

WMO Executive and RA-V Supporting the Region

Fourth Pacific Ministerial Meeting on Meteorology

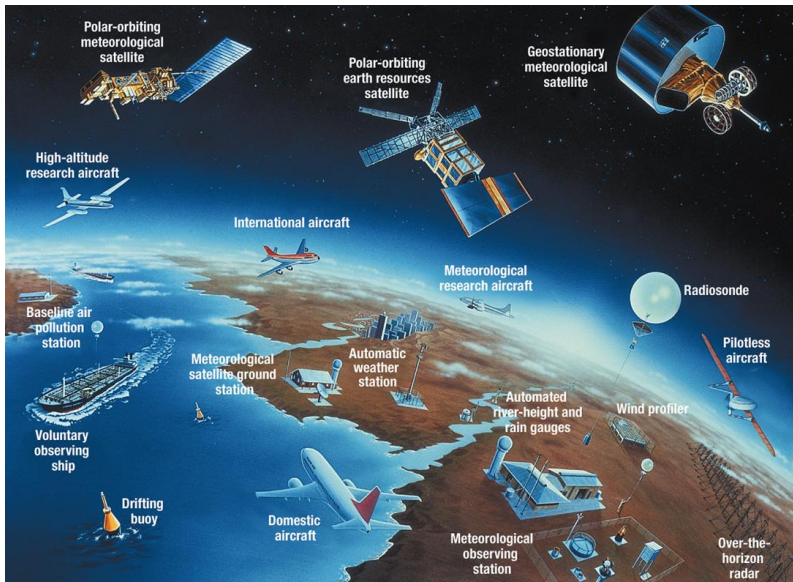
Presented by:

Ishaam Abader, (Representative of the WMO

Secretary General) / Director, Regional Coordination Office



World Meteorological Organization (WMO) at a glance



- United Nations specialized agency on weather, climate & water
- 193 Members, HQ in Geneva + regional offices
- 2nd oldest UN agency, established in 1873 as International Meteorological Organization
- Coordinates work of > 300 000 national experts from meteorological & hydrological services, academia & private sector
- Co-founder and host agency of IPCC
- Host for the Climate Risk and Early Warning Systems (CREWS) initiative
- Co-founder, technical authority and host for the Systematic Observations Financing Facility (SOFF): 33.4 M USD approved funding for 14 countries in the Pacific.

WMO and the HydroMet Value Chain

Our Mandate: Facilitate worldwide **cooperation** to advance the delivery and use of high-quality, authoritative weather, climate, hydrological and related environmental **services** by its **Members** to improve the well-being of all, through the **exchange of data, information products, standardization, applications, research, and training.**



WMO:
193 Members, 6 Regions
2 Technical Commissions, 1 Research Board
1 HQ, 9 Regional/Representative Offices

- WMO Headquarters
- ★ Regional/Rep Office
- ★ UN Affairs Office
- ★ EU Affairs Office

- Region I (Africa)
- Region II (Asia)
- Region III (South America)
- Region IV (North & Central America, the Caribbean)
- Region V (South-West Pacific)
- Region VI (Europe)

Note: Some Members participate in several RAs, such as the Russian Federation, France, the UK or the USA.



A year of visibility and transformation



75th anniversary, highest-level engagement

High-level event at Cg-Ext(2025) with participation of the UN Secretary-General, unprecedented political engagement and global visibility.



Call to Action on Early Warnings

WMO Secretary-General's Call to Action issued at Cg-Ext(2025) to accelerate implementation of early warning systems worldwide.



“One WMO” Secretariat transformation

Comprehensive reorganization to break silos, generate efficiencies and strengthen support to Members — carried out transparently.



Strategic Plan 2028–2031 underway

Foresight + regional consultations engaging ~two thirds of Members; coherent bottom-up and top-down framework.

