
Niue Meteorological Service
COUNTRY REPORT

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

Sionetasi Pulehetoa

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1.0 Summary

The report is structured to reflect the National Priority Actions of the 14 Pacific Key Outcomes (PKO's) of the Pacific Islands Meteorological Strategy (PIMS) 2012-2021. This report will contribute to;

- i. the working papers of the PMC-3 meeting
- ii. monitoring the progress of each NMSs against the implementation of the PIMS
- iii. the baseline information that will be used to measure the progress of the Pacific Islands Meteorological Strategy (PIMS) 2012-2021 during its mid-term review in 2016.
- iv. inform the Work Program of the Pacific Met Desk Partnership (PMDP)
- v. identify gaps and needs some of which will be packaged for projects and presented to the Donor Partners

	Contact of the Niue NMS	Alternate Contact
Contact	Name: Sionetasi Pulehetoa Division Title: Director Address: Hanan Airport, P.O.Box 82, Alofi, Niue. E-mail: Sionetasi.Pulehetoa@mail.gov.nu Work Tel: 4600 (683) Fax: 4602 (683)	Name: Rossylynn Pulehetoa-Mitiepo Division Title: Senior Scientific Officer Address: Hanan Airport, P.O.Box 82, Alofi, Niue. E-mail: Rossy.Mitiepo@mail.gov.nu Work Tel: 4600 (683) Fax: 4602 (683)

2.0 Background Information

2.1 Institutional Setup

Our aim is to deliver quality weather and climate information efficiently and effectively for a prosperous Niue. This complements the Niue National Strategic Plan (NNSP) under Pillar 3 (Economic Development and Maintenance of Crucial Infrastructure) and Pillar 5 (Environment). Meteorological services are part of the necessary infrastructure needed to serve the development needs of all services.

NNSP Pillar	Strategy Area	Activities	Measure/Indicator	Agency
PILLAR 3: Economic Development and Maintenance of Crucial Infrastructure	Meteorological Services	Provide reliable, timely and quality meteorological and climate services to all residents	Weather information for aviation, maritime, cyclone and other natural hazards disseminated in a timely manner, and including climate services.	Ministry of Natural Resources
PILLAR 5: Natural Resources, Environment and Climate Change	Climate Change and Natural Hazards	Ensure the adverse effects of climate change and natural hazards are mitigated and appropriate adaptation programs are implemented to strengthen Niue's resilience.	Mainstream climate change adaptation and mitigation programs across all sectors	Ministry of Natural Resources

Governance and Planning of Niue Meteorological Service

Governance	Description
Does 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.	<ul style="list-style-type: none"> • Policy Framework for the provision of Meteorology and Climate Services in Niue • Niue Meteorological Services Act 2012
Is the Meteorology Act or equivalent includes disaster management or vice-versa? If the Meteorology Act or equivalent does not include disaster management, provide information on your country Disaster Management Act or equivalent(s).	<p>The Meteorology Act contains the following;</p> <ul style="list-style-type: none"> • disaster management authorities means the Disaster Management Council, and all other agencies having lawful responsibilities under the approved Niue National Disaster Plan. • geohazard means any geological state that represents or has the potential to develop further into a situation leading to damage or risk, and includes volcanic activity or eruptions, tsunamis, earthquakes, and other seismic events, and submarine or surface landslides.
Is the Meteorology Act or equivalent includes climatology/climate variability/climate change. If the Meteorology Act or equivalent does not include it provide information on your country legislation or legal instruments related to climatology/climate variability/climate change.	The Meteorology Act does include climatology/climate variability and climate change.
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.	Refer 2.1 Institutional Set Up
Describe how disaster management and early warning systems are featured in the current national development plan, government ministries corporate and implementation/operational plans.	Refer 2.1 Institutional Set Up Disaster management processes are operated by the Niue Disaster Management Office, Niue Police.
Does your NMHS have a strategic plan, implementation/operational plan or equivalent(s)?	Niue Meteorological Service does have a Corporate Plan.
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).	They are categorized under Specific Outputs and Performance Measures in the Corporate 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.

