



UNITED NATIONS
UNIVERSITY
UNW-DPC

UN WATER
UN-Water Decade Programme
on Capacity Development



Legal and Institutional Aspects of Integrated Flood Management

Joachim Saalmüller
Climate and Water Department, WMO

Training Workshop Integrated Flood Management, Tehran, Iran
11-14 May 2009

WMO; Climate and Water Department

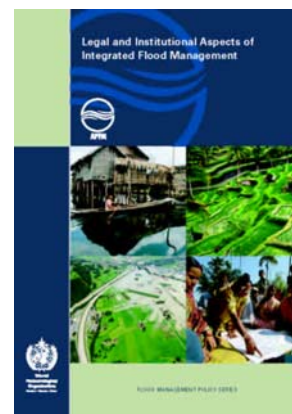
www.wmo.int



About this Presentation

This presentation:

- Is on IFM with special reference to Legal and Institutional Aspects of the concept
- Provides a rational and balanced way of addressing legal issues in flood management
- Aims at promoting understanding of the involved issues between flood managers and lawyers/legislators





Law: Definition

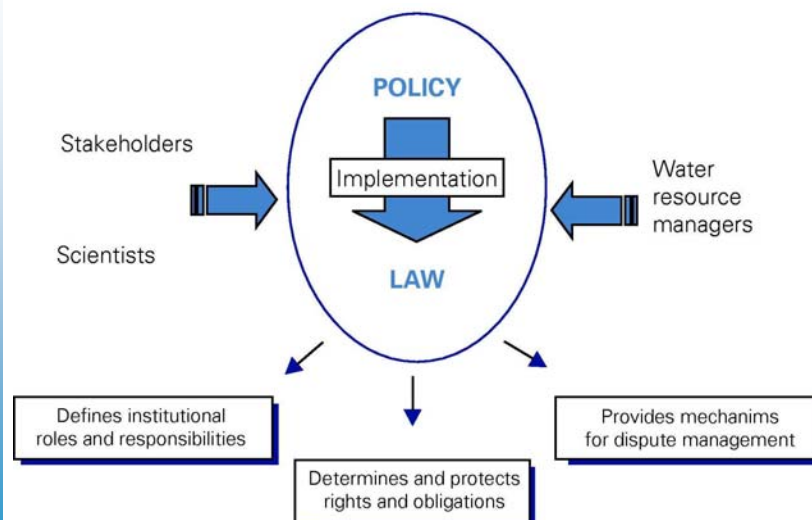
“Is a set of rules or norms of conduct which mandate, proscribe or permit specified relationships among people and organizations, provide methods for ensuring the impartial treatment of such people, and provide punishments for those who do not follow the established rules of conduct.”

Source: Wikipedia

3



Roles of Law in Flood Management

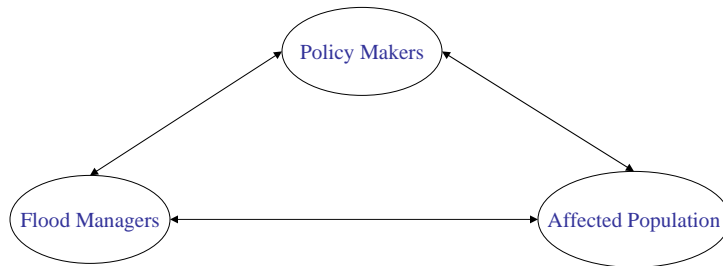


4



Role of Flood Managers

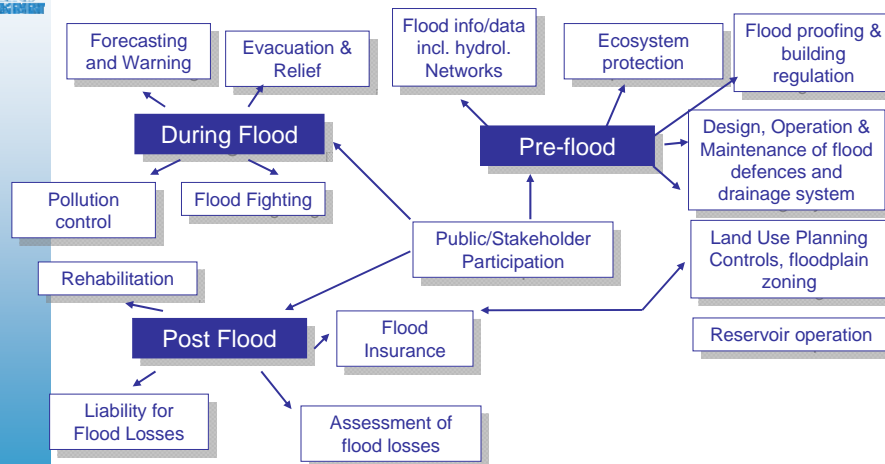
- Implement flood management policies within the given legislative framework
- Inform policy-making and legal reform processes about the realities of flood management



