



TOKELAU METEOROLOGICAL SERVICE COUNTRY REPORT

Reporting on National Priority Actions of the Pacific Islands Meteorological
Strategy (PIMS) 2012-2021

This Report is presented to the Fourth Pacific Meteorological Council (PMC-4) Meeting held in Honiara from 14-18 August 2017

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Country Report Guideline (Text)

The report is structured to allow the secretariat to capture the Progress of each NMHSs against the National Priority Actions of the 14 Pacific Key Outcomes (PKO's) of the Pacific Islands Meteorological Strategy (PIMS) 2012-2021 which will be reviewed at this meeting. This report will contribute to;

- i. monitoring the progress of each NMHSs against the implementation of the PIMS
- ii. inform the Work Program of the Pacific Met Desk Partnership (PMDP)
- iii. identify gaps and needs some of which will be packaged for projects and presented to the Donors and Partners

The draft of the Country Report is expected to be submitted by Heads of each NMHSs to the Pacific Met Desk Partnership by **03 August 2017** to assist in its planning as highlighted above. The Head of the NMHS can delegate the compilation of this report to their staff.

Provide diagrams, photos and other materials that will be useful for measuring or comparing the progress of the NMHS from 2014/15 to 2017 and 2021.

Information in this report will be made available on request by donors and partners unless indicated otherwise by the NMHSs directors.

The Pacific Key Outcomes (PKO's) which are priority activities of the Pacific Islands Meteorological Service (PIMS) are outlined below:

1.0 Summary

This reports presents an update of the current situation on Tokelau NMHS and it also highlights the gaps and the necessary requirements that are need to improve its current status. The Environmental Division of Tokelau is committing to upgrade the NMHS of Tokelau and bring it to standard where the Meteorology sector will strengthen its role providing the people of Tokelau up to date weather forecast but not limiting to the provision of rainfall data, temperature etc, that will enable the Division produce long term weather and climate outlook.

The report also expresses the commitment of the Government as a whole and how NMHS are recognized in the government. The Department of Economic Development, Natural Resources and Environment, developed its Departmental Strategy Plan in line with Tokelau National Strategic plan to recognize its major roles which is inclusive of the NMHS roles in country. The Strategic Plan has a vision for “Sustainable and Responsible Development for Tokelau” that encapsulates the strong wishes of the Taupulega^d and the villages for Tokelau to be able to withstand the challenges brought about by an environmentally changing world globally. As a low lying island Tokelau is very vulnerable to climate extremes and a call for Tokelau to be in a strong position in order to be resilient to natural hazards requires an integrated approach from both government and village levels to take on board responsible measures when planning any form of development.

[you can also include the name of the head of the NMHS and full details. This should also include the name and address of the alternate contact person.] to assist us in future communications.

	<i>Contact of the [country] NMS</i>	<i>Alternate Contact</i>
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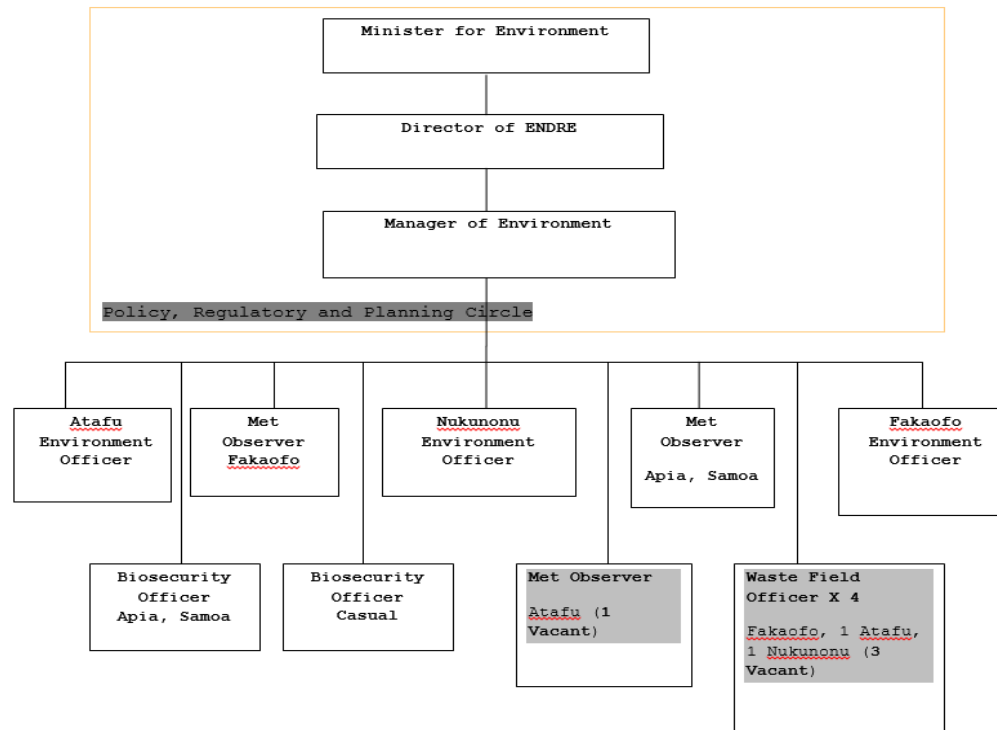
2.0 Background Information

