The Importance of Hydromet & Climate Information Services to the Climate Resilience Agenda

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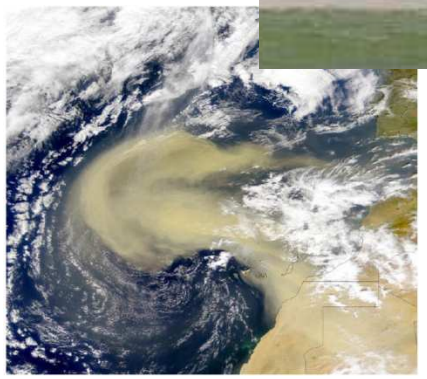
Outline

- Importance of Hydromet & Climate Information Services (HCIS)
- Overview of PPCR & WB Activities in HCIS
- The Shared Learning & Knowledge Series

Hydromet & Climate Services Are Important, Because...

They contribute to reducing livestock and crop loss in climate vulnerable areas – for example in Mongolia

They help protect coastal areas from floods & storms – in Vietnam



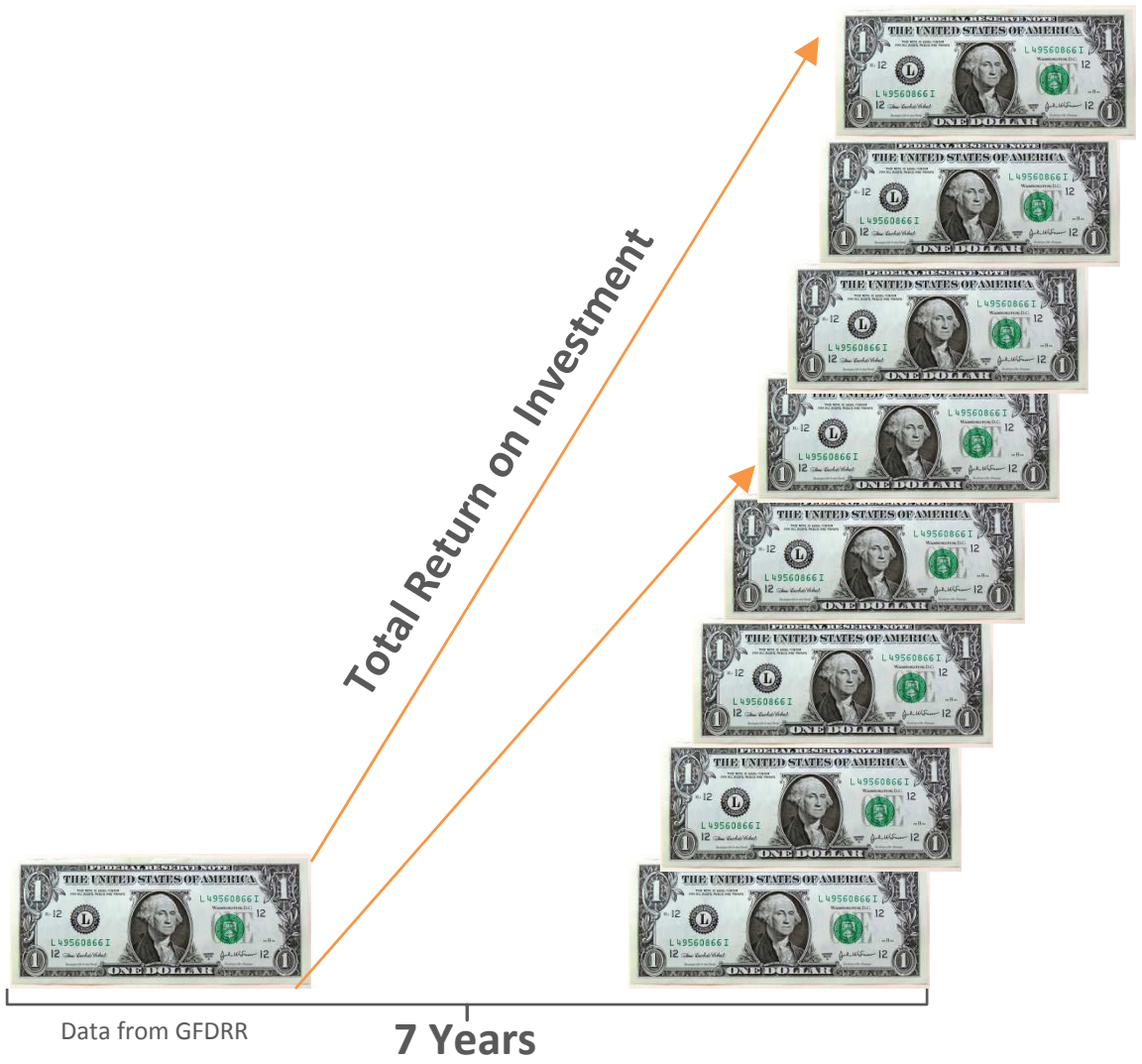
They contribute to climate resilient development in key sectors – in Mozambique, etc.

