Integrated Flood Management: the experience of the Associated Programme on Flood Management (APFM)

WMO/ESCAP Panel on Tropical Cyclones
New Delhi, India
2-6 May 2016
Risk Management: Hazards and disasters

“There are two types of levees, those that have been overtopped by floodwaters, and those that will be”

- William Hammon Hall, first State Engineer of California, 1880 circa

Natural hazards are **unavoidable**

**BUT**

Disasters are caused by social attitudes and developmental processes that increase vulnerability
Flood Risk Mitigation: from theory to practice

- Warnings, civil defence planning, awareness raising and education to risk
- Flood forecasting, flood mapping
- Risk sharing
- Structural measures (and maintenance), land use planning, basin management

DISASTER
Associated Programme on Flood Management (APFM)

Mission

“to support countries in the integrated management of floods within the overall framework of Integrated Water Resources Management.”

Joint Initiative
between World Meteorological Organization and Global Water Partnership

Technical Support Unit
embedded in the WMO Hydrology and Water Resources Branch

Founded
in 2001

Contributors
FOEN (Switzerland), MAE (France), CONAGUA (Mexico) and USAID (in the past: Japan, the Netherlands, Germany and Italy)
Activities of the APFM

• Compilation of guidance and advisory tools
• Capacity Building
• Strategic advice on flood management through a HelpDesk
  • Developing training and advocacy material
  • Capacity building
  • Building a network of institutions supporting multi-disciplinary approach
IFM publications

- Integrated Flood Management Concept Paper
- Flood Management Policy Series
- IFM Tools Series
- Training manuals
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Guidance documents in the IFM context

bridging disciplinary gaps
Examples of IFM Tools

- Integrated river-basin approach
- Research, education and exchange of knowledge
- Strengthening of institutional capacities
- Retention of water and non-structural measures
- Land use, zoning and risk assessment
- Structural measures and their impacts
- Public awareness, public participation and insurance
- Early warning, flow forecasting, flood emergency
- Minimizing environmental impacts

- Guidelines for the production of flood maps
- Defines the legal and administrative framework to set up a flood mapping mechanism
- Analyzes different type of maps, and different typologies for flood map production

- Guidelines for the assessment of flood losses
- Analyzes the various types of losses
- Presents examples from various countries
Capacity building & training

• What is needed?
  Identification of problems and gaps

• What is possible?
  presenting opportunities and existing capacities

APFM Provides:

• Vocational training (short training and workshops for different target groups)
• Specific topics and contact with experts:
  – Integrated flood management,
  – urban flood management,
  – community-based approaches
• Development of National Strategies that apply the IFM concept
Regional pilot projects

Aim of pilot projects:
develop and implement IFM concept and its application through demonstration (with third party funding)

Pilot projects have been undertaken in:
- South Asia (community-based approaches)
- Africa (flood management strategies)
- Central and Eastern Europe (flash floods)

Available through the HelpDesk:
- Assistance in development of proposals
- Support in securing funding from donors
- Technical supervision
Integrated Flood Management HelpDesk

A facility to provide guidance on flood-related issues to countries that seek to adopt the IFM concept.

Objectives

• Quick access to information on flood management;
• Guidance and momentum for reform activities towards IFM;
• Continuous and sustainable capacity development mechanism in support of IFM implementation;
• Serves as a link between practitioners / decision makers and experts.
**Integrated Flood Management HelpDesk**

**Beneficiaries**

Government agencies on various levels, CBOs, RBOs, Voluntary Organizations, Bi- and Multilateral Organizations, Universities

**Request** for assistance, preparation of project proposal, supervision of technical implementation

**HelpDesk Support Base**

institutes specialized in various IFM-relevant disciplines

Mail to floodmanagement@wmo.int
Support Base Partners

Specialized institutes in various disciplines relevant for IFM
DEWETRA Platform

- Combining real-time observations with different forecast scenarios
- Multi-hazard integrated platform covering floods, forest fires, landslides

- Interconnects different databases (vulnerability, hazard, assets, etc.)
- Incorporates and customizable various forecasting models
- Possible coupling with the FFGS

- Made available to requesting countries through an open source license agreement between WMO and the Italian Civil Protection (signed on 24 March 2014)
Success indicators

- Launched in 2009
- Around 170 requests received from more than 40 countries
- Used by:
  - NGOs and private sector
  - Academic institutions
  - Governmental agencies
Activities in Region

• Thailand
  – Workshop on “Development of National Strategy for Integrated Flood Management (IFM) for Thailand” held in 2012 by APFM upon request of the Thai Meteorological Department (TMD)
    • resulted in reallocation of roles and responsibilities in flood management at the national level
  – Pilot project on “Empowering Communities - Community-based Approaches to Flood Management in Thailand and Lao PDR” was implemented with the Asian Disaster Preparedness Centre (ADPC)
    • positive feedback has led local authorities to mobilize additional budgetary resources for community based disaster risk reduction for nine other communities
Activities in Region (Continued)

• Bangladesh
  – two-day workshop was held in April 2015 with over 100 participants
  – obtain feedback from stakeholders on the current coastal flood management policy and practice
  – develop a first draft of an Integrated Flood Management framework for the coastal areas of Bangladesh
For more details:
www.floodmanagement.info

Thank you for your attention