



Tonga National Multi-Hazard Early Warning Systems Framework & Early Warning For All

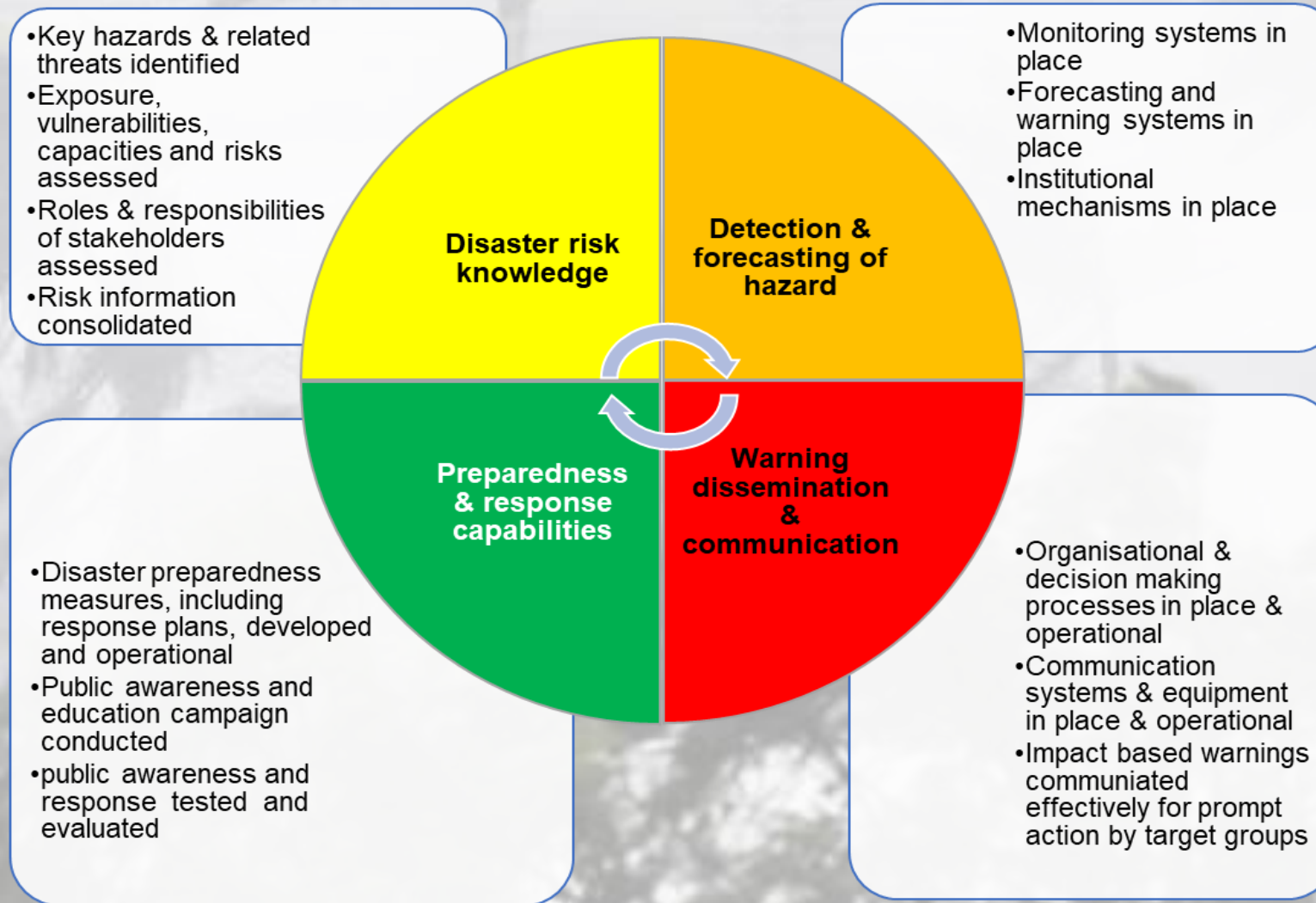
“ Climate & Disaster Risk Financing: Integration & Operationalization ”

Presented by: Laitia Fifita

Director : Tonga Meteorological Service

17th February 2025, Novotel Hotel, Nadi, Fiji

Components of a Multi-Hazard Early Warning System (MHEWS)



End to End Impact Based Early Warning System





Why does Tonga need a Multi-Hazard Early Warning Systems (MHEWS) Policy & Climate and Climate Disaster Risk Financing?

