



SOUTH ASIA
HYDROMET FORUM

Pathways for Regional Collaboration

Geneva, Switzerland
September 18–20, 2018

Agenda



GFDRR
Global Facility for Disaster Reduction and Recovery



WORLD
METEOROLOGICAL
ORGANIZATION



WORLD BANK GROUP

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Background

South Asia is highly prone to weather and climate-related disasters such as floods, drought, thunderstorms, heatwaves, landslides and cyclones. In the past two decades, over 50 percent of South Asians, or more than 750 million people, have been affected by at least one natural disaster.

The social and economic costs of such hazards have been staggering with almost 230,000 people dead and US\$ 45 billion in damages between 1970 and 2008. In the 2017 floods alone, almost 45 million people were affected. The scale is only expected to increase – a World Resources Institute estimate indicates that losses in the region can amount to US\$ 215 billion each year by 2030. In addition to losses and damages, the performance of the region's key economic sectors such as agriculture, aviation, water, urban infrastructure, hydropower, and tourism depends upon weather information-based services. However, users and communities have limited access to weather information products tailored to these sectors.

Investments in disaster early warning systems can be critical in saving lives and assets and strengthening the resilience of vulnerable communities. International experience suggests that for every dollar invested, the estimated benefits are in the range of US\$ 2-10 dollars. Similarly, development of hydromet services can make a critical contribution to enhancing the performance of weather-dependent and key economic sectors and improving the livelihoods of local communities.

Efforts to strengthen disaster early warning systems and weather services require national level modernization efforts but also have a regional dimension. Cyclones occurring in the Bay of Bengal affect a number of countries in the region. Each year, between March and May, severe thunderstorms develop in the region that commonly affect northeastern India, Bhutan, Nepal and Bangladesh taking their toll on people's livelihoods and property causing damages worth millions of dollars across the sub-region. The South Asian monsoon system delivers 70 to 80 percent of the rainfall to most countries in the region and variability in the timing and duration of precipitation poses serious risks and causes economic losses due to uncertainty to key sectors such as agriculture. Given the transboundary nature of weather and climate risks, regional collaboration can help improve understanding of these weather patterns and devise strategies to effectively respond to them.

Building on efforts made by each country in the region, and support provided by the World Meteorological Organization (WMO), the Global Facility for Disaster Reduction and Recovery (GFDRR) through the European Union financed EU-South Asia Capacity Building for Disaster Risk Management program and other development partners, the World Bank has been proactively investing in hydromet modernization efforts in the region. The World Bank's program takes a bottom-up approach with national level investments and/or engagement in the countries of the South Asia Region. Operations in

Bangladesh, Bhutan, India, Myanmar, Nepal and Pakistan seek to transform the provision of hydro-meteorological services by supporting national hydromet agencies to develop and deliver user-oriented hydromet and climate services and disaster early warning systems. Going forward, it is important to consider how to solidify these ongoing investments and scale them up through regional collaboration.

The UN reform agenda makes a call to join up efforts to better serve countries as a main direction going forward, and creates a sense of urgency for country-level action. The draft WMO Strategic Plan 2020-2023 sets an ambitious Goal: to close the capacity gap on weather, climate, and water information services between developed and developing countries. Scaling up effective partnerships is one of the Strategic Objectives to achieve this Goal.

Objectives of the South Asia Hydromet Services Forum, September 18-20, 2018

The objective of the Forum is to bring together high-level representatives from government agencies and development institutions working on weather and climate services to:

- Share information about ongoing national hydromet modernization efforts in the region;
- Identify areas to strengthen regional collaboration and;
- Discuss institutional arrangements needed to sustain and scale up ongoing national and regional efforts in the delivery of hydromet and climate services.

These discussions are important and timely given the transboundary nature of weather and climate risks that affect all countries in the region.

Vision

This Forum is conceived as the first in a series of such consultations that aims to showcase and push ongoing national-level modernization efforts in hydromet service delivery to the next level through regional-level collaboration. Its focus is on bringing together agencies providing and using weather services. As such, it puts the issue of service delivery and the need for regional collaboration and innovation center stage. Though narrow in scope, the Forum aims to contribute to building and strengthening a constituency around the development of weather and climate services relevant to the productivity of key climate dependent sectors and impact lives of people in the region on an ongoing basis.