**Disaster risk
knowledge**

**Detection,
monitoring,
analysis and
forecasting
of hazards**

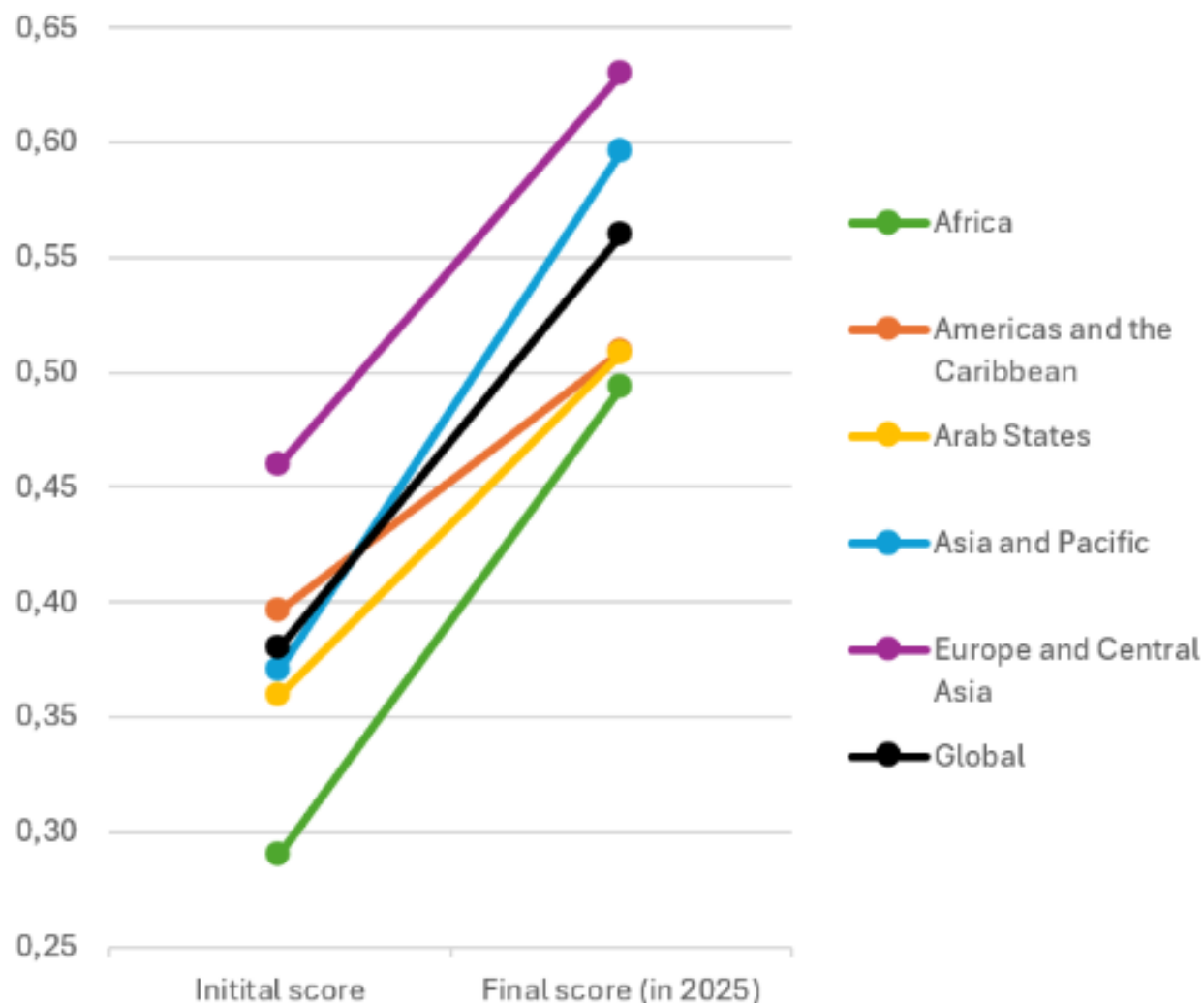
**Community
preparedness
and response
capabilities**

**Warning
dissemination
and
communication**



Early Warnings for All: Significant Progress, But Not Yet Universal Protection

- Every region has improved MHEWS, but coverage is not universal and is uneven.
- Consultations are currently occurring to guide the future of the Early Warnings For All global initiative post-2027
- Outcomes of PMC-8 & PMMM-4 will directly inform this process.
- Strong regional leadership in Pacific and a need to improve geohazard coverage - well-noted.



Early Warnings For All Dashboard

The Initiative's main data portal used to track progress and measure success along the M&E Framework.

