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Brisbane Australia
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HEALTHY RIVERS - HEALTHY ECONOMIES

Social Learning on Integrated River Basin Management (IRBM): Insights from the Philippines

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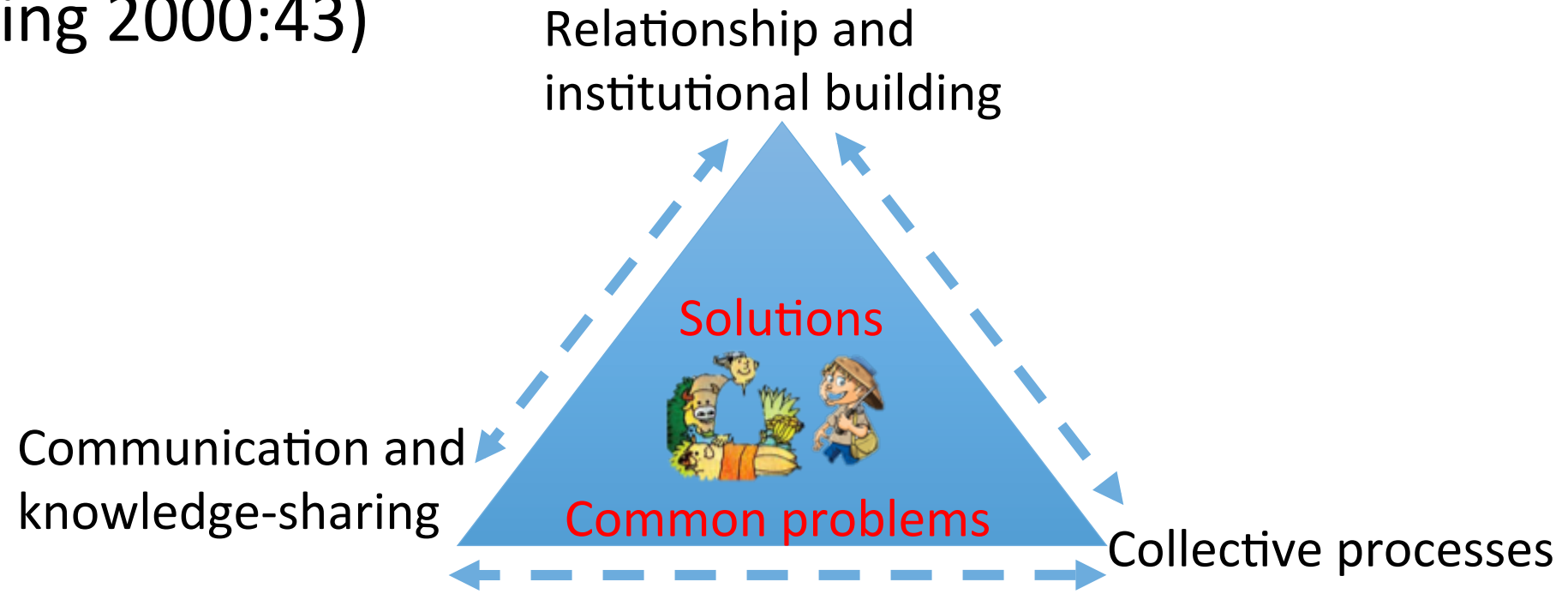
Presentation Outline

- Social Learning: Concepts, applications, potentials and gaps
- Context: Water and land resources management
- Case Sites
  - Marilao-Meycauayan-Obando River System, Bulacan, Philippines
  - Cabulig River, Misamis Oriental, Philippines
- Discussion
  - Social Learning in case sites, components and cycles
- Insights
- References

Social Learning: concept and applications

…refers to **learning processes** among a **group of people** who all seek to address **shared problems** and **take action collectively** (King 2000:43)