2.1 Institutional Setup

The NMHS is not a unit of its own but it sits under the Environment Division overseen by the Divisional Manager. There is no specific legislation or policy in place to guide the operation of NMHS but it is clearly addressed and supported by the Government of Tokelau in the Departments National Strategic Plan 2016- 2020 aligning it with the Tokelau National Startegic Plan 20116-2020.

The following present the institutional arrangement

ENVIRONMENT DIVISION ORGANIZATIONAL STRUCTURE 2017



Governance	Description
MET LEGISLATION: Update on whether or not your country have a stand-alone Meteorology Act or equivalent or is it part of other government's legislations to guide the NMHS to perform its role and responsibility? Briefly describe it.	There is no MET Legislation for Tokelau.
Do you require for your Act to be reviewed? If it is already reviewed, what is the current status of your Act	There is no ACT and no policy. Developing a policy and a MET Act is a priority for Tokelau and will required support.
Strategic Planning	
Describe how meteorology (weather) and climatology (climate variability and climate change) are featured in the current national development plan, government ministries corporate and implementation/operational plans.	Realised in the Departmental Strategic Plan 2016-2020.
Describe the process if your NMHSs is reporting against the SDG or its national equivalent	The Department strategic plans were overall developed to achieve the national goals thus achieve goals of SDG (Refer to TNSP 2016-2020)
Does your NMHS have a strategic plan, implementation/operational plan or equivalent(s)?	No Strategic Plan at the moment but Tokelau needs support in development a MET framework that in cooperated the strategy, action plan and some costing for donor considerations
Describe how meteorology (weather), climatology (climate variability and climate change), disaster management and early warning systems are feature in your NMHS strategic plan, implementation/operational plan or equivalent(s).	There is currently no specific NMHS strategic plan but a national strategic plan that is also in line with the Department's strategic plan

2.2 Staffing

2.2.1 Staff Qualification

- (a) UPDATE whether or not your NMHS have its own human resources development strategy or is part of the Ministry's or the overall government human resources development strategy.

Tokelau's NMHS has not been fully established. It started very recently by with only two staffs currently employed to work on translating the Tokelau weather forecast to vernacular that is being released by Samoa Meteorological Services.

- (b) Provide an updated list of personnel of NMHS, including their level of academic qualification in the matrix below. This will be kept in confidence and will be presented as an overall regional capacity mapping.

Refer to Organisation Chart above.

(c) [You can highlight gaps and needs related to Capacity building issues under Section 4.0 of this report]

Staff	Qualification	Division/Section	No. Professional Staff		Total
			Male	Female	
<i>Staff Name</i>	<i>(Description the qualification under each division) Example; WMO Class 1-4 or other qualification or professional training, education and research)</i>	<i>Responsibility of Staff (Forecast, Climate, Observation, Administration, etc)</i>			<i>Total Number of Staff</i>
<i>Solonaima Mei</i>	Environmental Science Degree holder	Forecast (Daily)		Female	1
<i>Meleka Faiva</i>	-	Forecast (Daily)		Female	1