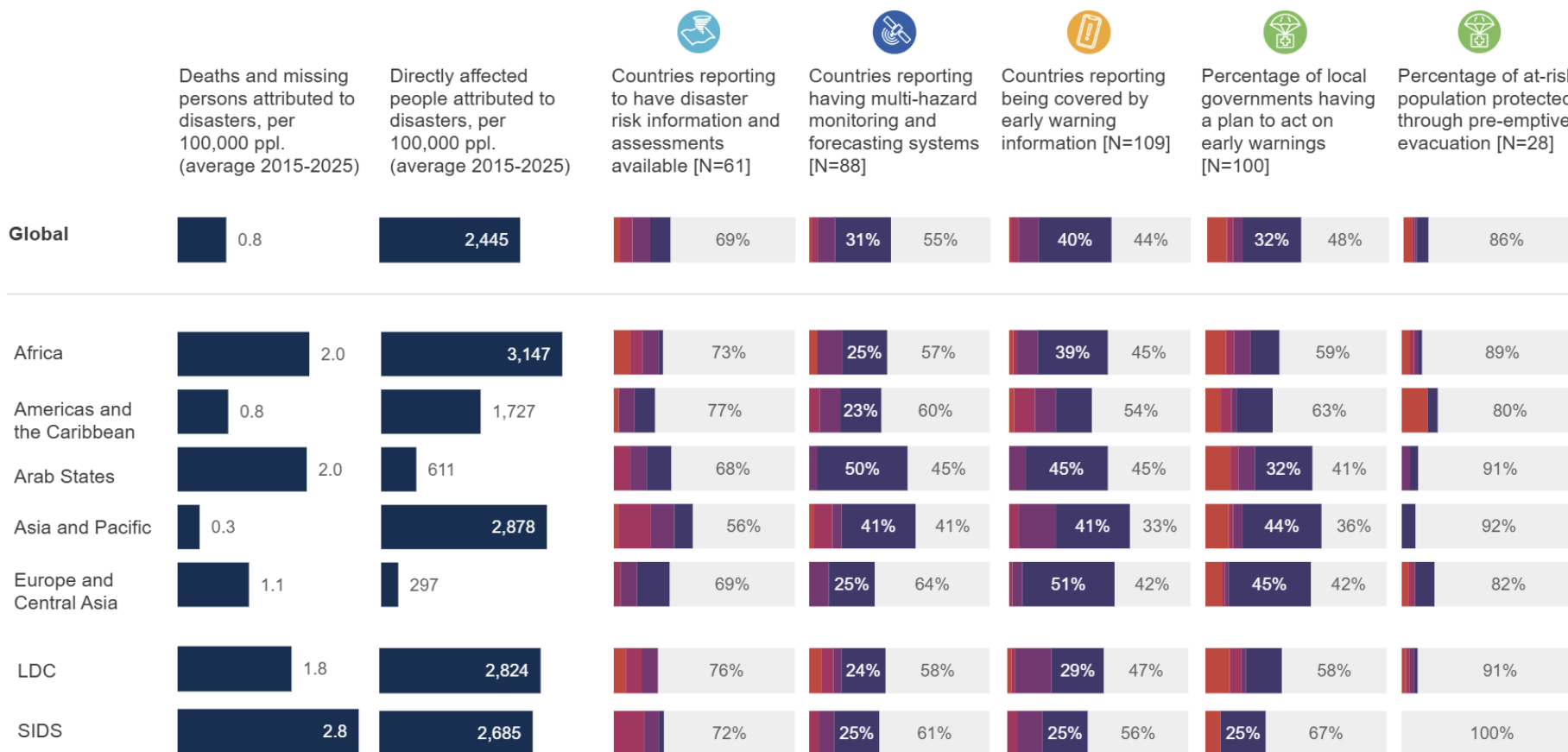
Global status of early warning systems

The indicators below are designed to capture the global impact of the Early Warnings for All Initiative across the four pillars of end-to-end, people-centred early warning systems.



Impact

Multi-Hazard Early Warning Systems capacity

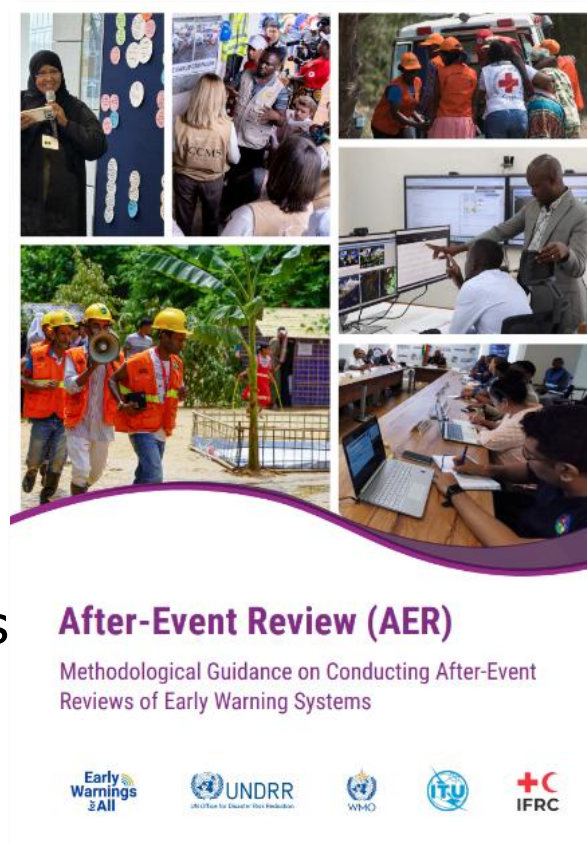


● Limited coverage ● Moderate coverage ● Substantial coverage ● Comprehensive coverage ● Not yet assessed

After Event Review and Simulation Manual

After Event Review: Structured, learning-oriented process for governments and stakeholders to assess EWS performance after a hazardous event.

EW4All Simulation Exercise Manual (upcoming): A step-by-step guide for designing and running functional and full-simulation exercises that test early warning and anticipatory action systems end-to-end.



Launched
4 August 2026



Leveraging AI to Enhance MHEWS

What this report provides:

Showcases practical AI solutions that can strengthen all four pillars of MHEWS, highlighting technologies already being applied around the world.

Identifies **operational gaps in MHEWS where AI can add value** and the conditions needed for responsible, effective implementation.

Developed under the **AI for EW4All Group**, bringing together global case studies, partner experience and emerging research.



