

Strengthening and  
Sustaining  
National  
Meteorological  
and Hydrological  
Services

**“Beyond  
business as  
usual – closing  
the capacity  
gap”**

Innovation  
financing  
infrastructure  
climate  
Hydromet  
programmatic community  
developing GCF beyond  
partners development  
sustainability  
services need  
expert  
observation service  
WMO global  
compact

Second Development Partners  
Conference

Geneva, 21 -22  
March, 2018



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## Conference Outcomes

The second Development Partners Conference brought together representatives from the global hydromet community in a context of exponentially growing weather, climate, and water challenges that translate into increasing importance and demand for hydrometeorological services. Participants agreed that progress made since the first conference in 2016 was not sufficient and explored ways to move beyond business as usual to close the capacity gap between developed and developing countries. The conference brought four main outcomes:

- **Exploring the possibility of developing a “Global Hydromet Compact”** that would create the framework for scaled-up, coordinated, sustained, and more impactful actions.
- **Scaling up programmatic approaches**, taking advantage of increasingly available funding from the Green Climate Fund that expects improved and better coordinated funding proposals.
- **Scaling up provision of expert services** to develop and implement better, more effective, and more sustainable hydromet projects.
- **Developing a web-based information platform** providing value to the whole hydromet community, beyond the scope of WMO’s current Country Profile Database

**The conference took place in a context of rapidly increasing global weather, climate and water challenges, translating into increasing importance and demand for hydrometeorological services.**

- **Increasing challenges and demands:** 2017 was the costliest year on record in terms of weather-related natural disasters. From hurricanes and wildfires to droughts and floods, global economic losses totaled more than \$330 billion. According to the 2018 Global Risks Report four of the five most pressing risks the world is confronted with are related to weather, climate, and water. While demand for information and service provision is increasing, many hydrometeorological institutions in developing countries are confronted with major performance challenges.
- **Insufficient progress:** With exponentially growing challenges and demand, linear progress in delivering hydrometeorological services is not sufficient. Participants agreed that substantial progress is needed to address issues already identified at the first Development Partners Conference in April 2016.
- **Closing the capacity gap through effective partnerships:** The draft WMO Strategic Plan 2020-2023 sets an ambitious Goal – to close the capacity gap on weather, climate, and water services between developed and developing countries. Scaling up effective partnerships is one of the Strategic Objectives to achieve this Goal. As a critical partner to achieve this, the World Bank Group through its Climate Change Action Plan will help bring access to high-quality hydrometeorological data and early warning systems to another 100 million people in 15 developing countries.

- **Improving and sustaining the Investments:** Scaling up effective coordination, shifting focus from a capital-based infrastructure to a service-based approach, innovation and leveraging of partnerships including the private sector are needed to improve the quality of support provided by development partners and the sustainability of investments.

Beyond business as usual: The conference focused on “Beyond business as usual – closing the capacity gap. What does it take?” The main conference outcomes are:

## 1. **Exploring the possibility of developing a “Global Hydromet Compact”**

- **Framework:** The idea of developing a Global Hydromet Compact (Alliance/Coalition) emerged as a proposal of the Conference.
  - It would create the framework for scaled-up, coordinated, sustained, and impactful investments in hydromet and early warning services
  - It would present a clear value and leverage proposition with respect to existing initiatives
  - It would recognize regional and national contexts, such that investments would support the optimization of national hydromet service delivery across the global weather enterprise (GWE) spectrum of actors, clearly considering the roles, responsibilities and added values of all stakeholders.
- **Partners:** The Global Hydromet Compact would bring together all partners committed to the goal of strengthening the provision of weather, climate, and hydrological services based on mutual accountability.
  - WMO community
  - Financial and implementing institutions including multilateral development banks, UN institutions, climate finance institutions, multilateral and bilateral partners, and all GCF accredited entities engaged on hydromet
  - Developing countries
  - Private sector partners.
- **Elements:** The Global Hydromet Compact would explore the following elements:
  - Finance – including from the GCF, multilateral development banks, and bilateral donors, ensuring interoperability of the systems being supported by various development partners
  - Innovation – including exploring development of a new global financing mechanism to support national weather and climate observation systems with a particular focus on increasing GHG observation infrastructure in order to measure the effectiveness of public and private climate mitigation action
  - Knowledge – mobilization of expertise from the broad hydromet community, including from WMO technical experts and the private sector
  - Programmatic approaches - including Africa Hydromet Program/AMCOMET, the Climate Risk and Early Warning Systems (CREWS) initiative, and the Global Framework for Climate Services (GFCS).

- **Support mechanism:** Collaborative development of the Global Hydromet Compact as implementation support mechanism for developing countries.
- Development of the Global Hydromet Compact would be spearheaded by WMO in collaboration with the World Bank and all major partners and stakeholders with the aim of being launched at the WBG/IMF Annual Meetings in October 2019
- It would become the mechanism to effectively support developing countries in implementing the WMO Strategic Plan 2020-2023 to be endorsed by the World Meteorological Congress in June 2019.

## **2. Scaling up programmatic approaches including for the provision of climate finance**

- **Programmatic mechanisms:** While several programmatic approaches have already been developed, including for example, Africa Hydromet Program, AMCOMET, CREWS, GFCS, there is a need to increase their operational relevance and to scale up their impact.
- **GCF aiming for programmatic financing:**
  - Currently, in many proposals submitted to the GCF a science-based rationale describing how that proposal will assist adaptation to, or mitigation of, climate change impacts is missing. WMO could play an important role in assisting the GCF in shaping the "climate rationale" methodology and approach based on best available science and data
  - There is also a need for a coordination mechanism within the hydromet community to ensure that funding proposals are emerging through programmatic mechanisms
  - In parallel, GCF secretariat is developing a guidance note for hydromet project proposals that would be shared among the development partners community for peer review.

## **3. Scaling up provision of expert services**

- **Need for more diverse expertise:** Development projects in hydromet have traditionally engaged technical expertise on observations, data management, ICT and forecasting, which remains critical. However, to adequately support sustainable hydromet modernization, expertise in institutional and business management, service delivery, stakeholder engagement and public-private partnership is also needed.
- **Better tapping knowledge and expertise:** There is an increasing demand for scaling-up various types of expertise to develop and implement effective and sustainable hydromet projects, which should be sourced from across the "global weather enterprise" and its spectrum of actors. Mechanisms for rapid and trustworthy access to expertise should be developed, including the planned WMO technical expert service, which will work in coordination with NMHSs and leading global and regional centers.

#### **4. Developing a web-based information platform providing value to the whole hydromet community**

- **Moving beyond current WMO country profile database:** WMO Members and hydromet stakeholders need access to a WMO Management Information System beyond the current Country Profile Database (CPDB). Developing partners and recipients of hydromet support also require a platform for the exchange of information relating to their projects and activities. This is a new requirement for the CPDB.