- ▶ Tonga is extremely vulnerable to the effects of natural hazards or a combination of natural hazards.
- ▶ Its expensive and take awhile to recover economically (e.g. HTHH 36.4% of GDP).
- ▶ Extreme events will increase given current and future warming scenarios.
- ▶ Multi-hazard Early Systems has been recongnise by UNDRR as critically important for reducing disaster risk and enhancing preparedness.
- ▶ MHEWS Policy approval required for budget support by 30th April 2024.

By developing this MHEWS policy & CDRF for Tonga, effective warning systems can be enhanced and maintained to ensure effective warning and informing services are provided to disaster management agencies and the people of Tonga, to mitigate and minimise the impacts from natural hazard events.

Our Journey & Key Milestones.....



18 – 19 April 2024: Final MHEWS Policy Consultation

Our Journey & Key Milestones.....

No.453

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MEMORANDUM

23rd May 2024

To: Hon. Prime Minister, Minister for Education and Training,
Minister for Police, Fire & Emergency Services
Hon. Deputy Prime Minister, Minister for Justice and Prisons
Hon. Minister for Lands and Natural Resources
Hon. Minister for Meteorology, Energy, Information, Disaster Management,
Environment, Climate Change and Communications
Hon. Minister for Trade and Economic Development and Tourism
Hon. Minister for Infrastructure
Hon. Minister for Agriculture, Food and Forests
Hon. Minister for Internal Affairs
Hon. Minister for Finance and Minister for Revenue & Customs
Hon. Minister for Health
Auditor General
CEO for Finance
CEO for MEIDECC

With reference to Re: Tonga Multi-Hazard Early Warning Systems (MHEWS)

Policy Framework 2024 – 2030.

(ORG 13/11 V2)

I have the honour to inform you that His Majesty's Cabinet Decision on 23rd May 2024

was as follows:-

Recommendations are approved, as amended, i.e.:

1. That the Tonga Multi-Hazard Early Warning System (MHEWS) Policy Framework 2024 – 2030, be approved.
2. That the Chief Executive Officer of the Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC) to distribute the MHEWS Policy Framework 2024 – 2030 widely through the various communications channels of Government, and through the Tonga National Working Group on MHEWS (TNWG-MHEWS) establish the Joint MHEWS Action Plan for the operationalisation of the Policy for submission to Cabinet for approval before 30th November 2025.



Akanesi S Taufa
Akanesi S Taufa

Acting Chief Secretary and Acting Secretary to Cabinet

23rd May 2024: Cabinet Approval of the "Tonga MHEWS Policy Framework 2024-2030"

MEMORANDUM

3rd May 2024

To: Hon. Prime Minister, Minister for Education and Training,
Minister for Police, Fire & Emergency Services
Hon. Deputy Prime Minister, Minister for Justice and Prisons
Hon. Minister for Lands and Natural Resources
Hon. Minister for Meteorology, Energy, Information, Disaster Management,
Environment, Climate Change and Communications
Hon. Minister for Trade and Economic Development and Tourism
Hon. Minister for Infrastructure
Hon. Minister for Agriculture, Food and Forests
Hon. Minister for Internal Affairs
Hon. Minister for Finance and Minister for Revenue & Customs
Hon. Minister for Health
Auditor General
CEO for Finance
CEO for MEIDECC
CEO for Infrastructure
CEO for Agriculture, Food and Forests
CEO for Education and Training
CEO for Health
CEO for Lands and Natural Resources
CEO for Public Enterprises
CEO for Internal Affairs
CEO for Statistic Department
Chief of the Defence Staff
Police Commissioner

03rd May 2024: Cabinet Approval for the Establishment of the "National Working Group on MHEWS"

With reference to Re: Formal Establishment of a National Working Group

on Multi-hazard Early Warning Systems.

(ORG 13/11 V24)

I have the honour to inform you that His Majesty's Cabinet Decision on 3rd May 2024

was as follows:-

Recommendations are approved, i.e.:

1. That Hon. Cabinet Ministers approve the establishment of the Tonga National Working Group on Multi-hazard Early Warning Systems (TNWG-MHEWS) with the following members:-

Our Journey & Key Milestones.....