However, Large Gaps in Hydromet Coverage Persist.....

Coverage of meteorological surface observation stations worldwide

Source: WMO

Economic Returns on Hydromet Investments are Very Large



Study done by World Bank for its ECA region showed that:

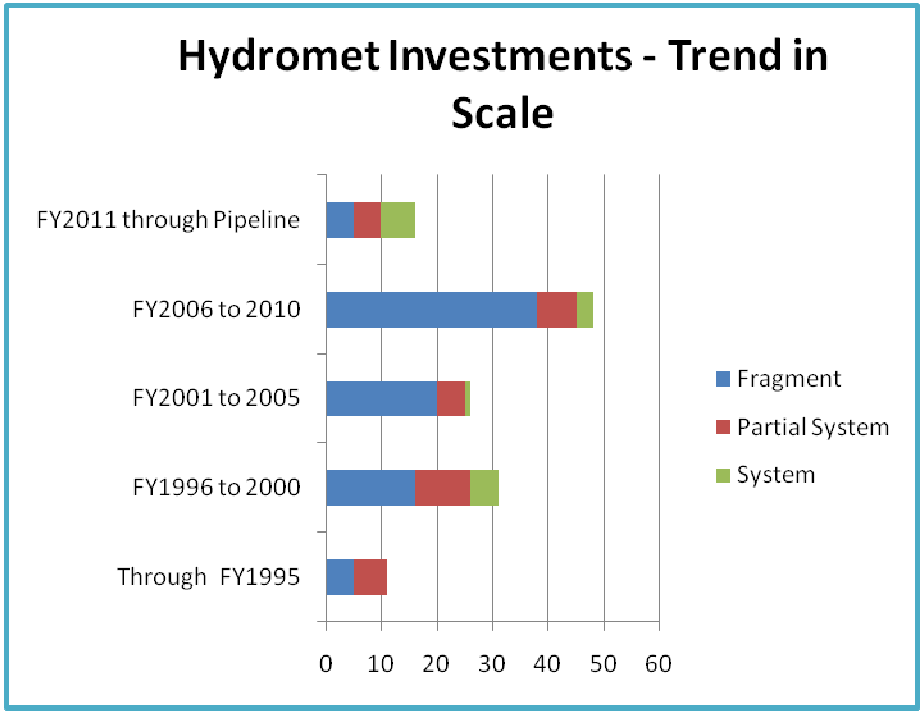
1. **Depending on the estimation method, rates of return are on average between 23 to 35% per year.**

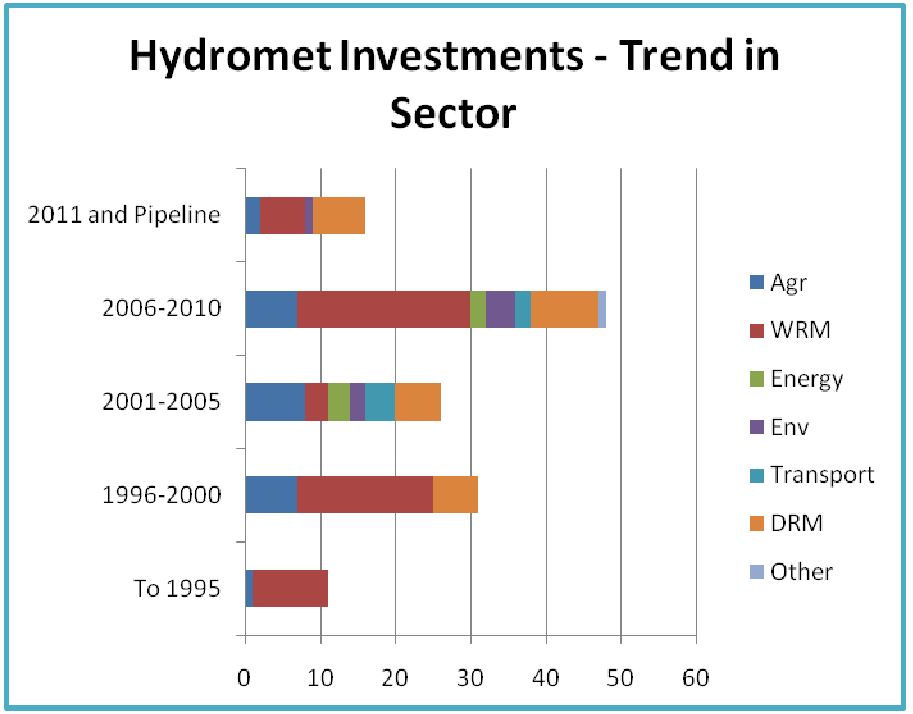
2. **Increased Climate Variability and long term Climate Change only stand to increase the returns even more.**