# ANNEXES

## Annex 1. Presentations of Session 1: The challenge - Closing the capacity gap

1. **Mr. Aengus Collins, Practice Lead Global risks, World Economic forum:** What is at stake - the importance of addressing the global weather, climate, and water related risks

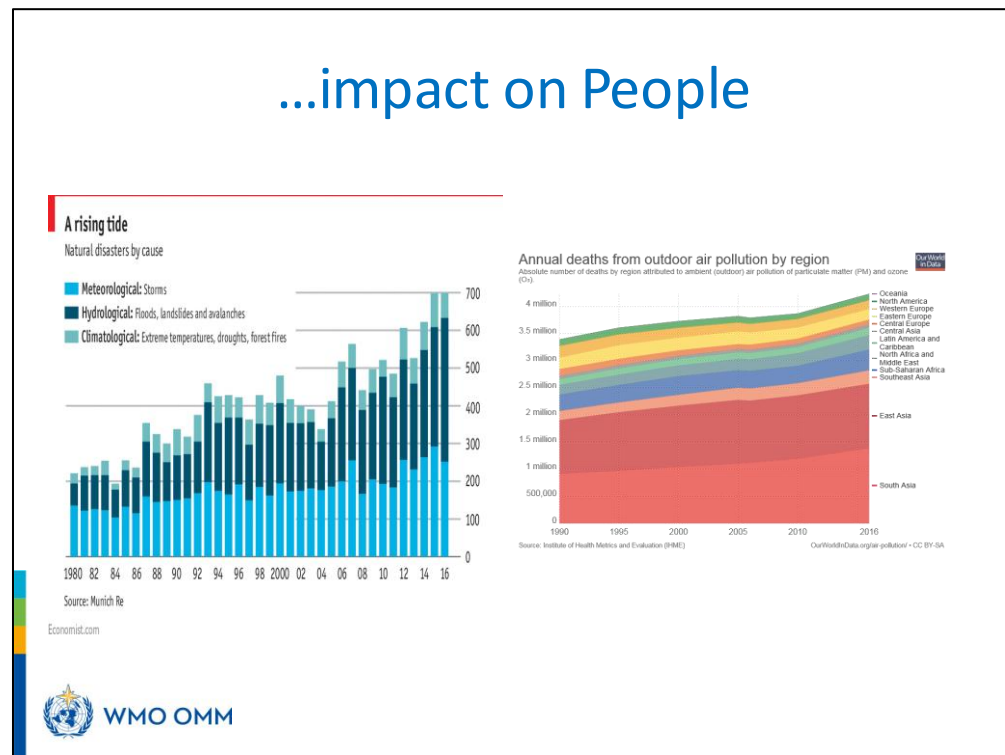
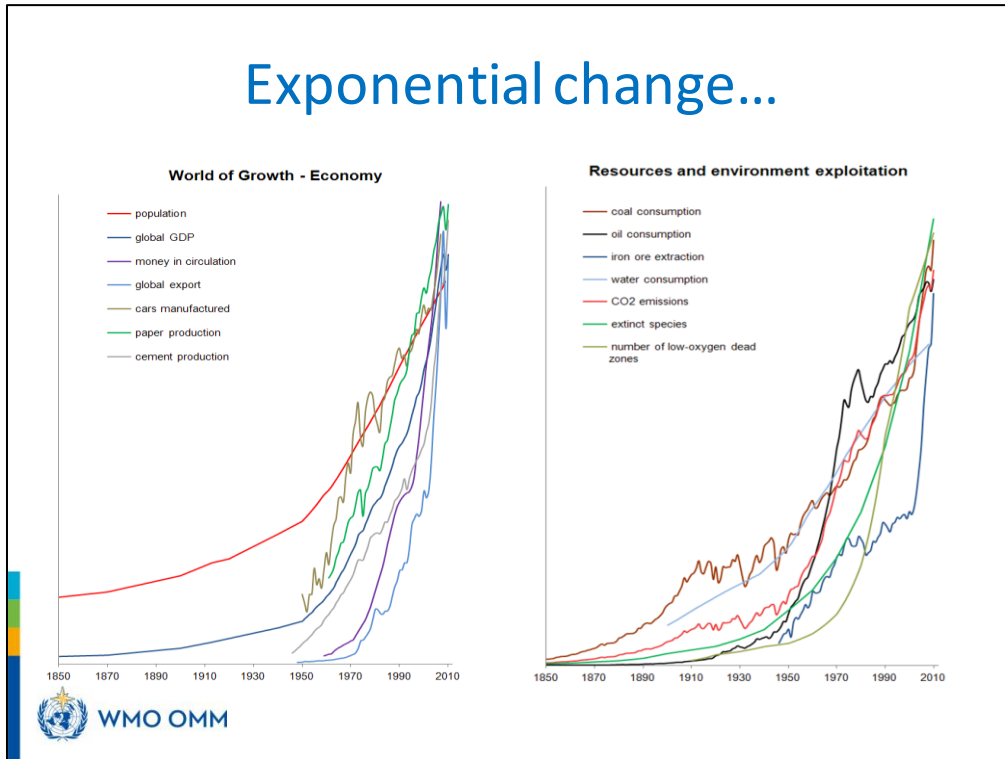




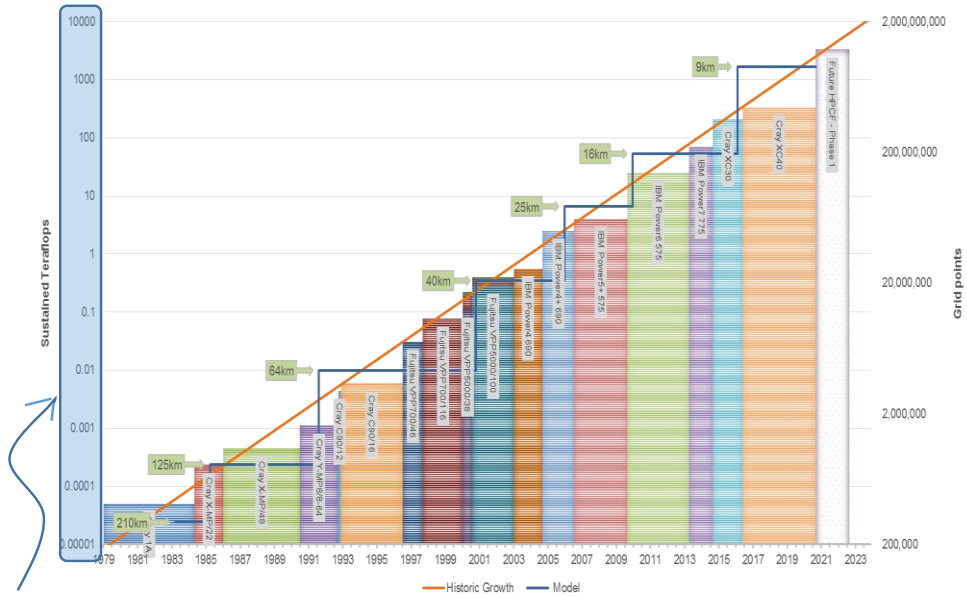




2. **Mr. Deon Terblanche, Director, WMO Research Department:** Where do we stand today and where do we need to go - the exponential growth of global challenges and how the WMO Strategic Plan 2020-2023 is going to address them



# So we invest in computing...



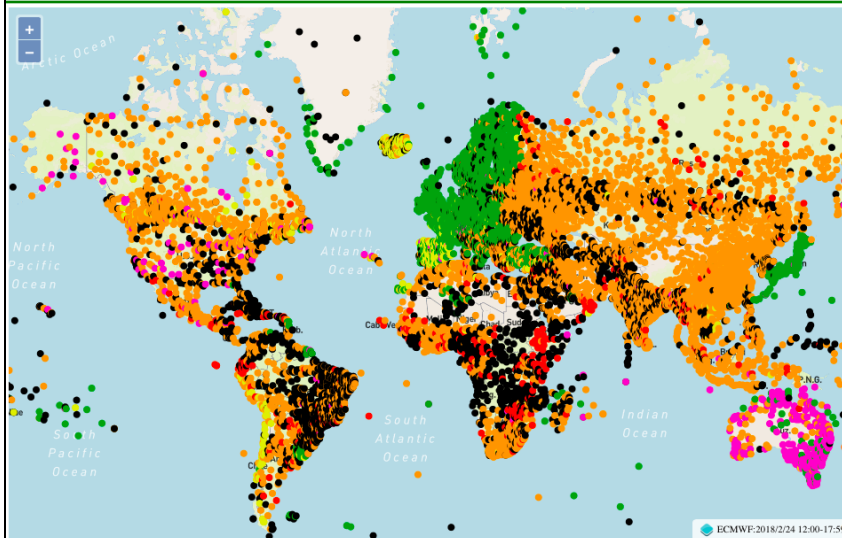
Log scale !!



EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS

PETER BAUER 2017

# ...and in (often silent) observations



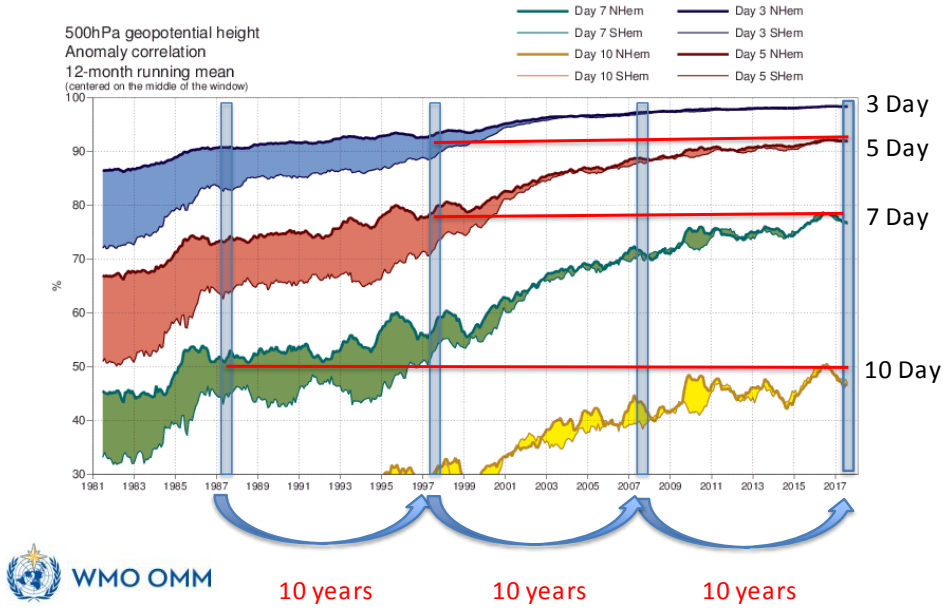
## NWP monitoring pilot project

SYNOP (surface pressure)   
 ECMWF   
 2018/02/24   
 0h  6h  12h  18h

### Nr. expected vs. Nr. Received

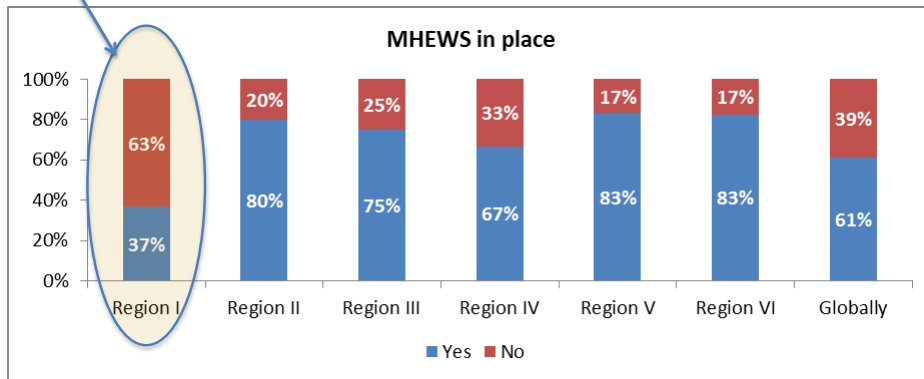
- normal ( $\geq 80\%$ )
- availability issues ( $\geq 30\%$ )
- availability issues ( $< 30\%$ )
- did not report in period
- not in VoIa
- more than 100%

# But are our best efforts good enough? Predictive skill:



# Multi Hazard Early Warning Systems:

Africa



## WMO STRATEGIC PLAN AT A GLANCE

**Vision 2030**

*By 2030, a world where all nations, especially the most vulnerable, are more resilient to the socioeconomic impact of extreme weather, climate, water and other environmental events, and empowered to boost their sustainable development through the best possible services, whether over land, at sea or in the air*

**Overarching Priorities**

Enhancing preparedness for, and reducing losses of life and property from hydrometeorological extremes

Supporting climate-smart decision making to build resilience and adaptation to climate risk

Enhancing socioeconomic value of weather, climate, hydrological and related environmental services

**Core Values**

• Accountability for Results and Transparency • Collaboration and Partnership • Inclusiveness and Diversity •

**Long-Term Goals**

**1 Better serve societal needs:**  
Delivering authoritative, accessible, user-oriented and fit-for-purpose information and services

**2 Enhance Earth system observations and predictions:**  
Strengthening the technical foundation for the future

**3 Advance targeted research:**  
Leveraging leadership in science to improve understanding of the Earth system for enhanced services

**4 Close the capacity gap:**  
Enhancing service delivery capacity of developing countries to ensure availability of essential information and services

**5 Strategic realignment of WMO structure and programmes:**  
Effective policy- and decision-making and implementation

**Strategic Objectives**

**2020-2023 focus**

- 1.1 Strengthen national multi-hazard early warning systems and extend reach to better enable effective response to the associated risks
- 1.2 Broaden the provision of policy- and decision-supporting climate information and services
- 1.3 Further develop services in support of sustainable water management
- 1.4 Enhance and innovate the provision of value-added, decision-supporting weather information and services

- 2.1 Optimize the acquisition of observation data through the WMO Integrated Global Observing System
- 2.2 Improve and increase access to, exchange and management of current and past observation data and derived products through the WMO Information System
- 2.3 Enable access and use of numerical analysis and prediction products at all temporal and spatial scales from the WMO Global Data Processing and Forecast System

- 3.1 Advance scientific knowledge of the Earth system
- 3.2 Enhance the science-to-service value chain ensuring scientific and technological advances improve predictive capabilities
- 3.3 Advance policy-relevant science

- 4.1 Address the needs of developing countries to enable them to provide and utilize essential weather, climate, hydrological and related environmental services

- 4.2 Develop and sustain core competencies and expertise

- 4.3 Scale-up effective partnerships for investment in sustainable and cost-efficient infrastructure and service delivery

- 5.1 Optimize WMO constituent body structure for more effective decision-making

- 5.2 Streamline WMO programmes

- 5.3 Advance equal and effective participation of women and men in governance, scientific cooperation and decision-making

Advance scientific knowledge of the Earth system

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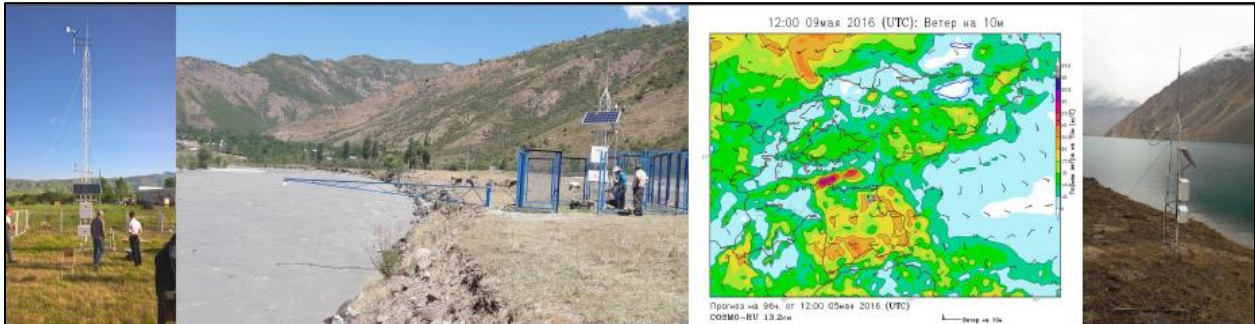
5.1 Optimize WMO constituent body structure for more effective decision-making