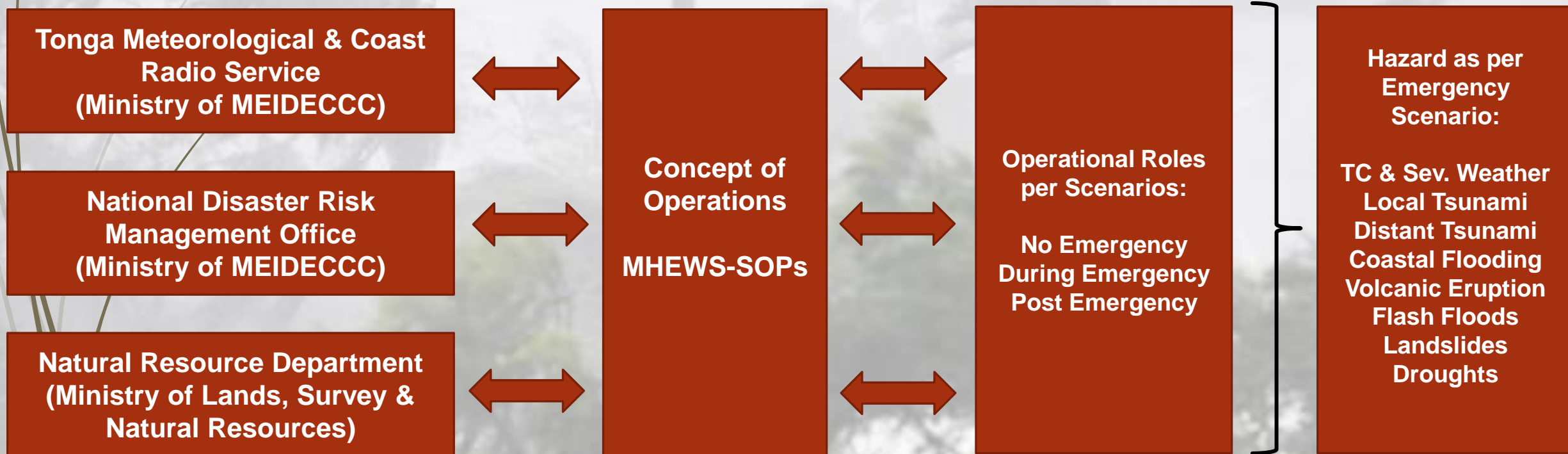
17 – 19 July 2024: National Early Warning For All & Anticipatory Action Workshop

Our Way Forward

- **Establishment of National Early Warning For All (EW4ALL) Consultant**
- **Develop & Finalize Terms of Reference for TNWG-MHEWS**
- **Develop & Submit to Cabinet : Joint MHEWS Action Plan**
 - **Validation of MHEWS Road Map (Action Plan) with key stakeholders**
 - **Before 30th November 2025**
- **Establishment of the National MHEWS Co-ordination Center**
- **Tonga Disaster Risk Financing Strategy 2021-2025**

Current Multi-Hazard Early Warning System Set-Up

- Guided by the Concept of Operations (Cabinet Approval: September 2017)
- Operational Roles of the MHEWS Agencies are being outlined





Key Hazards

- ▶ The DRM Act has identified the following as the key priority hazards for Tonga
 - Tropical Cyclones, Tropical Storms & Storm Surge
 - Tsunami
 - Flooding
 - Tornado
 - Volcanic eruption
 - Earthquakes
 - Drought

