SAHF IBF WG Implementation Plan Project

Regional Workshop on Impact-Based Forecasting: Training of Trainers (ToT) and National Demonstration Planning for Temperature-related Hazards

09 – 13 February 2026; Kathmandu, Nepal

Background

South Asia is increasingly exposed to temperature-related hazards, with climate change intensifying heatwaves, cold spells, and unseasonal extremes that place growing pressure on public health, livelihoods, and climate-sensitive sectors. These risks highlight the need for more actionable, people-centered early warning systems, where impact-based forecasting (IBF) supports timely and informed decision-making by linking hazards with exposure and vulnerability. Under the WISER Asia Pacific-funded South Asia Hydromet Forum (SAHF) IBF Project, a first Regional Workshop was held to develop a regional framework and toolkit for IBF of temperature-related hazards. The workshop helped establish common concepts and approaches and initiated discussions on how the framework could be applied through national demonstration activities. Building on this foundation, South Asian countries began identifying priority sectors, vulnerable groups, and institutional arrangements for applying the framework in national contexts.

The next critical step is the preparation, finalization, and establishment of national IBF demonstrations. National demonstrations serve as practical testing grounds for the regional framework and toolkit, allowing countries to translate regional guidance into operational products, institutional workflows, and sector-specific advisories. Through co-production with sectoral agencies and communities, demonstrations help refine thresholds, impact matrices, Early Action Protocols (EAPs), and Standard Operating Procedures (SOPs), while generating evidence on what works, what needs adaptation, and how IBF can be sustained within national systems.

Equally important to the success and sustainability of these demonstrations is the development of national capacity through a structured Training-of-Trainers (ToT) approach. The ToT model is designed to develop a core group of national trainers who can contextualize IBF tools, support implementation during demonstrations, and cascade knowledge to sectoral partners and sub-national actors. Insights from the previous regional workshop highlighted that long-term institutionalization of IBF depends not only on technical forecasting skills, but also on strong facilitation, communication, and coordination capacities. The ToT approach therefore emphasizes continuous participation, clear roles and responsibilities, and an iterative cascading model supported by RIMES and the UK Met Office, ensuring coherence at the regional level while allowing flexibility for national adaptation.

In this context, the Second Regional SAHF IBF Workshop is designed to bring these two aspects together through a combined Training-of-Trainers and National Demonstration

Planning approach. The workshop builds on the outcomes of the first regional engagement by shifting from conceptual understanding to applied, operational, and replicable IBF practice.

The workshop aims to strengthen the capacity of National Meteorological and Hydrological Services (NMHSs) in South Asia to design, operationalize, and communicate Impact-Based Forecasts for temperature-related hazards. It will follow an end-to-end IBF approach, guiding participants through the full IBF process, from forecast generation and interpretation, to impact analysis, trigger and threshold development, action-led warnings, and effective communication and dissemination.

The first four (4) days will be delivered as a Training-of-Trainers, equipping participants not only with technical knowledge but also with facilitation skills and practical tools that can be cascaded at their respective in-country national and sub-national levels. Key thematic areas include exposure and vulnerability analysis, integration of Gender Equality, Disability and Social Inclusion (GEDSI), development of multi-indicator triggers, risk-based decision-making, behavioral insights for communication, and operational IBF workflows.

The final day is dedicated to National IBF Demonstrations, where participating countries will apply the concepts and tools introduced during the ToT sessions to refine and finalize their country-specific IBF pilot designs. This includes defining priority temperature-related hazards, target sectors, triggers and thresholds, early actions, communication approaches, and next steps for implementation.

Objectives

The workshop aims to:

1. Build national capacity through a Training-of-Trainers (ToT) approach by delivering targeted training on priority technical and operational gaps, and by clarifying roles, cascading mechanisms, and the technical assistance required to sustain IBF implementation beyond the project period.

2. Finalize national IBF demonstration plans for implementation during the 2026 heat and cold seasons, including agreement on objectives, scope, phasing, roles, and institutional arrangements.

3. Strengthen coherence between national demonstrations and the regional IBF framework and toolkit, ensuring technical consistency, effective co-production, and context-specific adaptation across participating countries.

Expected Outputs

- An agreed Training-of-Trainers (ToT) arrangement, including national focal points, defined roles, and cascading and technical support mechanisms.

- Finalized national IBF demonstration plans for the 2026 heat and cold seasons, covering objectives, priority sectors and locations, implementation phasing, and coordination arrangements.

