

Integrated Basin Flow Management
BDP Stakeholder Consultation Meeting
13 March 2008, Vientiane

Outline



Why IBFM is important?

**IBFM Study & Holistic Flow Management
How the study is carried out?**

How does this support basin planning?

**How the information on cost and benefit
of water resource will be aiding
trade-off discussion and decision
making process on water resources
development in the LMB?**

IWRM context of the LMB





Integrated Basin Flow Management

IBFM is a set of multidisciplinary activities providing information and knowledge to decision makers on **cost** and **economic benefits** of water resource development in the LMB including environmental and social impacts of development as related to changes in the flow regime **(MRC Strategic Plan 2006-2010)**

Place an emphasis on social- resource economic study



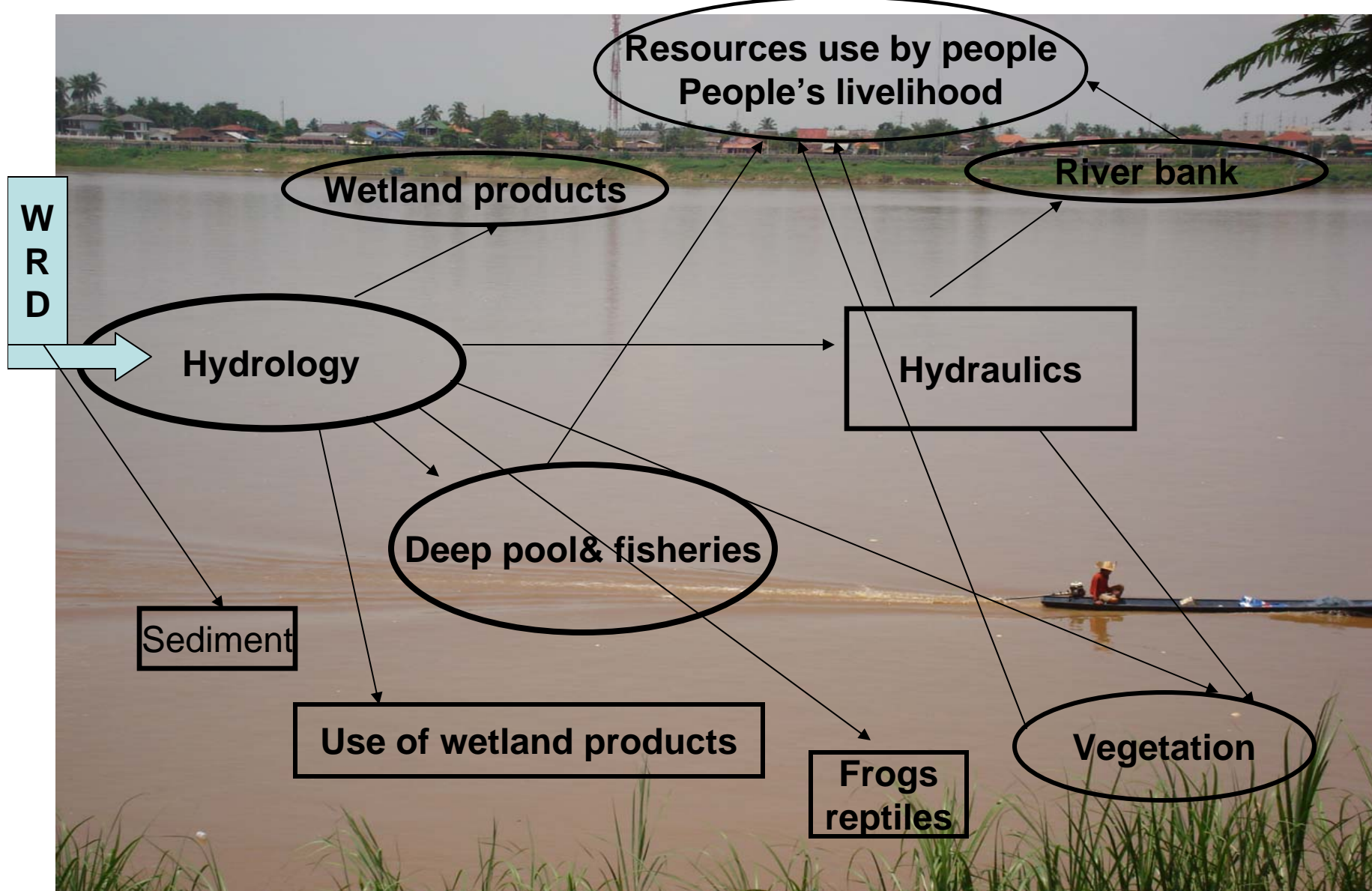
Why IBFM in the LMB?