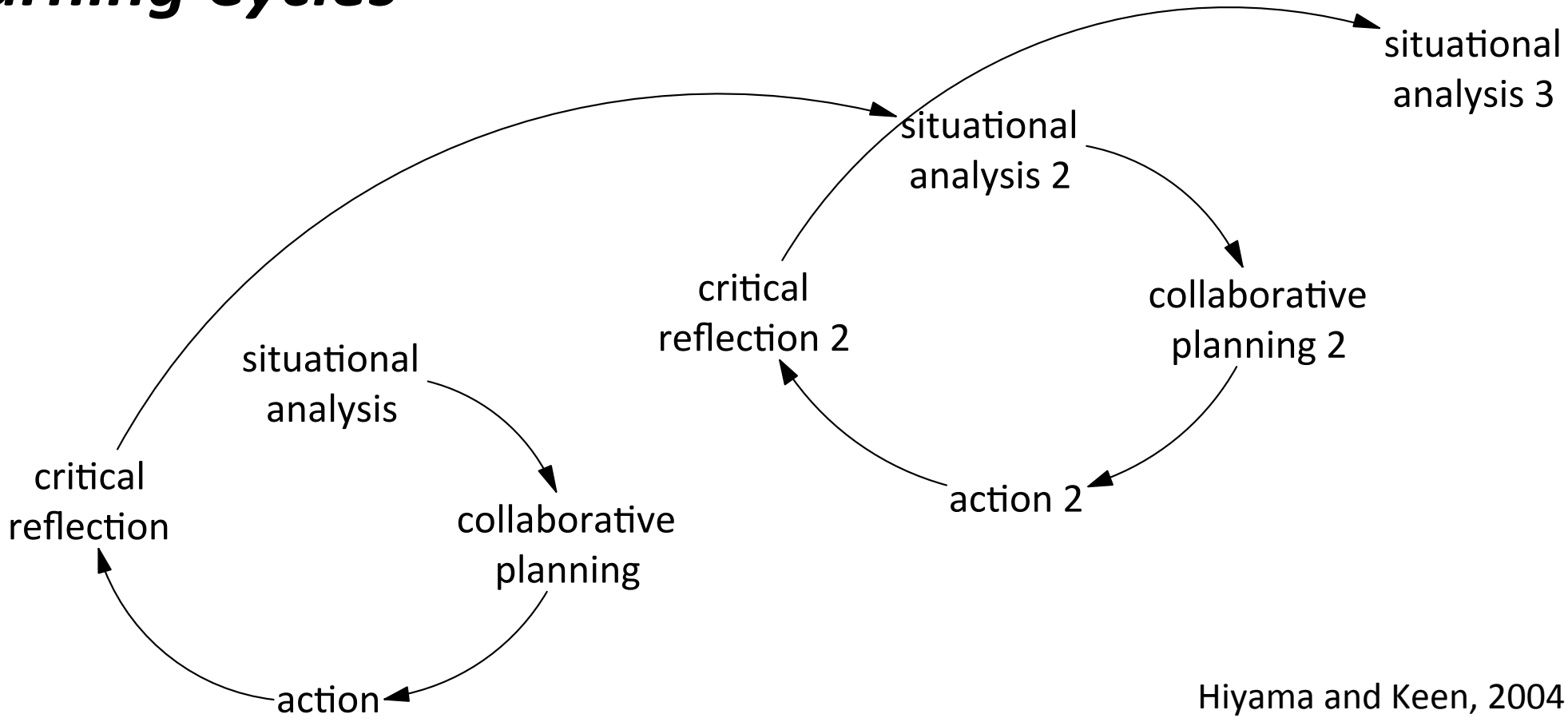
Core Strands of Social Learning

Dyball, Keen and Brown (2007)