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3. **Mr. Daniel Kull, Senior DRM Specialist, World Bank:** Is development partners' support for countries in addressing weather, climate, and water risks sufficient and effective – a global perspective



## IS DEVELOPMENT PARTNERS' SUPPORT SUFFICIENT AND EFFECTIVE?

*A Global Perspective*

**GFDRR Hydromet**

March 21, 2018



WORLD BANK GROUP



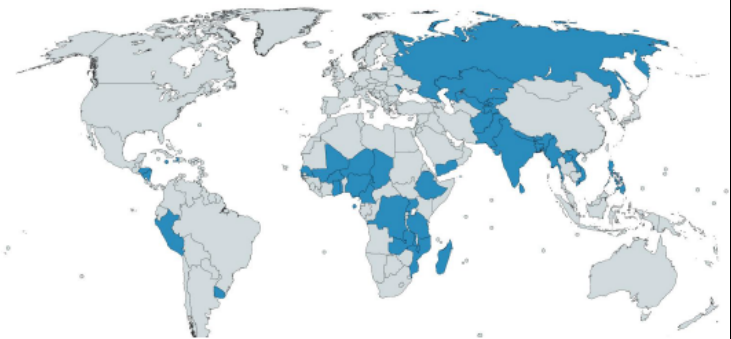
**GFDRR**  
Global Facility for Disaster Reduction and Recovery

### QUANTITY

- Significant growth since 2010 (WCC-3 in 2009)
- Tripling of World Bank investments
- Green Climate Fund (GCF) also increasing investment
- Hot spots: West Africa and South Asia
- Estimate that \$500 million of investment per year is needed for modernizing public NMHSs
- **Conclusion: Investment is growing but still insufficient**



WORLD BANK GROUP



**2010**  
 25 projects  
 US\$ 270 million
 ➔
**2017**  
 67 projects  
 US\$ 870 million

## QUALITY

### Performance (OECD Criteria):

Relevance	Green
Effectiveness	Yellow
Efficiency	Red
Impact	Yellow
Sustainability	Red

- Not enough focus on service delivery
- Not enough stakeholder/user engagement
- Not enough focus on institutional change and modern management
- Too much focus on infrastructure
- Project durations too short
- Poor coordination between partners



**Conclusion:** We must find a way to improve the quality of our support; this conference should push us in the right direction.



## (OPEN) QUESTIONS

### Sustainability, the eternal challenge


- Limited budgets and inability to attract, train and retain qualified staff
- Prioritization by Central Governments
- Need for quality leadership
- How to “force” the issue with Ministries of Finance, different business models

### Global Weather Enterprise (GWE)

- Tens of billions US\$ spent on commercial services each year
- Rapid growth is both an opportunity and a challenge
- Developing countries are growth markets
- Shift from capital-based infrastructure to service-based approach
- Level playing field needed
- **Conclusion:** Sustainability remains a challenge but leadership, innovation and leveraging of/partnership with private sector can resolve the issue.



4. **Ms. Celina Kattán, Director General, Observatorio Ambiental:** Ministerio de Medio Ambiente y Recursos Naturales, El Salvador: What is the role of country leadership in ensuring sufficient and effective national and international support for addressing weather, climate, and water risks – and what is the role of National Meteorological and Hydrological Services



## MARN

Ministerio de Medio Ambiente  
y Recursos Naturales

**Second Development Partners Conference: Strengthening and Sustaining National Meteorological and Hydrological Services**

**BEYOND BUSINESS AS USUAL – CLOSING THE CAPACITY GAP**

*What is the role of country leadership in ensuring sufficient and effective national and international support for addressing weather, climate, and water risks - and what is the role of National Meteorological and Hydrological Services*


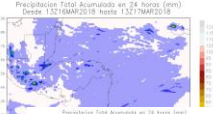
Celina Kattan, Ing. M.Sc.  
Director General of the Environmental Observatory,  
Ministry of Environment and Natural Resources, El Salvador

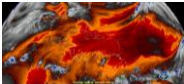
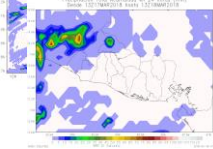
Geneva, 21-22 March 2018



## Natural Hazard Monitoring Center


- Integrated Monitoring Center
- Works 24/7
- Information from >300 monitoring stations
- Numerical models, satellite imagery, etc.
- Reports from >600 local observers
- SOPs for each hazard type

➤ Provide information to the National Civil Protection System, productive sectors and population, for EW and risk reduction.

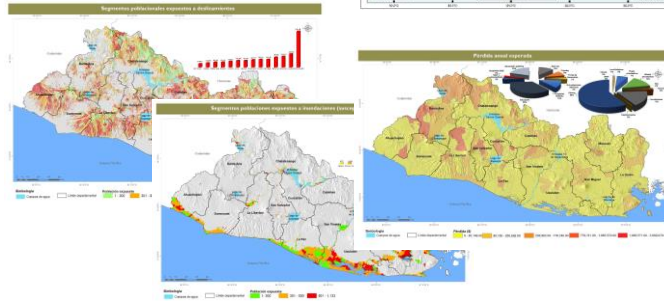
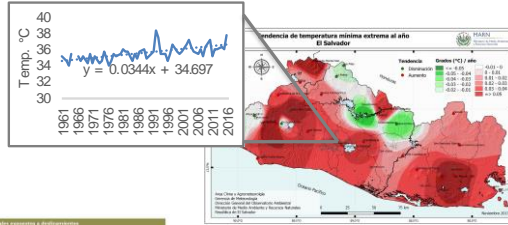







## Hazard and risk assessment as a tool for risk management

- ✓ First national risk assessment report (2017)
- ✓ Estimation of climate change indices, and development of climatic atlas (ongoing)
- ✓ Tools and apps to assess probable impacts
- ✓ Hydrologic Information system (2017)



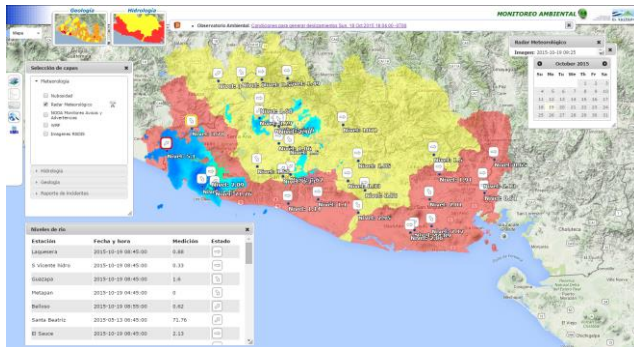
Disaster Preparedness



Disaster Prevention

## Scientific Applications to support decision making

### Water level and flood hazard monitoring and forecasting



### Restringen paso vehicular en frontera La Hachadura

El río Paz ha llegado al borde del puente entre El Salvador y Guatemala por lo que se ha restringido el paso vehicular.

ULTIMA ACTUALIZACIÓN: 15 DE OCTUBRE DE 2015 21:42 | POR JOSÉ MANUEL MORALES

El paso vehicular por la frontera de La Hachadura -que divide El Salvador y Guatemala- fue habilitado de forma parcial la noche de este lunes y se permitió el paso de vehículos livianos, autobuses de turismo y camiones que transportan productos perecederos.

