



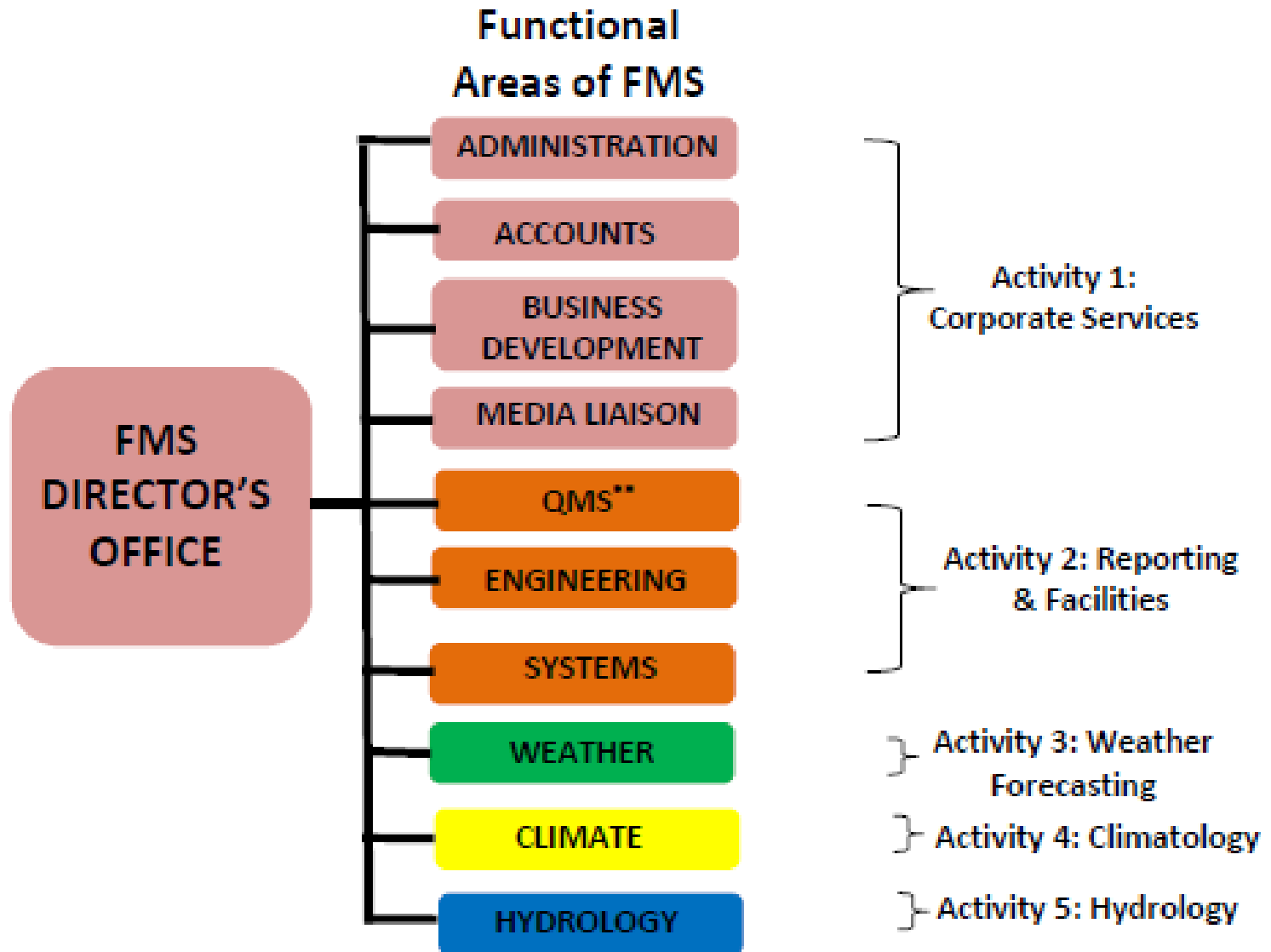
Fiji Government
Fiji Meteorological Service

