Integrated Watershed Management as a Tool for Ecologically Sound Water Resources Management and Sustainable Economic and Social Development

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3<sup>rd</sup> SEAWF, 22 – 26 October 2007, Kuala Lumpur, Malaysia

## Why watershed management?

- Watersheds are most appropriate units for managing natural resources
- Contain and define processes related to surface water and its movement to a common point
- Watersheds integrate the interrelationships between natural resources and human activity

### Water resources can best be managed on the watershed scale

# What is it all about?

gotiating process between all stakeholders plementation Participatory

Policy im-

op down

bottom up

processes

Policies and arrangements (global, regional, local), GMS priorities ( economic and biodiversity corridors), MRC procedures (BDP, EP,...), strategies and planning systems, monitoring procedures

Formulation of watershed functions, management guidelines, monitoring activities

Local needs & expectations social security. economic prosperity

MAINTAINANCE **OF WATERSHED FUNCTIONS** 

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# Watershed functions

The *function* of watersheds is the sustainable provision of goods and services



#### **Ecological**

- Ensure water flow and quality within the watershed and further downstream
- Provide erosion control, soil fertility, biodiversity, clean air, carbon sequestration



Sustainable Development



#### Economic

- Produce food, timber, fish, hydro power
- Sustain livelihoods
- Support income generation

#### Social

- Support indigenous culture and livelihoods
- Provide recreational opportunities

### MRC-GTZ watershed management project

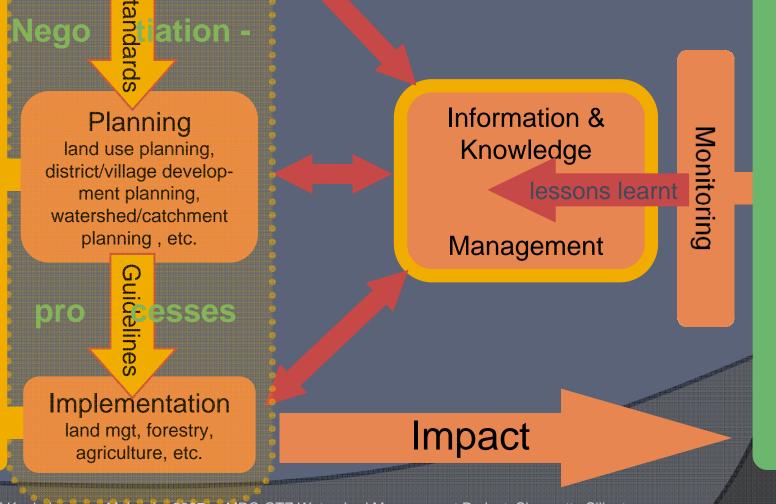
...aims to establish the analytical and organizational foundations to implement concepts for sustainable management of watersheds at the national and regional levels in selected relevant organizations

#### Core components:

- 1) Governance of natural resources
- 2) Capacity development strengthening of institutions
- 3) Information and knowledge management

Governance policies / rule of law / decentralization, etc. Capacity Standar ego S O Qo Institutional Development G. uideline pro (n

### Watershed Management System



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Maintenance of Watershed Functions

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# Why governance?

Governance = rules, mechanisms of enforcement that guide and coordinate people's behavior with regard to a common outcome

But: rules, mechanisms of enforcement are often not appropriate to ensure sustainable natural resources use

Sustainable management of natural resources has to focus on governance of resource use, facilitation of social processes

# Why governance?

Some resources are often degraded, while others are not

Why?