- 1. People's livelihood in LMB relies heavily on ecosystem "Goods and Services"**
- 2. Poverty alleviation is a prime agenda
SD= key mechanism. WRD= key mechanism to Support SD**
- 3. If WRD is going ahead anyway, there is a need to ensure that all parts of river goods and services (that people have relied on) are taken into account.**

Why IBFM is important?

- 1. To take account the importance of ecosystem and people's livelihood into basin planning of LMB**
- 2. Value ecosystem goods and services, base on society choice and place them on decision making table**
- 3. What is the impact of flow change?**
- 4. Livelihood implications**

Integrated: whole ecosystem are taken into account.. In response to change of flow due to WRD



IBFM 1 2 3

- IBFM 1: hydrological assessment of LMB
- IBFM 2: introduced a holistic approach to flow management, demonstrate outcome
- IBFM 3: 3 years programme, develop approach & tool that allow prediction to be made



IBFM: Mekong Method to Integrated Flow Assessment



- **Develop and assess three development scenarios (HEP/IRR)**
- **Undertake holistic flow assessment**
 - River hydrology, hydraulic, vegetation, fisheries, wetland products
- **Undertake studies in 6 zones, collate info related to hydrology, hydraulics, vegetation, fisheries, river bank, water use, resource use**
- **Expert's opinion, severity of change from baseline**