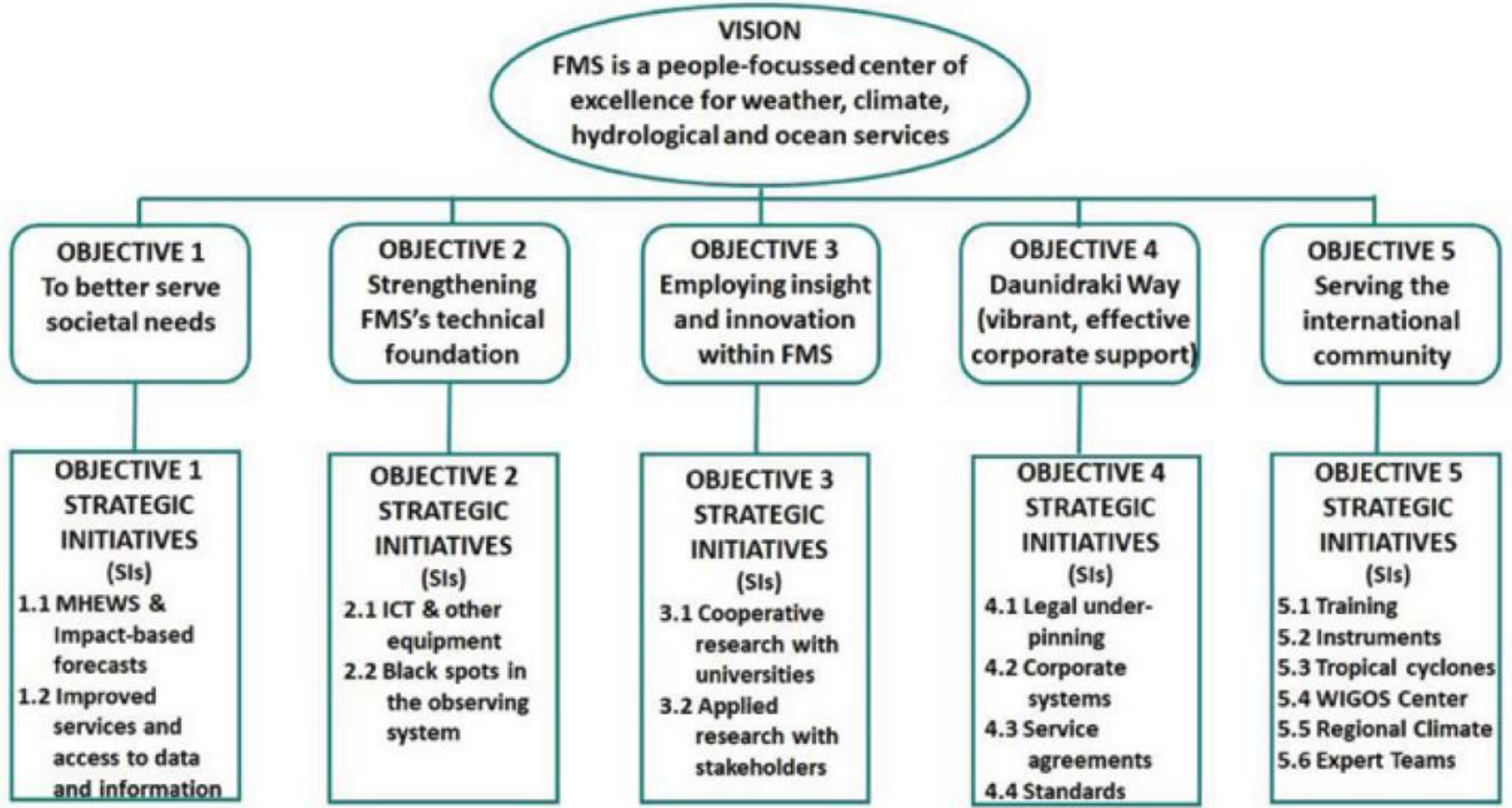
Fiji Meteorological Service

Bipen Prakash

7-Sep-2023

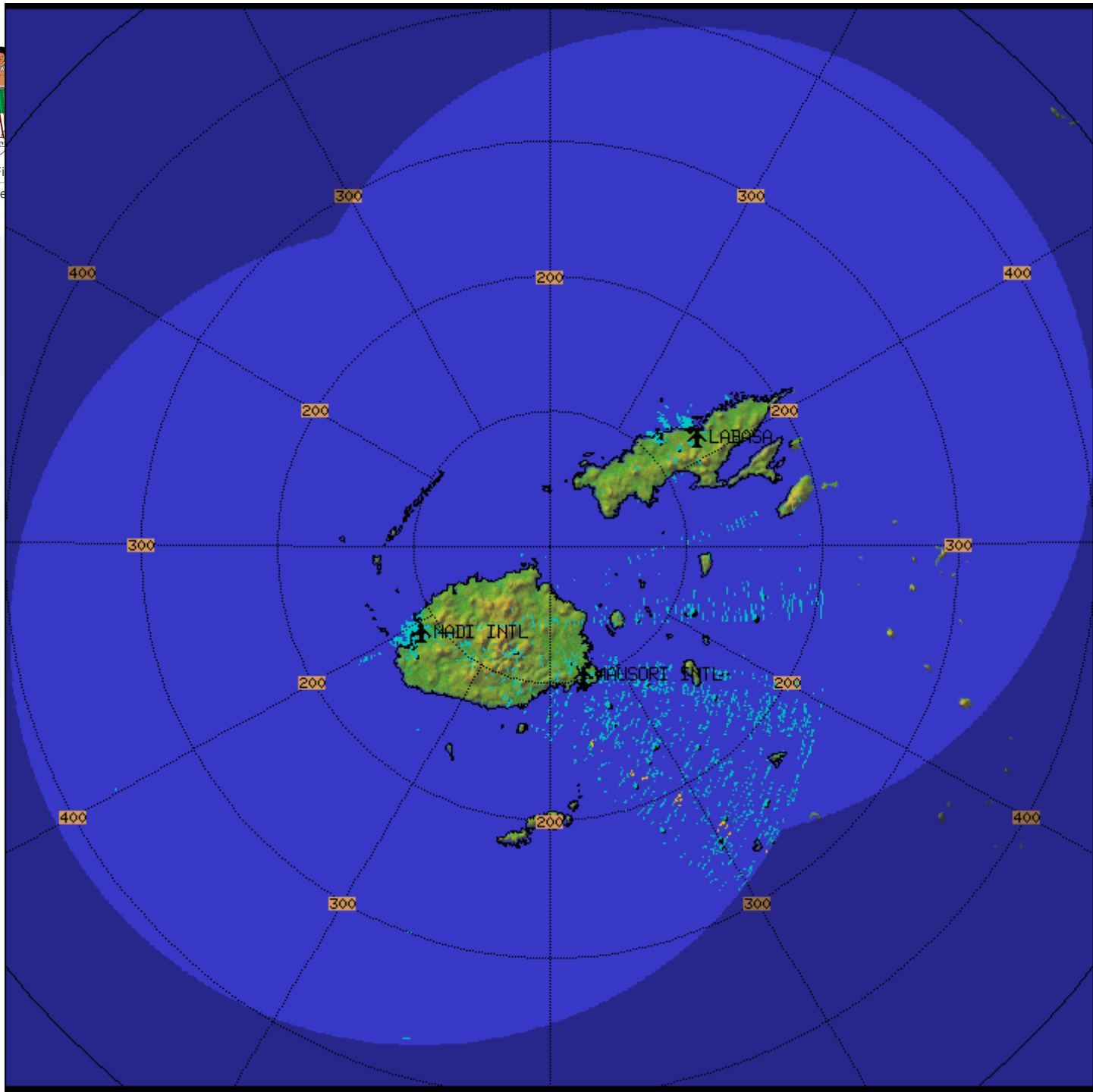




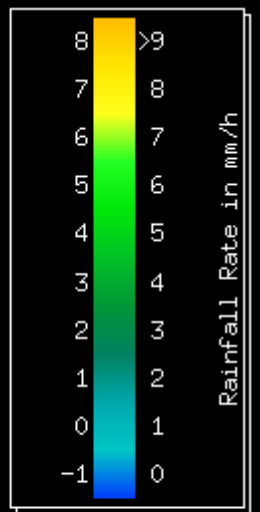




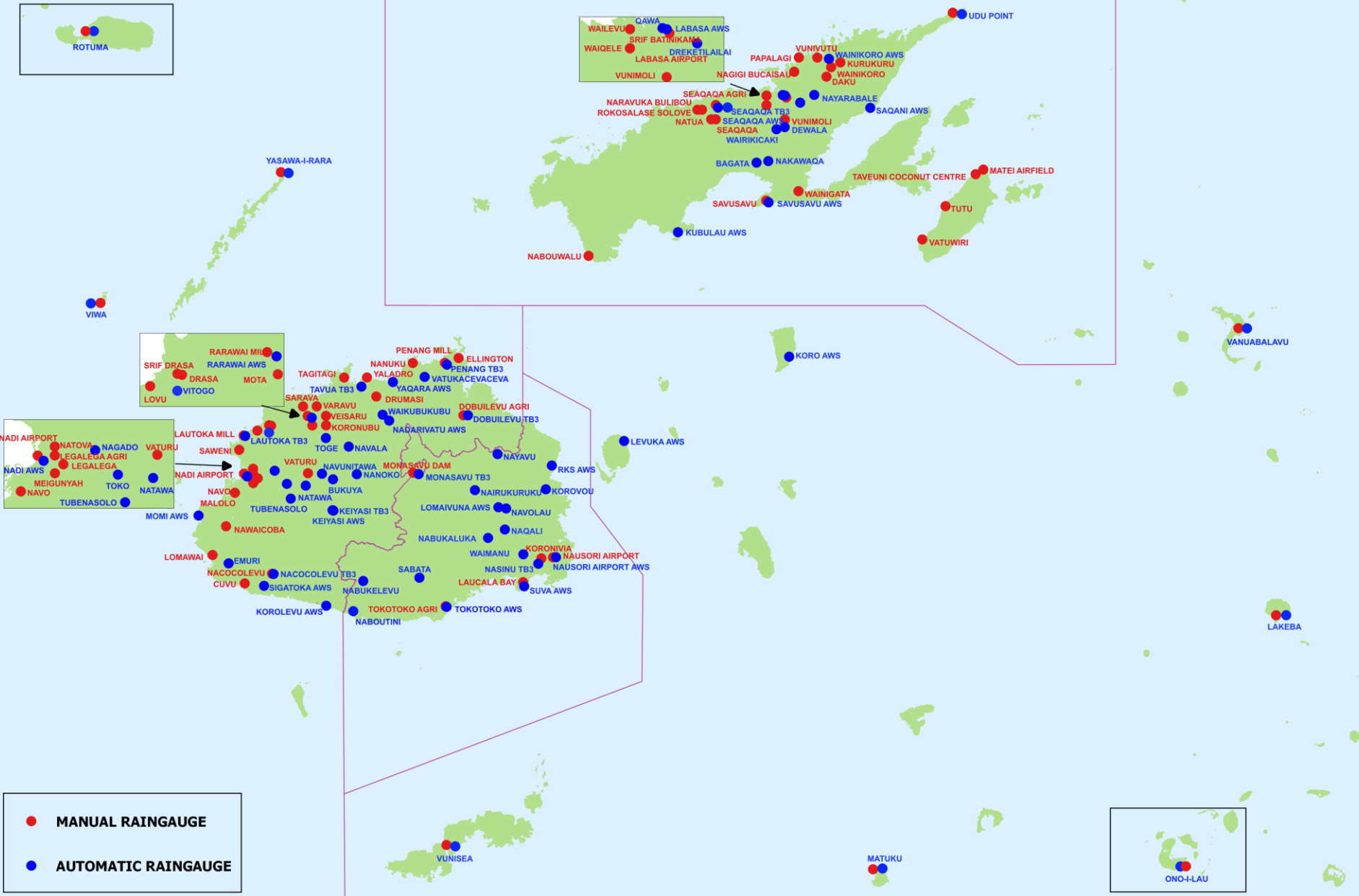
Fiji
Fiji Me



Fiji
PPI
LONG_RANGE_R
Task: PPIVOL_A
PRF: 300Hz
Elevation: 1.0
Max Range: 400 km
23:00:01Z
6 SEP 2023 UTC