Key Hazards

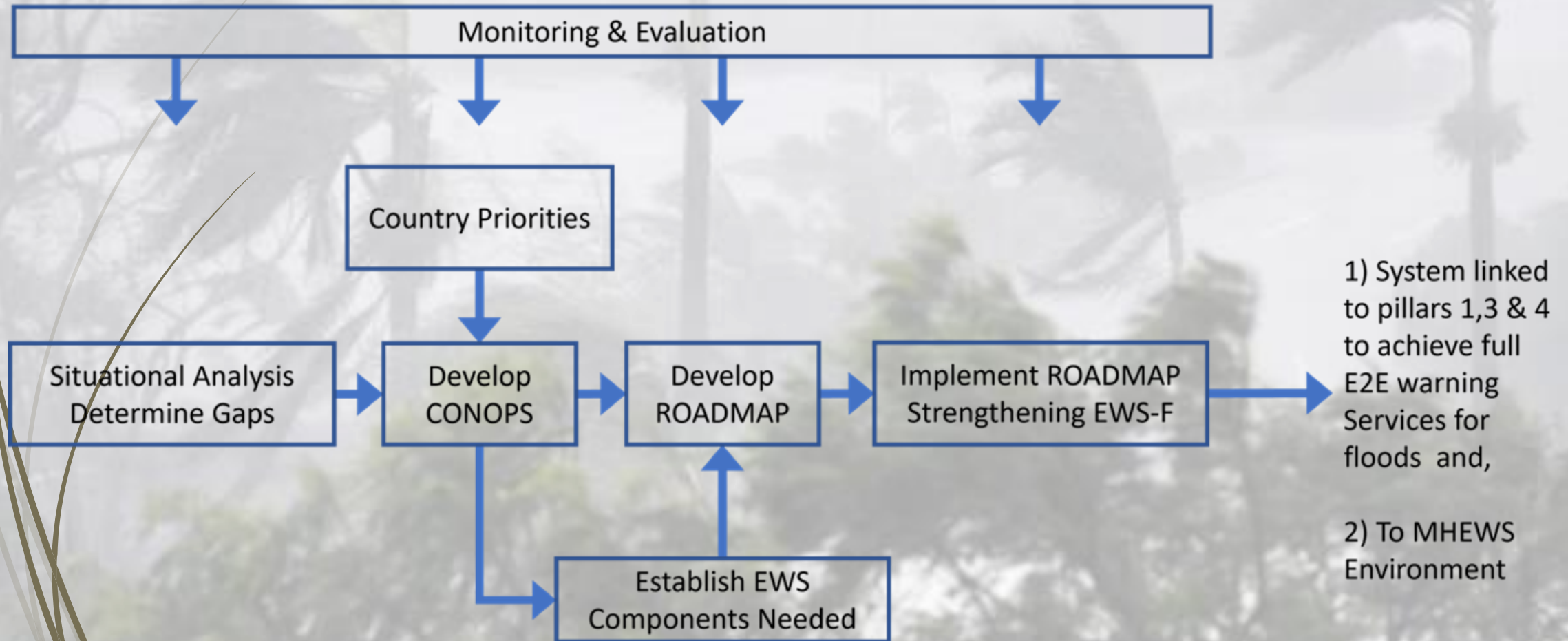
➤ The Met Act has identified the following as the key **ocean related events** for Tonga

- Damaging Swells
- Extreme Ocean Temperature
- Extreme Tides
- Sea Flooding
- Sea Level Rise
- Storm Surge
- Tsunami

➤ The Met Act has identified the following as the key **meteorological related events** for Tonga