Las autoridades de Protección Civil, Aduana Terrestre y de Gobernación, ordenaron suspender temporalmente el paso por el puente Arce, debido a la crecida del río Paz, medida que también adoptaron las instituciones gubernamentales de Guatemala.

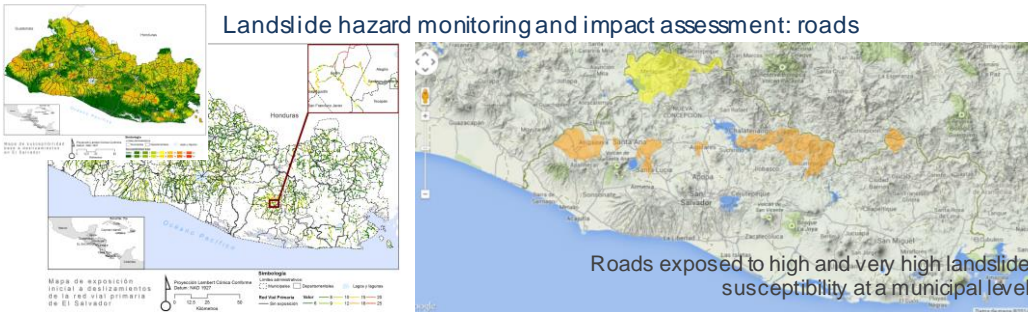
La medida había sido implementada luego que el agua alcanzara su punto máximo y llegara al borde de ese puente por el cual transitan vehículos livianos y pesados.

De acuerdo a Protección Civil, el cierre preventivo duraría 24 horas mientras baja el nivel del caudal del agua y se determina que la estructura del puente del río Paz no presenta daños.

El paso fue restringido a partir de las 9 de la mañana de este lunes y en la noche se abrió el paso para los automóviles, buses de turismo y camiones con productos perecederos. Los trailers tendrán que esperar una nueva orden.

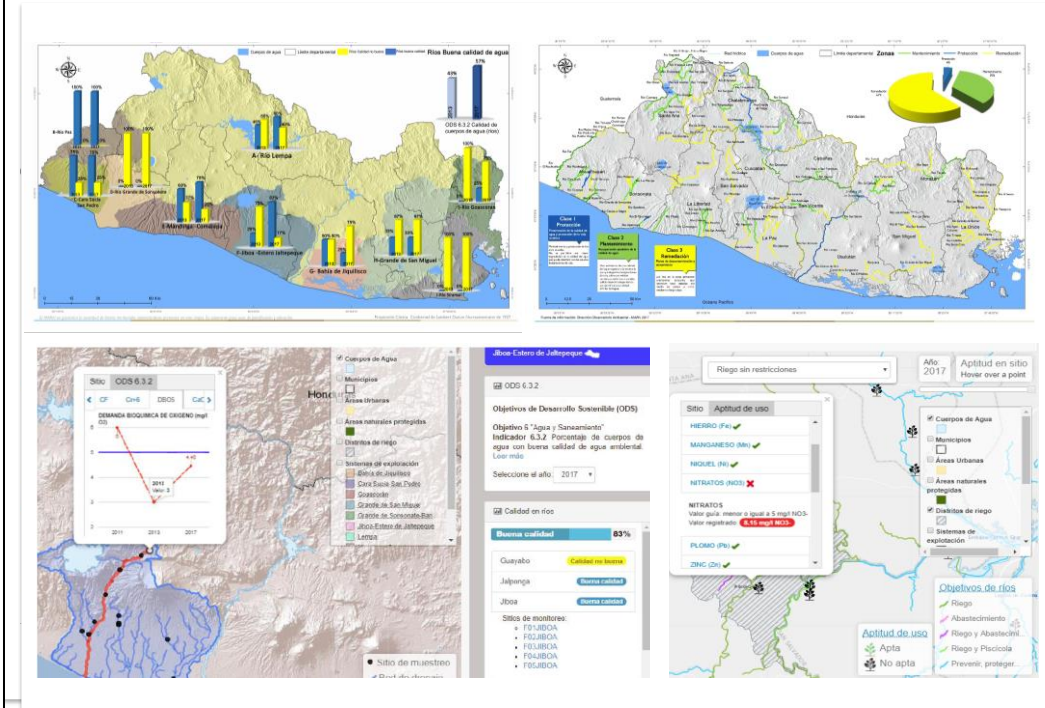


### Landslide hazard monitoring and impact assessment: roads



Roads exposed to high and very high landslide susceptibility at a municipal level

## Tools for integrated water resources management



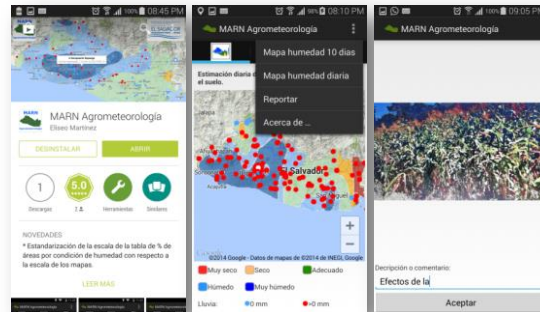
## Real time Information transfer

Social networks:  
WhatsApp, Twitter,  
Facebook

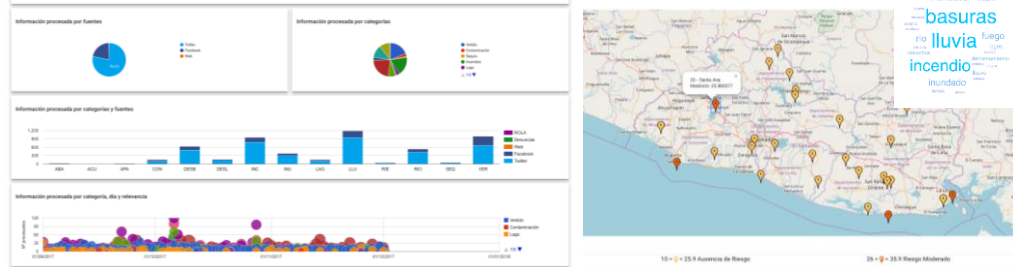
Monitoring Screens



Mobile apps



Crow dsourcing to assess



## **Annex 2. Summary of Session 3: Closing the capacity gap – Learning from emerging financing and implementation mechanisms aiming at systemic solutions**

### **Climate Risk and Early Warning Systems - CREWS**

- **Programmatic:** Provides programmatic framework for EWS in Least Developed Countries (LDCs) and Small Island Developing States (SIDS). Is a portfolio level initiative
- **Collaboration:** Effective WB/WMO operational collaboration with countries – “good marriage” – example Democratic Republic of Congo (DRC).
- **WMO comparative advantages:** knowing country needs, technical advisory services, access to global expertise
- **Leverage:** Creates bigger packages leveraging bigger and better funding. Creates a “master plan”
- **Beyond country:** Creates the needed links between country level intervention and (sub)regional collaboration
- **Current frame:** Crews currently limited in terms of (i) scope – climate risk and early warning systems; (ii) countries – LDC and SIDS; (iii) 3 implementing partners
- **Potential expansion:** Crews as a model for expansion (i) from Early Warning Systems to adaptation; (ii) from LDC/SIDS to all developing countries; (iii) from 3 to more implementing partners?
- **Long-term perspective:** How can Crews bring in long term perspective beyond shorter term project time frames
- **Wider dissemination** of CREWS activities and results.
- **Challenge:** Full mobilization of targeted resources

