



Social Aspects and Stakeholder Involvement in Integrated Flood Management

WMO/GWP Associated Programme on Flood Management (APFM)



World Meteorological Organization



Introduction

Flood management measures in the past have contributed to mitigate the adverse impacts of floods, but have often created inequalities and conflicts if policies are inappropriate and inadequate attentions are paid to social issues.

The need to deal with social concerns and involve stakeholders in the decision making process



Integrated Flood Management

**The need for paradigm shift
“From flood control to flood management”**

Integrated Flood Management

- **Combination of structural and non-structural measures**
- **Address both the negative and positive characteristics of floods**
- **Focus on the physical, social, environmental and economic aspects of floods**

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Social aspects and stakeholder involvement

Flood issues are influenced
-not only by the physical causes of flooding
-but the social, economic and political setting

(Issues in flood management)

- **Beneficial and negative effects of floods**
- **Construct of risk and its reduction**
- **Involvement of stakeholder**
- **Enabling mechanism for stakeholder involvement**

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Beneficial aspects of floods

- **Recharging water sources** (recharge groundwater, restock man-made reservoirs)
- **Agriculture** (provide nutrients and sediments)
- **Fishery** (provide an ecological trigger for spawning and migration)
- **Rejuvenation of the river ecosystem** (provide seasonal variability and variable sediment, wash down pollutants and contaminants, flush out organic substances)

➡ **Provide livelihood opportunities**

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Negative socio-economic impacts

- **Loss of lives and property**
- **Loss of livelihoods**
- **Decreased purchasing and production power**
- **Mass migration**
- **Psychosocial effects**
- **Hindering economic growth and development**
- **Political implications**

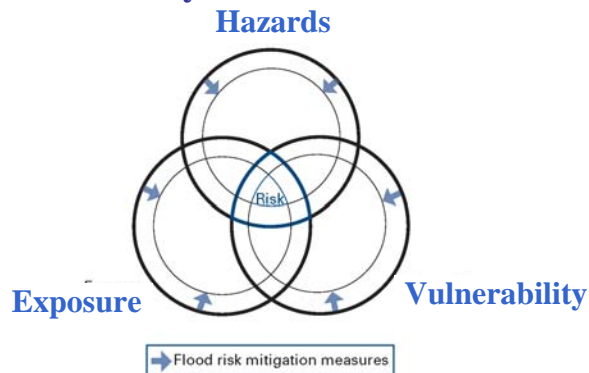
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Understanding flood risks

Flood risk consists of

- The magnitude of the flood hazard expressed in terms of frequency and severity;
- The exposure of human activities to flooding;
- The vulnerability of the elements at risk.



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Perception of flood risks

Unless the population is aware of the risks it faces, local energies cannot be mobilized to build resilience.

- Understanding of risks should be the first step
- Risk perception among people differs considerably
- Man-made factors can increase flood risks
- Large scale structural flood control measures may generate a false sense of security → recognize the limitations and level of the protection
- Be aware of residual risk → Contingency plans

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Vulnerability to flooding

- Community's proneness to be impacted adversely by flooding
- Represented by the inability or incapacity of a community or a group to anticipate, cope with, resist and/or recover from its impacts

Three major groups of vulnerability

- Physical or material
- Constitutional or organizational
- Motivational or attitudinal

Social factors contribute to vulnerability

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Exposure to flooding

Exposure to flooding can be reduced through

- Structural flood mitigation works**
reducing the probability or degree of exposure
- Land-use planning and regulation**
keeping people away from flooded areas
- Flood emergency measures**
moving people away from flooded areas

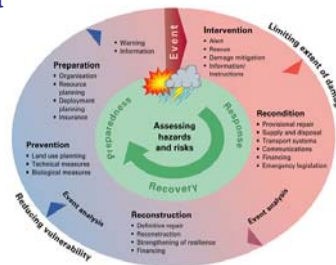
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Flood emergency management

Avoid the exposure of critical activities from flooding and temporarily shift people and such activities

- **Preparedness:** to ensure effective response
- **Response:** to reduce adverse impacts during the flooding
- **Recovery:** to assist the affected community to rebuild



