



World Meteorological Organization
Working together in weather, climate and water

Towards Integrated Flood Management

Processes and Indicators

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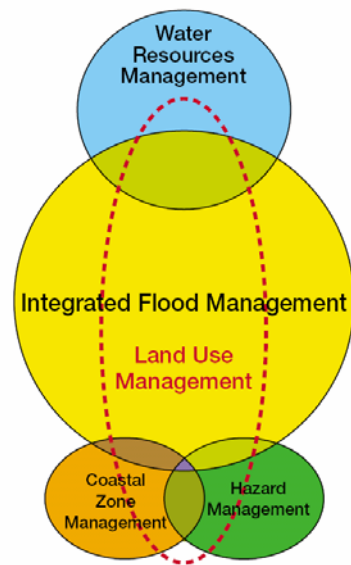
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Integrated Flood Management

Integrated Flood Management (IFM) refers to the integration of land and water management in a river basin the context of **Integrated Water Resources Management (IWRM)**





Integrated Flood Management: Objectives

- **Sustainable development:** balancing development needs and flood risks
 - **Maximising net benefits:** ensure livelihood security and poverty alleviation thereby reducing vulnerability
 - **Minimising loss of life:** in particular through preparedness planning for extreme events
 - **Environmental preservation:** ecosystem health & services
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What indicators can help to steer?

NOT

- Overall annual flood losses

WHY?

- Biased through intensity or frequency of events in a particular year
 - Biased through economic growth and development
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Consider

- IFM should be seen as a **long-term process, not in project terms**
 - First evaluation of such process possible only after 5-10 years
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Process Indicators

- Has a flood management policy or strategy been agreed between all relevant departments at national and subnational level? Are the linkages to the overall water resources management strategy/policy clearly set out?
 - Have comprehensive flood risk assessments been carried out and publicly consulted? Have linkages between hazards been recognized?
 - Have basin flood management plans been prepared and implemented?
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Process indicators (cont.)

- Have residual risks been factored into those plans, i.e. how to handle extreme events and failure of systems?
 - Are there agreed procedures for CBA of flood management projects and do they factor also environmental cost and benefit?
 - Is the performance of flood management policies and strategies assessed after major flood events and are the necessary adjustments made
 - Have robust institutional linkages been developed between different line agencies to work together in pursuit of agreed policy goals?
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Political indicators

- Are new flood management projects more acceptable to the public?
 - Which sections/sectors?
 - Is this accompanied by higher risk awareness?
 - What changes can be observed in flood vulnerability?
 - Can flood warning services be provided reliably
 - Are the average annual losses of life decreasing?
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THANK YOU