### **AFR Hydromet Program**

- **Programmatic:** Programmatic approach with currently 6 formal partners
- **Value proposition:** upfront coordination potential but not fully taken advantage of
- **Coordination:** Countries are taking advantage of AFR Hydromet to create an overarching framework for partner coordination – examples Burkina and DRC
- **Mobilizing finance:** Provides vehicle to crowd-in and leverage finance from different sources including GCF, IDA and EU
- **Challenge:** Mobilizing the right technical expertise in a timely manner from WMO community including strengthening regional climate centers
- **Sustainability:** Focus on delivery of relevant services: “last mile delivery”

### **Green Climate Fund - GCF**

- **Science-based projects:** Need to bring science and finance together. Projects need to be built on science. Climate rationale of many GCF projects is inadequate.
- **NMHS potential role:** Many GCF projects are not using weather/climate/water data and evidence coming from NMHS and the broader WMO community

- **Value of investments in hydromet:** strengthened NMHS (through systemic approach including implementation of NFCS) to contribute to the design of future national GCF projects – critical role of NMHS
- **GCF “flooded with projects”:** example one AE submitted 10 hydromet projects under the Simplified Approach Process (SAP); GCF would expect more projects from country strategies
- **Regional approach:** Need for a more balanced intervention model – country/(sub)regional
- **Preparation of GCF guidelines for:** readiness ; project preparation facility; project review + WMO support for project's climate rationale and criteria.
- **Needs and gaps:** GCF needs help from WMO community in identifying needs and gaps for hydromet projects – links to Crews and Africa hydromet
- **Public Private Partnerships approaches are very welcome** - if agreed at national level.

### **Annex 3. Summary of working groups - Session 4: What does it take to close the gap – translating the opportunities for scale into concrete action beyond business as usual**

#### **WORKING GROUP 1: What does it take – Money: How to leverage financial resources through innovative financing mechanisms?**

**Co-chairs:** Mr. Manuel Keller, Head of International Affairs, MeteoSwiss, Federal Department of Home Affairs (FDHA), and Mr. Deon Terblanche, Director, WMO Research Department

- **A growing idea:** WMO presented the conceptual basis of a plan to substantially scale up atmospheric GHG measurement stations to better measure effectiveness of climate actions got traction at the conference. There is a need for follow up at (i) political, (ii) scientific/technical, and (iii) financial level.
- **Scientific/technical work:** Three main points were discussed. (i) Need to map out in a more detailed manner what infrastructure is needed (how many stations in which priority countries . (ii) Need to clarify and to scientifically substantiate what level of downscaling is possible with what level of confidence for project level interventions. (iii) This additional observation infrastructure is complementary to and leverages other observation methods, in particular satellites.
- **Envisioned innovative financing vehicle:** While still at early stages, the following elements of a potential new financing vehicle in support of scaling up of GHG measurements and observation system were discussed:
  - (i) global public good: country-level weather/climate observation infrastructure provides benefits beyond the country level.
  - (ii) integrated observation infrastructure: It would be fully integrated in all country-level weather/climate observation infrastructure. Therefore, it would target all country-level infrastructure.
  - (iii) multi-country: as there is a (sub)regional and global dimension to observation a financing model beyond country-by-country is needed.
  - (iv) sustainability: Hydromet appears to be one of the most poorly performing sectors concerning infrastructure sustainability in developing countries. Therefore, the financing facility would need to create financial incentives to allow for financing of operating, maintenance and replacement costs.
  - (v) performance-based financing: the financial vehicle should include performance-based financing, i.e. flow of resources if the infrastructure delivers the data based on agreed quality/timeliness standards.
  - (vi) non-traditional financing: As with the downscaling it appears to be technically possible to measure climate effectiveness of private sector facilities well as projects financed by public financial institutions (GCF, MDBs) there appears to be a huge potential to tap additional financial sources.
  - (vii) Governance and management: the facility would need a transparent governance structure and a professional management (e.g. one of the MDBs). The World Bank as well as GCF agreed to jointly further scope out the potential facility. Switzerland and Korea appear to be ready to provide financial support and are important stakeholders in further developing the facility.

## **WORKING GROUP 2: What does it take – Technical expertise: How to best deliver technical expertise from the WMO community?**

**Co-chairs:** Ms. Mary Power, Director, Development & Regional Activities Department, and Mr. Geoff Love, Lead Technical Consultant, World Bank Group

Mechanism and models for engagement within the WMO community need to be refined, scaled up and institutionalized to better service the increasing demand for support for modernization of NMHS. Issues the Group considered needed to be tackled included:

- While there is a wealth of technical expertise spread through the World's NMHSs it is concentrated in the developed country NMHSs. While the WMO Technical Commission structure enables all WMO Members to access this expertise the progressive tightening of budgets in the developed countries has steadily reduced the availability of experts for international work.
- There is a lack of specialized meteorological, hydrological and related expertise in the private sector that can easily deployed should financial resources be available.
- It was noted that at times WMO Guidelines do not address the realities of a resource stretched, small developing country.

Some solutions considered included:

- Including within the Country Profile Database (CPD) a roster of experts, along with a description of under what conditions they might be released for limited periods to work on externally funded aid projects in the developing world;
- A focus on culture change within the WMO Technical Commissions to consider “real world” technical issues rather than specifications for the best possible technical solution;
- A culture change in both donor and recipient communities to reach a better balance amongst expenditures on: (1) infrastructure, (2) services development and delivery, and (3) human capacity development, with possibly more expenditure on 2) and 3) and less on 1).
- Building better relationships in developed countries between the national aid agency and the NMHS.
- Encouraging, and exploring options for, further financial support for “twinning” of developed and developing country NMHSs. Within this activity finding further resources for embedding experts from developing countries in developed country NMHSs and vice versa was seen as a priority.
- Exploring options for a “volunteer network” from amongst retirees in the WMO community among others.



### **WORKING GROUP 3: What does it take – Information: How can the WMO Country Profile Database increase its value for the whole hydromet community?**

**Co-chairs:** Ms. Sylvie Castonguay, Acting Chief, Communications and Public Affairs, WMO and Mr. Stephen Mooney, Climate and Environment Adviser, Department for International Development (DFID)

Development partners indicated that there would be added value for them if the following could be incorporated in a re-branded CPDB:

- The system should include National Strategic Plans for each WMO Member
- Partner and WMO country assessment reports
- Who is investing in each country? Who is developing what in each country? A clear picture of what's going on at a national level is needed to avoid duplication.
- Institutions apart from Metrological entities should be represented, for example, Hydrological Services and Aviation Services should also be represented
- All the other WMO information on activities and structures in the region should be integrated – Regional Climate Centers, Regional Training Centers – as well as SWFDP data, Hydro data and projects, training catalog
- There should be a quick access to WMO guidelines by themes
- WMO should check if is possible to integrate project information sources. A few examples
  - OECD
  - ODI overseas projects (<https://www.odi.org/our-work/programmes/projects>)
  - SADC
  - UN Procurement database

The following guidelines were recommended:

- The system should be easy to use, non-technical first level with no learning curve but have access to deeper technical information for experts
- Data input should not be voluntary
- The system should rely primarily in information that WMO already has, since it will be difficult and take time for Members to update all of their information; it should not burden Members
- The message to WMO Members that Partners are checking the database could help motivating them to update their information
- System should break down WMO silos (WMO staff should not reflect its silo mentality when in the field with partners)
- Re-Brand the CPDB
- Need for long term commitment from all: WMO, Members and PARTNERS!