Personnel of NMHS and level of academic qualification					
Staff	Qualification	Division/Section	No. Professional Staff		Total
Staff Name	(Description the qualification under each division) Example; WMO Class 1-4 or other qualification or professional training)	Responsibility of Staff (Forecast, Climate, Observation, Administration, etc)	Male	Female	Total Number of Staff
Sionetasi Pulehetoa	New Zealand Meteorological Certificate.	Overall Management of Administration, Budgetary and Operation.	✓		6
Sean Tukutama	WMO Class III, Class IV Certificates, Statement of Competency (Direct Observations, Oral Questions, Written Examination of METAR/SPECI report).	Forecasting, Weather Observation, Climate Observation, Quality Management System	✓		
Robert Togiamana	Have not carried out any studies in relation to Meteorology. Currently trained by Meteorology staff on basic observations via work.	Communication – TV Weather, Climate & Weather Observation	✓		
Rossylynn Pulehetoa-Mitiepo	WMO Class II Certificate, Bachelor of Science (Geography) and Postgraduate Climate Change Certificate, Statement of Competency (Direct Observations, Oral Questions, Written Examination of METAR/SPECI report).	Climate & Weather Observation, Climatology, Forecasting, Traditional Knowledge Project, Annual Report, Corporate Plan.		✓	
Mellisa Douglas	WMOS Class IV, Foundation Certificate in Social Science-USP, Certificate of completion on Computing Skills –USP, Statement of Competency (Direct Observations, Oral Questions, Written Examination of METAR/SPECI report).	Climate & Weather Observation, Climate Data Records and Data Entry, Climatology, Forecasting.		✓	
Hingano Laufoli	NCEA Level 3, Statement of Competency (Direct Observations, Oral Questions, Written Examination of METAR/SPECI report).	Climate & Weather Observation, Climate Data Records and Entry.		✓	

2.3 Finance

Description	2014	2015	2015 Funds		Total
	Total Budget	Total Budget	Administration	Operation	
<i>Government Support</i>	NZD189,000	NZD189,00			NZD189,000
<i>External Support Traditional Knowledge Project (COSPPAC)</i>	AUD 20,000	AUD 20,000			AUD 20,000

2.4 Development

Highlights since 2013 and anticipated development in the near future.

Daily Operations

- Weather Observations
- Climate Observations
- Weather Forecasting (Up to 3 days ahead)
- Television (TV) Weather

Monthly Operations

- Climate Forecasting
- Climate Records
- Online Climate Outlook Forum (OCOF) Teleconference
- Rainwater data collection

Disaster Monitoring and Issuing of Warnings

- Tropical Cyclone Warnings
- Tsunami Warnings
- Drought Warnings
- Severe Weather Warnings

Equipment and Communication Systems

- Climate and Weather Equipment
- Emergency Managers Weather Information Network (EMWIN)
- Tsunami Warning System
- Earthquake Monitoring System
- SailMail (HF-radio based email system)
- Government Wide Area Network (GWAN) system (Server)
- Fax, Phone, VHF Radio

Training Received

- Abstract Writing and Posters for Science Papers and Conferences
- Strengthening Standing Operating Procedures for Tsunami Warning and use of new Tsunami products
- Develop Competency Requirements for Aviation Meteorology Personnel and Consequences for Quality Management Systems
- Develop Communication Strategy Plan
- Media Communications Training
- Pacific Lead (Quality) Auditor
- Meteorology and Media Training
- World Meteorological Organisation Information System (WIS)
- Corporate Plan preparation
- Climate Traditional Knowledge Survey and Database Training
- Disaster Risk Reduction Training
- Basic Observers Training
- Pacific Desk Training on Forecasting
- Greentree Access with Treasury Acting Financial Secretary

Key Achievements

- Capacity building for Meteorology staff
- Qualified Auditor for Quality Management System
- Secure of funding for the new Automatic Weather Station (AWS) under Asset Replacement Fund from New Zealand
- Certified Meteorological Officers to conduct meteorological reports for Aviation
- Climate Services Communication Plan
- Niue Drought Poster
- Meteorological and Media Plan
- IT Capacity Mapping of Climate Services in Niue
- Implementation Climate Traditional Knowledge Project
- Niue Tide Gauge Project
- Drought Poster for Niue
- Visit to Niue High School Year 9 Students and presented on Weather, Climate and Climate Change