 .... very often due to unclear property rights, open access, insufficient enforcement
> no incentives to manage sustainably

Incentives determine how people manage their resources: exploit, use sustainably, protect

→ Analysis of incentive structures

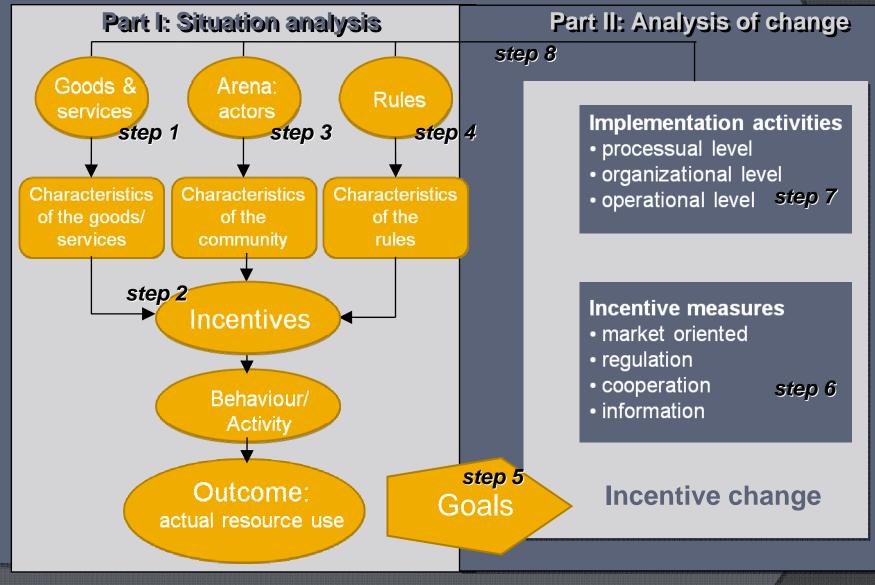
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# Key role of incentives

- If we want to change the way resources are used we first need to understand existing incentive structures
- Then we may need to change incentive structures
- This might include changing the rules and / or the mechanisms of their enforcement



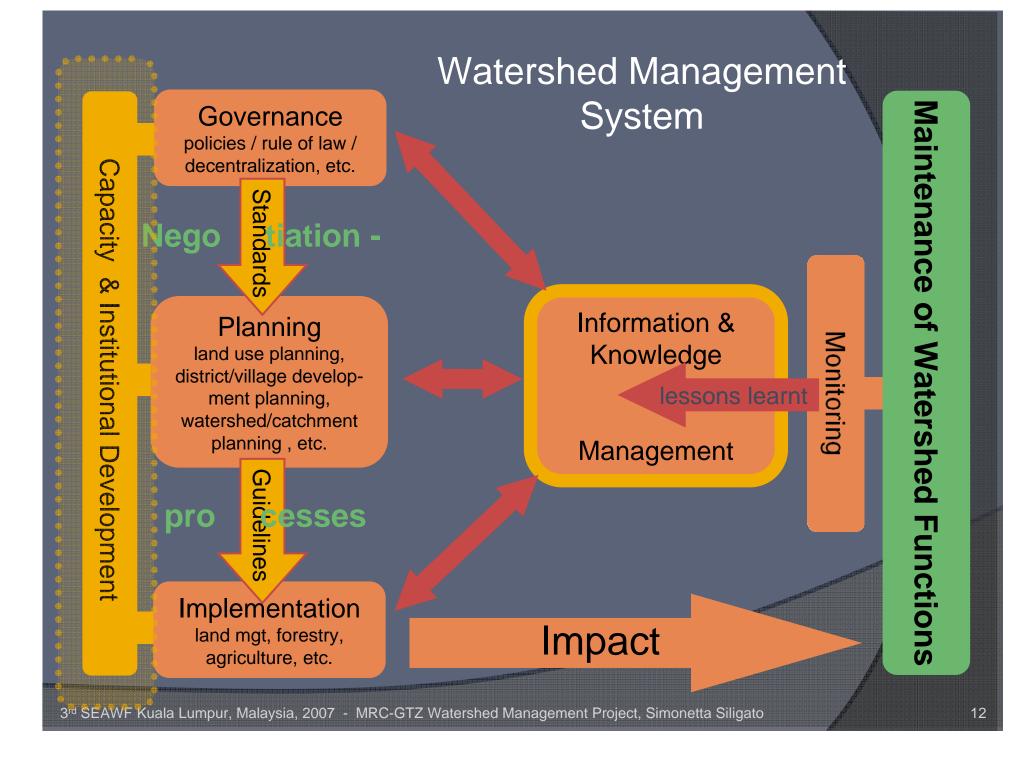
# Analytical Framework - Overview



## Analytical Framework - Summary

#### Nothing entirely new

- Cross-sectoral synthesis and systematization
- Translates academic discussion into practical guidance for analysis
- Systemic view: focus on underlying driving forces rather than on technological approaches
- Enables systematic analysis of governance issues and development of solutions
- Scalable: applicable at local as well as at national level



