

APCC 기후데이터 및 기후서비스

-2026년도 기후정보 활용 워크숍-



2026.10.1.

아시아·태평양경제협력체 기후센터

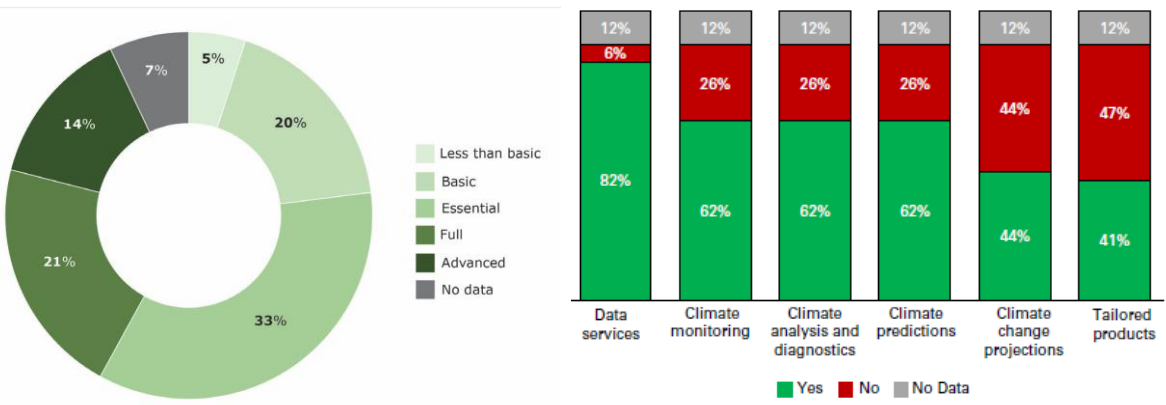
APEC Climate Center(APCC)'s Approach for Climate Services

<Climate Services>

- **Transformation of climate-related data into customized products** such as projections, forecasts, information, trends, economic analysis, assessments (including technology assessment), counselling on best practices, development and evaluation of solutions and any other service in relation to climate **that may be of use for the society** at large.
- **Enable better management of the risks** of climate variability and change **and adaptation** to climate change, **through** the development and incorporation of **science-based climate information and prediction** into planning, policy and practice on the global, regional and local scale.

<Global distribution of climate services capacity levels, shown as a percentage of Members, for each capacity level>