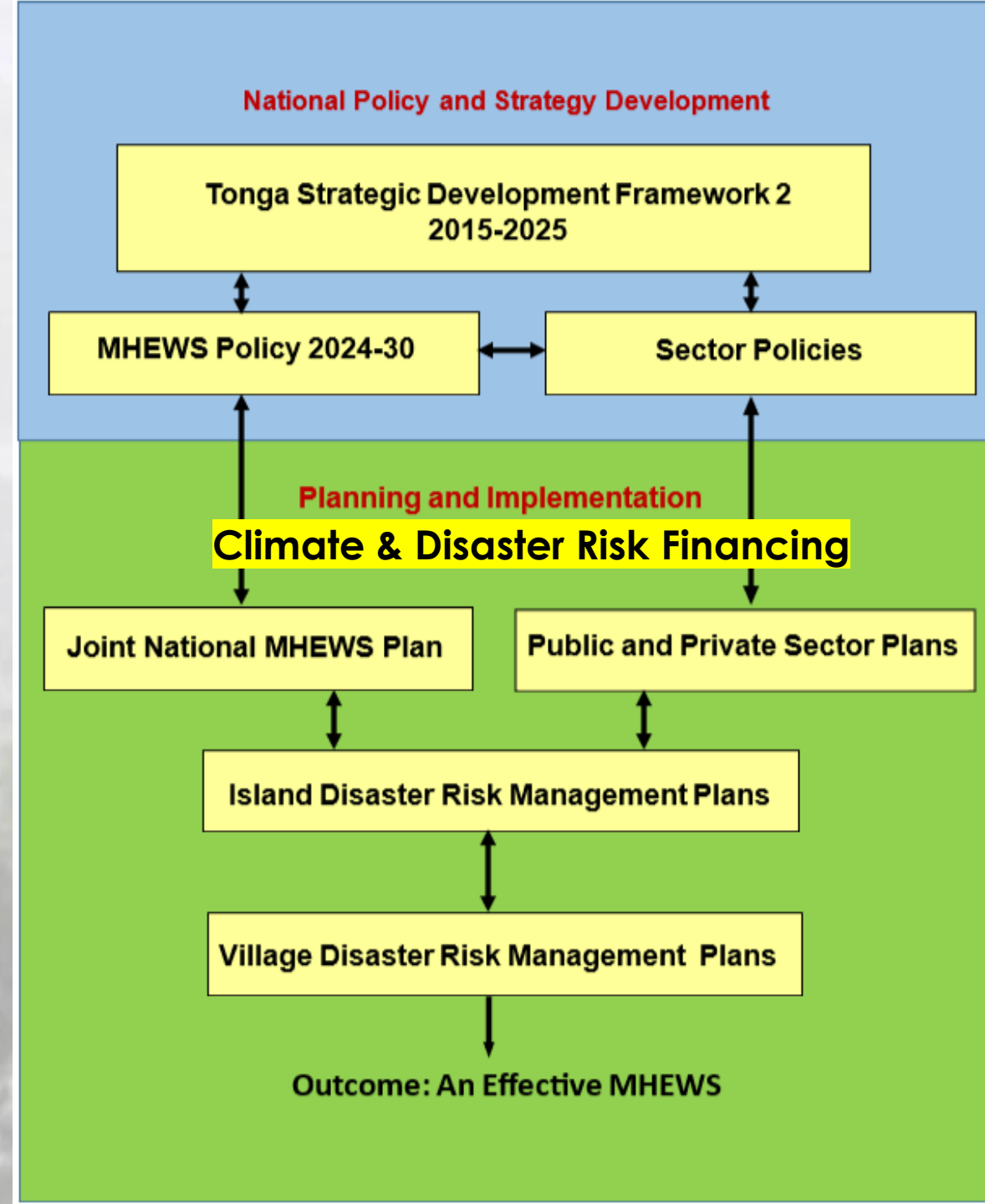
- Drought, El Nino, Extreme Temperatures
- Flash Flooding, Fog, Hail
- Heavy Rain, La Nina
- Strong, Gale, Storm, Hurricane force winds (not associated with Tropical Systems)
- Thunderstorms & Lightning
- Tornado
- Tropical Systems

Linking our National Framework to Today's Session: **Climate & Disaster Risk Financing (Tonga DRF Strategy)**