The Six Major Hydrological Zones of the Mekong River Mainstream

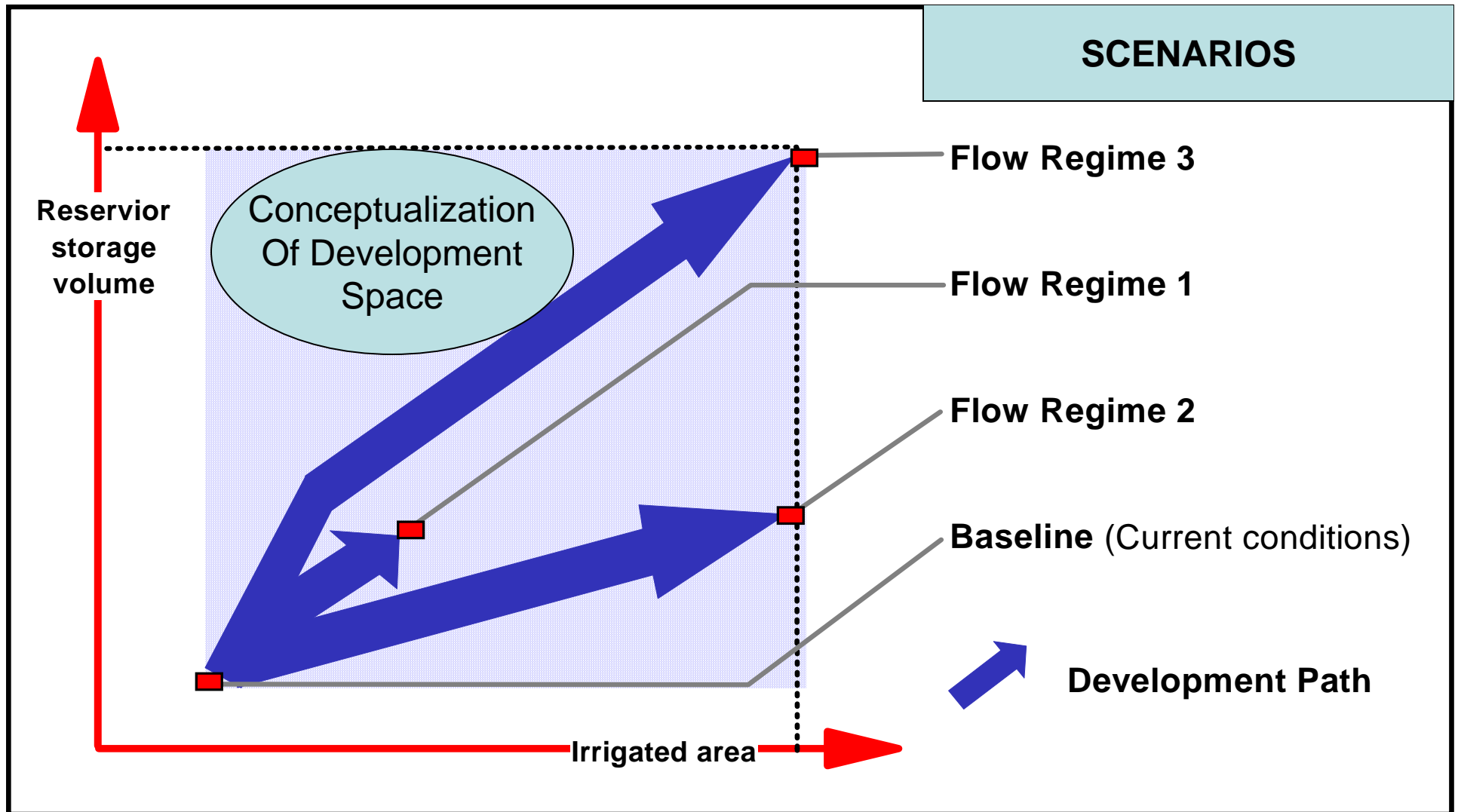


6 Zones with Representative Sites

What is the impact of flow changes (caused by scenarios) on the river?