Social Learning: Potentials and Gaps

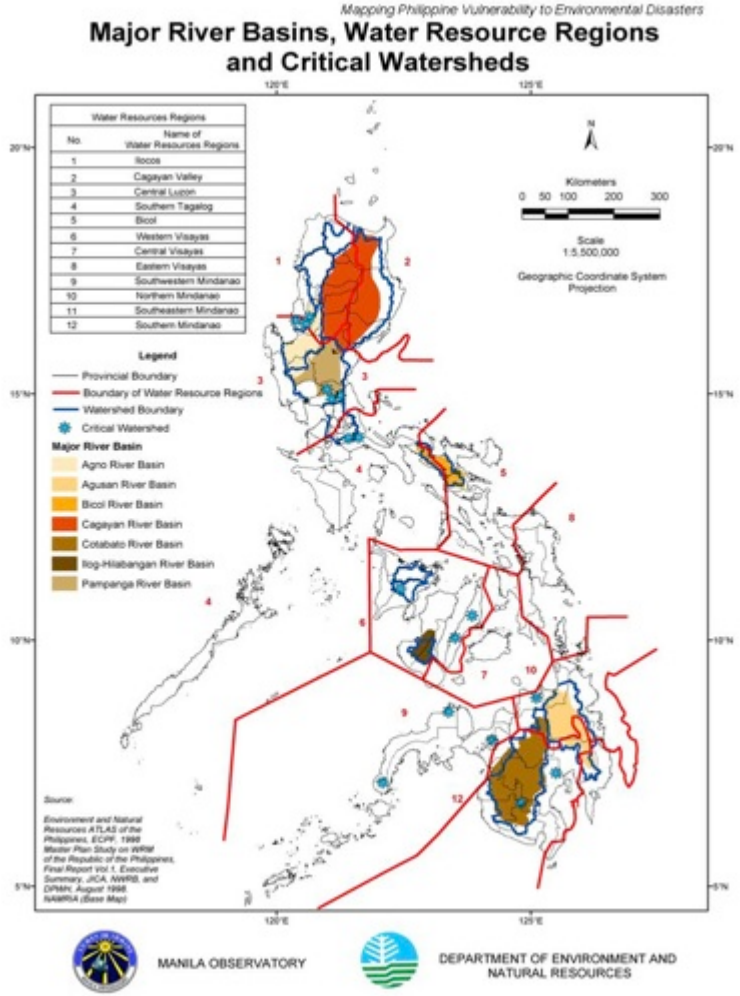
- Applications: environmental mgmt; organizational devt
- Potentials: sustainability and transdisciplinary research and projects
- Gap: Need to understand the learning theory; current social learning discussion is more focus on skills acquisition and power relationship (Hiyama and Keen, 2004)

Learning Cycles



Hiyama and Keen, 2004

Social Learning on IRBM in Philippine watersheds



Water Resources: River Basins

- 412 river basins in 119 proclaimed watersheds
- 18 major river basins
- 12 water resource regions coordinated by Water Resources Regional Councils
- Sources of pollution: 33% domestic wastes, 29% livestock, 27% industrial sources, 11% non-point sources

Types of River Basin Organizations

- Authority (i.e. Laguna Lake Development Authority)
- Commission (i.e. Pasig River Rehabilitation Commission)
- Council (i.e. Cagayan de Oro River Basin)
- Project Management Office (i.e. Cotabato-Agusan River Basin Development PMO)
- Inter-agency Committee (i.e. Manila Bay River Basin Coordinating Committee)

Water Quality Management Area (WQMA)
(i.e. Marilao-Meycauayan-Obando River System WQMA)