World Bank hydromet portfolio

- Since mid-1980s the Bank has prepared and implemented over 130 operations with some elements supporting NMHSs
  - Over 85 – fragments (few sensors, hydrology without meteorology)
  - 33 – partial systems
  - 15 – systems

- The number of operations and their scope considerably increased since mid-1990s
- Total cost of investments under preparation or implementation exceeds USD500M

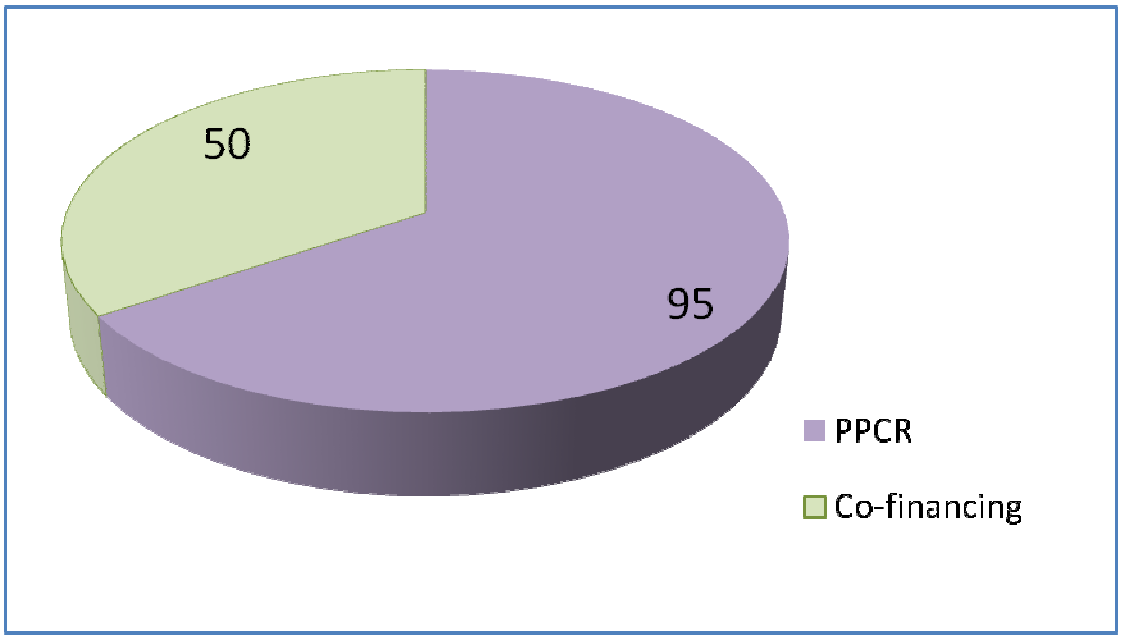




Overview of PPCR Support to Hydromet & Climate Services

- Cambodia
- Grenada
- Nepal
- Niger
- Saint Vincent and the Grenadines
- Samoa
- Tajikistan
- Zambia
- Mozambique
- Jamaica
- Yemen
- Bolivia
- Regional Caribbean/Pacific