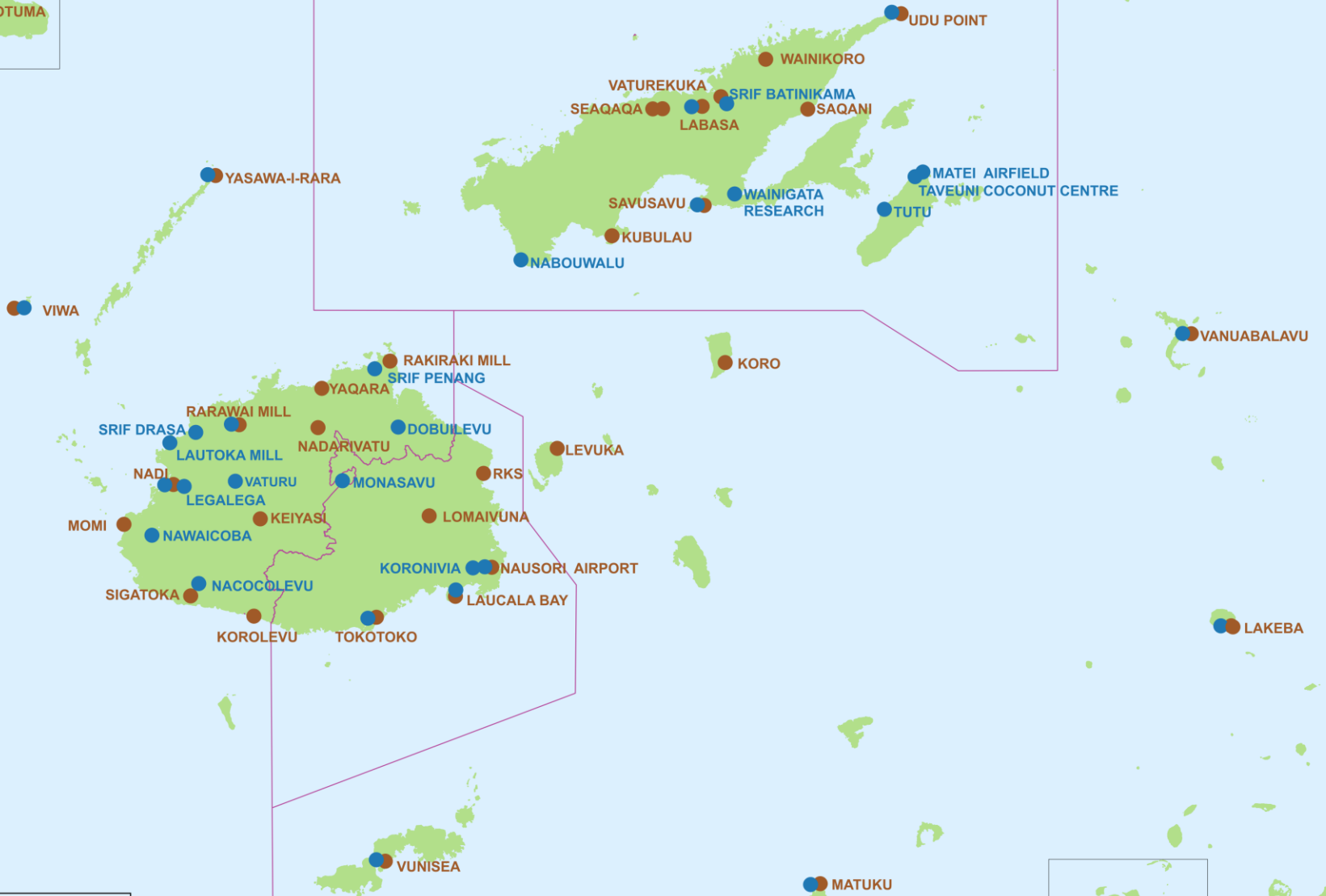
FIJI METEOROLOGICAL SERVICE: RAINGAUGE NETWORK



- **MANUAL RAINGAUGE**
- **AUTOMATIC RAINGAUGE**

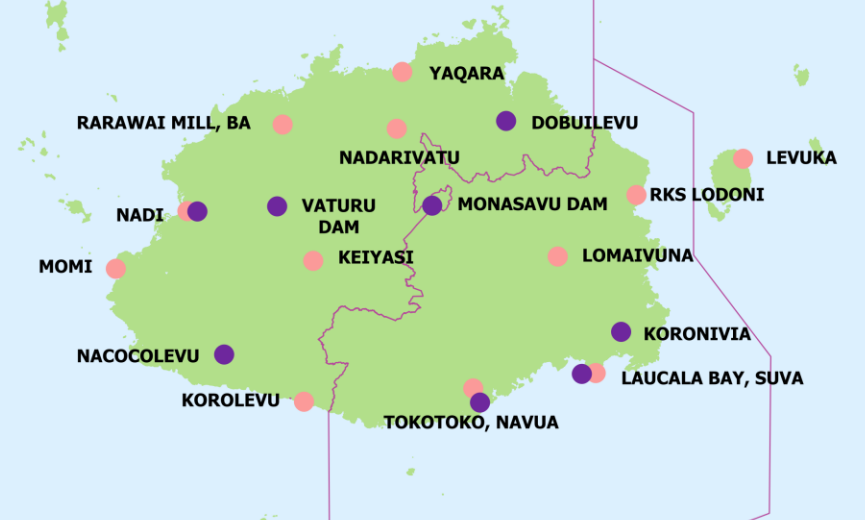
ONO-I-LAU

FIJI METEOROLOGICAL SERVICE: AIR TEMPERATURE OBSERVATION NETWORK



- AUTOMATIC REPORTING
- MANUAL REPORTING

FIJI METEOROLOGICAL SERVICE: SOLAR RADIATION AND SUNSHINE DURATION OBSERVATION NETWORK

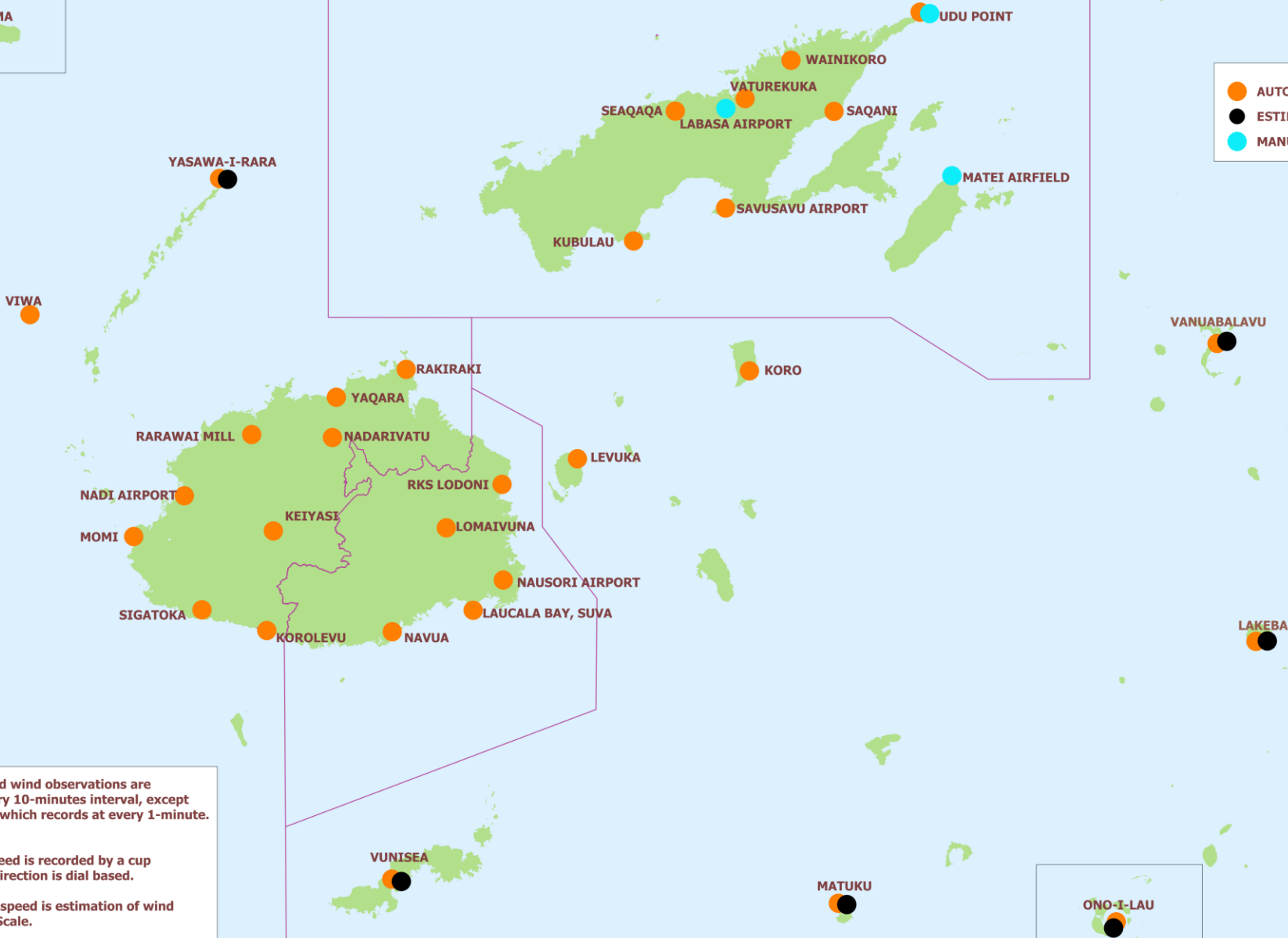


- SOLAR RADIATION (AWS)
- SUNSHINE DURATION (MANUAL)

FIJI METEOROLOGICAL SERVICE: WIND OBSERVATION NETWORK



- AUTOMATED
- ESTIMATED
- MANUAL

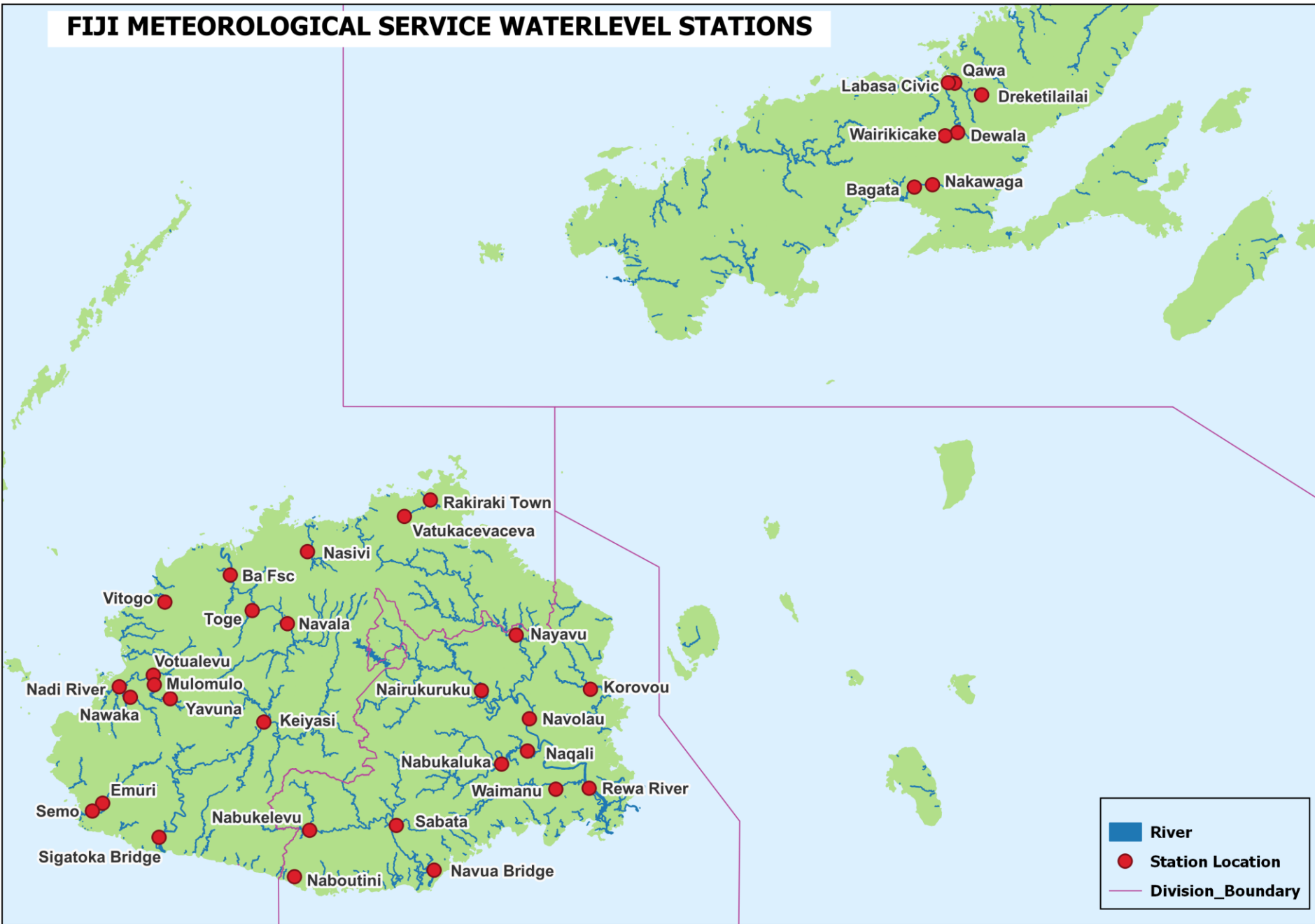


Note: Automated wind observations are recorded at every 10-minutes interval, except for Laucala Bay which records at every 1-minute.