Land resources

ICRAF-Philippines

ICRAF-Philippines

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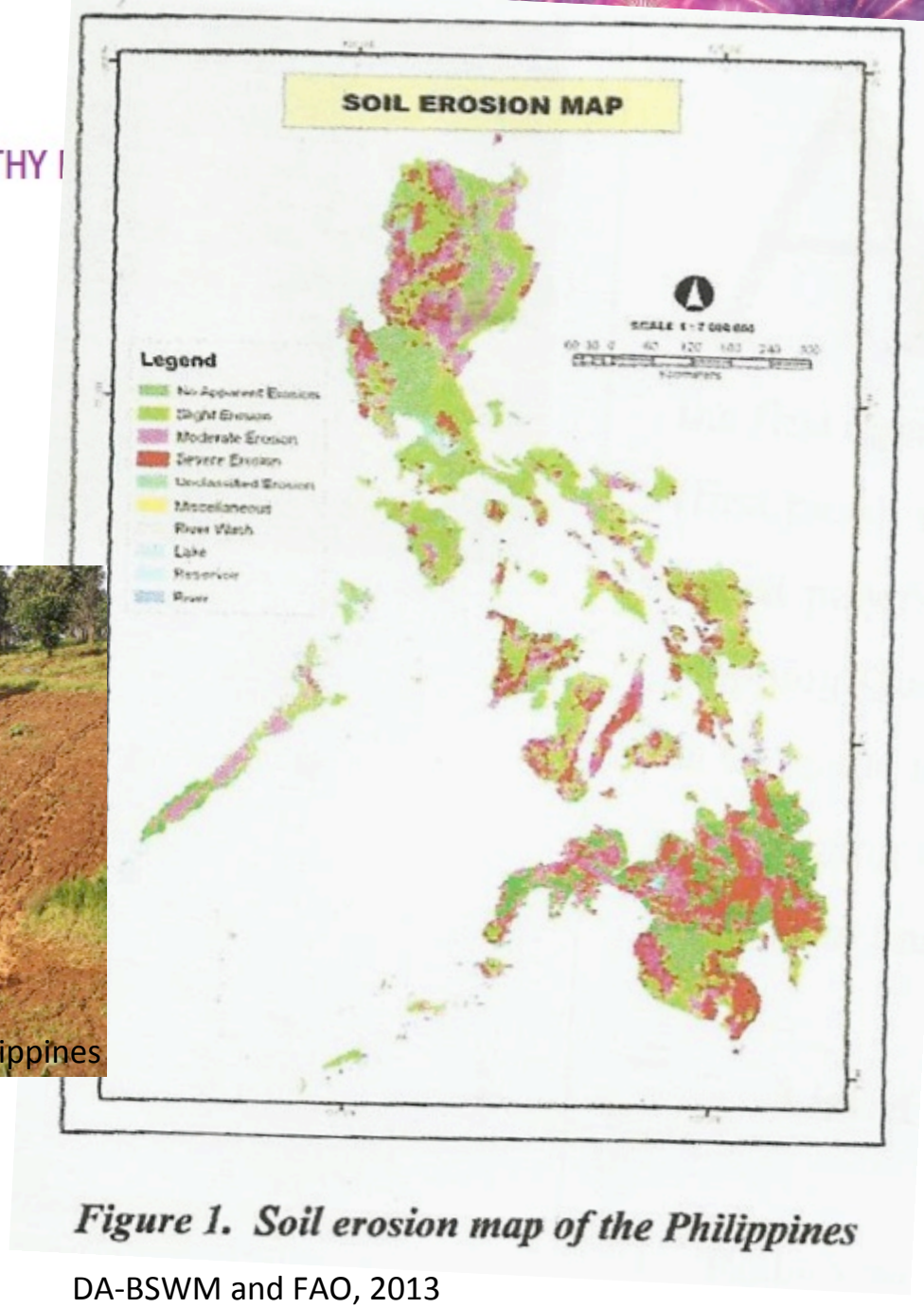

Figure 1. Soil erosion map of the Philippines

DA-BSWM and FAO, 2013

Our Cabulig…

By Felisa Hinalan, a Higaonon farmer from Cabulig watershed, Southern Philippines

Cabulig is where we live
A most peaceful and quiet place
invisible even when beheld
because it is concealed
by the surrounding mountains

Case site 1: Marilao-Meycauayan-Obando River System (MMORS)

- 19 km; 130 km2; 1.386 million
- 7 municipalities/cities: Meycauayan, Marilao, Obando, San Jose Del Monte, Sta. Maria (all Bulacan); and Valenzuela, Caloocan (Metro Manila)
- Drains in Manila Bay
- Part of the Pampanga River watershed
- Threats: flooding, water pollution (heavy metal and solid wastes)

