermine the importance of engaging communities/beneficiaries from the outset regarding their own development as this will go a long way in building resilience and ownership in the actual implementation of activities both during and after the life of the project. Without community/beneficiaries buy in, big investment in water and EWS infrastructures such as those support by the SIWSAP will result in wastage.
- The use of illustrations and real life examples on exposure, sensitivity and adaptive capacity during the CCVA has proven to be powerful in capturing the interest of communities and in enhancing their understanding of complex climate change concepts and jargons.
- In delivering various awareness in relation to climate change and water resource management, a systematic system needs to be put in place to avoid any confusion to project beneficiaries. All future awareness will now be endorsed and facilitated by the respective counterpart ministry with support from the PMU. This will ensure uniformity and consistency in the messages relayed.
- The UNDP procurement process particularly for cases requiring RACP endorsement is cumbersome. The rigor of the system requires collective and laborious monitoring/oversight from the PMU, UNDP Sub-Office and the UNDP Multi-Country Office to ensure timeliness in the turnaround of submissions. This is not only important in managing expectations from key partners and beneficiaries but most importantly in the timely implementation of project activities. Where possible, the Solomon Islands Government procurement system will be mobilized to avoid such prolonged process.
- Effective coordination and alignment of project activities with those of key government partners is critical in ensuring that the project compliments and contributes to the overall achievement of government priorities. Also this will reduce competition by various projects for limited technical government officials.
- Cultural induction/briefing, particular for international consultants/staff is necessary to avoid any misunderstanding or prevent incidences where community values, beliefs or rules are not respected or adhered to. Cultural sensitivity in the Solomon Islands is a crucial consideration as it has the potential to defer project progress especially when communities' taboos are violated or disrespected.
- Advanced preparation for any project mission is important to ensure successful outcomes. For instance, the CCVA Assessment Methodology and Tools (Surveys and Focus Group Discussion questions & guidelines) should have been shared with PMU staff, including SIWSAP Provincial Officers and key government counterparts well in advance before the workshop to allow ample time for national staff to review and comment on the draft questionnaires. This will save precious government and project staff time during workshops. Additionally, it provides ample time for national staff to discuss how to translate certain climate change jargons into simple terminologies which communities can relate to.
- Strong rapport, teamwork and respect with key partners and communities/beneficiaries has significantly benefited the project in the implementation of activities.
- The project prides itself in the strong leadership role by the Water Resources Division of MMERE in close collaboration with the EHD and CCD in the planning, implementation and monitoring of project activities. Without this, the SIWSAP would not be able to achieve what it did in 2015. SIWSAP will continue to nurture this healthy relationship in coming years by ensuring key partners do engage at all levels of project planning, implementation and monitoring. Technical support from key government partners, particularly the WRD was exceptional.

VIII. Risks and Issues

Please kindly refer to Annex 1 for the Project Risks and Issues Log

Risk	Level	Mitigation measures	Responsibility
Weather impedes travel to Provinces, in some cases for months. Health and safety concerns with outer islands and drought weather/boat rides. Extreme natural events.	Medium	Avoiding travel during times of the year when the weather is known to be changeable and rough seas. Project have purchase safety kits for boat travel containing lifejackets, satellite phones, and other emergency equipment.	PMU.
Large tracts of land under customary ownership could be an impediment to spatial approaches in CC-A IWRM if landowners do not cooperate .	Medium	<p>The IWRM process in formulating CCA plans will undertake consultative and transparent processes, including with landowners. The co-benefits from IWRM through partnerships will be emphasized with landowners.</p> <p>The involvement of landowners and Provincial Governments in Pilot and Water Committees in all pilot sites should instill and promote a sense of ownership and enhance their understanding regarding project interventions. This should hopefully motivate landowners to allow their resources for utilization under the project.</p>	PMU, MMERE, MECDM, EHD, Provincial Governments, Pilot Committees