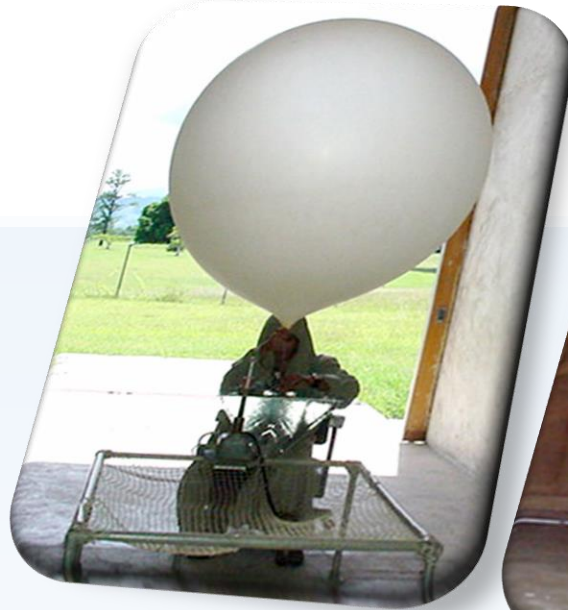
Manual wind speed is recorded by a cup generator and direction is dial based.

Estimated wind speed is estimation of wind using Beaufort Scale.