## Capacity development

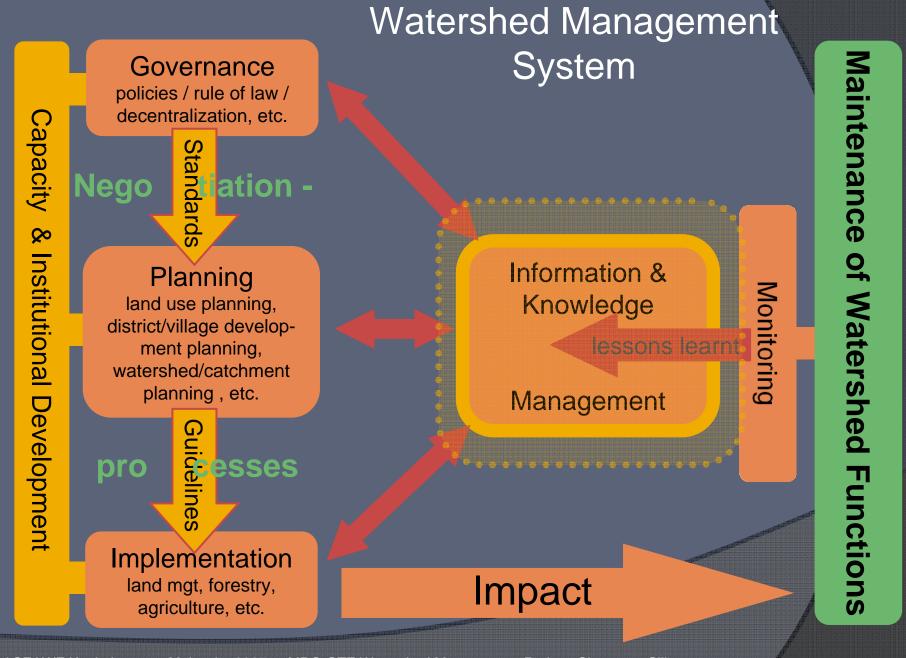
Natural resources management can only be sustainable if relevant actors have enough capacities to support the process, collaborate and govern

Different levels:

- hational level
- provincial level
- district level
- village level

## Goals & objectives of CD

- Building a knowledge which facilitate better negotiation and decision-making
- Improving skills required to adapt to differing and changing circumstances
- Improving management practices and techniques
- Fostering institutions that promote and support cooperation



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# Information & knowledge mgmt

- Proper decision making requires proper information
- Collection, analysis, valutation & target group oriented preparation and distribution
- Consideration of regional, national and local data, information and knowledge

Policy makers and leading institutions are aware of, have access to, and make use of information and knowledge available on the management of water related natural resources

# Information & knowledge mgmt

Up to date, interactive, easy accessible, easy to use, regional

www.mekonginfo.org

More than 13,000 users, 300 new users every month

- More than 3,000 documents
- All documents can be accessed and downloaded
- Platform to share experiences & lessons learned

# Information & knowledge mgmt

Thorough & condensed collection of information:

Watershed Management Resource Kit

- will be a comprehensive document
- translated in all riparian languages
- can also be used in very remote areas hardcopy

## Expected results of the WSMP

Local & regional effects  $\leftrightarrow$  up- and downstream effects

Socio-economic effects → contribution to sustainable creation and increase of income and reduction of potential disputes over water resources

Socio-cultural effects → improved communication, promotion of conflict avoiding strategies for resource utilization

**Ecological effects**  $\rightarrow$  protection of ecological integrity

Effects on partner institutions → capacity development – communication, networking, cooperation, good governance



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