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Preparedness

- **Raising public awareness**
 - Education and regular training
 - Flood hazard mapping
- **Emergency preparedness plans**
 - Preparedness begins at the community level
 - A common platform should be established for local communities
- **Coordination mechanisms**
 - Establish disaster response committees to exchange information and review experiences

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Response

- **Early warning**

- Availability and reliability and certain lead time
- Unambiguous, easily understandable manner and in local language
- Through a legally designated single authority
- Through a medium that is accessible to poorer communities
- Message should be reached to all individuals

- **Protection of critical infrastructure**

- Mobilizing men and machinery from unaffected contiguous areas
- Emergency flood-proofing measures

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Response

- **Rapid needs assessment**

- A rapid assessment of the latest situation should be made
- Information should be shared with local, state and national authorities and volunteer organizations for timely and efficient coordination

- **Safe shelters**

- Three basic questions of relief distribution (who is responsible, how to get the relief items to the affected areas, and who is entitled to relief provided)
- Secure the safety of women from sexual harassment through local community organization

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Post-flood recovery and rebuilding

- Vital lifeline facilities have to be repaired as soon as possible
 - Reconstruction should not repeat previous errors
 - Use local labour and locally available materials
- **Documentation of lessons learned**
- To update hazard map
 - To be used in the reconstruction phase
 - To optimize future emergency response

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Stakeholder involvement in IFM

Objectives

- Provide all stakeholders, including the public, with full opportunities to share their views and influence the outcome
- Build consensus and public support for the outcomes
- Build stakeholders commitment
- Ensure implementation of basin flood management plans with full public support
- Ensure sustainability of plans and associated decisions
- Build resilience of flood-prone communities

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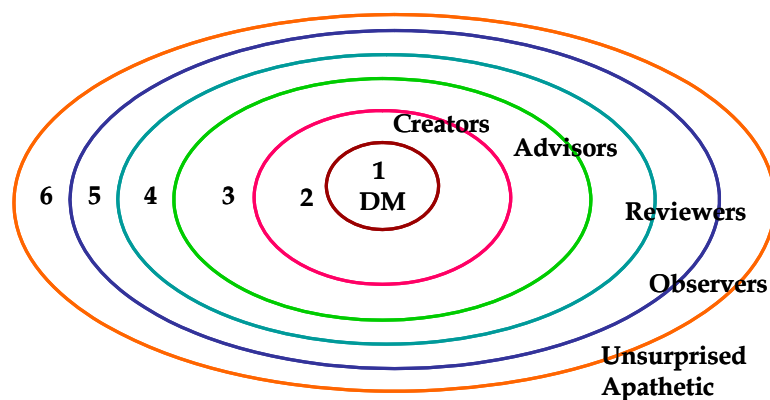
Potential pitfalls

- High expectations leading to disappointment
- Complexities of involving all stakeholders
- Insufficient involvement
- Time consuming process
- High costs
- No concern for economic viability

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Stakeholder analysis

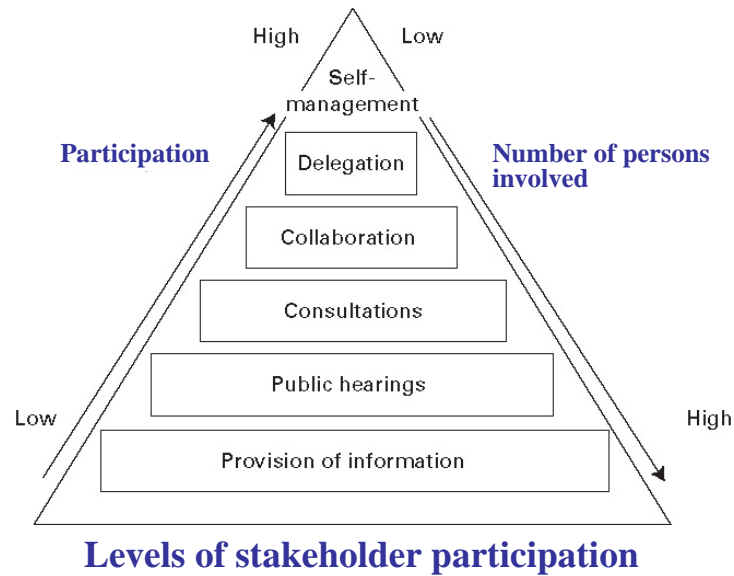


Orbits of stakeholder influence (L. Aggens)

