



Regional Workshop on Framework and Toolkit Development

RIMES-Serving as Regional Mechanism under SAHF Umbrella

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Regional Partnerships for Weather and Climate Services Delivery Enhancement



Support to RIMES Services

Intergovernmental Mandate and Ownership

- The RIMES Council, through its intergovernmental governance structure, ensures collaborative data and expertise sharing, and co-production and customization of services that are responsive to differential needs and demands of Member States.
- In the last 15-years from inception in 2009, RIMES leveraged support from predominantly India contributions and various project opportunities with support from UNESCAP, UNEP (GCF), USAID, FCDO/UKMET, and World Bank (through SAHF and CARE projects) to incrementally build the Regional Multi-hazard, Multi-scale, and Multi-purpose Early Warning Center and operationalized it in full scale in 2024.

Pillars of the RIMES Early Warning Center Operations

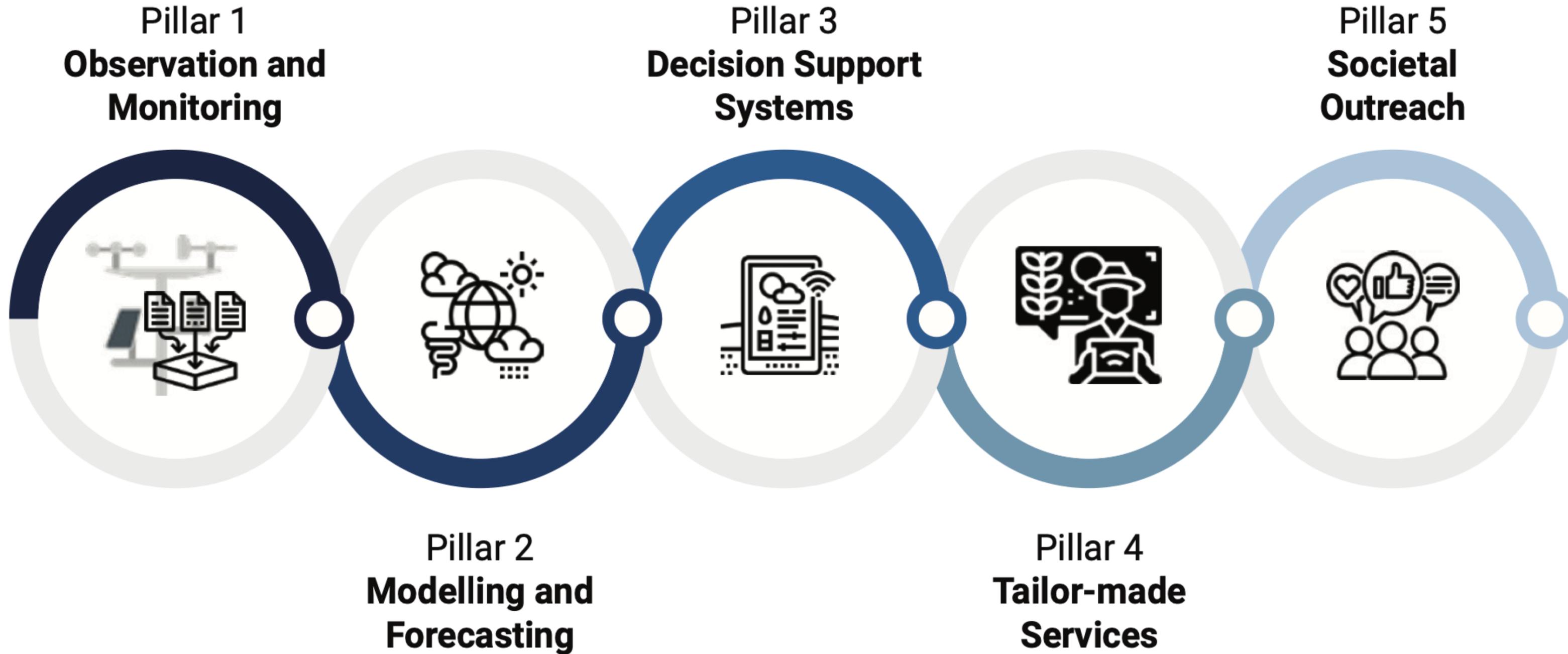


Figure 1. The five pillars of the climate information and early warning systems value chain