Indicators established 10 from each discipline

Predict the change

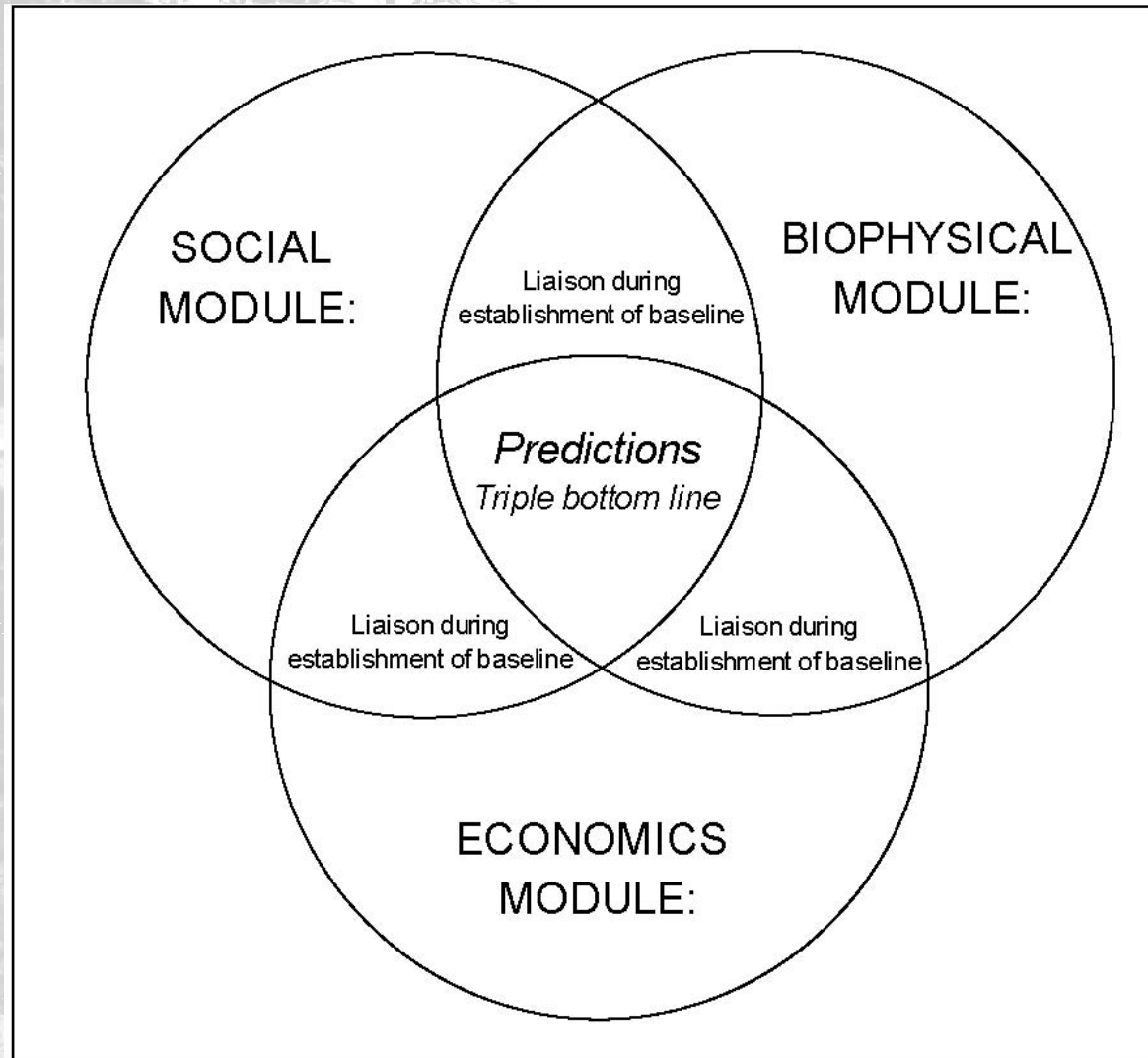


Flow Regime 1: 2.6 times increase in HEP production (to about 18,000 GWh/yr) 