- Confirmed alignment with the regional IBF framework and toolkit, ensuring consistent concepts, methodologies, and operational approaches across countries.

Target Participants

The workshop will bring together representatives from:

- National Meteorological and Hydrological Services (NMHSs), who will serve as the initial national Training-of-Trainers (ToT) focal points. These participants will form the core of national ToT teams responsible for cascading IBF knowledge and supporting national demonstration implementation. As introduced during the first regional workshop, RIMES has shared preferred qualifications and skills to guide NMHS nominations.

- Relevant user agencies (e.g., health, agriculture, disaster management, water, urban services) that will partner with NMHSs in the design and implementation of national IBF demonstrations.

- Development partners and technical organizations engaged in the SAHF IBF Working Group, supporting coordination, technical alignment, and knowledge exchange.

Training-of-Trainers (ToT) Nomination Criteria

NMHSs are requested to nominate participants who meet the following criteria:

- Technical background in climate services, forecasting, and/or disaster risk management
- Experience working with sectoral user agencies (e.g., DRM, agriculture, health, water)
- Familiarity with impact-based forecasting (IBF) concepts and applications
- Strong communication and facilitation skills
- Experience in training delivery, coaching, or mentoring approaches
- Commitment to participate in all ToT activities and national demonstration phases
- Formal endorsement from NMHS senior management

Administrative Details

Date: **09 – 13 February 2026**
Location: **Himalaya Hotel, 3584 Yala Sadak, Lalitpur 44600, Nepal**

Contact Person:
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WORKSHOP AGENDA

DAY 1 (February 9): Regional IBF Context & Forecast-to-Impact Pathway

TIME	ACTIVITY
08:30 – 09:00	**Registration**
09:00 – 09:30	**Opening Session** Welcome Remarks RIMES, UKMO, and DHM Workshop Overview Dr. Anshul Agarwal, Danna Valdez, and Peter Ferrer, RIMES Participant Introduction / Group Photo
09:30 – 10:00	**Session 1: IBF for Temperature-related Hazards – Refresher (Applied)** Dr. KJ Ramesh, RIMES ● End-to-end IBF value chain for temperature hazards ● IBF as a process supporting decision-making, not standalone product ● Temperature Hazards in South Asia
10:00 – 10:20	**Session 2: Regional IBF Framework and Toolkit** Danna Valdez, RIMES ● Regional IBF Framework Overview ● IBF Toolkit components
10:20 – 10:40	**Morning Break**
10:40 – 11:30	**Session 3: Forecast Generation for Temperature Hazards** Dr. Shiromani Jayawardena & Rabbani Golam, RIMES ● Forecast types, lead times, and uncertainties ● Strengths and limitations of temperature forecasts for IBF ● Bias correction for temperature hazards forecasting to address how biases translate into indices
11:30 – 12:30	**Session 4: Overview / Demo of Regional Tool (INSTANT South Asia)** Rabbani Golam, Raihanul Khan, & Asif Udin Bin Noor, RIMES ● Co-design session of the INSTANT Tool (show demo, followed by group work to get user feedback on the design)
12:30 – 13:30	**Lunch Break**
13:30 – 14:30	**Session 4 Cont'n: INSTANT Tool Co-Design Session** Rabbani Golam, Raihanul Khan, & Asif Udin Bin Noor, RIMES ● Co-design session of the INSTANT Tool (show demo, followed by group work to get user feedback on the design)
14:30 – 14:45	**Afternoon Break**
14:45 – 16:45	**Session 5 + Group Exercise 1: Translating Forecasts into Impacts** Helen Caughey, UKMO and Ramiz Khan & Madhab Uprety, RCCC ● Introduction to Impact Tables and their role in IBF ● Examples of Impact Tables for temperature related hazards ● Introduction to facilitating national co-production of impact tables ● Development of temperature related impact tables
16:45 – 17:00	**Wrap-up and Reflections**