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Case site 2: Cabulig River Watershed, northern Mindanao

- 40 km; 8851 has main river channel
- 3 municipalities: Claveria, Balingasag, Jasaan
- Part of the Cabulig watershed
- Drains in Macajalar Bay

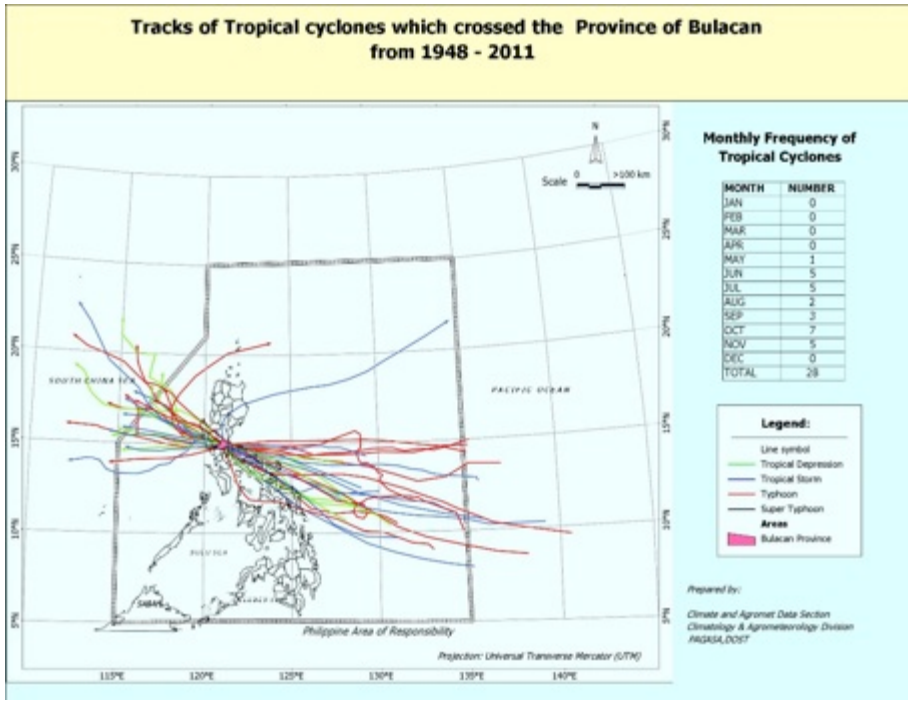
Threats: Land degradation due to unsuitable land use and unsustainable land use practices; increasing climate variability and extreme events (e.g. typhoon, flooding, landslide)