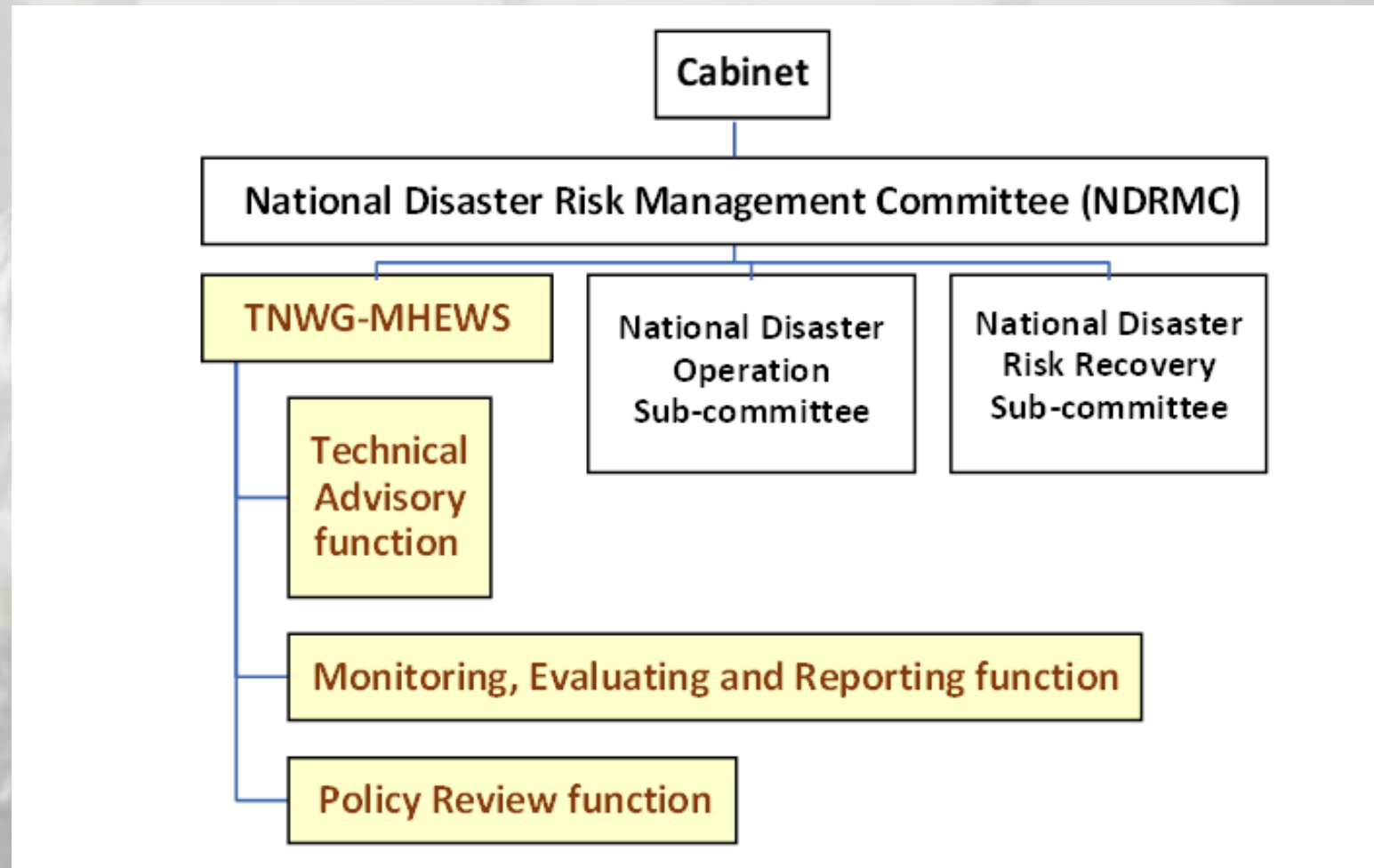
Join National MHEWS Action Plan

- Each Objective, actions, lead and support agencies, resource, funding and timelines
- Developed to operationalize the MHEWS Policy through the Joint MHEWS Action Plan.
- Supported by strategies for partnership management and mainstreaming
- Implementation structure supported by M&E, Reporting and Policy Review
- Joint National MHEWS Action Plan in place for cabinet approval before 30th November 2025 (18 months from MHEWS Policy Approval)



TNWG-MHEWS Background Information

- TNWG – MHEWS Roles/Set-up within the Disaster Risk Management Framework and Financing Mechanisms



The MHEWS Policy



Disaster risk knowledge

Systematically collect data and undertake risk assessments

- Are the hazards and the vulnerabilities well known by the communities?
- What are the patterns and trends in these factors?
- Are risk maps and data widely available?



Detection, observations, monitoring, analysis and forecasting of hazards

Develop hazard monitoring and early warning services

- Are the right parameters being monitored?
- Is there a sound scientific basis for making forecasts?
- Can accurate and timely warnings be generated?



Preparedness and response capabilities

Build national and community response capabilities

- Are response plans up to date and tested?
- Are local capacities and knowledge made use of?
- Are people prepared and ready to react to warnings?



Warning dissemination and communication

Communicate risk information and early warnings

- Do warnings reach all of those at risk?
- Are the risks and warnings understood?
- Is the warning information clear and usable?



Vision

“The People of Tonga will have access to an Effective MHEWS that can be used to take Early Action and Effective Decisions to Minimize the Impacts of Hazardous Events.”



Mission

“To provide an Effective, People-centered, End-to-end Multi-Hazard Early Warning System for the Protection of Lives, Livelihoods and Prosperity for all Tonga.”