Project Issues Log

Issue	Potential impact on the project, how dealt with and the result.	Update since last quarter
<p>Major delays in the procurement of V&A ICs and equipment.</p>	<p>Delays in the recruitment of consultants to undertake a Comprehensive and Participatory Vulnerability and Adaptation (V&A) assessment on water resources have impacted on the capacity of the project to move activities forward during the year. The programme and project team have stepped in to assist procurement in the second half of 2015 to progress the recruitment of consultants. All consultants finally came on board in late October 2015.</p> <p>Also delays in the procurement of crucial equipment such as the ground water survey equipment have resulted in government technical staff not being able to carry out ground water assessments. As such, assessment teams mobilized in the latter part of 2015 only focused on less technical interventions such as rainwater catchment, wells and springs. The more complex assessment will be carried out once the equipment are procured.</p> <p>Besides the ground water survey equipment, major delays have been encountered with the EWSs, desalination and water filtration systems, and the man pack transceiver series. This has caused grave concern by key partners as these equipment are necessary to assist SIWSAP pilot specific activities.</p>	<p>Completed. All recruitment completed in late October 2015.</p> <p>Ongoing. This procurement is yet to be submitted to CAP. PMU together with the Environment Portfolio team with Procurement colleagues are working closely to push this procurement forward without any further delay. PMU to continually update government partners on the progress of this procurement.</p> <p>Ongoing: PMU to work closely with procurement colleagues to push these procurements forward without any further delay. Look at option of sourcing additional support if required. PMU to continually update government partners on the progress of these procurements.</p>

<p>Termination of the Project's Chief Technical Advisor's (CTA) contract</p>	<p>In the absence of the Project Manager (on maternity leave July to October 2015), the termination of the CTA's contract (in late July 2015) meant that leadership at the Project Management Unit was lacking. Having a very new team on board without such leadership has implicated on the successful mentoring of new staff as well as the timely implementation of project activities. In addressing this gap, the Environment Analyst and Environment Assistant have stepped in to assist the newly recruited Technical Officer Communication and Community Engagement with the day to day management of the PMU. The Regional Technical Advisor based at the MCO in Suva has also provided much needed technical support during the reporting period.</p>	<p>Completed. The scope of work (TOR) of the Water and Sanitation Specialist (recruited as part of the CCVA) encompasses back stopping technical support to the PMU. This is an interim measure while long term arrangements are explored with key government counterparts.</p> <p>Project Manager resume normal duties in October 2015.</p>
<p>Delays in rolling out quick fixes in the six pilot sites.</p>	<p>Delays in rolling out quick fixes in the six pilot sites is causing frustration to key partners/beneficiaries. This has the potential to impact on the good relationship and trust already established. PMU with support from the Environment Portfolio team will work closely with procurement colleagues in fast tracking some of the quick fixes. The delay was mainly attributed by challenges encountered in finalizing the material/equipment specifications.</p>	<p>Ongoing: Contracts for three of the pilot sites have been finalized and signed. Procurement is targeting to complete all contracts by January/February 2016.</p>

IX. Abbreviations and Acronyms

AHS	Automatic Hydro meteorological Stations
AP	Adaptation Plan
AWP	Annual Work Plan
CAP	Contracts, Assets and Procurement
CBA	Cost Benefit Analysis
CCVA	Climate Change Vulnerability and Adaptation Assessment
CLTS	Community Lead Total Sanitation
CTA	Chief Technical Advisor
EHD	Environment Health Division
EWSs	Early Warning Systems
GEF	Global Environment Facility
LDCF	Least Developing Countries Fund
MCO	Multi-Country Office
MECDM	Ministry of Environment, Climate Change, Disaster Management and Meteorology
MDPAC	Ministry of Development Planning and Aid Coordination
MMERE	Ministry of Mines, Energy and Rural Electrification
MOU	Memorandum of Understanding
NDMO	National Disaster Management Office
NGOs	Non-Government Organizations
NIWA	National Institute of Water and Atmospheric
PMU	Project Management Unit
POs	Provincial Officers
PPG	Project Preparatory Grant
RACP	Regional Assets, Contracts, and Procurement
SIWSAP	Solomon Islands Water Sector Adaptation Project
SWoCK	Strogem Waka Lo Communiti for Kaikai Project
TOCCE	Technical Officer Communication and Community Engagement
WASH	Water, Sanitation and Hygiene
WRD	Water Resources Division
WS-CCARP	Water Sector-Climate Change Adaptation Response Plans