Future regional collaborative events are expected to expand their scope to other thematic areas such as hydrological services and help inform linkages with hydromet service delivery efforts across the region.

Organization

Day 1 will emphasize on sharing of information on ongoing modernization efforts in the region.

Day 2 will focus on service delivery in different sectors and on areas and pathways for regional collaboration in the development and delivery of weather and climate services.

Day 3 will bring voices from a broader group of stakeholders including development partners who can support modernization efforts in the region.

Partnerships

The Forum is made possible with the continued support and collaboration of our partners, the European Union (EU) and the Global Facility for Disaster Reduction and Recovery (GFDRR).

Participants

The South Asia Hydromet Services Forum will bring together representatives from government and development institutions working on the supply and demand side of weather and climate services, which is considered a key element of sustainable development.

Location

World Meteorological Organization
7bis Avenue de la Paix, C.P. 2300
CH-1211, Geneva 2, Switzerland

Agenda

Day 1: Tuesday, September 18, 2018

8:30 – 9:30 am Registration – WMO Headquarters entrance

9:30 – 10:30 am Opening Session 1: Importance of Hydromet Services in Resilient Development

Salle C1 Conference Room

Chairs: Sameh Wahba, Director, WBG and Markus Replik, Director, WMO

- **Dr. Elena Manaenkova**, Deputy Secretary-General, World Meteorological Organization (WMO)
- **Dr. M. Rajeevan**, Secretary, Ministry of Earth Sciences (MoES), India
- **Sameh Wahba**, Director, World Bank Group (WBG)
- **Mark Schanck**, Policy Officer, Humanitarian Affairs, European Union
- Role of WMO in South Asia Region in weather and climate service delivery
- Enhancing regional initiatives on weather and climate and vision for future
- WBG support to hydromet modernization in South Asia
- EU-South Asia Capacity Building for Disaster Risk Management program

10:30 – 11:00 am Coffee Break – Obasi Bar

11:00 am – 12:30 pm Session 2: Regional Delivery of Early Warnings and Climate Products

Salle C1 Conference Room

Chairs: Sameh Wahba, Director WBG and Maxx Dilley, Director WMO

- Rupa Kumar Kolli, Chief, World Climate Applications & Services Division (WMO)
- **Dr. K.J. Ramesh**, Director General, India Meteorological Department (IMD)
- **Dr. A. Subbiah**, Director, Regional Integrated Multi-Hazard Early Warning System (RIMES)
- WMO's Regional programs on capacity Building, FFGS, SWFDP-Bay of Bengal, SASCOF, Global observation etc.
- Multi-Hazard Early Warning and Climate Services (National and Regional support)
- Delivery of Sub-Regional Early Warning Decision Support Systems and Sub-National Climate outlook/multi-sectoral climate impacts assessment

12:30 – 1:30 pm Lunch – Salle D Cafeteria

1:30 – 4:30 pm Session 3: Hydromet Modernization Efforts in the Region

Salle C1 Conference Room

Chairs: Arati Belle, SAR Regional Coordinator, Hydromet, Early Warning and Climate Services, WBG and Lars-Peter Riishojgaard, WMO

Coffee break 3.00 -3.30 pm – Obasi Bar

- **Dr. Rishi Ram Sharma**, Director General, Department of Hydrology and Meteorology, Nepal (DHM) (*via remote connection*)
- **H. E. Mahmood Shah Habibi**, Head of Afghanistan Civil Aviation Authority
- **Dr. Ghulam Rasul**, Director General and **Dr. Muhammad Hanif**, Project Director, Pakistan Meteorological Department (PMD)
- **Momenul Islam**, Deputy Project Director, Bangladesh Meteorological Department (BMD)
- Nepal's experience with hydromet modernization and service delivery
- Roadmap for modernizing Hydromet Services in Afghanistan
- Improving meteorological service delivery through Modernization of PMD
- Modernization of BMD and its services

- **Karma Dupchu**, Director, National Center for Hydrology and Meteorology, Bhutan (NCHM)
- **M.M.P. Mendis**, Deputy Director, Sri Lanka Department of Meteorology
- **Thahmeena Abdul Kareem**, Assistant Meteorologist, Maldives Meteorological Services
- Bhutan's vision and progress on its Roadmap for Hydromet Modernization
- Weather and Climate Services in Sri Lanka
- Status and Challenges of Meteorological Services in Maldives