## **WORKING GROUP 4: What does it take – Systemic interventions: How can increasingly available climate finance foster systemic approaches?**

**Co-chairs:** Mr. Jerry Velazquez, Director, Mitigation and Adaptation Division, GCF and Ms. Astrid Tveteraas, Senior Adviser, Department for Climate, Energy, Environment and Research, Norwegian Agency for Development Cooperation

### **Point of entry and climate rationale**

- Funding for hydromet modernization is available but proposals are not coordinated and projects do not sufficiently include the national authorities and hydromet service.
- GCF needs to know what is the minimum requirement for hydromet programmes that needs to be developed? How do we ensure that the projects are really science based, builds on the NAP and NAPAs (or another national strategy), to ultimately feed into the NDCs?
- GCF highlighted the need to improve the climate rationale of the projects. The board had asked the secretariat to develop a roadmap for this by July 2018. Role of WMO to complete this task is essential.
- Developing the climate rationale for the GCF proposal should be manageable while the systemic approach is the largest challenge.

### **Systemic challenge**

#### **National level**

- Country level policies are often missing. Very few policies are focusing on hydromet in an integrated way. There is also a missing link between the NMHSs and the overall policies, NAPS etc. The NMHSs have not automatically been considered as a reference player. Departmentalization - there is a need for policy reform, fostering legislation, such as the Africa hydromet programme has done.
- Strengthening hydromet data will lead to obtaining more funding. GCF readiness window should help countries to prepare the hydromet sector to respond to the challenge.

#### **Development partners/Global level**

- Development partners must make the case for hydromet services.
- Coordination - you need to create incentives for coordination. Partners have that responsibility.
- The Global Framework for Climate Services (GFCS) could be a vehicle to bring us together. It has an implementation plan designed by more than 2000 experts. However, it is not entirely serving its purpose as of today, largely because there are not sufficient incentives for the actors to cooperate.

- GCF could change the review criteria for readiness, to ensure collaboration.
- Plea to GCF –if you come across an application with a piecemeal approach to hydromet development, send it back and demand a systemic approach.

### **Where are the next steps?**

- Go back to agencies and discuss ways to developing high quality proposals
- Support countries to get ready with a focus on hydromet services as the foundation for robust project proposals.
- GCF is developing guidelines for hydromet services: input from WMO community is critical.
- WMO/GFCS will prepare a concept note that addresses the problem of ad hoc submission of projects, along with a plan of how to make this work. To be shared with partners.
- Piggyback on upcoming events bringing together hydromet community to advance on these areas (e.g. UNFCCC COP; GFDRR Consultative group)

### **Action items recommended related to GCF:**

- Most of the support needed is bilateral rather than project based. GCF could support in scaling up or sequencing projects. We could build on each other incentivizing a systemic approach.
- GCF to include in their roadmap the action items discussed here and reconvene on guidance material and readiness programme when progress is made.

## **Annex 4. Conference Agenda**

### **Context**

According to the [World Economic Forum 2018 Global Risks Report](#) four of the five most pressing risks the world is confronted with are related to weather, climate, and water. Demand for the provision of weather, climate, water services is rapidly increasing, and national hydrometeorological institutions play a central role for the provision of these services.

At the same time, many national hydrometeorological institutions in developing countries are confronted with major performance challenges. Therefore, the [draft WMO Strategic Plan 2020-2023](#) sets an ambitious Goal – to close the capacity gap on weather, climate, and water services between developed and developing countries. Scaling up effective partnerships for investment is set as one of the main Strategic Objectives to achieve this Goal.

### **Conference objectives**

Guided by the goal to close the capacity gap and building on the outcomes of the first Development Partners Roundtable in 2016, the 2018 Conference has the following objectives:

- Identify ways how to increase the effectiveness of investments in national and regional hydrometeorological institutions to strengthen their weather, climate and hydrological service provision;
- Identify ways to strengthen leadership and management capacities of the hydrometeorological services, contributing to the sustainability of service provision.

### **Expected Outcomes**

- Agreed concrete ways to increase effectiveness of investments in hydro-meteorological services in developing countries;
- Agreed next steps, including mutual commitments from international partners as well as developing countries hydrometeorological institutions on how to contribute to increased development effectiveness.

### **Participants**

- National Meteorological and Hydrological Services from developing and developed countries;
- Financing and development partners including Multilateral Development Banks, UN organizations, bilateral development partners and climate finance institutions;
- Regional development institutions.

## Approach

The conference will provide the space for an interactive dialogue and joint thinking on how to go beyond business as usual in strengthening and sustaining hydrometeorological services. A series of panels and working groups will identify opportunities for scaling up what works and develop proposals on how to move forward in innovative ways.

<b>Wednesday, 21 March 2018</b>	
08:00-09:00	Registration (Ground Floor)
09:00-09:15	<p><b>Opening remarks</b></p> <p><b>Ms. Elena Manaenkova</b>, Deputy Secretary-General, WMO  <b>Ms. Laura Tuck</b>, Vice President, Sustainable Development, World Bank Group (video)</p>
09:15-10:30	<p><b>Conference objectives and agenda</b></p> <p><b>Mr. Markus Replik</b>, Director, WMO Office of Development Partnerships  <b>Mr. Vladimir Tsirkunov</b>, GFDRR Hydromet Program Lead</p> <p><b>Session 1: The challenge - Closing the capacity gap</b>  Moderators: <b>Mr. Markus Replik</b> and <b>Mr. Vladimir Tsirkunov</b></p> <p>Panelists:</p> <p><b>Mr. Aengus Collins</b>, Practice Lead Global risks, World Economic forum: What is at stake - the importance of addressing the global weather, climate, and water related risks  <b>Mr. Deon Terblanche</b>, Director, WMO Research Department: Where do we stand today and where do we need to go - the exponential growth of global challenges and how the WMO Strategic Plan 2020-2023 is going to address them  <b>Mr. Daniel Kull</b>, Senior DRM Specialist, World Bank: Is development partners' support for countries in addressing weather, climate, and water risks sufficient and effective – a global perspective  <b>Ms. Celina Kattán</b>, Director General, Observatorio Ambiental Ministerio de Medio Ambiente y Recursos Naturales, El Salvador: What is the role of country leadership in ensuring sufficient and effective national and international support for addressing weather, climate, and water risks – and what is the role of National Meteorological and Hydrological Services</p>
10:30-10:45	Group Photo (Ground Floor) Coffee / Tea Break (Salle D)
10:45-13:00	<b>Session 2: Implementing the Guiding Principles - How can we scale up what works?</b>

3 consecutive 45-min panels, moderated by experts, with NMHS representatives as panelists sharing country experience. In each panel, short interventions of panelists followed by 30 minutes discussion.

### **Panel 1: Strategic planning**

Guiding questions:

- What are the main strategic planning vehicles at country level that guide hydro-met investments
- How are these strategic planning vehicles linked with the countries' national development agenda and programming for climate action and DRR?
- How can we reach greater impact through strategic planning?

**Moderator: Mr. Dave Britton**, UK Met Office, Head of International Development & Principal Advisor to DFID and FCO

**Panelists:**

**Mr. Davit Karapetyan**, Deputy Minister of Emergency Situations, Ministry of Emergency Situations, Yerevan, Republic of Armenia

**Mr. Sayed Reza Mousawi**, Director, Afghanistan Meteorological Department, Afghanistan Civil Aviation Authority

**Ms. Semunesh Golla Seyoum**, Director of Hydrology and Water Quality, Ministry of Water, Irrigation and Energy, Ethiopia

### **Panel 2: Ensuring sustainability**

Guiding questions:

- What is done to ensure sustainability of investments and service delivery beyond project lifetime?
- How to foster sustainability of the full value cycle from infrastructure to services to development outcomes for service users?

**Moderator: Ms. Sézin Tokar**, Senior Hydrometeorological Advisor, USAID

**Panelists:**

**Ms. Lai Lai Aung**, Deputy Director, Department of Meteorology and Hydrology, Myanmar

**Mr. Miguel Montoute**, Acting Director, Water Resources Management Agency (WRMA), Saint Lucia

**Mr. David Farrell**, Principal Caribbean Institute for Meteorology and Hydrology

### **Panel 3: Measuring results**

Guiding questions:

- What is measured, and at what level?
- Which indicators to use?
- How to use results measurement to inform and influence policy and budget allocation decisions?