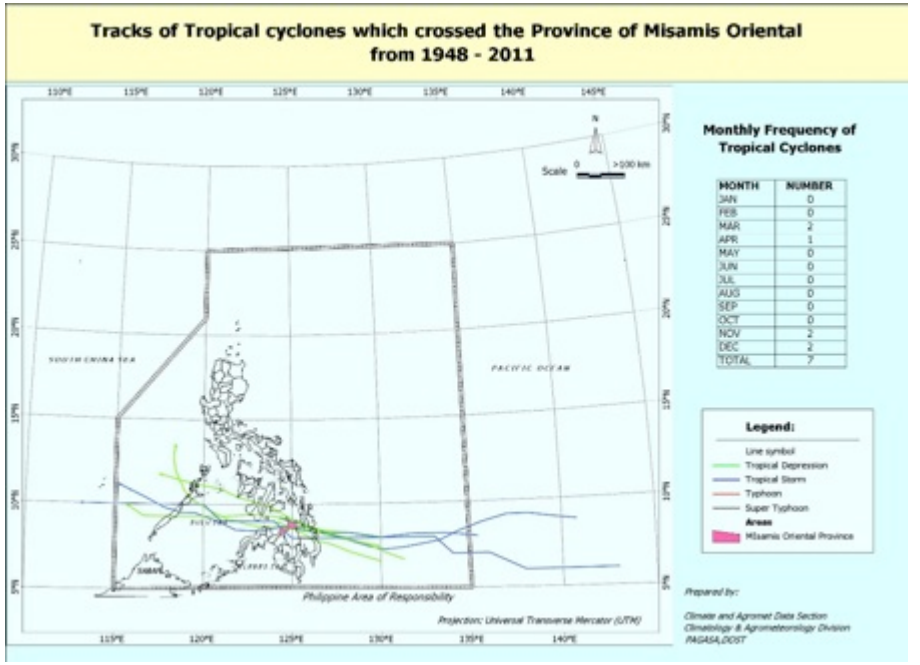
Multiple Water Users

MMORS	Cabulig River
• Households • Farmers/fishers • Water concessionaires • Industrial companies • Traders/transport operators	• Households • Farmers • Hydropower plant • Industrial companies • Multi-national companies (e.g. banana, pineapple, tobacco)

Resource competition results to conflicts due to increasing number of users vis a vis degrading water quality and land health.

Increasing risks and vulnerabilities





Social Learning in IRBM: Social Learning Components

Components	MMORS	Cabulig River
Learning processes	Knowledge generation IEC / capacity building LEK (livelihood, community identity)	Knowledge generation IEC / capacity building LEK (livelihood, tradition)
Group of people	Industry/commercial Agriculture Residential/household	Industry Agriculture Residential/household/IPs
Shared problems	Poor water quality Flooding during monsoon season	Land degradation (e.g. soil erosions) affecting water availability/quality
Collective actions	"Save the MMORS" – **rehabilitation MMO WQMA Action Plan**	Formation of Cabulig Watershed Management Council (on-going) – **sustainable land use and watershed protection and management**

Social Learning in IRBM: Knowledge Generation and Interventions

MMORS	Cabulig River
• Baseline and Research Studies • Conduct of pilot studies to control pollution at source • Formation of MMO WQMA • Monitoring of River quality • Enforcement (closure of dumpsites, unregistered tanneries and gold smelters) • River clean-ups	• Rapid Hydrological Appraisal (inc. GenRiver Modelling) • This enabled the integration of different knowledge systems: local ecological knowledge (LEK), policy-makers ecological knowledge (PEK) and modeler's ecological knowledge (MEK) • Communicating study results

Social Learning in IRBM: Civil Society Engagement

PURE EARTH
BLACKSMITH INSTITUTE

BULACAN STATE UNIVERSITY
1904
"MALOLOS, BULACAN"

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Ecosystems Research and Development Bureau