FIJI METEOROLOGICAL SERVICE WATERLEVEL STATIONS



UPPER AIR OBSERVATIONS



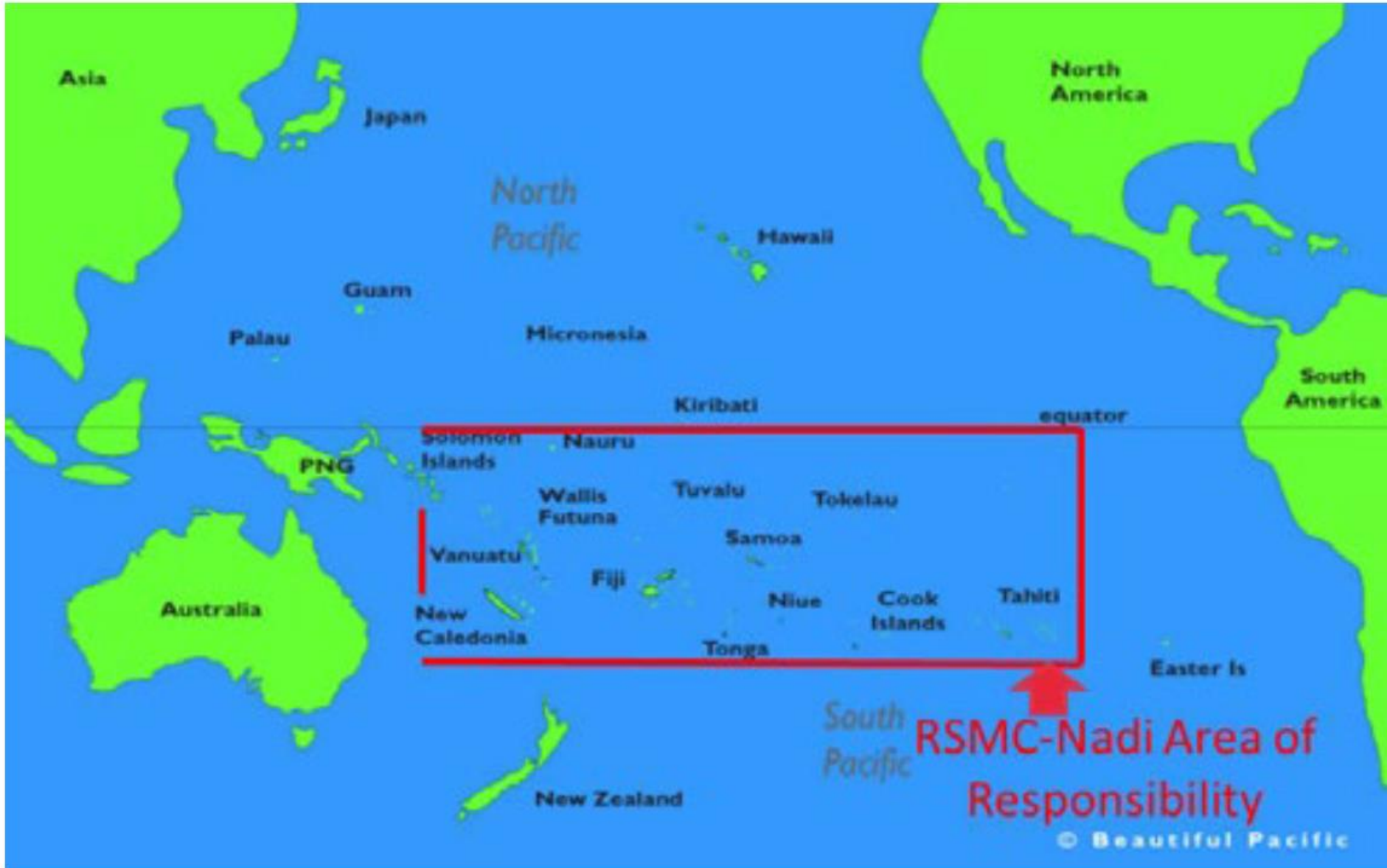


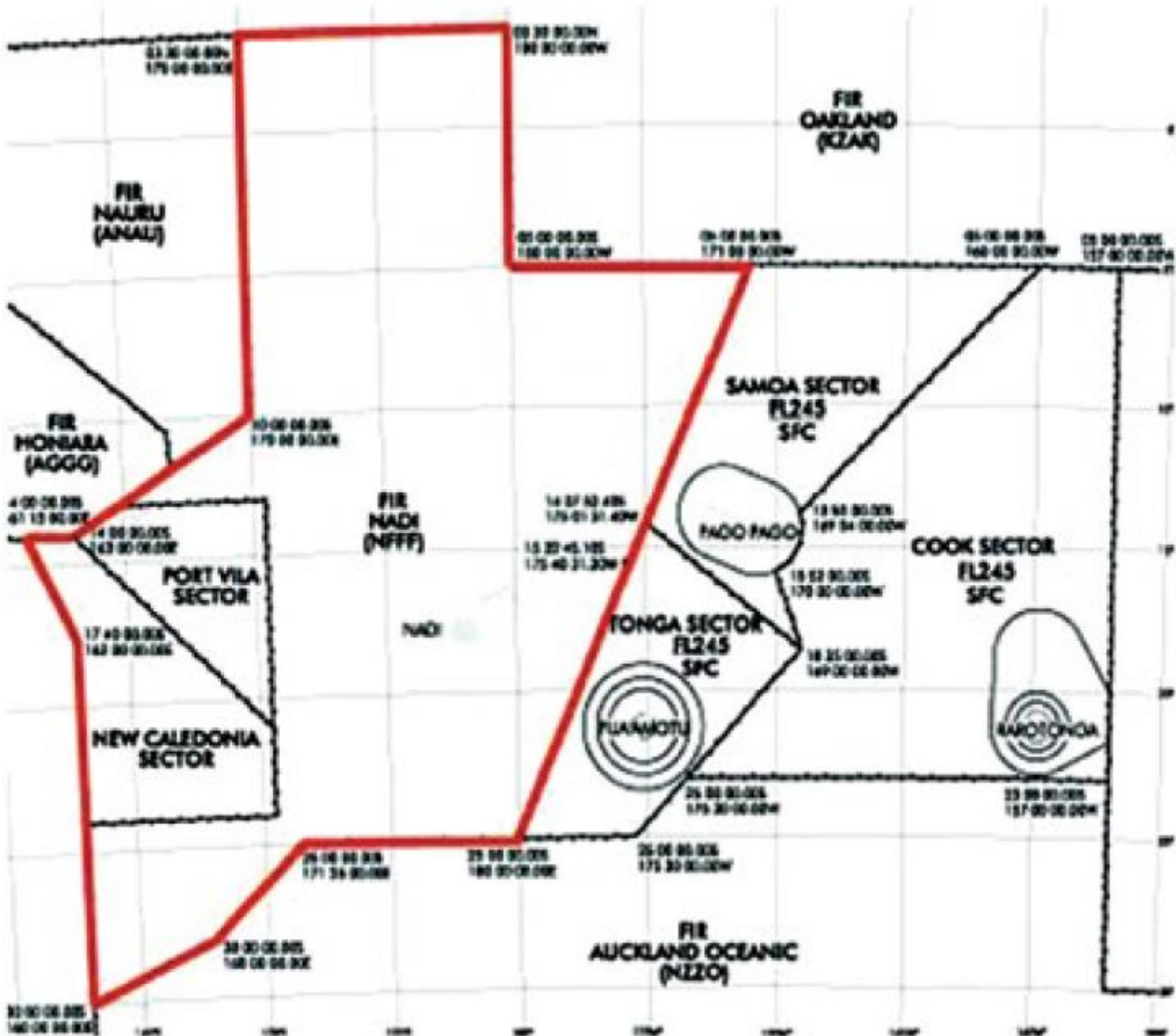
Forecasting Services

11

Fiji Government
Fiji Meteorological Service

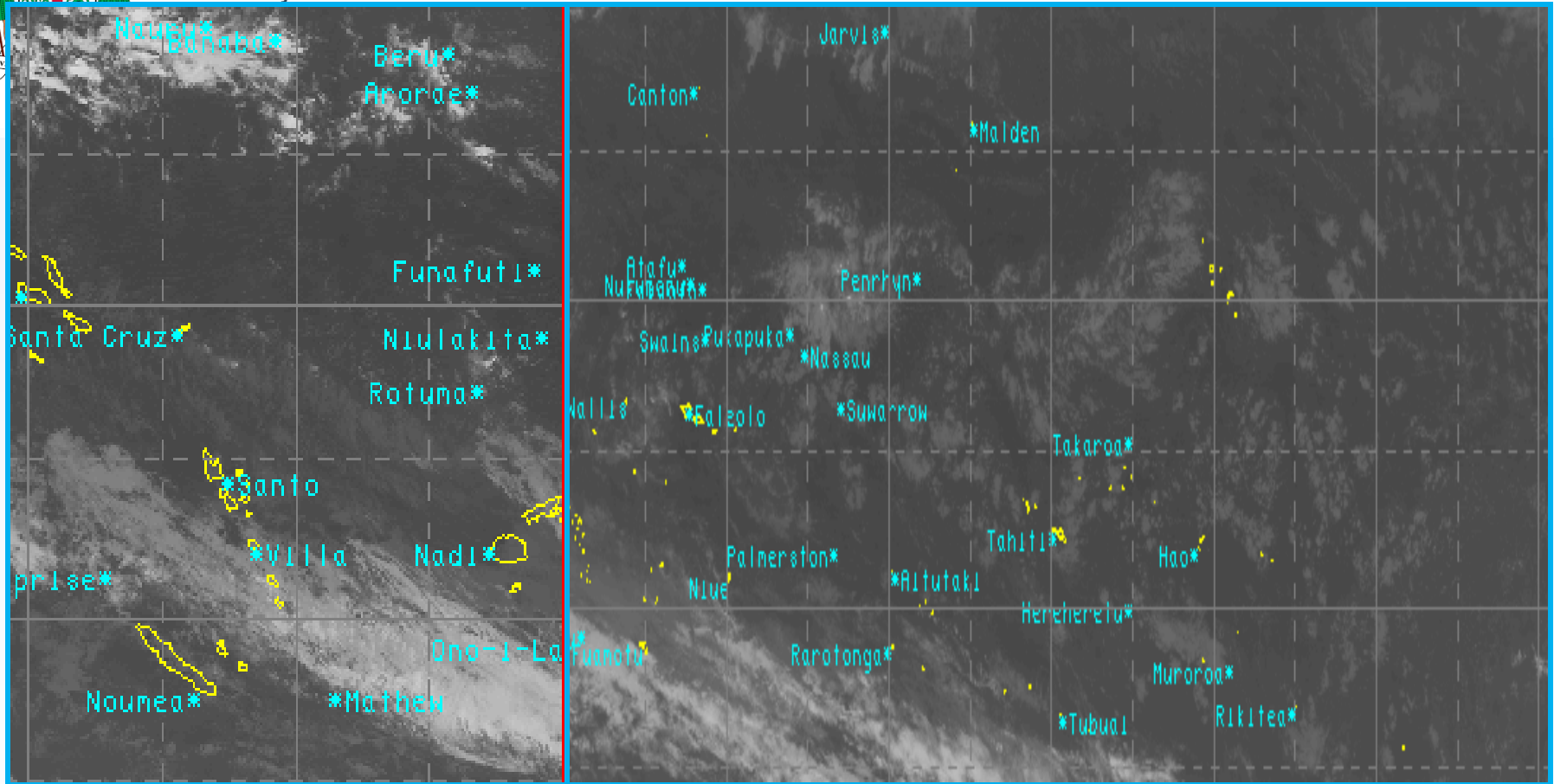
- RMSC Tropical Cyclone Centre Nadi
- Meteorological Watch Authority and the Meteorological Watch Office for the Nadi FIR and also TAFs for some of the aerodromes outside Nadi FIR
- Meteorological forecast and warning services for international shipping in the tropical South-West Pacific waters
- Public and Marine Weather Forecast – Fiji, Tuvalu, Kiribati, Tokelau, Niue and Nauru
- Aviation weather services – ISO 9001:2015 certified





Marine AOR:

Fiji Government



International marine forecasts and warnings for area from Equator to 25°S, between 160° E to 120° W



Fiji Government
Fiji Meteorological Service

Climate Services

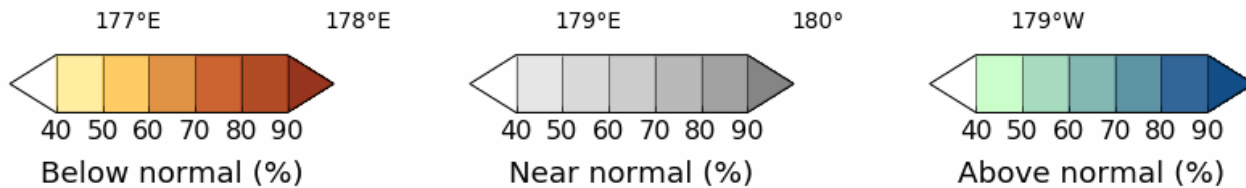
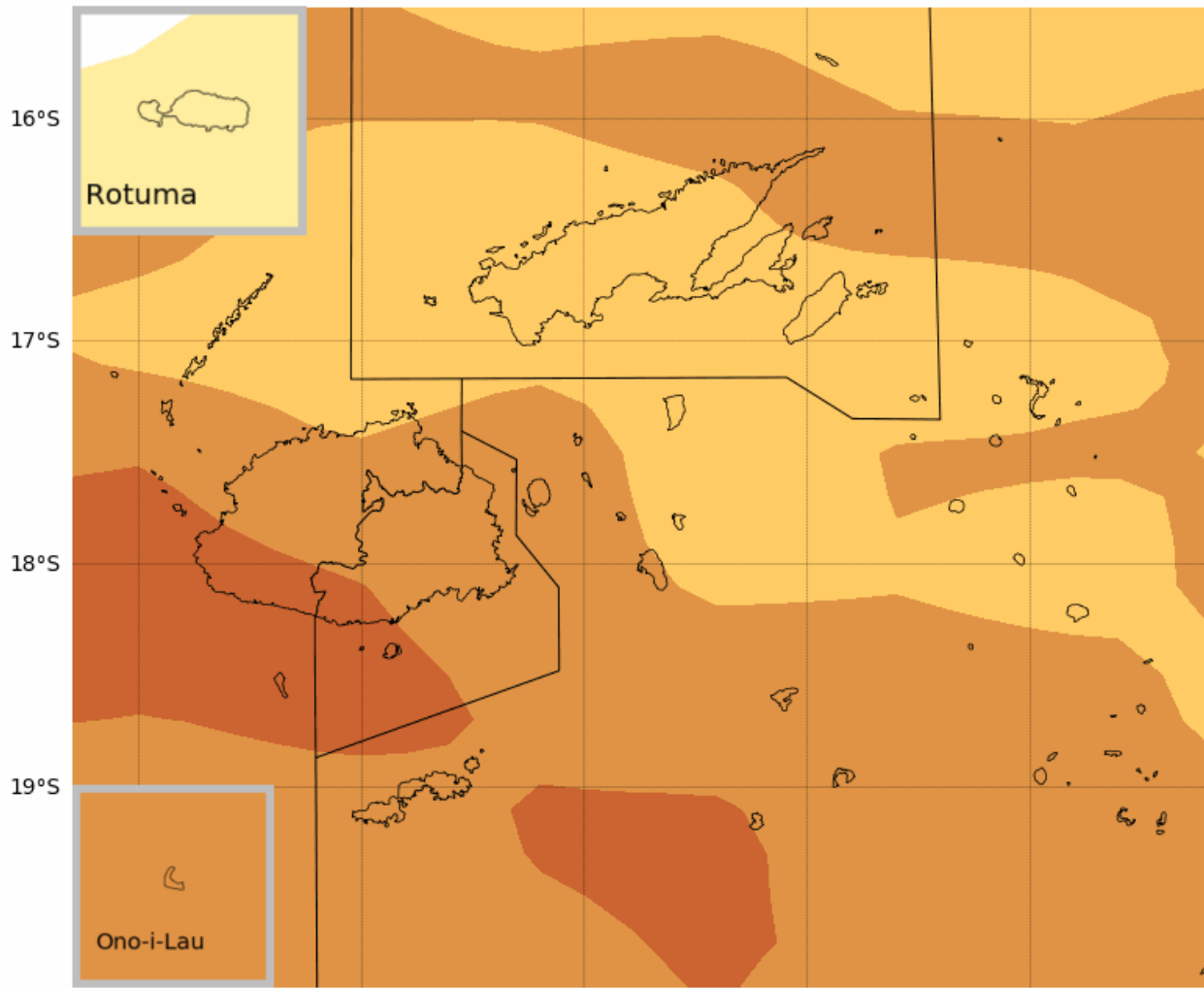
15

- National repository for climate data
- National Climate Monitoring and Prediction Centre
- Sub-seasonal to seasonal climate and ocean predictions
- Meteorological drought monitoring
- Sector-specific climate bulletins
- Fiji's focal point to IPCC
- Climate services ISO 9001: 2015 certified

Tercile rainfall probabilities for 11 to 17 September 2023



Fiji Government
Fiji Meteorological Service



Base period: 1981-2018
Model: ACCESS-S2

Model run: 04/09/2023
Issued: 06/09/2023

© Commonwealth of Australia 2023, Australian Bureau of Meteorology
Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marineregions.org/>.