Pictures:



Niue Met Staff Certified Competency Assessment



Climate Traditional Knowledge Survey & Database Training

2.4.1 Buildings Infrastructure

- Ionosonde – Rewiring and renew masts
- GPS renewal for new Tide Gauge
- Installation of Data Back Up Server

2.4.2 Monitoring Stations and Equipments

Station Name (WMO No.)	Operational Status	Equipment's available in the station	Manual/Automatic (if manual, indicate the number of staff manning the station)	Gaps and Needs
Hanan Airport (91824)	Operational	Anemometer and Wind Vane	Manual	
Hanan Airport (91824)	Not in use	Anemometer Cup counter	-	
Hanan Airport (91824)	Not in use	Barograph	-	
Hanan Airport (91824)	Operational	Barometer Digital (Vaisala) PTB220	Digital	Upgrade to PTB 330. Spares and Calibration
Hanan Airport (91824)	Operational	Mercury Barometer Manual (Kew Pattern)	-	Good condition
Hanan Airport (91824)	Operational	Evaporimeter (Class A Pan)	Manual – 4 x staff – 1 on duty	Need to cover the top with wires mesh.
Hanan Airport (91824)	Operational	Rain gauge 10 inch	Manual – 4 x staff – 1 on duty	Good condition
Hanan Airport (91824)	Operational	Rain gauge 4 inch (SPaRCE)	Manual – 4 x staff – 1 on duty	Need to be replaced with new gauges
Hanan Airport (91824)	Not in use	Rain gauge Pluviograph Dines Chart	-	Replacement for the clock
Hanan Airport (91824)	Operational	Rain gauge TBRG Automatic (HYCOS)	Niue Water Supply Downloaded monthly	No data received
Hanan Airport (91824)	Operational	Stevenson screen (Tropical – Wood)	Manual – 4 x staff – 1 on duty	
Hanan Airport (91824)	Operational	Sunshine recorder (Campbell Stokes)	Manual – 4 x staff – 1 on duty	Good condition
Hanan Airport (91824)	Not-Operational	Thermometer – Earth (10cm)	Broken	Need to replace but no spares
	Operational	Thermometer – Earth (30cm)	Manual – 4 x staff – 1 on duty	

	Not-Operational	Thermometer – Earth (100cm)	Broken	Good condition Need to replace but no spares
Hanan Airport (91824)	Not-Operational	Thermometer - Grass min. (Alcohol in Glass)	Broken	Need to replace but no spares
Hanan Airport (91824)	Operational	Thermometer – Maximum (Mercury in Glass)	Manual – 4 x staff – 1 on duty	Good condition
Hanan Airport (91824)	Operational	Thermometer – Minimum (Alcohol in Glass)	Manual – 4 x staff – 1 on duty	Good condition
Hanan Airport (91824)	Operational	Thermometer - Dry bulb	Manual – 4 x staff – 1 on duty	Good condition
Hanan Airport (91824)	Operational	Thermometer - Wet Bulb	Manual – 4 x staff – 1 on duty	Good condition

(a) Describe the current status of and future plans for lightning detection systems and networks in your country? Who is operating and managing the systems and network.

N/A

(b) Describe the current arrangement of and future plans for maintaining and calibrating the meteorological (weather) and climatological (climate variability and climate change) observing equipment in your NMHS.

There is an initiative in place to maintain and calibrate meteorological and climatological observing equipments for Niue Meteorological Service. Need to calibrate Digital Barometer currently in use for more than one year.