6:00 – 8:00 pm

Reception at Inter-Continental Hotel

Day 2: Wednesday, September 19, 2018

9:00 – 11:00 am

Salle C1 Conference Room

Chairs: Dr. Subbiah, RIMES and John Harding, Head, CREWS Secretariat

Session 4: Early Warnings and Disaster Risk Management

- **Dr. V. Thiruppugazh**, Joint Secretary, National Disaster Management Agency (NDMA), India (*via remote connection*)
- **Abu Syed Mohammad Hashim**, Director General, Department of Disaster Management, Bangladesh
- **Muhammad Idrees Masud**, Chairman, National Disaster Management Agency (NDMA), Pakistan
- **Dr. Srikantha Herath**, Senior Advisor, Ministry of Megapolis and Western Development, Sri Lanka and **D. D. Ariyaratne**, Additional Secretary, Ministry of Irrigation and Water Resources Management (MIWRM), Sri Lanka
- Lessons from India and regional initiatives
- Experience of Bangladesh in cyclone early warning to vulnerable coastal communities
- Experience of Pakistan in flood management and early warnings
- Urban Early Warning Systems - Metro Colombo

11:00 – 11:30 am

Coffee Break – Obasi Bar

11:30 – 1:00 pm

Salle C1 Conference Room

Chair: Dr. L. S. Rathore, Chair, Inter-Governmental Board for Climate Service, WMO

Session 5: Linking Communities to Weather and Climate Service

- **Dr. Archana Shrestha**, Senior Divisional Meteorologist, DHM Nepal (*via remote connection*) and **Mr. Shibnandan Shah**, Project Director, Nepal Agromet Information System (NAMIS)
- **Dr. Mazharul Aziz**, Project Director, Department of Agriculture and Extension, Bangladesh
- **Abdul Fattah Tunio**, Member, Planning and Development, Sindh
- **Dr. Satheesh Chandra**, Director, Indian National Center for Ocean Information Sciences
- **Dr. Mandira Shrestha**, Program Coordinator, River Basins and Cryosphere, International Center for
- Joint production of agromet advisories and delivery of agromet services in Nepal
- Opportunities and challenges in agromet service delivery
- Actions and challenges for urban resilience in Karachi
- Indian Ocean observation: needs, challenges and future
- Regional Initiatives – flood forecasting and cryosphere monitoring in the Himalayas

Integrated Mountain Development (ICIMOD)

- **Rodica Nitu**, Global Cryosphere Watch Project Manager and **Joel Fiddes**, WMO
- Advances in cryosphere monitoring, innovations and technologies, status in SAR, and other relevant regional or global programs.

1:00 – 2:00 pm

Lunch – Salle D Cafeteria

2:00 – 4:30 pm

Salle C1 Conference Room

Chairs: Vladimir Tsirkunov, Lead Specialist, WBG, and Rob Masters, Director, Cabinet and External Relations Department, WMO

Session 6: Roundtable on Regional Collaboration - Thematic Areas and Working Modalities

- Permanent Representatives of participating countries with WMO and Heads of Meteorological Agencies and User Sector Representatives
- Discussion on themes and areas of common interest and potential regional collaboration, and modalities to establish and develop the South Asia peer group on weather and climate services

Coffee break 3.00 -3.30 pm – Obasi Bar

5:00 – 6:30 pm

Reception at WMO

Day 3: Thursday, September 20, 2018

9:30 – 10:45 am

Salle C1 Conference Room

**Chairs: Markus Replik, Director WMO
Robert Saum, Director, WBG**

Session 7: Development Partner Support for Regional Cooperation

- **Christoph Pusch, Practice Manager WBG**
- **Panel Discussion:** EU, DFID, CREWS, USAID, JICA, CMA, KMA, RIMES
- **Gemma Tanner, DFID, U.K. and Julian Menadue, UK Met Office**
- Regional priorities and areas for support and collaboration
- Asia regional resilience to a changing climate program

Coffee break 10.45 -11.15 am – Obasi Bar

Closing

12:00 - 1:00 pm

Lunch – Salle D Cafeteria



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www.worldbank.org/southasiahydrometforum