September 2023

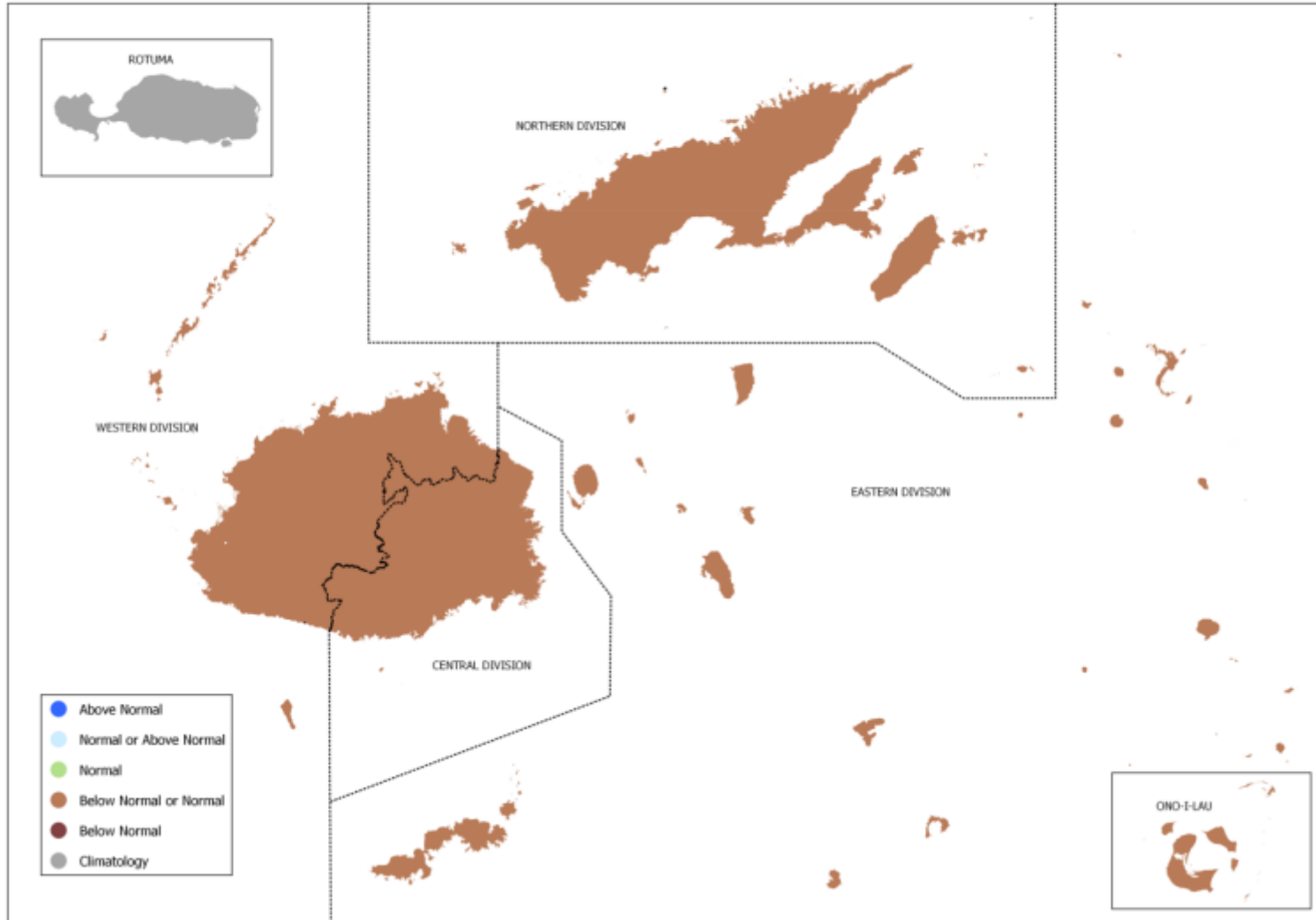
Fiji Government
Fiji Meteorological





SEPTEMBER TO NOVEMBER 2023

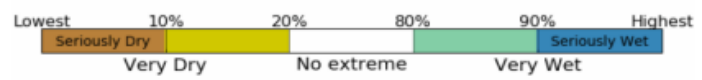
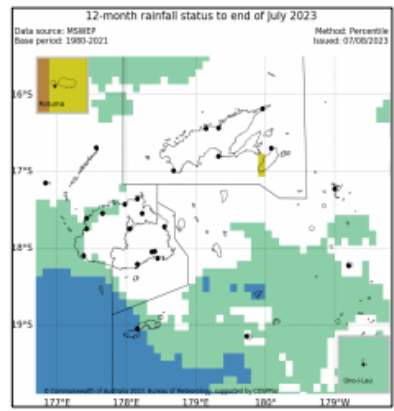
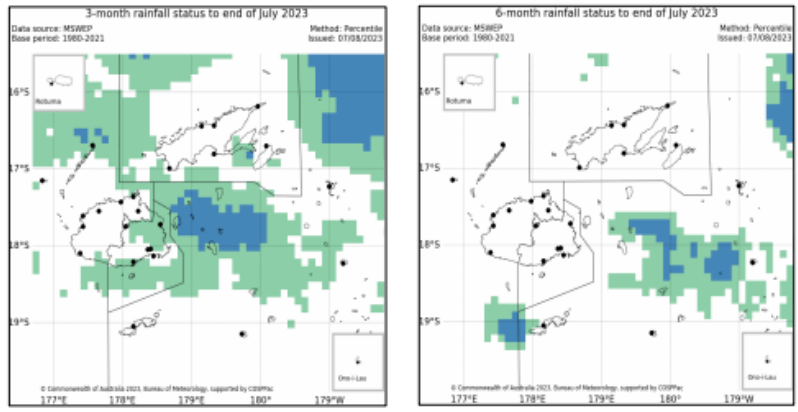
Fiji Government
Fiji Meteorological Service



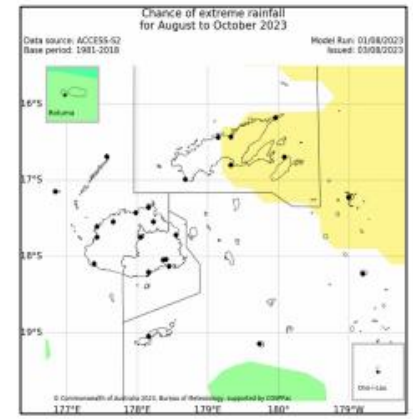
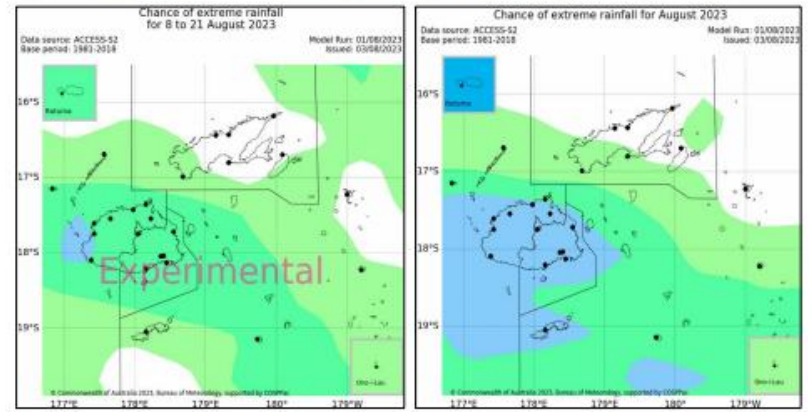


Fiji Meteorological Service

Rainfall monitoring for the last 3-months, 6-months and 12-months



Rainfall Outlooks for 8– 21 August, August and August to October 2023





Fiji Government
Fiji Meteorological Service

ISO 9001:2015
Certificate of Climate Services

Fiji Meteorological Service

Climate Outlook for Hydro-electricity Generation from March to May 2023

Volume: 19 Issue: 03
Issued: February 17, 2023

Current Conditions:

Fiji's Climate
The weather across the country during the month, between 1st to 26th February was dominated by a series of trough of low pressure systems, tropical disturbances, periods of heavy rain and squally thunderstorms accompanied by floods.

Overall, out of the 19 rainfall stations analyzed until 26th February, 5 recorded well above average, 8 above average, 5 average, while Rotuma was the lone station that recorded below average rainfall.

When comparing the total rainfall observed until 26th February, against the World Meteorological Organization (WMO) standard 30 years (1981-2010) normal, average rainfall for Monasavu (until 26th February) was 472 mm, which was 91% of the total monthly rainfall for Monasavu, which was normal. During December 2022 to 26th February, Monasavu recorded 1265 mm of rainfall, which was 73% of the normal, while in the past 6 months (September to 26th February), 2089 mm of rainfall was registered (76% of the normal) (Figure 1).

El Niño Southern Oscillation and Monasavu Climate Predictions

Climate models on average suggest a return to ENSO-neutral conditions during March to May 2023.

Air Temperature Predictions - March to May 2023:
Both maximum and minimum air temperatures are likely to be warmer than normal across the country during the March to May period (Figure 3).

Rainfall Predictions:

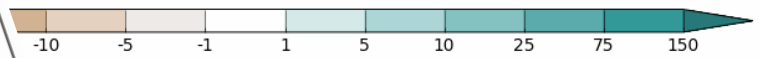
Fortnightly: 26th February- 11th March & 5th - 18th March
Rainfall is likely to be above median across Viti Levu during the above mentioned periods.