2.3 Finance

[In the PMC-3 in 2015, we have been able to show that the total investment in the region on meteorology per annum is around USD20 million with 80% supporting staff personal. The secretariat would like continue monitoring these investment. This section can be kept confidential. It should describe an UPDATE on the financial status of the NMHSs and also highlighting other external financial support. They can be summarized in the table below;]

Description	2016	2017 Funds [Own currency]		Total [Own Currency]
	Total Budget (USD)	Administration (USD)	Operation (USD)	
<i>Government Support</i>				
<i>Operational</i>			20,000	
<i>Personnel</i>			20,000	
<i>.....</i>				
Total (USD)			40,000	

[You can also highlight some of the key issues in finance that needs to be addressed to contribute to the improvement of your operations under section 4 of the report]

2.3.1 Projects supporting the NMHSs

[This will contribute to agenda 28.7 on the mapping of projects in the region. Provide a list of the number of projects available to each NMHSs

Name of Project	Total Project Budget	Percentage of how much is provided to the NMHSs	Summary of NMHSs activities covered by the project
<i>Project 1-CREWS Project</i>	-		
<i>Project 2 – Republic of Korea-Pacific Islands Climate Prediction Project is now providing a Regional Climate Bulletin and Tokelau is included.</i>		100%	
<i>Total (USD)</i>			

2.3.1 Potential Collaboration on project proposals

[Priority areas for collaboration on future projects]

- Development of MET Service Framework
- Early warning systems
- Funding for documentation of Tokelau climate information
- Possibility under Disaster Risk Management the setting up of a Radio station for Tokelau as a means of Mitigation communication weather forecast and climate outlook for Tokelau

2.4 Development

[Highlight development since 2015 and also anticipated development in the near future. Pictures would assist in this section. Highlight gaps and needs.]

- There has been no development since 2015.

2.4.1 Buildings Infrastructure

- There was never an infrastructure build for NMHS in Tokelau ever since basically because the service was not established fully. At the mean time is it ad hoc service supply where by MET Officers just need internet connection to upload the translated version of the weather forecast. Tokelau weather forecast is release by Samoa MET and so there was no need for infrastructure.
- With the current arrangement to upgrade the Tokelau NMHS, office space has been allocated in one of the atolls namely; Atafu where NMHS will now be fully in operation by the end of 2017

2.4.3 Update on Communications Infrastructure (to support current and future development)

	Details
What is the mode of communication for transmitting oceanographic and hydro-meteorological data from remote stations?	[e.g. Satellite DCP/ HF/VHF/Internet/RANET (Chatty Beetle)/Telephone/and or fax, and add descriptions] The current modes of communication that now exist in country are telephone and satellite DCP
What is the Mode of transmitting data to the Global Data Network?	[eg. GTS, e-mail and to whom, etc.] Currently we have not been transmitting any data to the Global Data Network and will look into the best mode should we begin to transmit data
What is your Current Internet Speed , and is your main office connected to a secure national Government provided IT network (inbound and outbound)?	Internet connectivity in Tokelau is almost perfect with the exceptions of very bad weather that will shut down the power and eventually cutting the whole nation from communicating abroad. The Department Office is currently connected to the national IT Network
Does your NMHS have access to SATELITE information?	NO
Which geostationary satellite(s) do you utilize, and which product(s) do you rely upon and how do you obtain it?	None

How many Upper Air Station does your NMHSs operate and what is their status? Do you have access to Lightning data, and do you use in in your forecasts?	NO
What is the scope and extent of marine weather services provided by your NMHSs and describe your NMHSs interaction with your national marine/port authorities and the marine user communities?	None
What type of marine weather products, warnings, advisories do you provide?	Normal daily forecast that covers the marine forecast issued by Samoa MET
Does your NMHS have a Port Meteorological Officer and are they involved in the WMO VOS Programme?	We have very limited MET Officers and they are not heavily involved in WMO VOS program

2.4.4 Training

List any international, regional or national training, educational or research related events or workshops in which the NMHS has participated in the last 2 years (2015-2017) by using the table below;