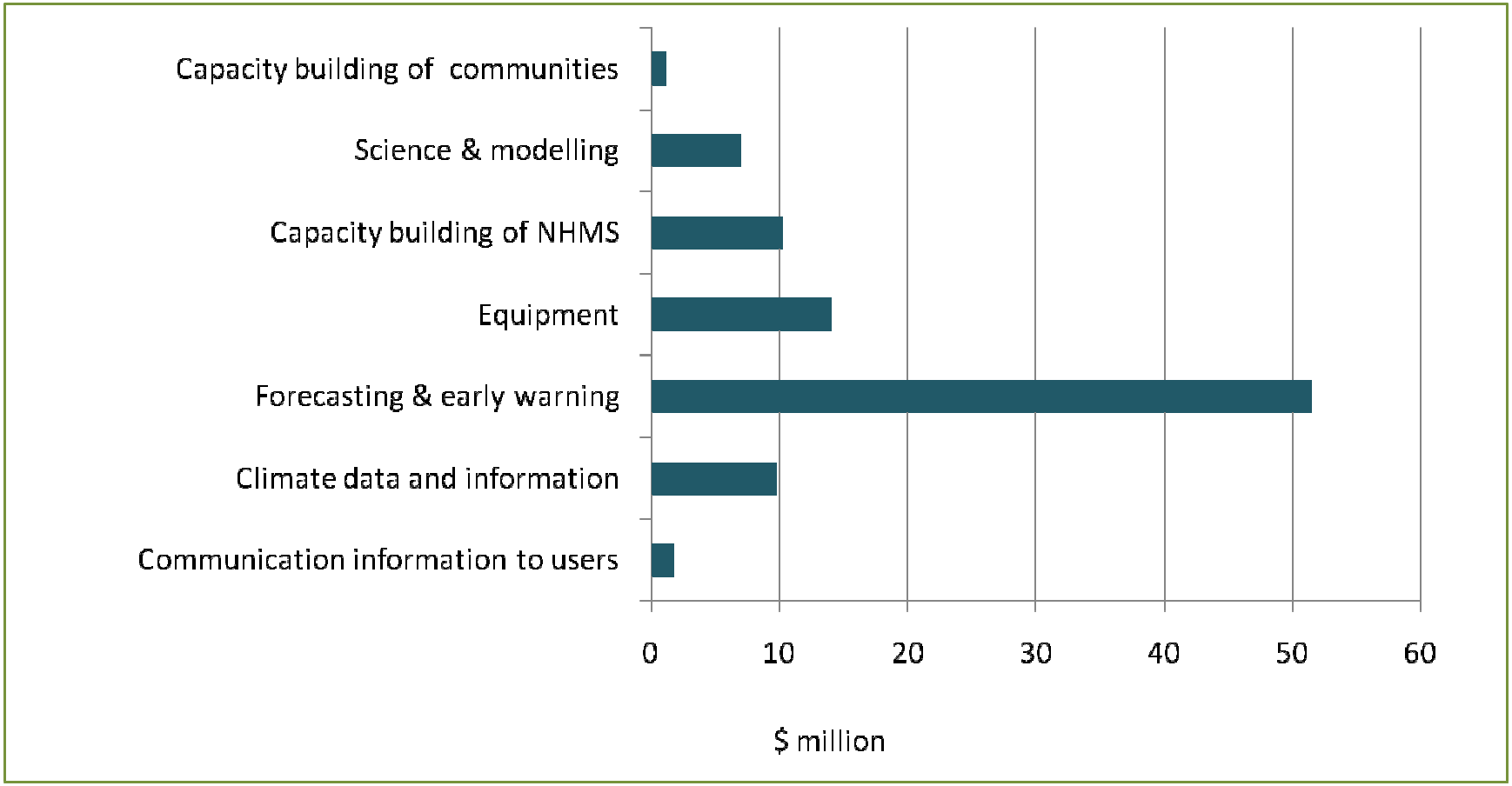
Indicative funding for HCIS* ($M) via PPCR



(i) This excludes sums for large multi-sector projects that that do not specify amount for hydromet activity (e.g., Cambodia), and recent approvals (Jamaica, Bolivia) and Yemen, regional tracks

(ii) for several investments co-financing is still TBD

Nature of Investments proposed for Hydromet & Climate Services under the PPCR



PPCR Areas of Intervention and Support

Cross-cutting themes

- ❑ Policy (mainstreaming climate resilience in development)
- ❑ Community resilience
- ❑ Private sector development
- ❑ Gender
- ❑ Disaster risk reduction
- ❑ Capacity building and awareness raising