14% increase in irrigated area (to about 8.2m ha);

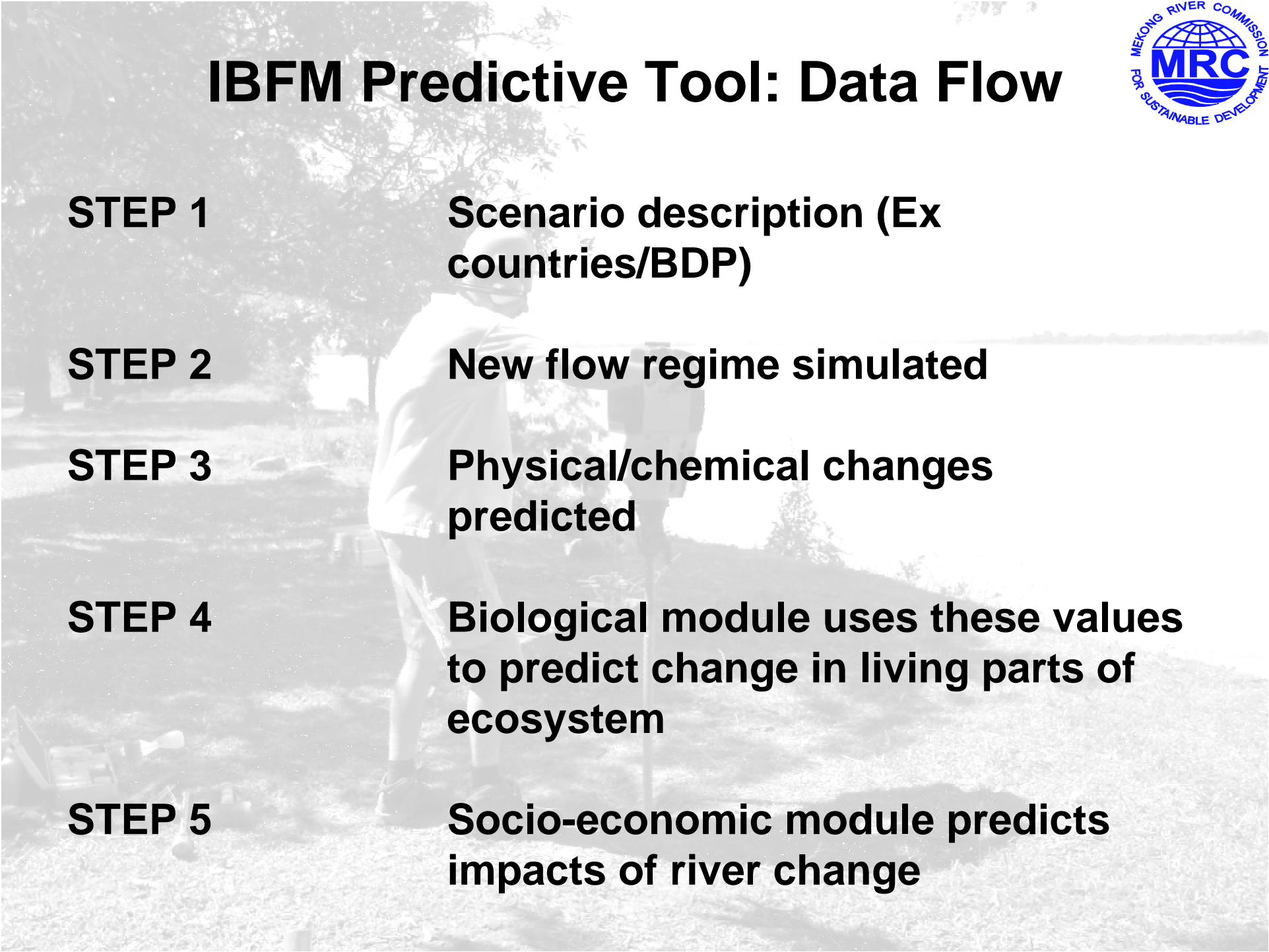
Flow Regime 2: 2.6 times increase in HEP production/ 40% increase in irrigated area (to about 10m ha)