DAY 2 (February 10) – Exposure, Vulnerability, GEDSI, and Impact Prioritization

TIME	ACTIVITY
08:30 – 09:00	**Signing of Attendance**
09:00 – 09:15	**Daily Recap**
09:15 – 10:45	**Session 6: Exposure, Vulnerability, and GEDSI in IBF** Asif Uddin Bin Noor/Raihanul Haque Khan, RIMES ● Understanding exposure and vulnerability in the context of temperature-related hazards ● Why GEDSI is a critical consideration for temperature hazards Nina Karla Jaim, RIMES ● Indicators and data limitations, practical GEDSI integration (i.e., health-related vulnerability, socio-economic and livelihood sensitivity, urban and environmental factors, GEDSI, etc.) Asif Uddin Bin Noor/Raihanul Haque Khan, RIMES ● Hands-on exercise for assessing and generating vulnerability and exposure indices ● Discussion on the inclusion of exposure and vulnerability layers/datasets for the regional tool
10:45 – 11:00	**Morning Break**
11:00 – 12:30	**Session 7: GEDSI Integration in IBF** Helen Caughey, UKMO and Ramiz Khan & Madhab Uprety, RCCC ● Aligning impact severity to alert levels with sector and decision thresholds ● Prioritization and linking scientific information with sector decision needs
12:30 – 13:30	**Lunch Break**
13:30 – 15:00	**Group Exercise 2** Helen Caughey, UKMO and Ramiz Khan & Madhab Uprety, RCCC ● Refinement of Impact Tables with GEDSI Lens ● Considering different approaches needed for IBF warnings
15:00 – 16:00	**Session 8: Introduction to ESCAP's Risk and Resilience Portal** Madhurima Sarkar-Swaisgood & Parvathy Subha, ESCAP ● Introduction to ESCAP's Risk and Resilience Portal ● Hands-on Training
16:00 – 16:15	**Afternoon Break**
16:15 – 17:15	**National Pilot Demonstration Clinic – Round 1 (3 countries)** 1. Bhutan 2. Pakistan 3. Myanmar
17:15 – 17:30	**Wrap-up and Reflections**

DAY 3 (February 11) – Triggers, Thresholds, and Decision-Making

TIME	ACTIVITY
08:30 – 09:00	**Signing of Attendance**
09:00 – 09:15	**Daily Recap**
09:15 – 10:00	**Session 9: Trigger and Threshold Development for Temperature Hazards** Raihanul Khan & Rabbani Golam, RIMES ● Why Local Level Thresholds are Important? ● How to define location- and sector-specific thresholds? ● Localized Threshold Determination - a hands-on exercise
10:00 – 10:15	**Morning Break**
10:15 – 11:30	**Session 9 Cont'n:** Helen Caughey, UKMO & Pranav Dahal, START Network ● Overview of Start Network's recent activation in Nepal for Cold Wave Ramiz Khan & Madhab Uprety, RCCC ● Triggers and thresholds development for temperature related hazards ● Aligning triggers with decision timelines ● Linking triggers with institutional decision protocols ● Examples of how thresholds are defined for AA and used in various sectors/settings Anuj Tiwari (People In Need Nepal) ● Translating temperature-related forecast to locally actionable early warning (PIN's Experience) Damien Riquet (FAO) / Jochen Luther (WMO) (Online) ● Triggers of Anticipatory Action vs public early warnings, and harmonisation challenges
11:30 – 12:30	**Session 10: End-to-end IBF Process: IMD Experience** ● IMD's approach, triggers, thresholds and alerts for different geographical zones and user sectors ● Temperature forecasting and verification approach ● Live Demonstrations of DSS Tools / Hands-On Exercise
12:30 – 13:30	**Lunch Break**
13:30 – 15:30	**Group Exercise 3** Helen Caughey, UKMO and Ramiz Khan & Madhab Uprety, RCCC ● ToT action orientated advice in warning. A practical exercise which delegates can lead in their national contexts to encourage stakeholders to approach IBF from an action orientated perspective.
15:30 – 15:45	**Afternoon Break**

15:45 – 17:00	**National Pilot Demonstration Clinic – Round 2 (3 countries)** 4. Nepal 5. Bangladesh 6. Sri Lanka
17:00 – 17:15	**Wrap-up and Reflections**

