



# Urban Flood Management

## STAKEHOLDERS

  
General Public

  
Municipal Authorities

  
National Flood Planners

  
Emergency Response Authorities

  
Spatial Planners

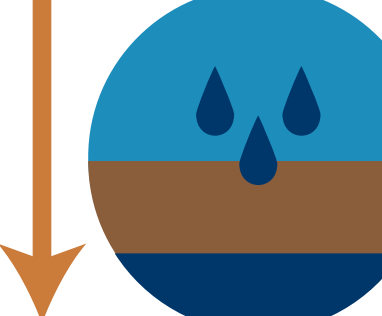
  
Water Supply & Sanitation Services


  
Civil Defense Authorities

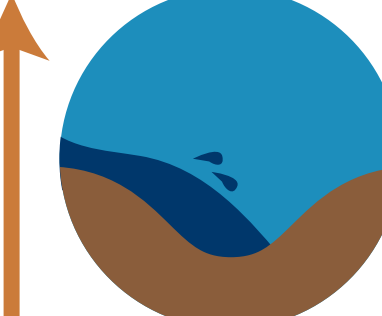
  
Non-Governmental Organizations


  
Property Developers

## URBAN AREA CHARACTERISTICS

  
**LOW**  
Soil storage capacity

  
**HIGH**  
Population density

  
**HIGH**  
Runoff

  
**HIGH**  
Vulnerability

## HUMAN ACTIONS CAN EXACERBATE FLOODING

  
Poorly planned land use

  
Impermeability of soils

  
Floodplain occupation


  
Increased vulnerability of informal settlements


  
Poor maintenance of drainage infrastructure


  
Improper disposal of solid waste


## ACTIONS


### CHALLENGES

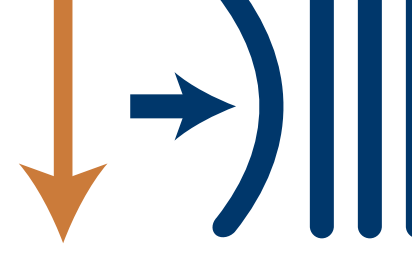
  
Climate change impacts

  
Lack of financing


  
Socio-economic vulnerabilities


  
Poor Governance


  
Demographic growth

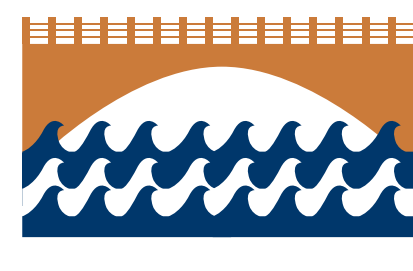
  
Low adaptive capacity


### STRUCTURAL MEASURES

  
Reduce runoff


  
Improve runoff retention


  
Optimize drainage systems


  
Enhance river capacity


  
Create diversion channels


### NON-STRUCTURAL MEASURES


  
Flood risk mapping & zoning


  
Flood forecasting & early warning systems

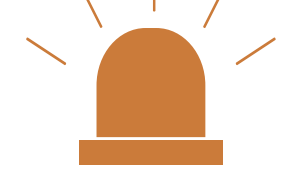
  
Land use planning


  
Flood proofing

  
Enforcing codes for building & municipal drainage


  
Insurance


  
Disseminate flood risk information


  
Develop & test emergency management plans


  
Train emergency teams

### OBJECTIVES

  
Improve population safety and quality of life

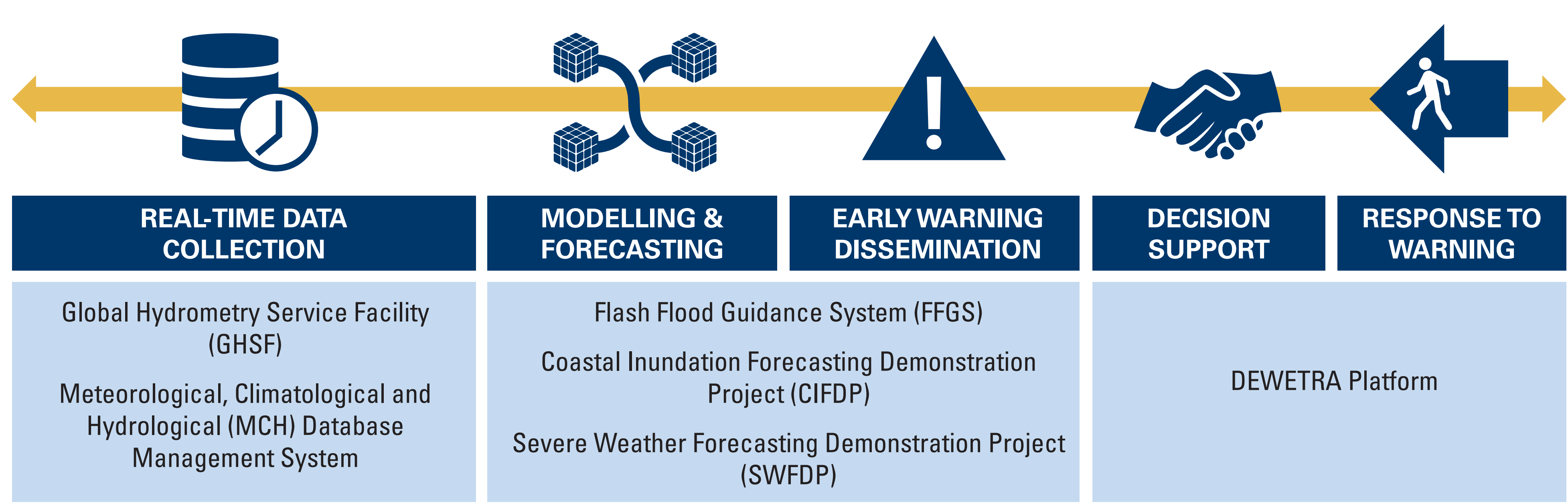
  
Reduce losses and vulnerability

  
Reduce uncertainty in economic sectors

  
Conserve the environment

## How can we help?

We support National Meteorological and Hydrological Services through the **Associated Programme on Flood Management** which provides guidance materials and help on End-to-End Early Warning System for Hydrometeorological Hazards



## What is Integrated Flood Management?



IFM integrates **land use** and **water resources** in a river basin, in accordance with Integrated Water Resources Management, with the objective of **maximizing net benefits** derived from the use of floodplains and **minimizing loss of life** due to flooding. IFM keeps in consideration environmental preservation, balancing development needs with **flood risk** towards **sustainable development**.

## What are our core activities?

  
**Assistance in developing national strategies**  
National strategy development has been supported in:  
South Asia (Thailand, Pakistan)  
Africa (Kenya, Zambia, Volta basin countries)  
Latin America (Mexico, Paraguay)

  
**Capacity Building & Training**  
Vocational training  
Short training and workshops for different target groups  
Material & expertise on integrated flood management, urban flood management and community-based approaches

  
**Guidance Materials**  
1 Concept Paper  
4 Policy Papers for policy makers and flood managers  
25 Tools for practitioners  
+ Case Studies & Training Manuals

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

  
**IFM Helpdesk**  
Request assistance for the preparation of project proposals, advice and supervision on implementation  
Technical expertise from 30 Support Base Partners