5



Overview of functions in IFM



6



Central Legal Themes in IFM

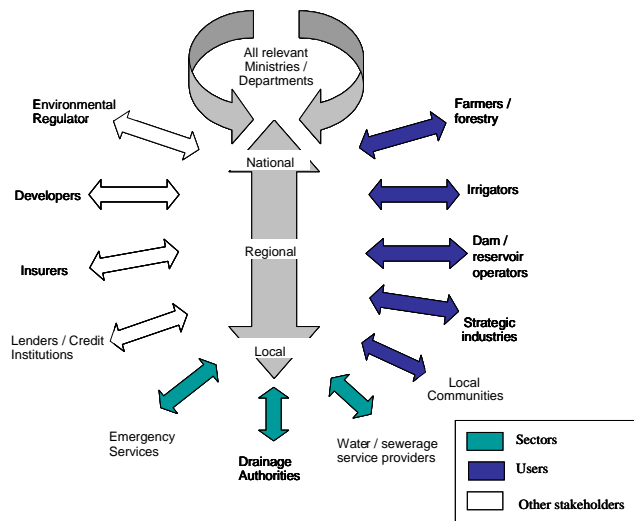
- Ensuring coordination and integration across institutional boundaries
- Information generation and sharing
- Enabling stakeholder participation
- Rights, powers and obligations

7



Ensuring coordination and integration

The challenge of integrating national public planning processes



8



Ensuring coordination and integration (cont.)

Example Land use planning controls:

- Flood hazard identification (hazard maps)
- Regulated development of flood plains (spatial planning/ land use legislation)
- Introduction of flood risk assessment to development activities (urban, forestry, agriculture)
- Flood proofing of structures (building codes)
- Guidance on best practice for agriculture
- Regulation through incentives and disincentives (insurance)



9



Information generation and sharing

- Creating institutional mandates and obligations for information generation
- Mandating relevant institutions to exchange data in necessary quality and timeliness
- Exposing plans, strategies, programmes and projects to public scrutiny
- Linking information to intended uses in
 - Preparedness planning (hazard, exposure and vulnerability information)
 - Emergency response (forecasting, warning, flood fighting, evacuation etc)

10



Information generation and sharing

Example: Flood Forecasting and Warning

- Define responsibilities for provision of flood forecasting, warning and emergency response
- Rights of access to relevant data and ensuring their availability (basin wide)
- Obligatory broadcasting of flood warnings on the mass media
- Liability issues in cases of failure (warn too late, inaccurately or where no warning is required)



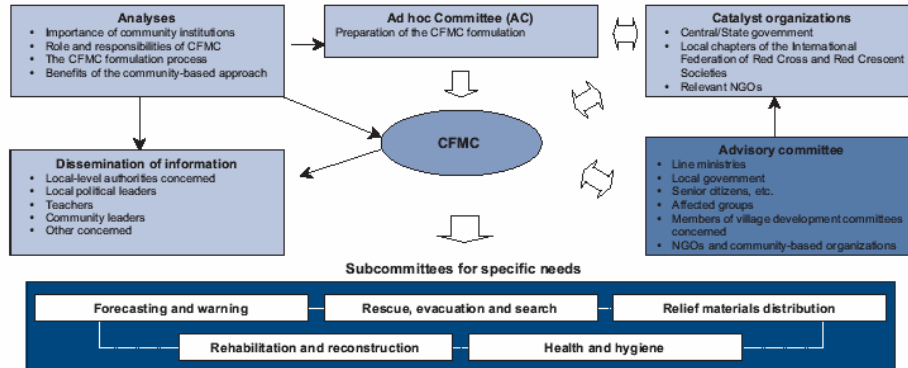
Enabling stakeholder participation

- Granting rights of access to adequate information to the public for informed decision-making
- Institutionalizing community participation in flood management activities on the local level
- Providing for flood preparedness of the population (e.g. emergency drills)