DAY 4 (February 12) – Communication, Operations, and Training-of-Trainer Skills

TIME	ACTIVITY
08:30 – 09:00	**Signing of Attendance**
09:00 – 09:15	**Daily Recap**
09:15 – 10:45	**Session 11: Action-led Warnings for Temperature Hazards** Dr. KJ Ramesh, Raihanul Khan, & Asif Uddin Bin Noor, RIMES ● Generic Elements of SOPs and EAPs ● Designing advisories linking IBF forecasts, impacts, and recommended actions to SOPs and EAP activation ● Aligning alert levels with actions for different user groups Ramiz Khan & Madhab Uprety, RCCC ● Experience in early action protocols ● Examples of action-oriented advisories for heat- and cold-related hazards Man Kshetri & Sunil Bogati, WFP Nepal ● Case Example: Operationalizing IBF through anticipatory action in Nepal (Flood Example)
10:45 – 11:00	**Morning Break**
11:00 – 12:30	**Session 12: Behavioral Insights and Risk Communication** Helen Caughey, UKMO and Ramiz Khan & Madhab Uprety, RCCC ● ToT approach to engage stakeholders at a national level in risk communication. ● Critical review of communication approaches and messaging ● Communication challenges in temperature-related forecasts and warnings. ● Tailoring messages for different sectors and different levels of risk
12:30 – 13:30	**Lunch Break**

13:30 – 13:45	**Session 10 Cont'n: End-to-end IBF Process: IMD Experience** ● Examples of action-oriented advisories for heat- and/or cold-related hazards ○ Experience of ICMR and Agriculture (and other sectors) (end-to-end comprehensive SOP/EAP) ○ Communication of action-led warnings for various sectors (e.g. public health, agriculture, etc)
13:45 – 15:30	**Session 13: Operational IBF Workflows and Decision Support** <u>Helen Caughey, UKMO</u> ● Integrating IBF into existing NMHS operational workflows (Examples of integration from UK Met Office and DHM Nepal) and Draft IBF Competency Framework <u>Raihanul Khan & Asif Uddin Bin Noor, RIMES</u> ● Coordination between NMHSs and sector partners: An Interactive Activity <u>Jeevika Khadka, Stimson Center</u> ● Minimum operational requirements and ensuring sustainability beyond IBF pilot demonstrations ○ Enhancing Impact-Based Forecasting in Nepal: Findings from the Stimson Assessment <u>IMD</u> ○ Minimum operational requirements needed for heatwave and coldwave IBF with allowance for future expansion and scale up
15:30 – 15:45	**Afternoon Break**
15:45 – 16:45	**Session 13 Cont'n**: <u>Parvathy Subha, ESCAP</u> ● Use of DSS tools and templates ○ ESCAP's Relevant Initiatives and Available Tools ○ Intro and Hands-on Training to IBF Tool ▪ Loss and damages assessment ▪ Seasonal forecast translated to sectoral impacts
16:45 – 17:00	**Wrap-up and Reflections**

DAY 5 (February 13) – Synthesis, Summary, and Next Steps for Training-of-Trainers and National Demonstration Plans

TIME	ACTIVITY
08:30 – 09:00	**Signing of Attendance**
09:00 – 09:15	**Daily Recap**
09:15 – 10:30	**National Pilot Demonstration Clinic – Round 3 (3 countries)** 6. Bangladesh 8. India 7. Maldives 9. Afghanistan (tbc)
10:30 – 10:45	**Morning Break**
10:45 – 13:00	**Combined Sessions 14-16** **(Training-of-Trainers, Cross-Country Synthesis of National Pilot Demos, and Roadmap to Implementation & Post-Workshop Support)** Helen Caughey (UKMO) and Dr. Anshul Agarwal, Raihanul Khan & Asif Uddin Bin Noor (RIMES) • Bringing together various ToT components and tools made available from through the week • Guidelines and structuring for National Cascading of IBF • Country-wise planning of national demonstration activities • Coordination between NMHSs and sector partners: An Interactive Activity
13:00 – 14:00	**Lunch Break**
14:00 – 15:00	**Con't of Combined Sessions 14-16** **(Training-of-Trainers, Cross-Country Synthesis of National Pilot Demos, and Roadmap to Implementation & Post-Workshop Support)** Helen Caughey (UKMO) and Dr. Anshul Agarwal (RIMES) • Planning of national level workshops • Key principles of effective adult learning and facilitation • Practical tips for facilitating group exercises and discussions • "Clinic" on helping to address common challenges experienced by participants in their efforts in these areas previously • Next steps in implementation and post-workshop support
15:00 – 15:20	**Session 17: Monitoring, Evaluation, and Learning (MEL) in IBF** Thanut Rittichai, RIMES and Anat Prag, UKMO • Purpose and focus of MEL for IBF operationalization • MEL tools and their application for national demonstrations
15:20 – 15:40	**Early Warning For All (EW4All) Roadmap Nepal** Dr. Popular Gentle & Haile Girmai, WFP
15:40	**Workshop Closing and Way Forward** RIMES and UKMO
15:40 onwards	**Afternoon Snack and Networking**