March 2023
There is 75% chance of receiving at least 207 mm of rainfall at Nadarivatu station and 75% chance of at least 255 mm of rainfall at Monasavu and Wailoa. There is high confidence in this forecast (Table 1).

March to May 2023
For the March to May 2023 period, there is 75% chance of receiving at least 540 mm of rainfall at Nadarivatu station and 75% chance of at least 630 mm of rainfall at Nadarivatu Dam, Monasavu and Wailoa. There is high skill on the generated outlook (Table 1).

Summary
Overall, wetter than usual conditions are likely to be experienced across Viti Levu during March and the March to May 2023 period.

Difference from average rainfall forecast for 26 March to 8 April 2023



Difference from average (mm)

Base period: 1981-2018

Run: 19/03/2023

Service of Meteorology, supported by COSPPac (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11.



MPWTMS
METEOROLOGICAL SERVICE
Fiji Meteorological Service
Ph: +679 6724000, Email: climate@met.gov.fj

Volume 19

Fiji Sugarcane Climate Outlook 2023
Planting Season

SRIF
SUGAR RESEARCH INSTITUTE OF FIJI
Ph: +679 8921839, Email: info@srif.gov.fj

Issue: 1
Issued: January 25, 2023
Next issue: February 28, 2023

Key Messages

English

- The sugarcane growing areas have received above average rainfall in the last 3 months (October-December).
- The Fiji Meteorological Services has predicted that there are high chances of receiving above average rainfall in the forthcoming months (February-April) due to a weak La Niña event in the Pacific Ocean.
- With the La Niña event in place, farmers can expect frequent rainfall (which can be heavy at times), strong winds (damaging at times), drop in night temperatures and low-pressure systems.
- The predicted rainfall and forecast for warmer air conditions will favour rapid weed germination and growth and growers must adopt integrated weed management that includes manual weeding followed by weedicides application to control the weeds.
- Land preparation for 2023 season planting should commence in early March and planting of cane to be planned from mid-March to mid-May.
- Soil sampling activity to be carried out in fields followed for planting.
- Farmers are advised to source certified seed cane in their sectors.
- Farmers must ensure that the field and main drains in and around their farms are cleaned to allow easy drainage of excess water from the fields to avoid water logging conditions. Cane growing in water-logged environment will undergo stress, with irregular internode length, decrease in stalk height and weight and tiller production, causing a loss in yield.
- For further advice, please contact SRIF on 8921839.

Volume 19

Issue: 1

Fiji Sugarcane Climate Outlook from February 2023

January 25, 2023

Hindi

- Ganna ugaane vaale kshetron mein pichhale teen mahaneon (October-December) mein saamaan se adhik varsha hua hai.
- Fiji mausam kaaryalay ne aasaan lagaya hai ke aane vaale mahaneon (February-April) mein kamajor La Niña ke kaaran ganna ugaane vaale kshetron mein saamaan se adhik varsha hone ke sambhavna hai.
- La Niña ke ghatana ke saath, kisaan baar-baar baarish (jo kabhee-kabhee bhaaree ho saktee hai), tej havaen (kabhee-kabhee bhaanikaarak), raat ke tapmaan mein ghaavat aur low pressure ke ummeed kar saktee hain.
- Garm hava ke shah aur aasaanit baarish ke kaaran ghaas ke vikaas mein baadhaati hogi, aur ghaas ke buvaee March ke madhy se May ke madhy tak karane ke yojana banaae jamae chahiye.
- Ropan ke liye khaalee pade kheton mein mittee ka pareekshan kiya jamae chahiye.
- Kisaanon ko salah dee jatee hai ki ve pramaanit beej hee praapt karen aur apne kshetron mein upalabdh pramaanit beej ganna ke liye apne kshetr ke salahakaaron ko sampark karen.
- Kisaanon ko yah sunishchit karana chahiye ki unake kheton mein aur usake sasappa ke kshetr aur paanee nikal sake. Jal jamaav vaale taanaavaran mein ugane vaale ganne ko nilar urpaadan mein kamae ke saath taanaav se gujarana hoga, jis se upaj mein kamae aayege.
- Aur salah ke liye 8921839 par SRIF ko sampark kare.

I. Tankaai

- E laurai ni levu cake sara na uca ka tara na noda vase ni Pasifika na 'La Niña', e ratou wasea na Tabana Ni Draki ni na Tiseba ni na noda vase ni vuvuvura na La Niña.
- E dau namaki me na rawa ni levu na uca, kaukauwa na cagi ka batabata na bogi, e na ganna e tara niko kina na noda vase ni vuvuvura na La Niña.
- E na namaki me na totolo na nubu ni co ca e na vuku ni draki ka sa da vakasalataki me na tara keda e teitei kece ko ni kila, me na rawa ni tarova na nubu ni co ca.
- Sa dodomu me sa tekiru vakarautaki yani na qele e na I tekiru ni vula ko Maji, ka tekirutaki yani na teitei, mai na vula ko Maji ki na vula ko Me.
- E dodomu me na vakadivei na qele, ka vakarautaki yani ki na teitei.
- Ko ni sa vakadreti tale ga na dau tei dovou mo ni vakayagataka na I tei ni dovou ka sa dikeri ka pasitaki oti, ka na rawa ogo e na nomuni veinaratara kei na nomuni dau ni vakasala e na nomuni va-ua ni veiqaravi.



Fiji Government
Fiji Meteorological Service


FJI METEOROLOGICAL SERVICE
Private Mail Bag (NAP0351)
Nadi Airport, Fiji
Ph: +679 6724888,
Fax: +679 6720430
Email: climate@met.gov.fj
Also online at <http://www.met.gov.fj>


Fiji Ocean Outlook


22


Volume : 5 Issue : 3
Issued: March 20, 2023
Next Issue: April 20, 2023


In Brief

- 

⇒ The Pacific Ocean has now returned to ENSO-neutral state, that is neither La Niña nor El Niño.
- 

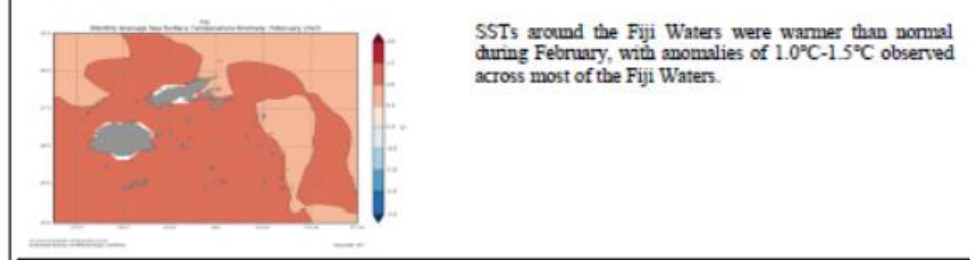
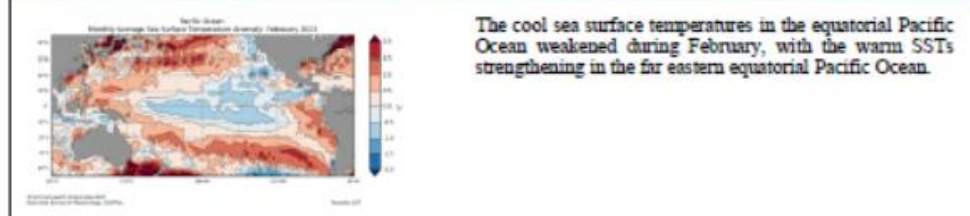
⇒ Near normal sea surface temperatures (SSTs) are likely in the Fiji waters during April to June 2023.
- 

⇒ The average position of the 29°C fisheries convergence zone is likely to lie closer to the Fiji Group during the April to June 2023 period.
- 

⇒ The 4 weeks coral bleaching outlook is at 'Alert 1' for Lau Group.
- 

⇒ Sea level is likely to be near normal across most of Fiji's EEZ, while above normal sea level is likely for Rotuma during the April to June 2023 period.

Pacific Sea Surface Temperatures (SSTs): Recent Observations



Possible Applications:
Presence of warmer than usual waters in the central and eastern equatorial Pacific indicate persistence of an El Niño event and cool waters indicate La Niña. Monitoring warm patches of ocean gives insight into the potential for cyclone formation, and possible start or finish of the cyclone season. For further information on ocean temperature refer to http://www.cimr.org.au/au/portal/help/about_OceanTemperatures.pdf

YouTube fiji meteorological service





Daily Annual Maximum Rainfall Return Periods for Selected Stations

Return Period in Years (yrs)	Rainfall mm (24-hour Maximum)														
	Nausori Airport (63 yrs)	Laucala Bay (79 yrs)	Tokotoko (Navua) ¹ (26 yrs)	Nadi Airport (78 yrs)	Lautoka Mill (115 yrs)	Penang Mill (92 yrs)	Udu Point (69 yrs)	Labasa Airport (63 yrs)	Nabouwalu (83 yrs)	Savusavu Airfield (53 yrs)	Matei Airfield (52 yrs)	Levuka ¹ (24 yrs)	Vunisea Kadavu (77 yrs)	Lakeba (76 yrs)	Rotuma (83 yrs)
1	81	89	109	53	49	56	69	69	63	65	65	82	74	68	75
2	167	172	175	136	145	174	150	138	131	123	153	136	131	133	148
3	198	202	199	165	173	217	179	162	155	144	185	155	151	156	174
4	218	221	214	184	191	244	198	178	171	157	206	167	164	171	191
5	233	235	226	198	204	265	212	190	183	167	221	176	174	182	204
10	276	277	259	240	244	324	252	225	218	196	266	203	203	214	241
20	317	317	291	279	281	381	292	258	251	224	308	229	230	246	276
30	341	340	310	302	303	414	314	277	271	240	333	244	246	263	296
40	358	356	323	318	319	438	330	291	284	251	350	254	257	276	311
50	371	369	333	331	330	456	342	301	295	260	364	262	266	286	322
75	395	392	-	353	352	488	365	320	314	276	388	-	281	304	342
100	412	408	-	369	367	511	380	333	327	287	405	-	292	316	356
150	435	431	-	392	389	544	403	352	346	303	430	-	308	334	376