Flow Regime 3: 4.5 times increase in HEP production (to about 31,000 GWh/yr) 40% increase in irrigated area (to about 10m ha)

IBFM Predictive Tool




IBFM Predictive Tool: Data Flow

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- STEP 1** Scenario description (Ex countries/BDP)
- STEP 2** New flow regime simulated
- STEP 3** Physical/chemical changes predicted
- STEP 4** Biological module uses these values to predict change in living parts of ecosystem
- STEP 5** Socio-economic module predicts impacts of river change

Required features of predictive tool



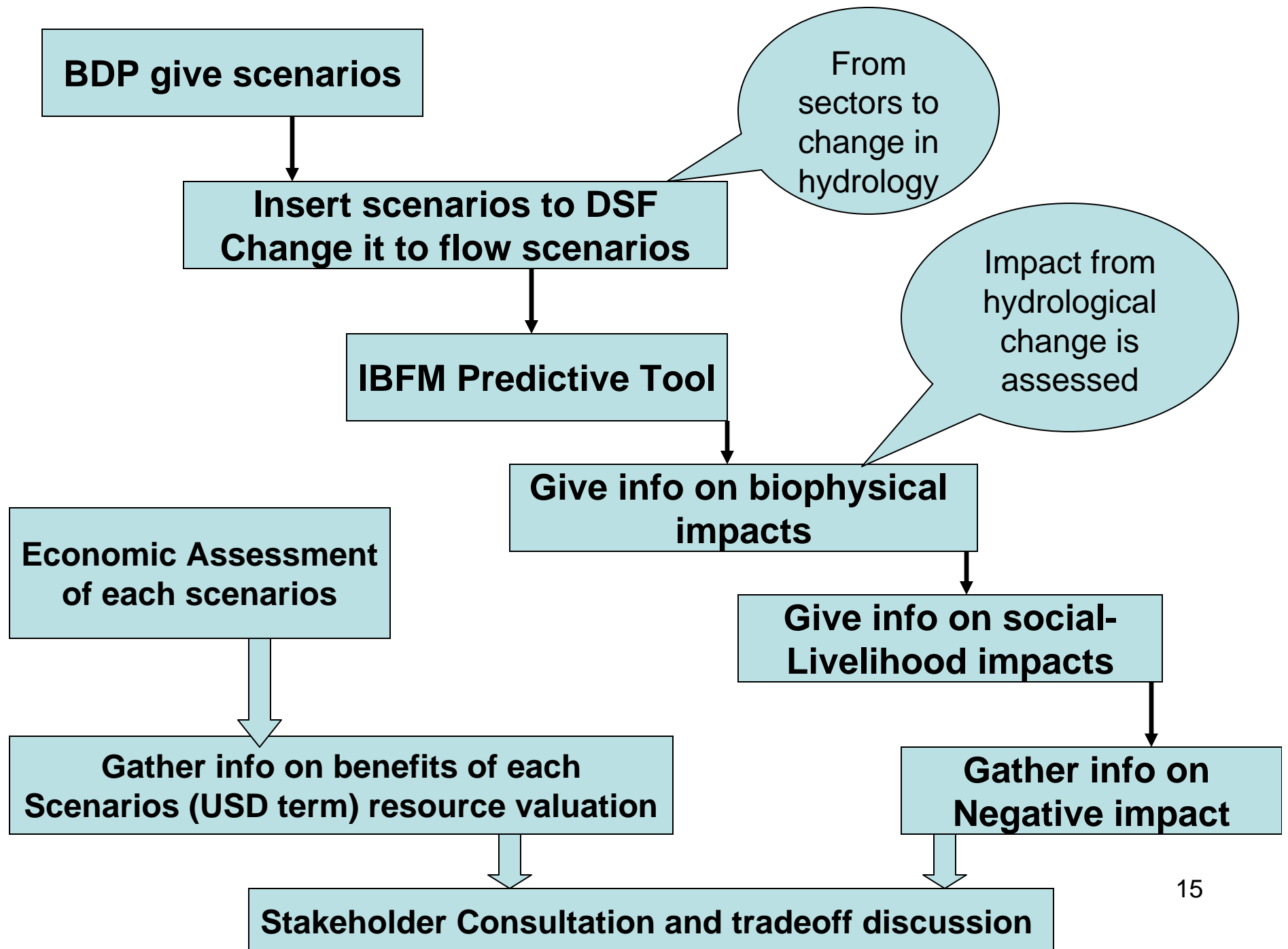
- Can respond to any water-management scenario query from the member states
- Can be updated as knowledge increases
- Can produce flow response relationship (linked ecological, social and resource-economic predictions of flow-related change)
- Can be queried in several different ways:
 - What social and ecological impacts would a proposed water management activity have
 - What flows are needed to maintain a certain level of river resources



Not only impacts are looked at..
Benefits of WRD are quantified..

Economic Assessment

- Economic valuation is taken place
- Hydropower, Irrigation, Wetland and Fishery
- Place value on resource, choice made by stakeholders
- Need more realistic value





Stakeholder Consultation

BENEFITS of WRD

IMPACTS



- Share the result of the study with stakeholders
- Improve the result together
- Refine value together
- Obtain livelihood knowledge from them, inclusion of local knowledge
- Enhance their roles in trade-off discussion



Trade-off discussion

BENEFITS of WRD

IMPACTS

- Trade off between what? Can we have both?
- Cost-Benefit analysis of each WRD scenario is conducted
- Economic analysis of each WRD scenarios is conducted
- Cost and benefit of WRD including impacts in the LMB are fed into decision making process

We realize that all of this is complex too complex, not good? Good?

- Transformation of scientific info to user-friendly language
- Result should be widely discussed, to refine value, better understand vulnerability context of livelihood
- Need more realistic scenarios, value
- Engage stakeholders in the study
- Who are stakeholders here?
- People who use the resources know the best, which way they will be engaged? Any channel?