Launched July 2026

Download the report

AI Opportunities Across MHEWS Pillars

Disaster Risk Knowledge



- Risk data discovery and integration
- Exposure and vulnerability baselines
- Use of risk information in early warning and early action
- Loss and damage data tracking & analysis

Detection, Observation, Monitoring, Analysis, and Forecasting



- Nowcasting
- AI weather prediction
- Flood and cyclone forecasting
- Impact-based forecasting

Warning Dissemination and Communication



- Automated translation
- Personalised alerts
- Misinformation management

Preparedness to Respond to Warnings

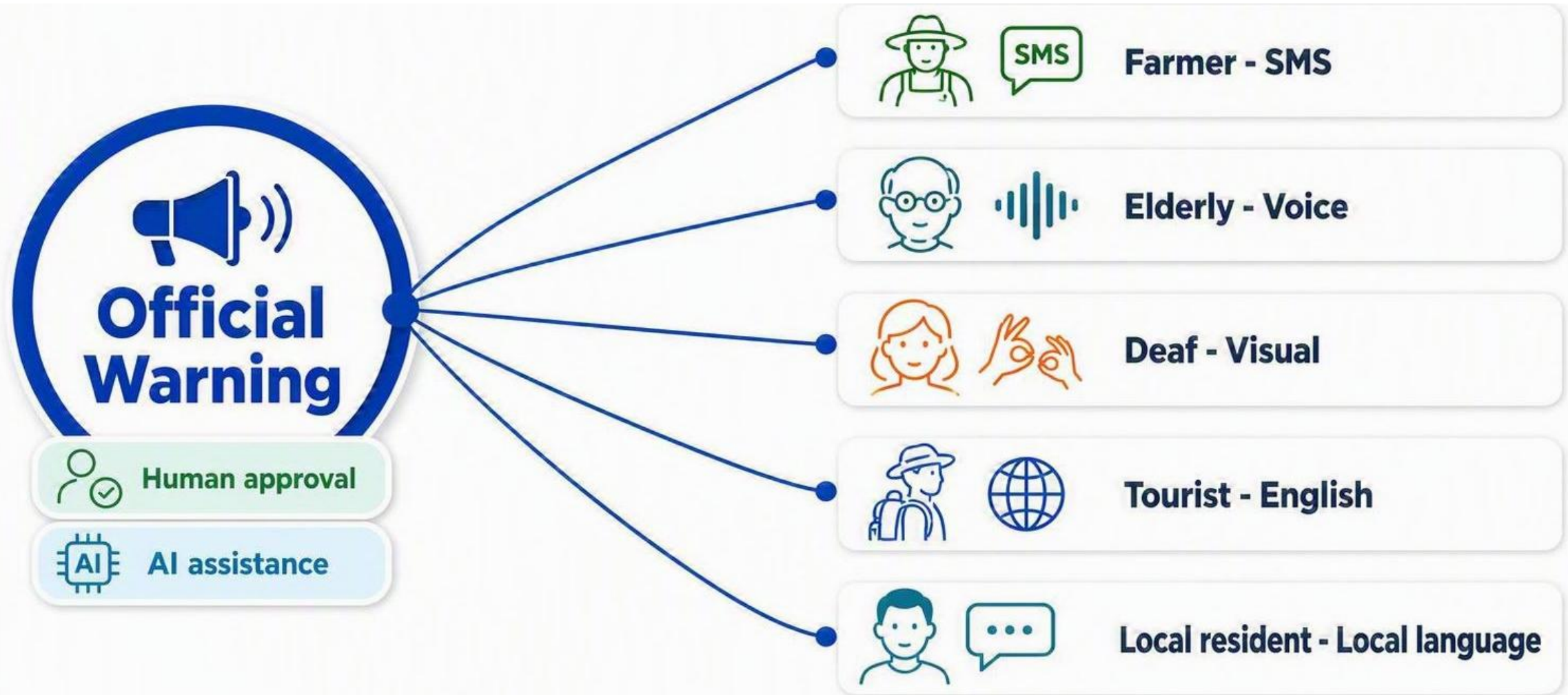


- Scenario modelling
- Resource optimisation
- Anticipatory action triggers



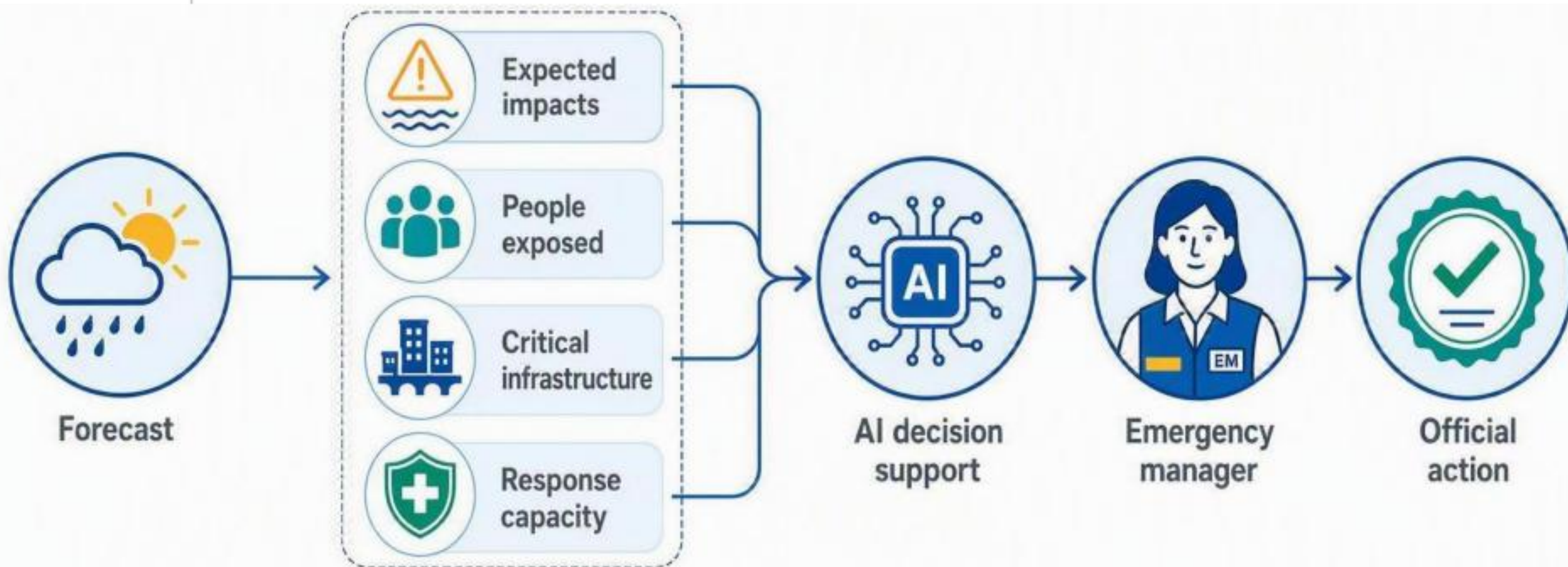
AI allows for end-to-end solutions - connecting all four pillars into interoperable, people-centred warning systems