Enabling stakeholder participation – Example of CFMC

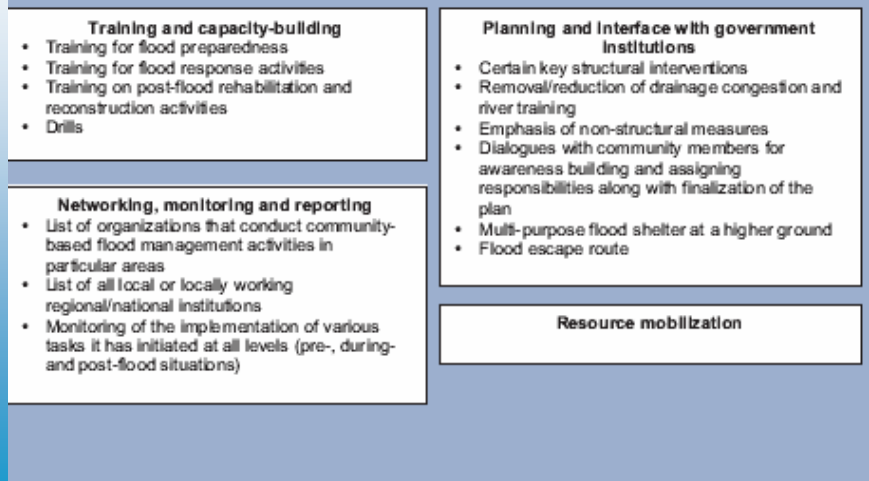


Functions of CFMC

<p>Assessing the needs and capability of the community</p> <ul style="list-style-type: none"> • Mapping of resources and services available at the local level • Mapping of a detailed inventory of social infrastructure • A local-level flood risk map 	<p>Raising awareness</p> <ul style="list-style-type: none"> • Increasing the community's capacity to manage floods • Organizing appropriate training activities • Information dissemination • Workshops at appropriate local levels
<p>Making provisions for emergency situations</p> <ul style="list-style-type: none"> • Pre-flood management operations • During-flood management operations • Post-flood management operations • Rehabilitation • Identification of priority 	<p>Managing information for future reference</p> <ul style="list-style-type: none"> • Information related to what had been done with what success and failures collected from previous floods • Relevant information on forecasting and warning • Information on the damages and losses caused by individual floods • Record of all flood events and associated damages and losses caused together with the activities conducted by CFMC



Functions CFMC (Cont.)



Rights, powers, obligations

Must be appropriate for functions to be carried out.

- E.g. agency responsible for maintaining infrastructure will need access rights
 - Is there corresponding right of compensation for property owners?
- Does flood management agency have right to destroy flood defences incompatible with flood plan?



Recent legal reform related to flood management on the national level

- South Africa
 - National Water Act 1998
 - Disaster Management Act 2002
- France
 - Law on Natural and Technological Risks 2003
- India
 - Disaster Management Bill 2005
- Germany
 - Act to Improve Preventive Flood Control 2005
- United States
 - WARN Act 2006

17



Regulating bi-and multi-lateral cooperation in shared basins

- Required for
 - improved planning and response
 - loss reduction
 - conflict prevention
- Should be based on relevant international legal principles
 - Law of international Water Courses (UN 1997 and UNECE 1992)
 - Draft model provisions UNECE 2006
 - Related international (environmental) law
 - Soft law (Helsinki Rules, ILA and ILC work)
 - Treaty practice and Case Law

18



UNECE Model Provisions on Transboundary Flood Management

Aim to strengthen the legal framework on transboundary flood management

Should be applied in conjunction with the UNECE 1992 Water Convention (not stand alone!)

Model provisions include among others:

- Parties shall prevent, mitigate and protect against flood risks in transboundary river basins and refrain from taking measures which may result in a transfer of flood risks

19



UNECE Model Provisions on Transboundary Flood Management

- Riparian Parties shall **exchange information** and set up coordinated or joint communication and warning systems
- Parties shall **consult** each other if they want to undertake a project likely to significantly alter the water flow
- Parties shall incorporate **environmental requirements** into their flood protection strategy and restore the natural function of the watercourse

20



Riparian Parties shall develop a long-term flood management strategy and measures covering the entire basin, including:

- **Exchange of data**, collection, and development of a forecasting model covering the whole basin or of a linkage between the Parties' forecasting models.
- **Preparation of surveys**, studies, flood plain maps, flood risk assessments and flood risk maps.
- Development of a comprehensive **flood action plan** addressing prevention, protection, preparedness and response
- **Raising awareness** and providing access to information, public participation and access to justice.