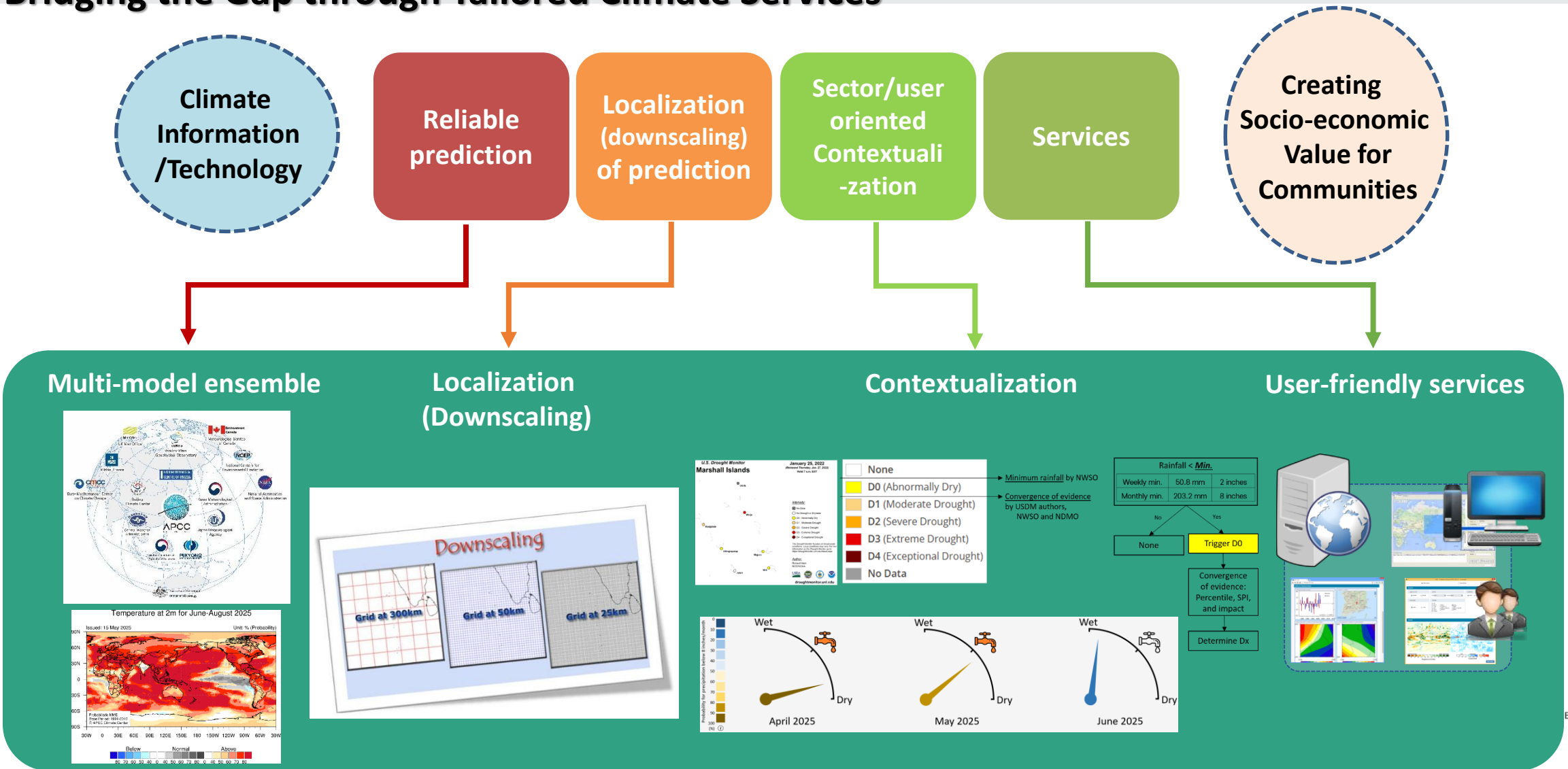
- **2024 State of Climate Services**
 - Based on the available data from 179 WMO Members, there has been improvement in climate services capacities over the last year.
 - However, in 2024, most WMO Members (33%) were still providing climate services at an essential level only.
 - One third of the world's people, mainly in least developed and small island developing economies, are still not covered by early warning systems.
 - Only 14% of WMO Members are providing climate services at an advanced level, **where the co-design and co-development of tailored climate services products take place.**
 - **There is room for improvement, in particular in the co-design and co-development of tailored climate services products.**



<Percentage of Meteorological Services providing climate services for disaster risk reduction>

APEC Climate Center(APCC)'s Approach for Climate Services

- Bridging the Gap through Tailored Climate Services



APEC Climate Center(APCC)'s Approach for Climate Services

- APCC's (reliable) Prediction Data

(1) Seasonal Prediction

Lead Time	Forecast Frequency	Models	Number of Ensemble	Prediction Data
3~6 months	monthly	16 models ※ Korea(APCC, KMA, PKN, PNU-RDA), UK(UKMO), France(MetFR), Italy(CMCC), Australia(BoM), China(BCC), Japan(JMA), Canada(ECCC), USA(NASA, NCEP), Russia(HMC, MGO), Chinese Taipei(CWA)	approximately 500 ensembles	deterministic and probabilistic prediction for 8 variables including t2m, prec, SST (monthly mean)

(2) Sub-seasonal Prediction (on-going)

Lead Time	Forecast Frequency	Models	Number of Ensemble	Prediction Data
3~4 weeks	weekly	10 models ※ Korea(APCC), ECMWF, Australia(BoM), Canada(ECCC), USA(NCEP, EMC, ESRL, GMAO, RSMAS), Russia(HMC)	approximately 280 ensembles	deterministic and probabilistic prediction for t2m, prec, SST (weekly mean)