Modelling and Forecasting Efforts

- Non-Global Telecommunication System (GTS) data sharing among participating NMHSs is pursued via the Data Exchange (DataEx) platform, a digital hub for sharing/accessing, curating, and visualizing observation and forecast data. Weather/climate observation data are utilized to enhance early warning/forecast accuracy/ resolution through the collaboration with the European Center for Medium-Range Forecasts (ECMWF), and the Government of India's IMD, National Center for Medium Range Weather Forecast (NCMRWF). High resolution forecast data, from ECMWF, IMD and NCMRWF, are provided to NMHSs for their reference/use.
- To enhance collaborative engagements among NMHSs to address weather/climate forecast accuracy/customization, RIMES facilitates the South Asian Climate Outlook Forum (SASCOF), the Association of Southeast Asian Nations Climate Outlook Forum (ASEANCOF), and the South Asia Hydromet Forum (SAHF).
- SAHF established the Weekly Forecasters' Forum to leverage regional and national capacities for collective sharing of expertise, learning, and enhancement of weather forecasts (197-weekly consultations completed so far)

Translating Data into Actionable Information – Decision Support Systems

- RIMES established the National Seasonal/ Monsoon/Climate Forums as a first- generation platform for co-production of early warning-informed decision guidance products between NMHSs and sectoral institutions (including agriculture, water resources, disaster risk management, etc.).
- These forums evolved as technological advancements become more accessible and established sector-specific digital decision support systems (DSSs) to assess sectoral opportunities and risks per evolving early warning information.
- A number of these Forums upgraded, through formal arrangements, to become Climate Application Centers which are nuclei for national institutions for co-production of climate-informed sectoral early warning.
- These centers – including the IMD-RIMES Unit (IRU) for impact forecasting in India, the Sri Lanka National Climate Application Center (SLNCCA), and the Bangladesh National Climate Information Application Center (BANCCA) – are hubs for the integration of NMHSs and sectoral/ user institutions that culminate to the development of digital DSSs.