Policy Goal

“The goal of this policy is to develop and make operational an effective MHEWS for Tonga by 2030.”



Policy Guiding Principles

- **Principle 1:** The MHEWS Policy is People-focused
- **Principle 2:** Strong Leadership, Good Governance and Accountability
- **Principle 3:** Equity, Fairness, Gender sensitive and Inclusiveness
- **Principle 4:** Collaboration, Integration and Mainstreaming
- **Principle 5:** A holistic, multi-hazard, multi-functional, multi-faceted and multi-sector approach
- **Principle 6:** Relevant and contextual
- **Principle 7:** Technology, Innovation and Forward looking
- **Principle 8:** Long-term sustainability and ongoing capacity development
- **Principle 9:** Respect of Cultural Values
- **Principle 10:** Free and unrestricted data and information
- **Principle 11:** Scientific and evidence based
- **Principle 12:** Follow the 4 elements of an effective MHEWS (Checklist)

Objectives of the MHEWS Policy

Objective 1	Multi-institution coordination, collaboration and accountability to develop, operate and maintain a MHEWS for Tonga
Objective 2	Integrate MHEWS into all aspects of relevant legislation, climate change adaptation and disaster management governance structures
Objective 3	User-centred warnings available to all
Objective 4	MHEWS warning information understood by all users
Objective 5	Sustainable capacities and resources for operating, maintaining and developing MHEWS
Objective 6	All priority natural hazards are included in the operational MHEWS

Appendix 3: Tonga MHEWS Policy Framework

Vision					
The people of Tonga will have access to an effective and inclusive MHEWS that can be used to take early action and effective decisions to minimize the impacts of hazards.					
Principles					
People focused		Strong leadership, good governance & accountable		Equity, fairness, gender sensitive & inclusive	
Collaboration, integration & mainstreaming		multi-hazard, multi-functional, multi-sector & multi-faceted		Relevant and contextual	
Technology, innovation & forward-looking		Sustainability & capacity development		Respect of cultural values	
Free & unrestricted access to warnings					
Goal					
Mainstream MHEWS considerations into policy, planning, decision-making, programming and project delivery at the community, sectoral and national levels					
Strategic Objectives					
Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6
multi-institution coordination, collaboration and accountability to develop, operate and maintain	Integrate MHEWS into all aspects of relevant legislation, and CCA and DRR governance structures	User-centered warnings available to all	MHEWS warning information understood by all users	Sustainable capacities and resources for developing, operating & maintaining a	All priority natural hazards are included in the operational MHEWS
Pillar 5: governance and Coordination		Pillar 3 & 4 : Communication +Dissemination+ Response		Pillar 2:Forecasting, Observing , Warning	
Enabling environment			Four Components of a MHEWS		
Coordinated and accountable governance system collaboration		Mechanisms for Effective planning and capacity	Effective budgeting and financing	Disaster risk knowledge	Warning dissemination & Communication
				Detection and Forecasting of Hazard	Preparedness and response capabilities
Policy Objective					
To strengthen the strategic frameworks and institutional structures at the national and community levels to deliver end-to-end and inclusive multi-hazard early warning services, which are flexible and adaptable, and that can support resilient people and sustain development in a changing hazard environment.					
Policy Implementation					
Mainstreaming	Partnerships	Monitoring, evaluating, and reporting		Implementation structure	Policy review

Tonga MHEWS Road Map, Weather Ready Pacific & Early Warning For All & CDRF: **What is Ahead?**

- Establish (or integration into existing) **national WRP/EW4All coordination mechanisms**;
- Designate or appoint **national WRP/EW4All coordinators and agency focal points**;
- Coordinate with UNCT focal points and EW4All Regional Pillar Leads for support
- Continue with **WRP/EW4All gap analyses**; Identify immediate technical support requirements
- Organise **multi-stakeholder WRP/EW4All consultation workshops** (could be in conjunction with project design consultations)
- Design **national WRP/EW4All roadmaps** & financing strategies; Budget activities;
- Organise follow-up workshops
- **Prepare project proposals to domestic and international financing mechanisms** such as CREWS, SOFF, GCF, etc. and multi-lateral and bilateral donors to implement the **WRP/EW4All roadmaps**

