Severe Weather Forecasting & Disaster Risk Reduction Demonstration Project (SWFDDP)

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1. Introduction – The Severe Weather Forecasting and Disaster Risk Reduction Demonstration Project (SWFDDP) is a World Meteorological Organization (WMO) initiative aiming to improve severe weather forecasting and build closer relations between National Meteorological Centres (NMC), Disaster Risk Reduction (DRR) services and other interested stakeholders in the South Pacific.

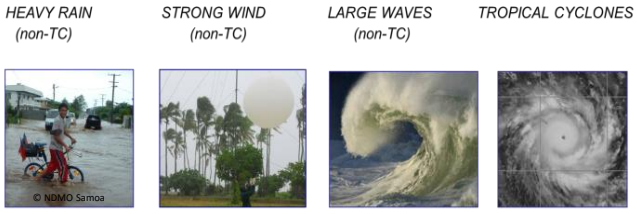

Figure 1(a): Severe weather thresholds for the SWFDDP (South Pacific)

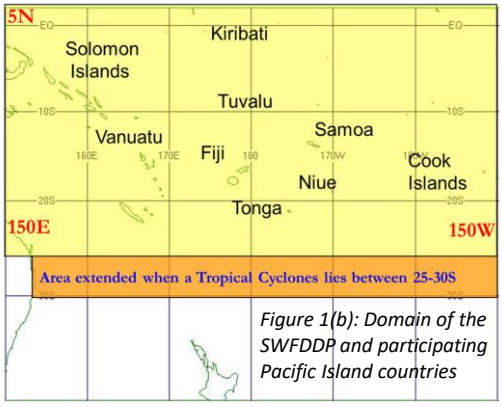

Figure 1(b): Domain of the SWFDDP and participating Pacific Island countries

2. Cascading Forecast Process – The SWFDDP is one of several regional projects that utilise a 'Cascading Forecast Process' to allow participating countries to benefit from advances in the science of weather forecasting. Global and regional support is provided by various organisations through tailored Numerical Weather Prediction (NWP), forecaster generated guidance and training.

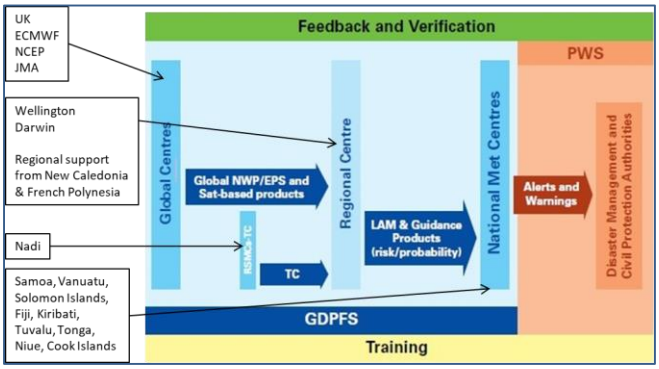

Figure 2(a) : The Cascading Forecast Process (EPS = Ensemble Prediction system; TC = Tropical Cyclone; LAM = Limited Area Model; PWS = Public Weather Services; GDPFS = Global Data-Processing & Forecast System)

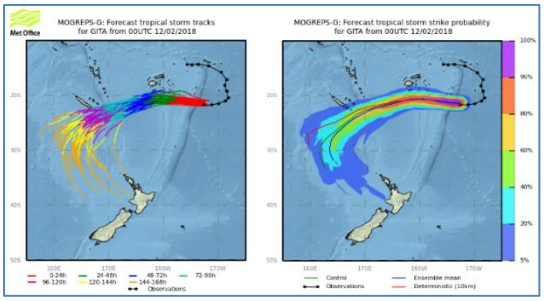

Figure 2(b): NWP ensemble product example

3. RSMC Wellington – Under WMO, MetService has formal designation as a Regional Specialised Meteorological Centre (RSMC) with specialised activities for Marine Meteorological Services and for Regional Severe Weather Forecasting (ie, the SWFDDP). RSMC Wellington created a website, 'MetConnect Pacific', for making available guidance, NWP products and observations central to the SWFDDP. Lead forecasters at RSMC Wellington produce a five-day outlook known as the South Pacific Guidance (Fig. 3); the purpose of which is to provide the participating Pacific NMCs with a "heads-up" of potential hazardous weather using the thresholds in Figure 1(a).

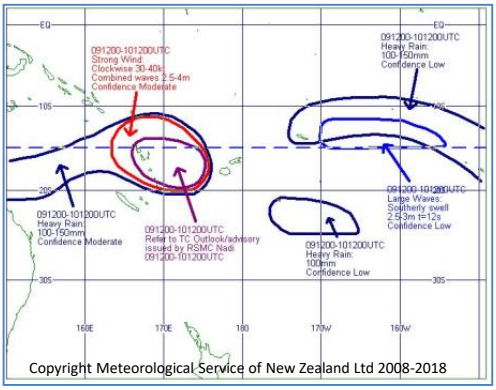

Figure 3: Example of South Pacific Guidance produced by RSMC Wellington and accessed via the website MetConnect Pacific

4.Training – In-country workshops have been conducted for relevant weather warning stakeholders: NDMOs; Police; Fire Service; Health authorities; etc. These included group exercises highlighting everyone's role to promote closer coordination and collaboration.

5. Continuing Development Phase – Future in-country training and maintenance/upgrades of the project website are necessary to successfully progress the project from the demonstration phase in to operations (the 'continuing development phase'), and this depends on the guarantee of long-term support.

Phases 1 & 2 – Initial & Pilot Phases
- Project Planning
- Four participating NMCs (Fiji, Samoa, Vanuatu & Solomon Is)

Phase 3 – Demonstration Phase
- Extension to nine participating NMCs (incl. Tonga, Kiribati, Tuvalu, Niue & Cook Is)

Phase 4 – Continuing Development Phase
- Continuous dev in synergy with other WMO Programmes

- Subproject Management Team
- WMO Secretariat Support
- 6-monthly reporting
- Regional responsibility for management
- Funding required

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