One Official Warning - Multiple Personalized Messages



The warning remains official. AI personalises how it is delivered - not what it says

From Forecasts to Decisions



AI strengthens evidence. People remain accountable for life-saving decisions

Working Structure of WMO RA V

Management Group

President: Laitia FIFITA (Tonga)

Vice-president: Misaeli FUNAKI (Fiji)

EC Members:

Dr Stuart MINCHIN (PR of Australia)

Prof. Teuku Faisal FATHANI (PR of Indonesia)

Ms KOH Li-Na (PR of Singapore)

Regional Hydrological Adviser (RHA): Mr Iuma BANI (Vanuatu)

Task Team on Early Warnings for All (TT-EW4All)

C: Agie Putra
VC: TBD

WG on Services (WG-S)

C: Andrew Tait
VC: Thea Turkington

ET-DRR
ET-CLI
ET-MMO
ET-AVI
ET-HS

Coordination Panel on Hydrology and Water Resources (CP-H)

C: Vacant
VC: Vacant

RA V RHA

ET Chairs

WG on Infrastructure (WG-I)

C: Karl Monnik
VC: Leonard Bale

ET-WIGOS
ET-WIS
ET-WIPPS
ET-SAT
ET-HM

Tropical Cyclone Committee for the SP and SEIO (TCC)

C: Chris Noble
VC: Laitia Fifita

WMO Members of
RA V in the South
Pacific and South-
East Indian Ocean

Research Focal Points (RFPs)

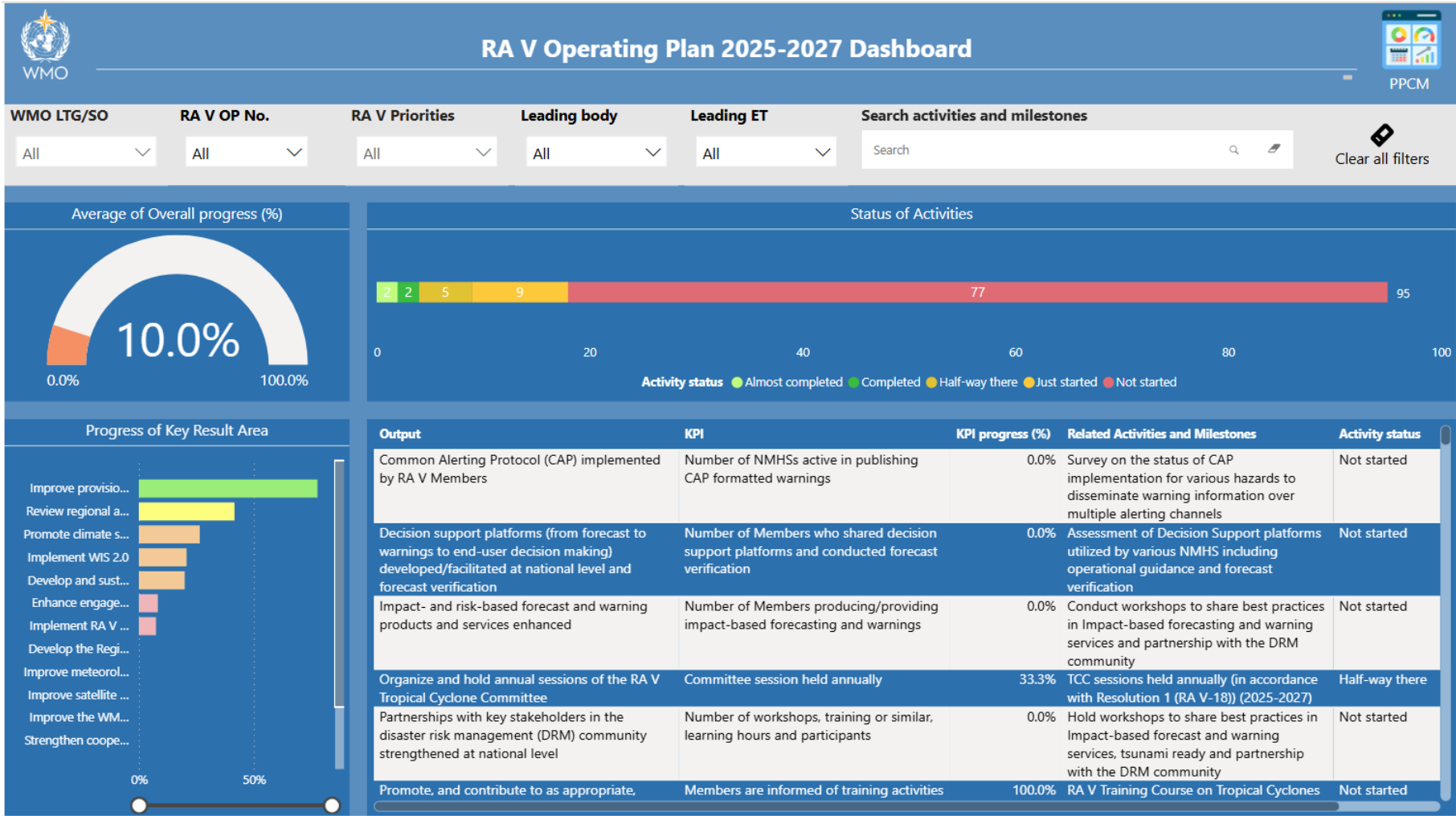
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Research
focal points:

Dr Viliamu Iese
Mr Nanda Alfuadi
Dr Thea Turkington

Regional Operating Plan for RA V 2025-2027 and Dashboard

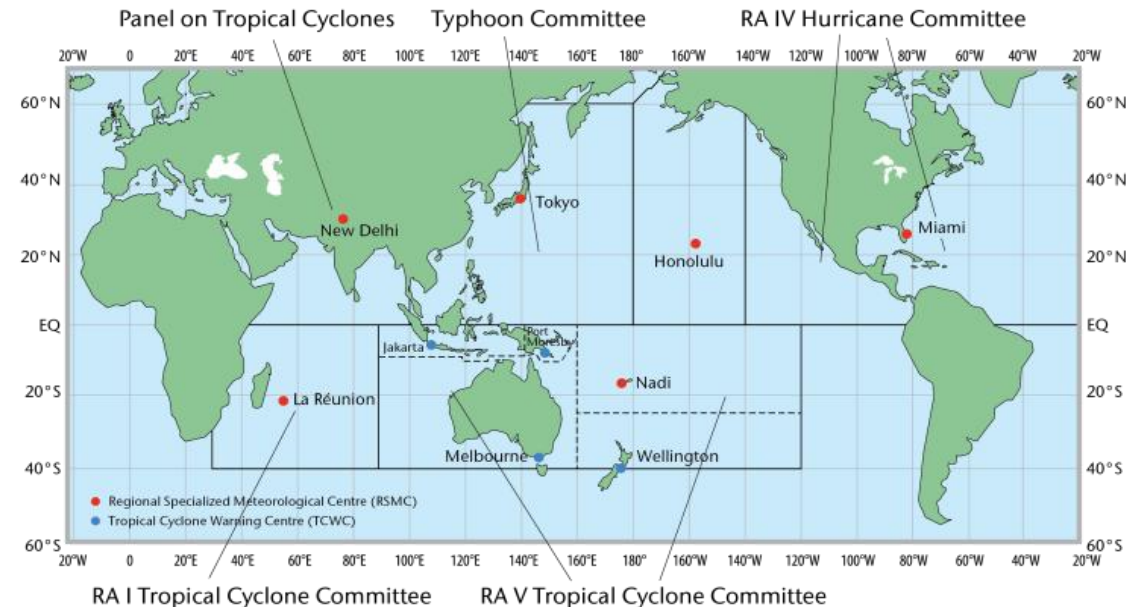


Regional Training Centre (RTC) and Regional Instrument Centre (RIC) in RA V (Pacific)

- Congratulate the Fiji Meteorological Service (FMS) as the newly accredited RTC in RA V, South-West Pacific and appreciate FMS for supporting NMHSs with testing and calibration of observational equipment at the RIC.

Regional Specialized Meteorological Centres (RSMCs)

- Acknowledge the work through the RSMC Fiji, RSMC Wellington, RSMC Darwin



Regional Climate Centre (RCC) Network and Climate Services in RA V

- Application and status report of the Pacific RCC Network has been endorsed by the RA V Working Group on Services (WG-S), now being sent to SERCOM/INFCOM for endorsement.
- State of the Climate in the South-West Pacific Report published in July – SPREP/PCCC/Pacific RCC-N invited to contribute to the 2026 and future editions.