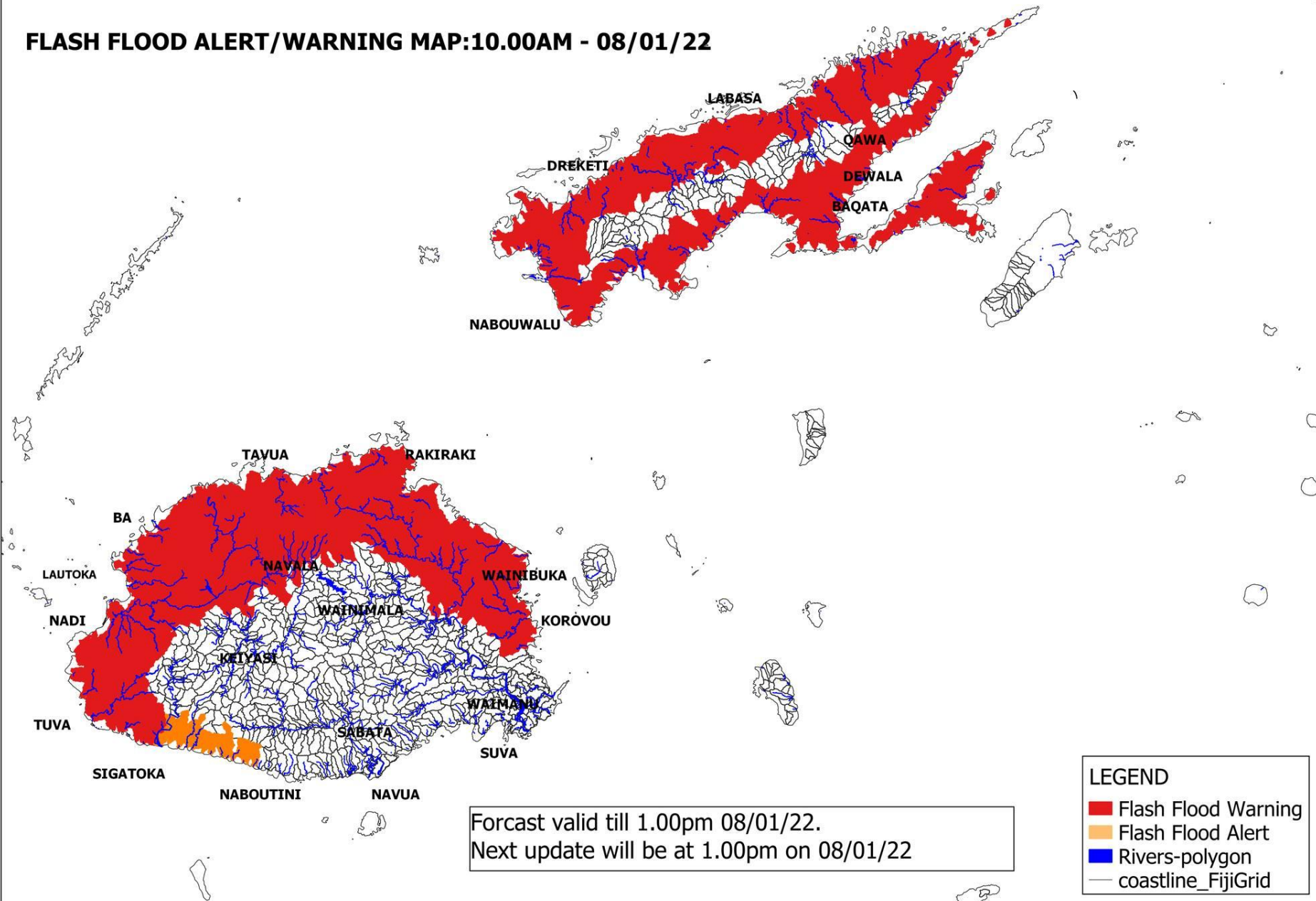


Hydrological Services

Fiji Government
Fiji Meteorological Service

- Recent introduction to FMS
- Support Fiji's need for hydrological data
- Flood monitoring and advisories

FLASH FLOOD ALERT/WARNING MAP:10.00AM - 08/01/22



Forcast valid till 1.00pm 08/01/22.
Next update will be at 1.00pm on 08/01/22

LEGEND

- Flash Flood Warning
- Flash Flood Alert
- Rivers-polygon
- coastline_FijiGrid



Challenges

Fiji Government
Fiji Meteorological Service

- High turnover of staff
- Maintenance of AWS/AWOS
- Hydrological service
- Improve communication
- Implement cost recovery



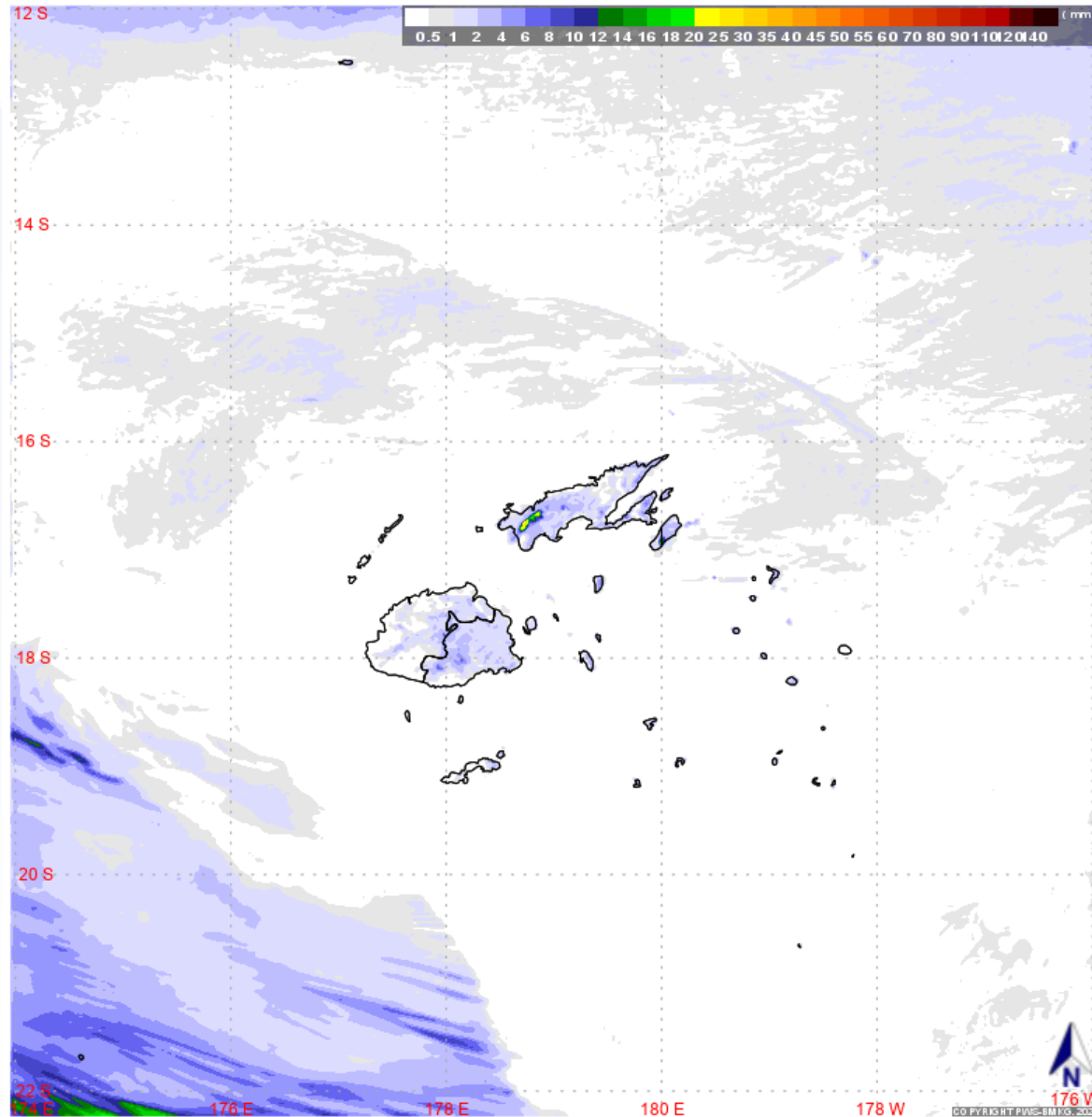
Aspirations/Opportunities

- RTC in South Pacific
- Regional Instrument Calibration Centre
- High Performance Computing – NWP
- Cost recovery
- Impact-Based Forecasting
- Flash Flood Guidance System



Fiji Government
Fiji Meteorological Service

24 Hour Precipitation Accumulation Forecast (mm)
Valid Time : 19 August 2023 12 FST to 20 August 2023 12 FST [+0 ~ +24]
Initial Run : 19 August 2023 12.00 FST
Fiji Meteorological Service
Fijian NWP 3 km





Thank you

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Fiji Government
Fiji Meteorological Service

For more information contact the
Fiji Meteorological Service

Web: **www.met.gov.fj**

Email: **bipen.prakash@met.gov.fj**

Phone: **+679 672 4888**
+679 990 5376

