



SUMMARY OF DAY 2



Photo by: Liang Changsheng



WMO

INTEGRATED PERSPECTIVE ON FLOOD MANAGEMENT

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OUTLINES

1. Aims and Elements of IFM
2. Flood Management Measures
3. Environmental Aspects
4. Economic and Social Aspects
5. Conclusion

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1. Aims and Elements of IFM

There are four (4) aims of IFM in the context of Integrated Water Resources Management, including:

- 1. Sustainable development that balancing development needs and flood risks.**
- 2. Maximizing net benefits from floodplains to ensure livelihood security and poverty alleviation.**

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1. Aims and Elements of IFM, cont'd

- 3. Minimizing loss of life: in particular through end-to-end FF&W Systems and preparedness planning for extreme events, and**
- 4. Environmental preservation for ecosystem health & services**

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1. Aims and Elements of IFM, cont'd

IFM Principles:

- 1. Risk management**
- 2. Water cycle as whole**
- 3. Multi hazard approach**
- 4. River basin as a planning unit**
- 5. Interdisciplinary**
- 6. Stakeholders participation**
- 7. Sustainable development**

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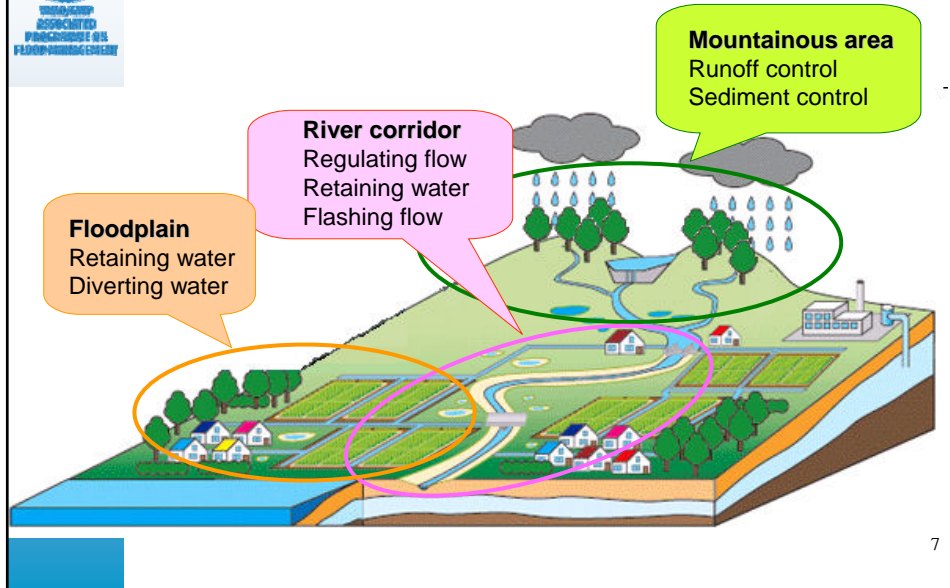
2. Flood Management Measures

- 1. Traditional measures, such as building dams, levee, river training, retention ponds, diversion channel, water gate etc.**
- 2. A new challenge arise to overcome increasing flood risk, uncertainty climate change, absolutely safety to flood is myth, growing environmental concern**

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Traditional flood management measures



3. Environmental Aspects

IFM can help alleviate environmental degradation that threaten human security. That includes *life, livelihoods, food and health*.

Ecosystem services provide human needs such as food, freshwater, wood and fibre, fuel, etc.

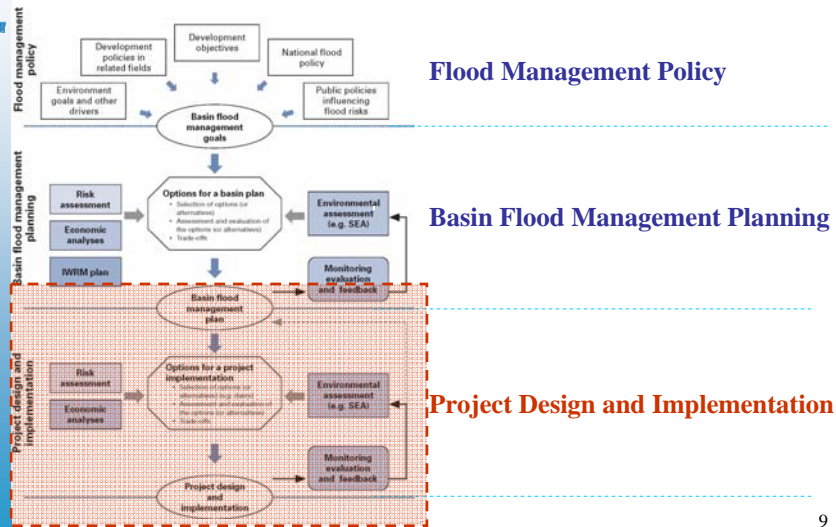
Therefore, there is a need to have environmental friendly flood

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3. Environmental Aspect, cont'd

Framework for Environment friendly flood management



4. Economic and Social Aspects

1. Economic aspects of IFM are complicated because its shall including analyses and evaluation of many measures to be taken.
2. Therefore, there is a need to make the complex level to a simple one, that we can comprehend and gain an understanding of what the choice



4. Economic and Social Aspects, cont'd

- 3. The method available to be used are cost-benefit analysis, multi-criteria analysis**
- 4. Social aspects in the form of public participation are determine the weights of the qualitative and subjective elements in appraisal, rise the level of public consciousness and enhance the interaction between stakeholders.**

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5. Conclusion

Integrated perspective on flood management shall include understanding of aim and elements of IFM, flood management measures, environmental, economic and social aspects

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Thank You