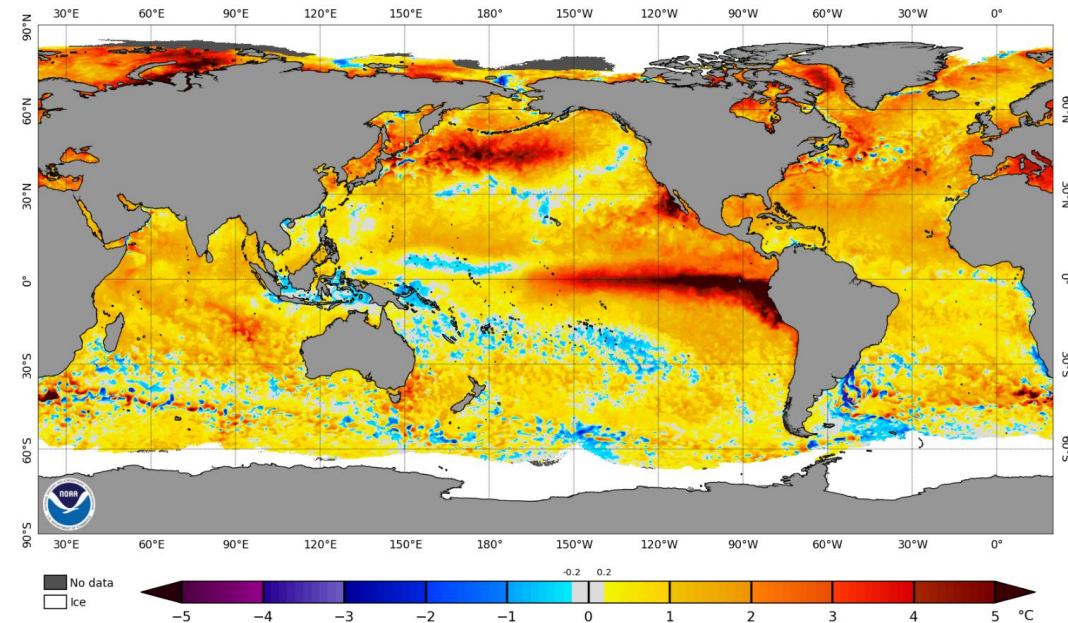
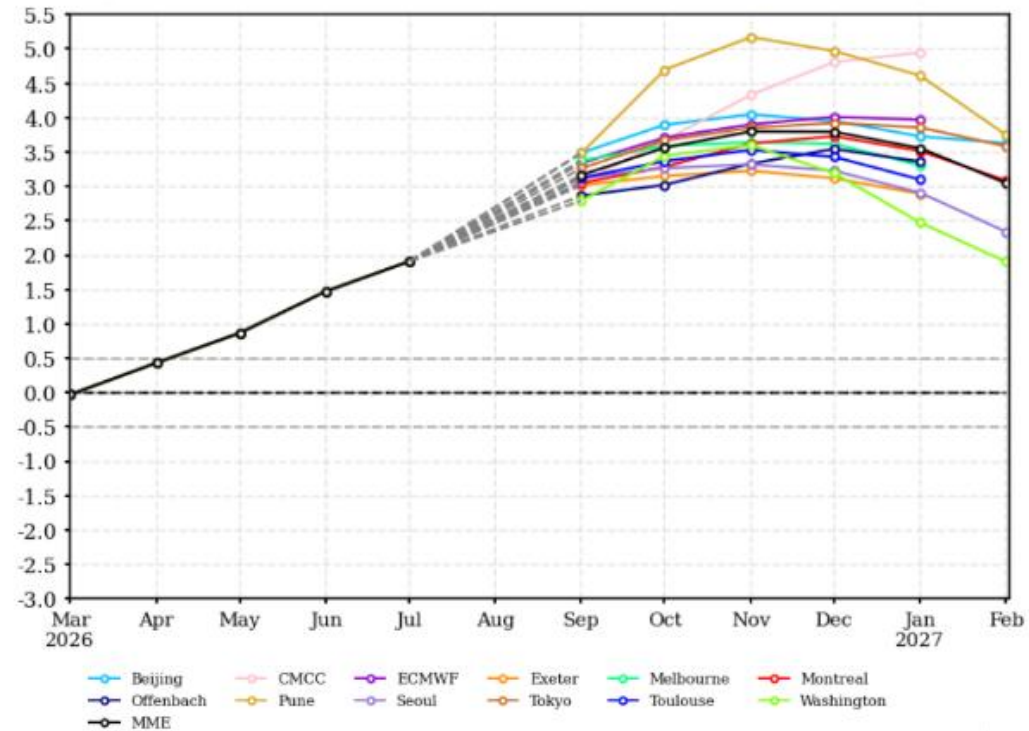


Regional climate

- 2025 was the second warmest year on record for the South-West Pacific region
- Marine heatwaves disrupted ecosystems and fisheries.
- From 1999–2025, sea level rose at an average rate of 3.7 ± 0.03 mm per year.
- Indonesia's last tropical glacier is just 2% of its 1988 size and may disappear in 2026
- Rare tropical cyclone killed more than 1,200 people in Indonesia and Malaysia
- Early warnings and early action save lives, but critical coordination and capacity gaps remain.

El Niño update

- El Niño is firmly established and is expected to strengthen further.
- WMO Forecasts show near 100% likelihood that it will persist through February 2027.
- Exceptionally warm tropical Pacific Ocean conditions support further intensification.
- A very strong El Niño can significantly shift rainfall and temperature patterns worldwide and fuel extreme weather.
- WMO and NMHSs step up preparedness and early-warning efforts for an exceptional event.