21



Key Considerations for International Water Courses

- IFM as part of wider legal frameworks for protection and utilization of int. water courses
- Reconciliation of conflicting interests through principle of "Equitable and reasonable utilization"
- Procedural rules for
 - Exchange of data and information
 - Public participation
 - Dispute settlement
 - Specifying the role of joint institutions

22



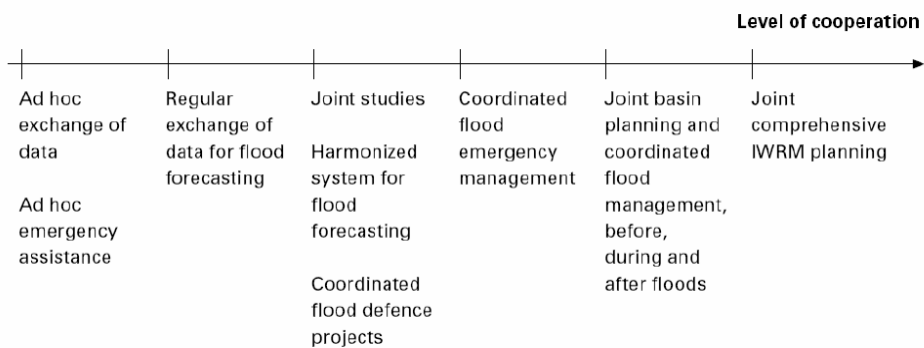
Basic Principles

- Equitable and reasonable use
- No significant harm
- Precautionary principle

23



Flood Management Cooperation Continuum



24



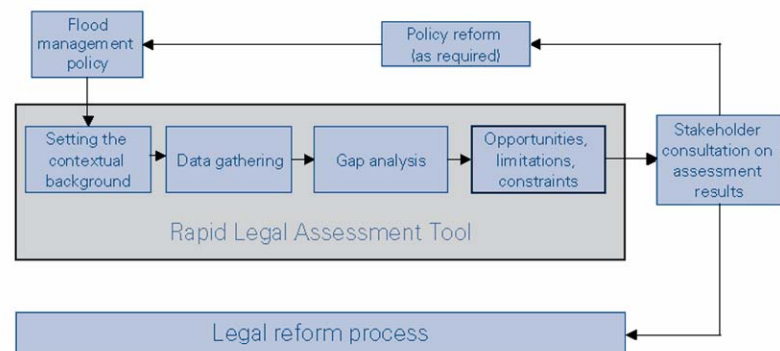
The European Example

- „Floods Directive“ adopted by the EC 2007
- Framework for the reduction of risk to human health, the environment and economic activity associated with floods in the Community
- Main elements:
 - Preliminary flood **risk assessment**
 - Flood risk **maps** and Flood risk **management plans** for river basins, sub basins or stretch of coastline for which it is concluded that potential significant flood risks exist or might reasonably be considered likely to occur.

25



Sound analysis as a basis for reform: The Rapid Legal Assessment Tool



Best to be applied by a team consisting of a

- flood manager/ water resources engineer
- Water/Natural Resources Lawyer
- Political Economist with in-depth understanding of “floodplain economics”

26



A word on politics

- Political windows of opportunity after floods
- Considering the transboundary level as an option to add value to flood management
- Experts and practitioners to be prepared with a balanced approach before the flood



27



Concluding Remarks

- Provisions to be mainstreamed into a broad range of sectoral legislation on all administrative scales
- Due consideration of enforceability
- Issues of wider sustainability to be mainstreamed into flood policy and legislation
- Policy, legal and institutional arrangements to be harmonized and flexible enough to provide for changing environment
- Legislative arrangements to be complemented by other available mechanisms (economic, social and cultural)

28



Further Reading

- IFM Concept Paper
- IFM Legal and Institutional Aspects
- Case studies: Flood Management and Law in India, Japan, Serbia and Switzerland
→ <http://www.apfm.info/publications.htm>
- National Laws and International Instruments (see Flood Management Reference Centre)
→ http://www.apfm.info/database_policy.htm

29



For More Information

Visit the APFM website at:

www.apfm.info

THANK YOU!

30