1. Policy & Enabling Environment

- Development of climate-resilient codes and standards
- Improved oversight, management and maintenance
- Climate-resilient sectoral and local development plans

2. Physical Investments

- "No-regrets" projects - valuable even in absence of climate change
- New types of infrastructure that take climate resilience into account, for instance at small-scale
- Retrofitting infrastructure to cope with changing climate

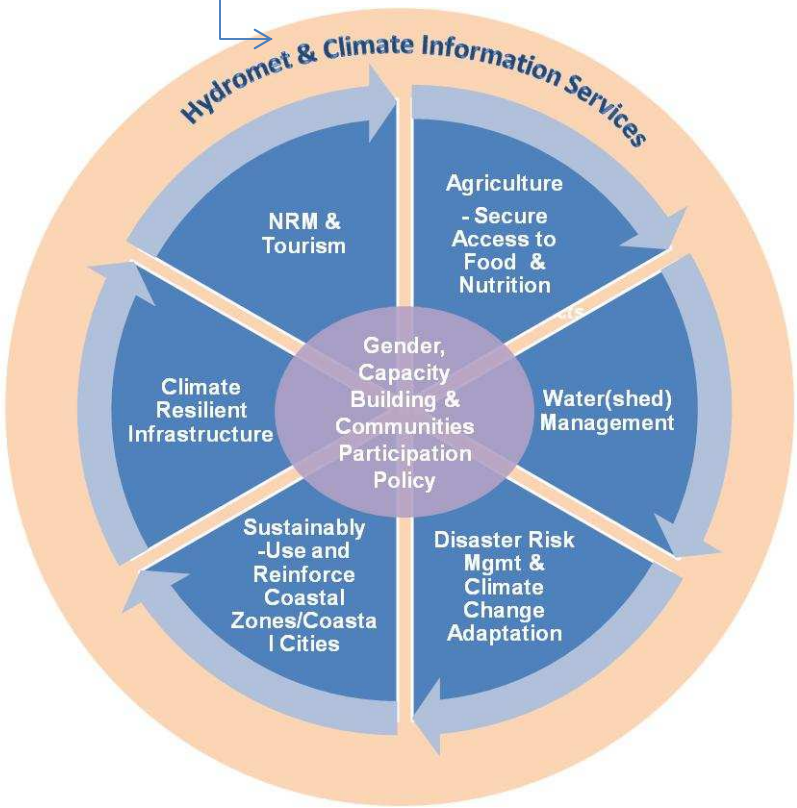
3. Capacity Building

- Analytical studies and assessments to guide climate-resilient infrastructure design
- Human capacity building
- Capacity building of Institutions

4. Knowledge Management

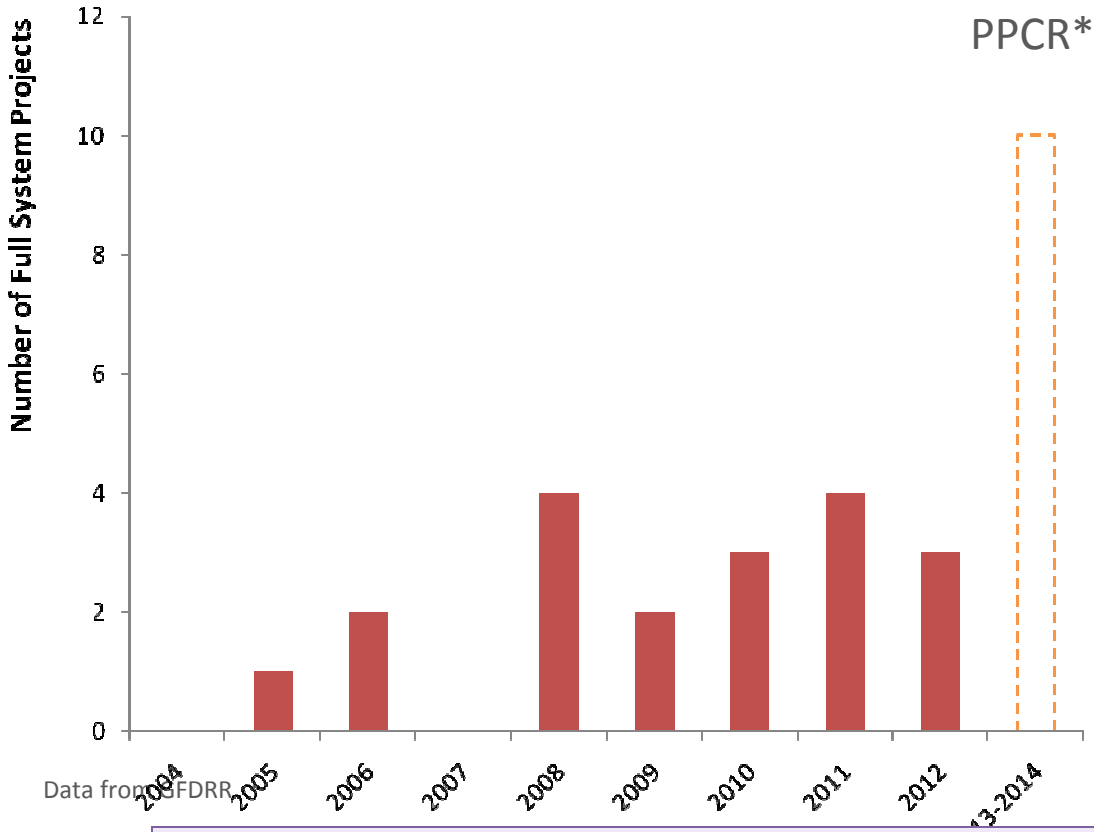
- Climate resilience aspects are integrated into Trainings and Dissemination products such as guidance manuals
- Data and information gathering for informed decisions and actions
- Improved coordination and systematization of knowledge