ADB

GREEN CROSS

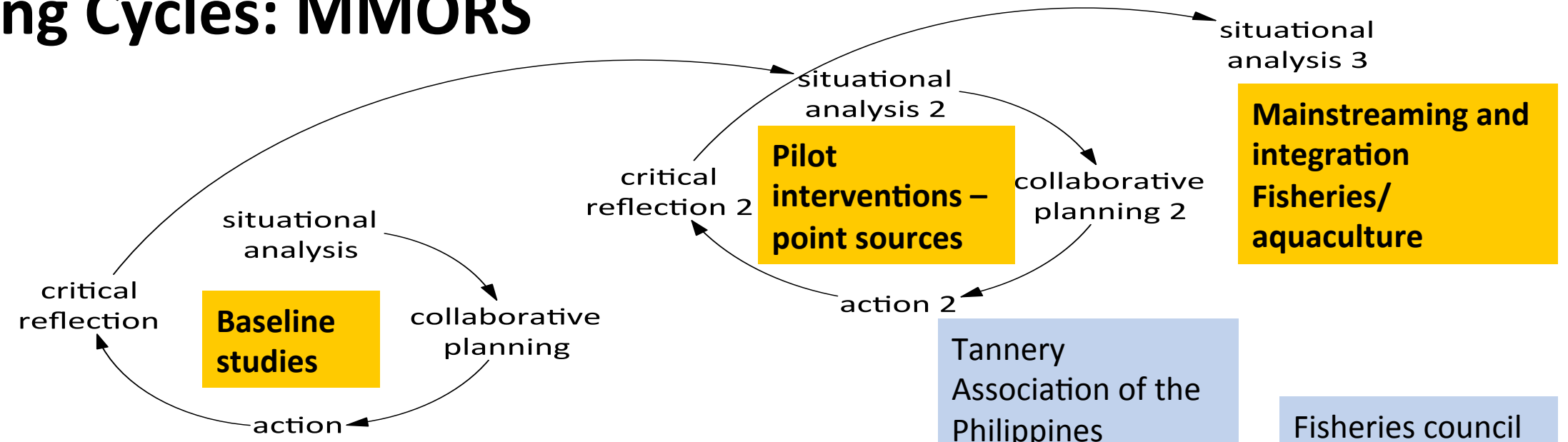
JICA

LANDCARE

MISAMIS ORIENTAL STATE COLLEGE OF AGRICULTURE AND TECHNOLOGY
1983
CLAVERIA, MISAMIS ORIENTAL

Balay Mindanaw

Learning Cycles: MMORS



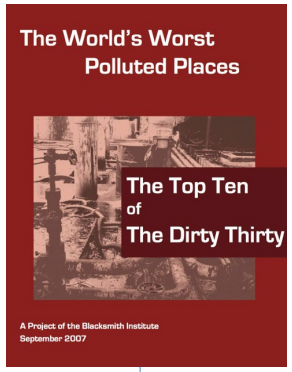
Baseline studies

Pilot interventions – point sources

Mainstreaming and integration Fisheries/ aquaculture

LGU river councils

Clean Water Act (RA 9275) enacted



Formation of MMO WQMA

MMO WQMA Ten Year Action Plan

Tannery Association of the Philippines

Meycauayan Jewelry Industry Association

Fisheries council engagement in river rehabilitation

Review of 10 year action plan

2004 | 2005-2010 | 2008-2012 | 2013-present

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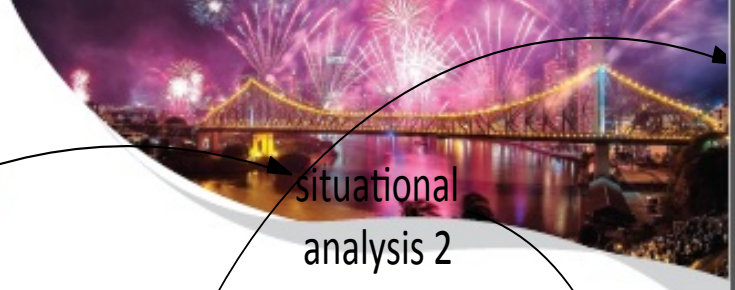
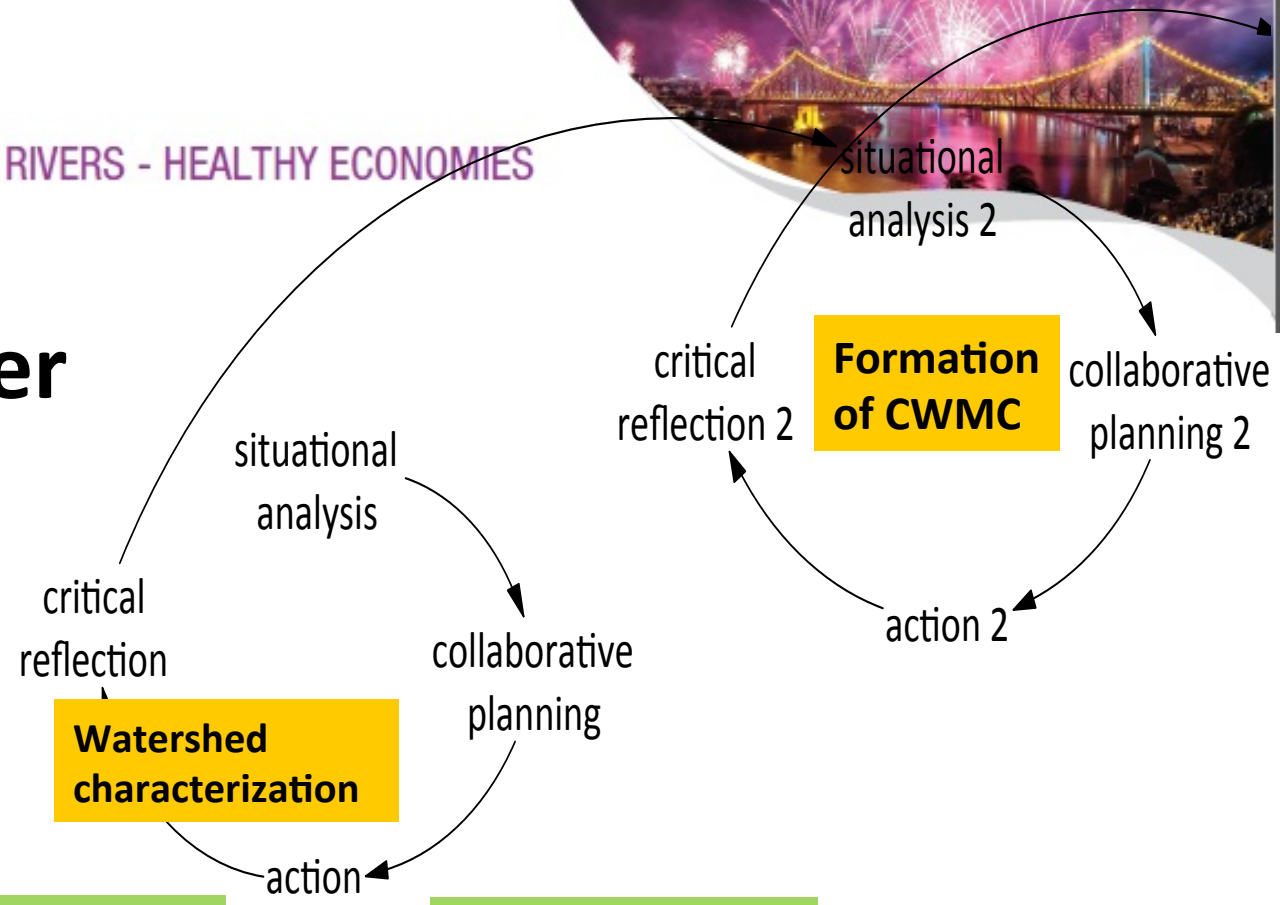


Learning Cycles: Cabulig River



1993 onwards	1998	2004	2008-2010	2013-2015	2014-2015
Participatory watershed management initiatives began in the Philippines	Developed Integrated Watershed Management Framework (DENR)	Initial watershed management initiatives in Cabulig by DENR-X (i.e. characterization, plan)	Rapid Hydrological Appraisal in Cabulig – results not strategically communicated	Watershed characterization (i.e. soil attributes, hydrology, carbon, agrobiodiversity, tenure, landscape, marketing)	Initiative to form the Cabulig Watershed Management Council (on-going)

Enabling factors

- Common issues
- Asset ownership (e.g. land, boats)
- Facilitation from NGOs and other support groups

Limiting factors

- Limited farmer/fisher organizations
- Poverty
- Balance and continuity of NGOs and other support groups

Key Insights

- Social learning is important in Integrated River Basin Management (plans, process and policy) – for it to be effective and sustainable
- The role of local and external actors (NGOs) in social learning – who learns? From whom? For what?
- Social learning "windows" to facilitate social learning and encourage people/organizations to engage in the process
- Learning platforms could be in the form of formal and informal venues
- Challenge: institutional coordination; social learning to institutional reforms (policy, arrangements, etc.); sustain gains from social learning

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Maraming Salamat Po.
Thank you.

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