Co-production of Multi-Hazard Decision guidance Products

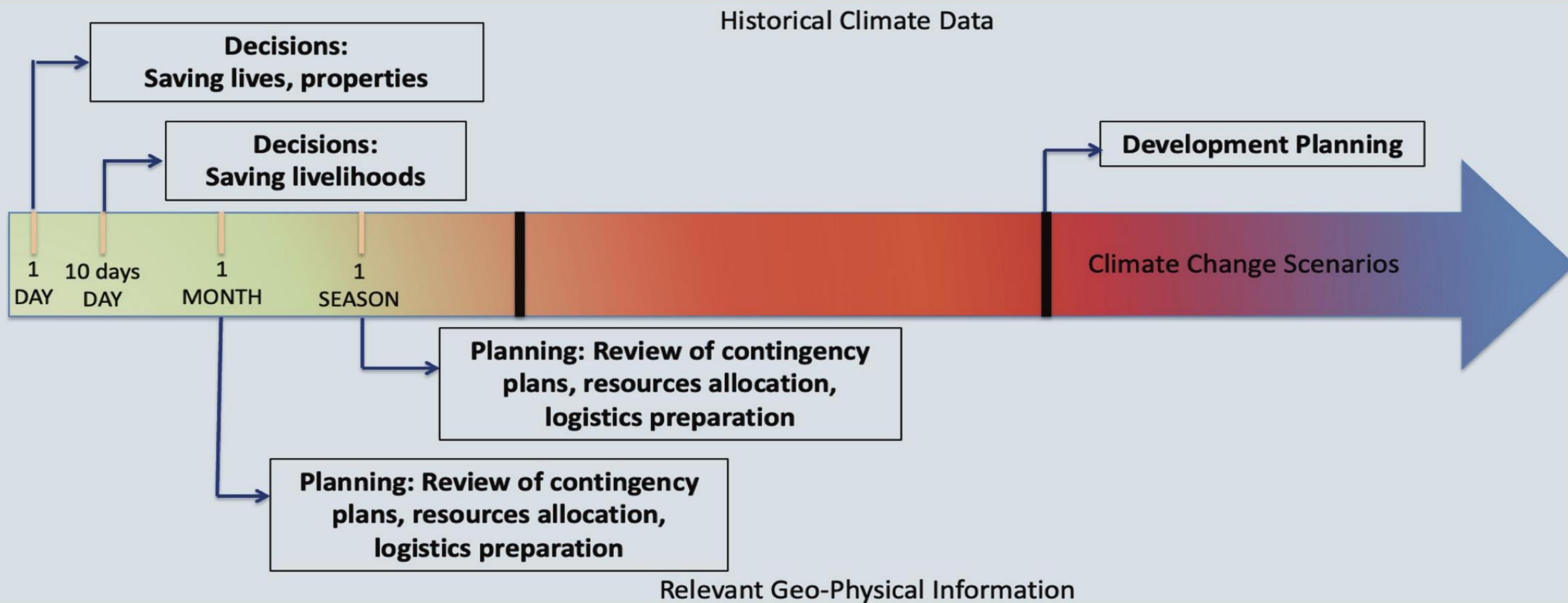


Figure 2. Societal engagements capacitate sectoral institutions/end users in nuanced application of multi-hazard decision guidance products, ranging from decisions that need to be undertaken most immediately to long-term development planning. These societal engagements also serve as an effective feedback loop, to regularly steer RIMES products and services to dynamic stakeholder's requirements.

Numerous sector-specific DSS were developed or enhanced to help different sectors manage climate risks:

Agriculture/Livestock:

- » BAMIS (Bangladesh): Supports agromet information dissemination via portals, kiosks, and apps
- » NLAS (Bangladesh): Provides climate-smart advisories for the livestock sector
- » BICAS Chatbot (India): Offers farmers access to location-specific weather updates and agricultural advisories
- » ADVISE (Nepal & Pakistan): Delivers real-time data and crop advisories for climate-resilient agriculture
- » SESAME (Timor-Leste): Provides alerts and advisories for priority crops based on weather parameters

Water:

- » FFWC Web Portal Enhancement (Bangladesh): Transforms the existing portal into a DSS with improved flood forecasting and visualization tools

Transport:

- » NAVIGATE (Nepal): Aids climate-resilient road operations and maintenance planning

Ocean:

- » OSFAS (Timor-Leste): Delivers alerts for safe sea navigation and sustainable fishing
- » Tsunami DSS (Thailand): Integrates various data sources for enhanced tsunami warning generation

Health:

- CRISH (Timor-Leste): An advisory system based on forecasts for climate-sensitive diseases.

Planning:

- CLIM-PLANNeD (Pakistan): Provides data-driven insights for strategic planning across sectors, including agriculture and transport

Disaster Management:

- RAPID (Bangladesh): Integrates flood vulnerability, impact maps, and early action plans for Forecast-based Action (FbA)
- INSTANT (Bangladesh, Nepal, Pakistan, Sri Lanka): An integrated platform for disseminating forecasts and alerts for multiple hazards
- SATARK (Nepal & India): A system for assessing, tracking, and alerting disaster risk information based on dynamic risk knowledge
- TNSMART (India): A Web-GIS based system for multi-hazard preparedness, response, and tracking in Tamil Nadu

RIMES aims to solidify its role as a regional center of excellence for end-to-end climate information and EWS under WISER SA (IBF and Climate Services) and CREWS-SA initiatives to refine its service delivery by strengthening user sector partnerships.