<i>Training or Workshop Title attended by NMHS staff from 2011-2013</i>	<i>Start and End dates</i>	<i>Donor</i>	<i>Number of Participants from the NMS</i>
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<i>Secondment at SPREP with the Climate Change Division</i>	<i>4th April -30 September 2016</i>	<i>EDNRE and SPREP</i>	
<i>Attachment with Samoa Meteorology Service</i>	<i>September 2016</i>	<i>SPREP</i>	
<i>Strengthening Water Security of Vulnerable Island States, Nadi, Fiji</i>	<i>18th – 21st July 2016</i>	<i>SPC and MFAT</i>	
<i>Pacific International Training Desk (PITD), Hawaii</i>	<i>3rd June- 1st July 2016</i>	<i>NOAA and the University of Hawaii at Manoa</i>	
<i>RESPAC Introductory Training on the Conceptual Design for “Reginal Training Programme for Meteorological Technicians” RTPMT and RESPAC Board Meeting</i>	<i>13th – 15th March 2017</i>	<i>UNDP and Support from Russian Federation</i>	
<i>Strengthening Water Security of Vulnerable Island States, Tarawa, Kiribati</i>	<i>19th -23rd June 2017</i>	<i>SPC and MFAT</i>	

2.4.5 Update on Climate Services (to support current and future development)

Questions	Details
What level is your climate services according to WMO standard? (Class 1-4)	No
Do you have an update climate science publication for your country? If not, when is the last one and how often do you want to have climate science published?	No
List the qualification obtained by climate officers (do not specify names)	None – capacity development support is greatly needed to build the capacity of our climate officers
List the types of training needed by you to enhance the generation and production of climate services	Training instrumental, data analysis, operation of communication tools (Chatty Beetles etc) and WMO basic certificate for observers training, attachment training with FIJI and SAMOA MET and regional organizations
What tools do you use to provide seasonal forecast? (please select from SCOPIC, POAMA, METPI, CLIKP, PEAC)	CLIKP- through Republic of Korea-Pacific Islands Climate Prediction Project at SPREP and Samoa MET

What model(s) do you use to provide seasonal forecasts on monthly basis?	None
What are the climate variables you are forecasting?	None
What are some variables you would like to forecast in the future to meet needs of your client?	Rainfall, Temperature, wind, SST, Oceanic Temperature (Coral bleaching), TC
How many AWS do you have that feed into the database you are using?	None
List in order of importance some sectors you engage with? List what products you issue for these sectors?	refer to global framework for climate services (Water sector, disasters, health, agriculture, energy, tourism)
List 5 most important mode of communication of seasonal forecasts in your country.	Telephone, Email or internet, Satellite phones
Do you have any early warning system (EWS) for climate extreme events?	Yes (Satelite phones only)
What are some climate extreme events that you want to be included in your EWS?	Droughts, Cyclones, Tsunami Warning, Water borne disease outbreaks, water quality and climate variability
What are some challenges that you have in climate division that you want to address with climate science and climate change mitigation and adaptation issues	Lack of expertise on planning -Require timely warnings -Lack of integration (warnings) that could affect planning -Absence of information system and communication to communities (Need to develop standard operative procedures and need for hazards specific such as Drought....
What are some priority needs for your services that you want to achieve in the next 5 years?	Establish MET office HQ Fully Function observation network in line with WMO standards Accreditation to a CLASS 1 WMO climate services standard (Collect and store data) Fully trained staffs Ability develop some own forecasting capabilities for Tokelau from Tokelau

4.0. Identify Gaps and Future Needs that would Improve the National Meteorological and Hydrological Services

- Tokelau needs the initial set-up basic equipment in order for Tokelau to establish a MET Service Station
- Tokelau has three islands and it is necessary that all islands have equipment necessary for basic data collection
- Tokelau needs to have automatic weather station
- Development of MET service guideline
- Documentation of both weather and climate data that will allow become less dependent on others
- Tokelau MET services need capacity development in both weather and climate service
- Tokelau need technical expertise in Tokelau to assist hands on training in Tokelau
- Development of the MOU between Samoa MET on the continuous support and assistance in providing updated weather forecast and the possibility for Samoa MET provide climate outlook for Tokelau
- Be a registered WMO member

ⁱ Taupulega- Local governing body that governs the community in Tokelau