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Participatory mechanism



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Participatory planning

National flood management policy

- Overall assessment of flood hazard
- Required degree of risk mitigation
- Equity principle
- Prioritization of pre- and post- event measures
- Types of incentives and disincentives
- Strategy for residual risks

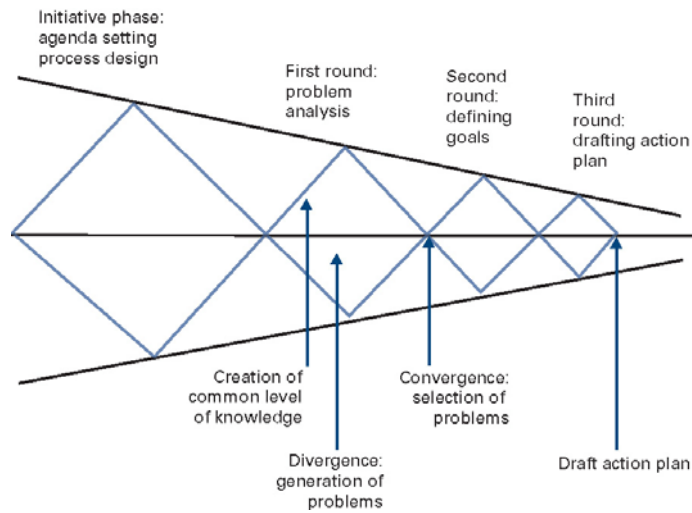
Basin flood management plan

- Setting goals guided by regional development goals
- Designing the process for stakeholder participation
- Involve stakeholders' ethical consideration
- Decide the degree of risk
- Institutional arrangement
- Comprehensive multi-hazard risk assessment

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Participatory process



Divergence and convergence in a participatory process

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Project planning

Identify priority action areas

- Identification of lead organization
- Employing various economic tools for making choice (multi-criteria analysis (MCA), cost benefit analysis (CBA))
- Involve the stakeholder and beneficiaries from the beginning
- Environmental impact assessment (EIA)

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Enabling mechanism

Facilitating dialogue

- **River basin organizations (RBOs)**
- **Disaster management committees (DMCs)**
(national, state and district levels)
- **Community-based organizations (CBOs)**
Community flood management committees (CFMCs)
- **Non-governmental organizations (NGOs)**

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Enhancing stakeholder involvement

Prerequisites

- **Building trust through information sharing and repeated interaction**

Challenges

(in launching the participatory process)

- **Political will**
- **Need for financial commitment and budget allocations**
- **Attitude toward flood management**
- **Risk perception**

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Challenges (in maintaining the participatory process)

- **Harmonization of water management, spatial planning and environmental activities**
- **Trans-boundary issues in international river basin**
- **Level of competency of local authorities, RBOs and water users**
- **Regional versus specific local needs**
- **Time constraints**

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Enabling mechanism

Stakeholder capacity-building

Capacity-building needs at different levels

- **Institutional capacity-building**
- **Community capacity-building**
- **Individual capacity-building**

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Capacity building areas

- Facilitating cooperation with other agencies as lead organization
- Participating as a stakeholder in the process led by someone else
- Undertaking planning
- Carrying out implementation

Capacity building mechanisms

- Training sessions and workshops
- Information technology
- Networking for information sharing
- Internships
- Public awareness rising
- Learning by doing
- Role playing

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Legal and institutional framework

Key legal mechanism for public participation

- Right to information
- Right to participate
- Accountability
- Transparency

For extensive coordination between stakeholders

- Information sharing and networking
- Enabling institutional framework

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Conflict management

- Understanding the underlying issues, perceptions and the values associated with the issues
- Unbiased third-party involvement
- Incentives and trade-offs

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Thank you !

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