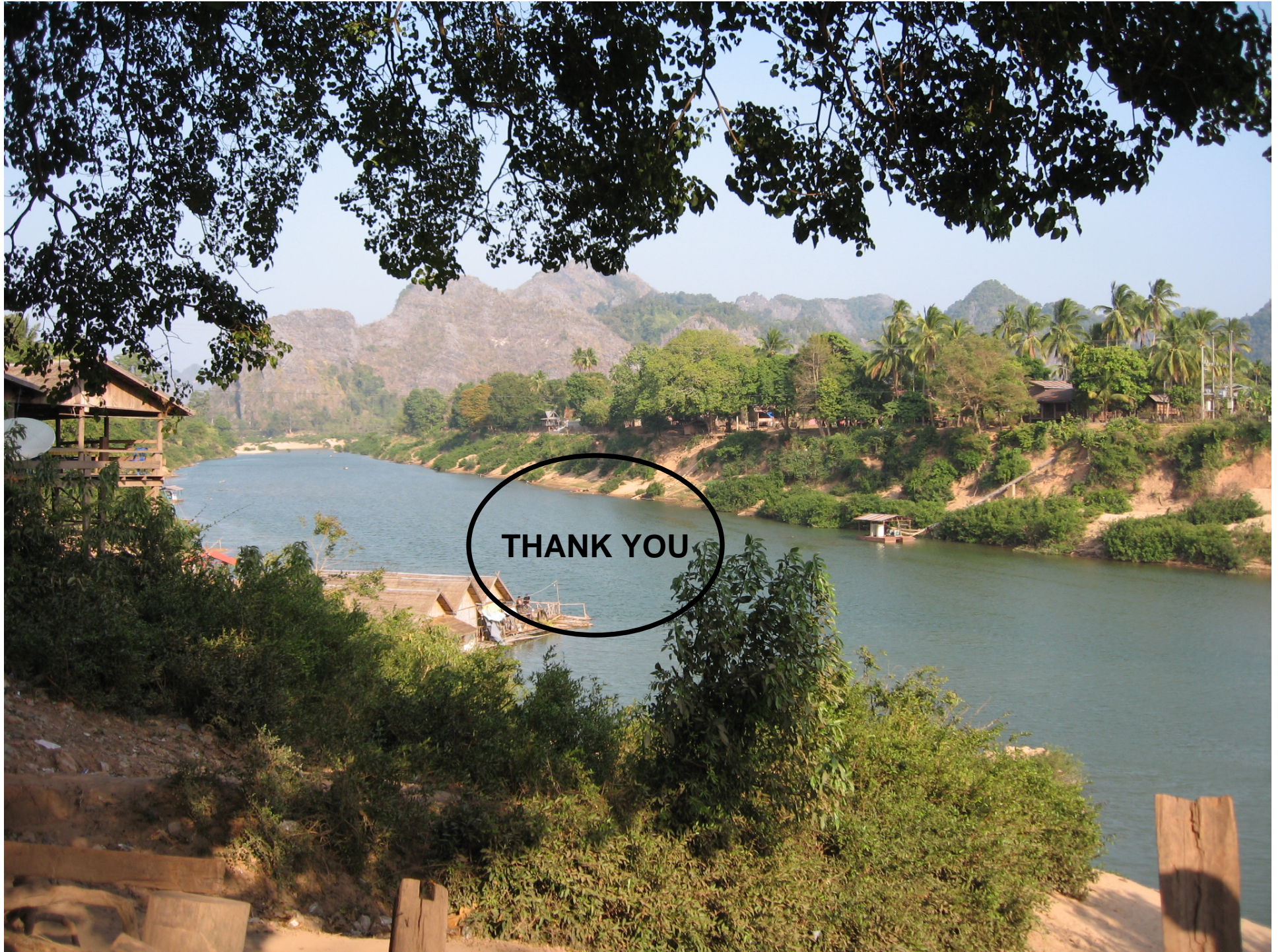
Just one layer of stakeholder consultation what about others?

- Scenarios formulation
- Trade-off discussion, trade-off between what aspects?
- Degree of dependency on river resources-weight
- Maintaining ecosystem goods and services while promoting WRD development... what is the best way to achieve? Constraints?

**Role of stakeholders in
Trade-off discussion**

**(Along the pathway of
decision making process)
Where and When IBFM knowledge
will impact?**





THANK YOU