	<p><b>Moderator: Mr. Justus Kabyemera</b>, Director for Climate Change and Green Growth, African Development Bank</p> <p><b>Panelists:</b>  <b>Ms. Bonizella Biagini</b>, Programme Manager, Climate Information for Resilient Development in Africa (CIRDA), United Nations Development Programme  <b>Mr. Jagadishwor Karmacharya</b>, Deputy Director-General, Department of Hydrology and Meteorology, Nepal,  <b>Mr. Matti Erikäinen</b>, Head of International Projects, Expert Services, Finnish Meteorological Institute</p>
13:00-14:00	Lunch Break
14:00-14:30	<p><b>Cont. Session 2: Reflection and summary - How can we scale up what works?</b></p> <p>Discussion moderated by <b>Mr. Markus Repnik</b> and <b>Mr. Vladimir Tsirkunov</b></p>
14:30-16:00	<p><b><u>Session 3: Closing the capacity gap – Learning from emerging financing and implementation mechanisms aiming at systemic solutions</u></b></p> <p><i>3 consecutive panels, each with a moderator and mixed panelists</i></p> <p><b>Panel 1: Climate Risk and Early Warning System (CREWS) initiative</b></p> <p>Guiding questions:</p> <ul style="list-style-type: none"> <li>• What is it and why is it needed?</li> <li>• How does it incorporate the guiding principles/good practices?</li> <li>• What are its strengths and current limitations?</li> <li>• How to bring CREWS to scale?</li> </ul> <p><b>Moderator: Mr. Francois Vince</b>, Task Team Leader, Water and Sanitation Unit, AFD</p> <p><b>Panelists:</b>  <b>Mr. John Harding</b>, Head, CREWS Secretariat  <b>Ms. Anna-Maria Bogdanova</b>, Operations Officer, GFDRR, World Bank  <b>Mr. Maxx Dilley</b>, Director, Climate Prediction and Adaptation Branch, WMO  <b>Mr. Jean-Pierre Mpundu Elonga</b>, Directeur Général, Agence nationale de la Météorologie et de Télédétection par satellite (METTELSAT)</p> <p><b>Panel 2: Africa Hydromet Programme</b></p> <p>Guiding questions:</p> <ul style="list-style-type: none"> <li>• What is it and why is it needed?</li> <li>• How does it incorporate the guiding principles/good practices?</li> <li>• What are its strengths and current limitations?</li> <li>• How to bring Africa hydromet Programme to scale?</li> </ul> <p><b>Moderator: Mr. Prashant Singh</b>, Sr. DRM Specialist, World Bank</p>

	<p>Panelists:</p> <p><b>Mr. Justus Kabyemera</b>, Coordinator, ClimDev-Africa Special Fund (CDSF), African Development Bank</p> <p><b>Mr. Makoto Suwa</b>, Senior Disaster Risk Management Specialist, World Bank</p> <p><b>Mr. Kouka Ernest Ouedraogo</b>, Directeur Général, Agence nationale de la Météorologie (ANAM)</p>
	<p><b>Panel 3: Green Climate Fund</b></p> <ul style="list-style-type: none"> <li>• What are the GCF financing opportunities?</li> <li>• What challenges does the GCF face in identifying and quality assuring the hydromet components of its investments?</li> <li>• How to scale up GCF hydromet financing and impact?</li> </ul> <p>Moderator: <b>Mr. Patrick Bénichou</b>, President of MFI</p> <p>Panelists:</p> <p><b>Mr. German Velasquez</b>, Director, Mitigation and Adaptation Division, Green Climate Fund</p> <p><b>Mr. Pa Ousman Jarju</b>, Director, Country Programing Division Green Climate Fund</p> <p><b>Mr. Joseph Intsiful</b>, Systems Senior Specialist, Climate Information and Early Warning, Green Climate Fund</p>
16:00-16:15	Coffee/Tea Break (Salle D)
16:15-17:15	<p><b>Continuation Session 3: Reflection and summary – what are we learning from these emerging mechanisms and how to use them to reach scale?</b></p> <p>Discussion facilitated by the moderators of the 3 panels</p>
17:15-17:30	<p><b>Summary of the day: Main take-aways and scaling up opportunities</b></p> <p><b>Ms. Elena Manaenkova</b>, Deputy Secretary General, WMO</p> <p><b>Mr. David Farrell</b>, Principle, Caribbean Institute for Meteorology &amp; Hydrology (CIMH)</p>
17:30	Reception (Attic)
<b>Thursday, 22 March 2018</b>	
09:00-11:00	<p><b><u>Session 4: What does it take to close the gap – translating the opportunities for scale into concrete action beyond business as usual</u></b></p> <p><i>4 Parallel working groups, each working group with 2 co-chairs. Working groups are requested to come up with at least one concrete scaling up proposal and game plan on how to put it into action. Participants to freely choose working groups; working groups formed at the end of the first day.</i></p> <p><b>Working group 1 (Press room – Ground Floor): <u>What does it take – Money: How to leverage financial resources through innovative financing mechanisms?</u></b></p> <p>Co-chairs: <b>Mr. Manuel Keller</b>, Head of International Affairs, MeteoSwiss,</p>



	<p>Federal Department of Home Affairs (FDHA), and <b>Mr. Deon Terblanche</b>, Director, WMO Research Department</p> <p><b>Working group 2</b> (Room 0L08 – Ground Floor): <b><u>What does it take – Technical expertise: How to best deliver technical expertise from the WMO community?</u></b>  Co-chairs: <b>Ms. Mary Power</b>, Director, Development &amp; Regional Activities Department, and <b>Mr. Geoff Love</b>, Lead Technical Consultant, World Bank Group</p> <p><b>Working group 3</b> (Salle D): <b><u>What does it take – Information: How can the WMO Country Profile Database increase its value for the whole hydromet community?</u></b>  Co-chairs: <b>Ms. Sylvie Castonguay</b>, Acting Chief, Communications and Public Affairs, WMO and <b>Mr. Stephen Mooney</b>, Climate and Environment Adviser, Department for International Development (DFID)</p> <p><b>Working group 4</b> (Salle D): <b><u>What does it take – Systemic interventions: How can increasingly available climate finance foster systemic approaches?</u></b>  Co-chairs: <b>Mr. Jerry Velazquez</b>, Director, Mitigation and Adaptation Division, GCF, and <b>Ms. Astrid Tveteraas</b>, Senior Adviser, Department for Climate, Energy, Environment and Research, Norwegian Agency for Development Cooperation</p>
11:00-11:15	Coffee/Tea Break (Salle D)
11.15–13.00	<p><b>Cont. Session 4: What does it take to close the gap - translating the opportunities for scale into concrete action beyond business as usual</b></p> <p>Working groups present their proposals and action plans, followed by discussions</p> <p>Moderators: <b>Mr. Markus Repnik</b> and <b>Mr. Vladimir Tsirkunov</b></p>
13:00-14:00	Lunch Break
14:00-15:30	<p><b><u>Session 5: From action plans to action – next steps</u></b></p> <p>Moderators: <b>Mr. Markus Repnik</b> and <b>Mr. Vladimir Tsirkunov</b></p>
15.30 – 16.00	<p><b>Closing Remarks</b></p> <p><b>Ms. Courtney Draggon</b>, Director, International Activities Office, National Weather Service</p> <p><b>Ms. Elena Manaenkova</b>, Deputy Secretary-General, WMO</p>

## **Annex 5. Participants list**

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