WMO Projects & Technical Assistance

RA V countries receive strong support through WMO implemented projects, with a robust pipeline of initiatives to strengthen their capacity to deliver weather, climate, and water-related services to communities

GLOBAL CONTEXT

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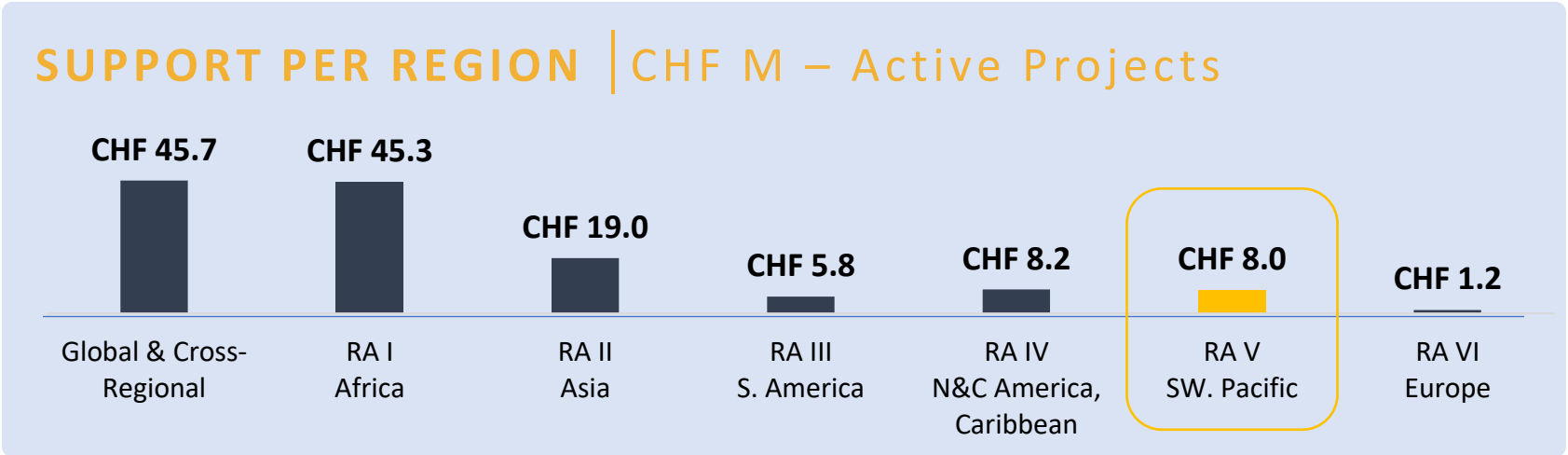
Active Projects & Technical Assistance Services

WMO as leading Implementing Partner, Consortium Member, Junior Partner, or Technical Advisor

CHF 133.3 M

committed

Active Projects implemented by WMO



TOP 5 DONORS

CREWS	46.9 M	35.2 %
US DoS	21.4 M	16.1 %
AF	9.3 M	6.9 %
Saudi Arabia	8.6 M	6.5 %
SDC	8.2 M	6.2 %

PACIFIC REGION

3

Projects currently in implementation

8 M

CHF in pledged funding for active projects

Visit www.wmo.int/project

RA V projects at a glance...

24 WMO Members

5 EW4All Countries

Fiji, Kiribati, Samoa,
Solomon Islands, Tonga



CHF ~8.0 M
investment in EW4All
countries in RA V
through projects



5 Active Projects

3 New Projects
Pre-Approved

Investments in EW4All countries

- » **Min. CHF 1.3 M** support to close observation gaps
- » **Min. CHF 1.4 M** support to enhance regional or national data management for forecasting & warning systems
- » **Min. CHF 1.0 M** support to improve forecasting capabilities
- » **Min. CHF 1.9 M** investment in improved warnings & forecasting

Enhanced Regional Partnerships



ESCAP
Economic and Social Commission
for Asia and the Pacific



UNDRR
UN Office for Disaster Risk Reduction



UNITED NATIONS
الأمم المتحدة
ESCWA



Association of Southeast Asian Nations

INTERNATIONAL



FEDERATION

International Federation of
Red Cross and Red Crescent
Societies Asia Pacific (IFRC AP)



**Cooperation Council for the
Arab States of the Gulf (GCC)**



WORLD
METEOROLOGICAL
ORGANIZATION



SPREP
Secretariat of the Pacific Regional
Environment Programme



Pacific
Community
Communauté
du Pacifique



**Asia-Pacific Space
Cooperation Organization**



ICIMOD

The International Centre for
Integrated Mountain Development

Key Messages

- Elevate NMHSs within national governance through legislation, strategic plans and government support.
- Encourage and enable better collaboration and cooperation among all NMHSs, partners and donors in the region.
- Identify sustainable funding opportunities that address regional needs including CREWS and SOFF in collaboration with WRP
- Extend support to GBON ocean systematic observations in the Pacific
- Call for regional experts to join expert teams and technical bodies to share knowledge and insights from the Pacific

Thank you



WMO