(3) BSISO Prediction

Lead Time	Forecast Frequency	Models	Number of Ensemble	Prediction Data
20 days	daily	5 models ※ USA(CFS/NCEP, GFS/NCEP), ECMWF, Australia(BoM), Chinese Taipei(CWA)	approximately 150 ensembles	phase diagram, impact anomalies, heavy rainfall probability (daily mean, pentad mean, weekly mean)



APEC Climate Center(APCC)'s Approach for Climate Services

- **Examples: 1. Climate Information Services for Resilient Development Planning in Vanuatu**

Vanuatu Klaemet Infomesen blong Redy, Adapt mo Protekt (Van-KIRAP)

- Funding: GCF/Accredited Entity: Technical Partners: SPREP/APCC, CSIRO, BoM

- **Reliable/Localized prediction**

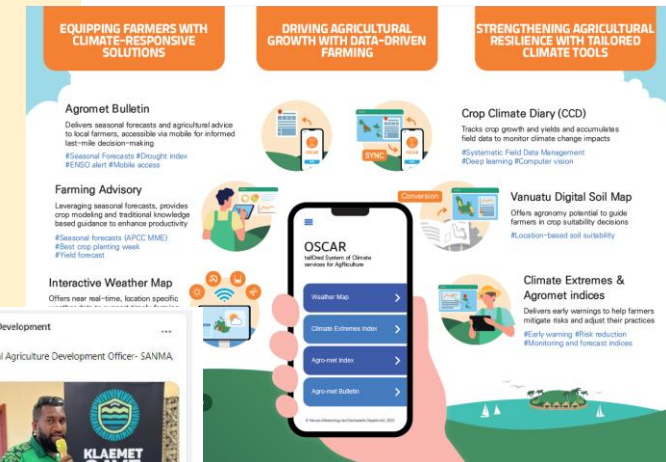
- (1) APCC Multi-model ensemble seasonal prediction downscaled to Vanuatu
- (2) Undertaking field trials and validation for Taro and Cassava

- **Contextualization**

- (1) Collecting, modeling, analysis and reporting of agro-met data
- (2) Development of an agricultural climate information services system to determine optimal agriculture crop planning options (decision-making)

- **Services**

- (1) Develop Agro-met information portal (on-line IT infrastructure and software)
- (2) Training of trainers, official handover to the Government of Vanuatu



APEC Climate Center(APCC)'s Approach for Climate Services

- Examples: 2. Strengthening Climate Resilience in Peru through Enhanced Climate Information Services and Capacity Building for Climate Change Monitoring and Prediction
- Funding: KOICA/Technical Partners : APCC, Weatherpia, SENAMHI

- Reliable/Localized prediction

(1) APCC Multi-model ensemble seasonal prediction downscaled/tailored to Peru

* Peru: 38 types of climate zone and El Nino → coastal/mountain regions, rain forest

- Contextualization

(1) Improving the provision of sectoral (Agriculture) climate information

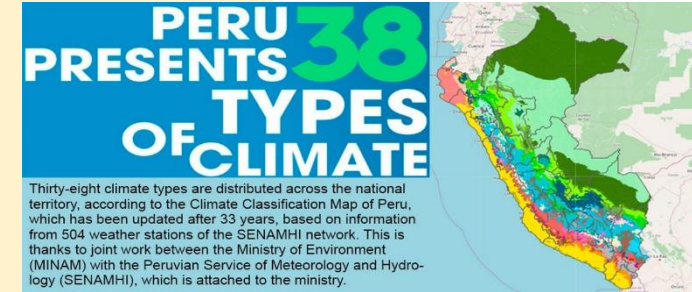
(2) New installation/improvement of PGA (Plataforma de Gestion Agroclimatica)

- Services

(1) Advancing weather/climate data platform

(2) Capacity building (staffs for tailored climate prediction, farmers for Agro-met information)

(2) Enhancing local communication



APEC Climate Center(APCC)'s Approach for **Climate Services**

Bell rings (to save people): 경종 警鐘
vs Bell tolls (for victims): 조종 弔鐘

- People-centered (last-mile population)
- Evidence-based
- Target-specified (region, sector, users)
- End-to-end



Thank you.