Hydromet & CIS



Sectors & thematic areas

Client Demand for Hydromet+ System-Oriented Projects Is on the Rise



Data from GFDRR

Key points:

- Sharp rise in WB portfolio of hydromet ++/systems approach investments
- PPCR investments are going to provide a strong additional boost.
- Opportunity for shared learning

➢ **Opportunity for PPCR to transform at scale & set a new "gold standard for NHMS/CIS projects**

Completed or active projects supporting NMHSs

Project/component title	Funding (USD)	Status
Poland. Emergency Flood Recovery Project (1997-2006)	**62 M**	Completed
Turkey. Emergency Flood and Earthquake Recovery Project (1998-2005)	**26M**	Completed
Russia. Hydromet Modernization Project – I (2005-2012)	**173M**	To be completed in August 2012
Albania. Disaster Risk Mitigation and Adaption Project (2008-). Component 2	**1.8M**	Under implementation
Moldova. Disaster and Climate Risk Management Project (2010-2015)	**9M**	Under implementation
India. Bihar Koshi Flood Recovery Project (2010-2015) Component 3.	**30M**	Under implementation
CA region. Central Asia Hydrometeorology Modernization Project (2011-2016)	**27.7 M**	Under implementation

Pipeline of operations supporting NMHSs

Project/component title	Funding (USD)	Stage of preparation
Mexico. Modernizing the National Meteorological Service to Address Variability and Climate Change in the Water Sector in Mexico	105 M (IBRD)	Appraisal
Vietnam. Managing Natural Hazards Project Component 2**:** Strengthening Weather Forecasting and Early Warning	30 M (IDA)	Pre-appraisal
Nepal. Building Resilience to Climate Related Hazards	25 M (PPCR/IDA)	Pre-appraisal
Russia. Hydromet Modernization Project - II	141.5 (IBRD)	Preparation
Mozambique. Strengthening Hydrological & Meteorological Information Services for Climate Resilience	10-15M (PPCR/IDA)	Preparation
Ghana. Strengthening Hydrological and Meteorological Agencies	15-25 (IDA)	Identification
Zambia. Strengthening Climate Information System	9.5M (PPCR/IDA)	Identification
Africa. Climate Risk Management Project	25M	Identification

Preliminary results & lessons of Hydromet Modernization Programs

- Climate services, go beyond hydromet agencies and need multi-agency support – in-country coordination is key.

- There is no universal or quick solution to improve NMHSs services
  - Need for a project flexible design and long-term engagement (10 years+)
  - Lack of long-term financial instruments

- Building infrastructure is less challenging than building institutions, strengthening capacity and sustaining them

- More targeted support is needed to arrest degradation of Hydrological agencies and services

- Better technical guidance how to build or modernize NMHSs
  - How to design, select most important activities and how much to invest


Thank you