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

	Details
What is the mode of communication for transmitting data from remote stations	No remote station in Niue
What is the Mode of transmitting data to the Global Data Network	All observation data a send via email to Wellington to put on GTS to Melbourne to transmit to the world.
What is your Current Internet Speed (inbound and outbound)	1.5M
Does your NMS have access to SATAID information	No
Which satellite product do you most rely on and how do you obtain it?	GOES and MTSAT satellite via internet, ir, eir, vs, wv GOES via LRIT System
How many Upper Air Station does your NMSs operate and what is their status	Nil
What is the scope and extent of marine weather services provided by your NMSs and describe your NMSs interaction with your national marine/port authorities and the marine user communities	Marine weather provided for coastal waters for Niue. Forecast mainly used by local fishermen, which they can access by ringing 101 at Telecom Department and email or contact the Niue Met Service by phone.
What type of marine weather products, warnings, advisories do you provide	Strong Wind Warning, Damaging Heavy Swell Warning and Cyclone Warning
Does your NMS have a Port Meteorological Officer and are they involved in the WMO VOS Programme.	No

2.4.4 Training

Training or Workshop Title attended by NMS staff from 2011-2013	Start and End dates	Donor	Number of Participants from the NMS
RA V Workshop on WMO Information System/Table Driven Codes Form, Melbourne, Australia	29 April -03 May 2013	Australia Bureau of Meteorology and AusAID	1
Phase 2 - QM Internal Auditor training visit to Australia WARO, Perth, Australia	9 – 20 th July 2013	Australia Bureau of Meteorology and AusAID	
Greenhouse Conference 2013, PACCSAP Session and 2 Day Course, Adelaide, Australia	7-15 October 2013	PACCSAP	1
Conference of the Parties COP 19 and Conference of the Meeting of the Parties CMP 9, Warsaw, Poland	6-22 November 2013	UNFCCC	1
Pacific International Training Desk, Honolulu, Hawaii	20 October - 14 November 2014	National Oceanic Atmospheric Administration's (NOAA's & World Meteorological Organisation (WMO).	1
Regional Consultation on Climate Services for Pacific Small Island States and Related Meeting, Global Climate Framework Services, Rarotonga, Cook Islands	28 March 2014 - 4 April 2014	Government of Canada, Government of Finland, WMO LDC Programme, GFCS.	1
Regional Training Workshop on Quality Management and Mock Auditing of the Fiji Meteorological Service Quality Management System, Nadi, Fiji	25 April - 2 May 2014	SPREP and FINPAC	1
Regional Observers Workshop, Nadi, Fiji Meteorological Service	2 May - 16 May 2014	Australian Governments' Department of Foreign Affairs and Trade, through the Climate and Oceans Support Program in the Pacific (COSPPac)	1
WMO Regional Association V Tropical Cyclone	22 – 30 May 2015	WMO	1

Committee for the South Pacific and South-East Indian Ocean Fifteenth Session; Regional Workshop on the Intergovernmental Oceanographic Commission (IOC) Intergovernmental Coordination Group (ICG)/PTWS Training on new enhanced products, Nadi, Fiji.			
COSPPAC Annual Planning Workshop	19-21 May 2014	COSPPAC	1
Climate and Oceans Support Program in the Pacific (COSPPac) Regional Workshop, Melbourne, Australia	16-27 June 2014	COSPPAC	1
Media Training for the Niue Meteorological Services, Alofi, Niue	21 – 22 July 2014	SPREP and Niue Met	6
Regional Training Workshop on Quality Management and Mock Auditing of the Fiji Meteorological Service Quality Management System, Nadi, Fiji	11 th – 15 th August 2014	SPREP-FINPAC Project	1

3.0 Progress of the NMS

3.1. UPDATE on Achievements of the NMS from 2013-2014

No.	Achievements of the NMS (2011-2013)	PKO Achieved
1	Refer Section 2.4	

3.2. Proposed Activities to be Carried out in the Future (2013-2014)

No	Proposed Activities to be carried out	PKO to be Achieved
1	Continuous reports and records for meteorological and climatological observations	
2	Ongoing Weather Forecasting and issuing of cyclone warnings and other severe weather warning	
3	Establishment of New Tide Gauge for Niue	
4	Ongoing issuing of Niue Climate Outlook reports on a monthly basis to stakeholders	
5	Climate Traditional Knowledge Project	

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

No	Gaps and Needs of the your NMS	PKO Addressed
1	Basic meteorological observers training similar to WMO class 3 & 4	
2	Training for WMO Class 1 in Meteorology	
3	Online courses available for Staff in areas of Climate change and Meteorology	