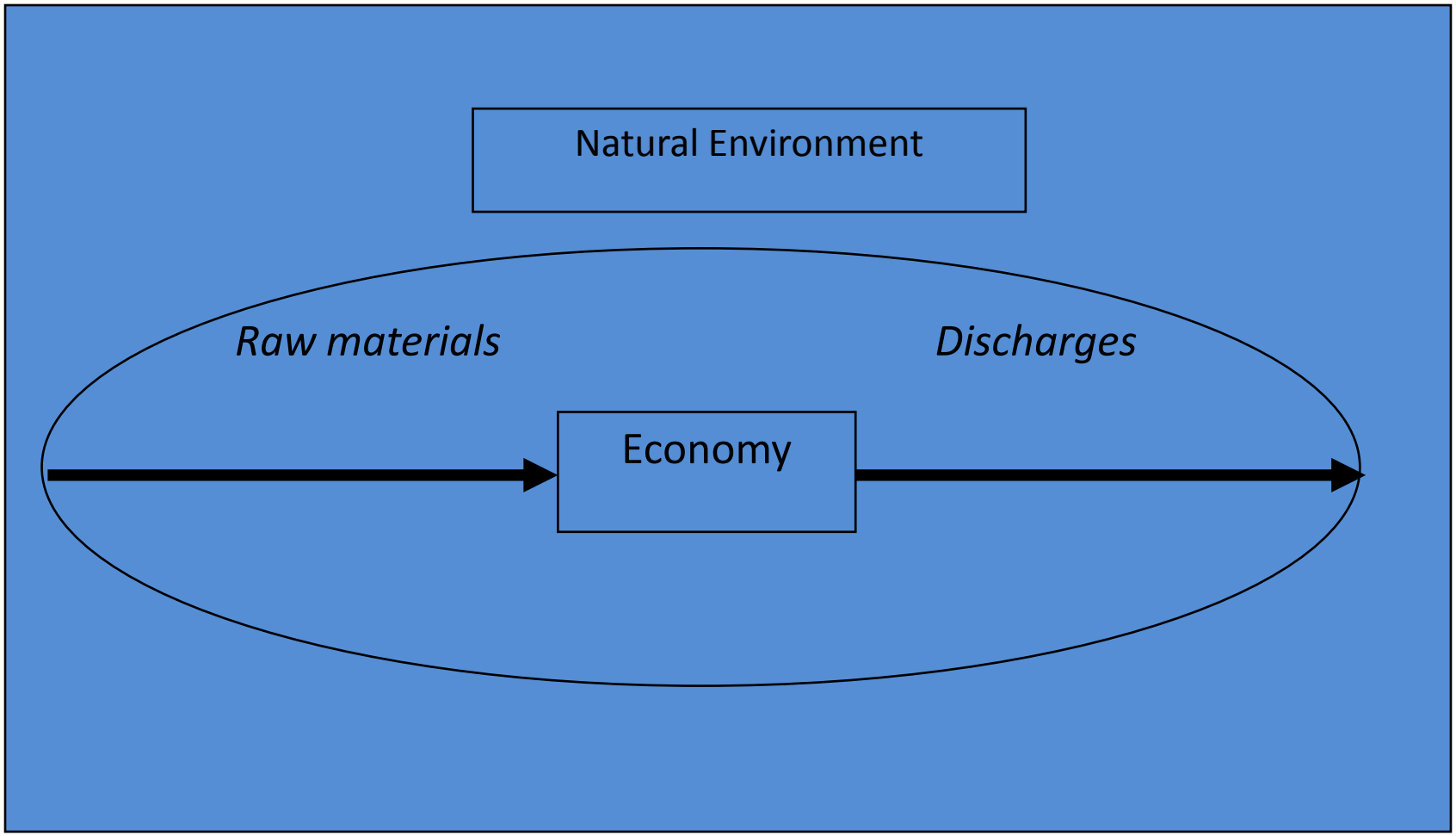
Environmental Science National Research Agenda

HUMANOSPHERE:

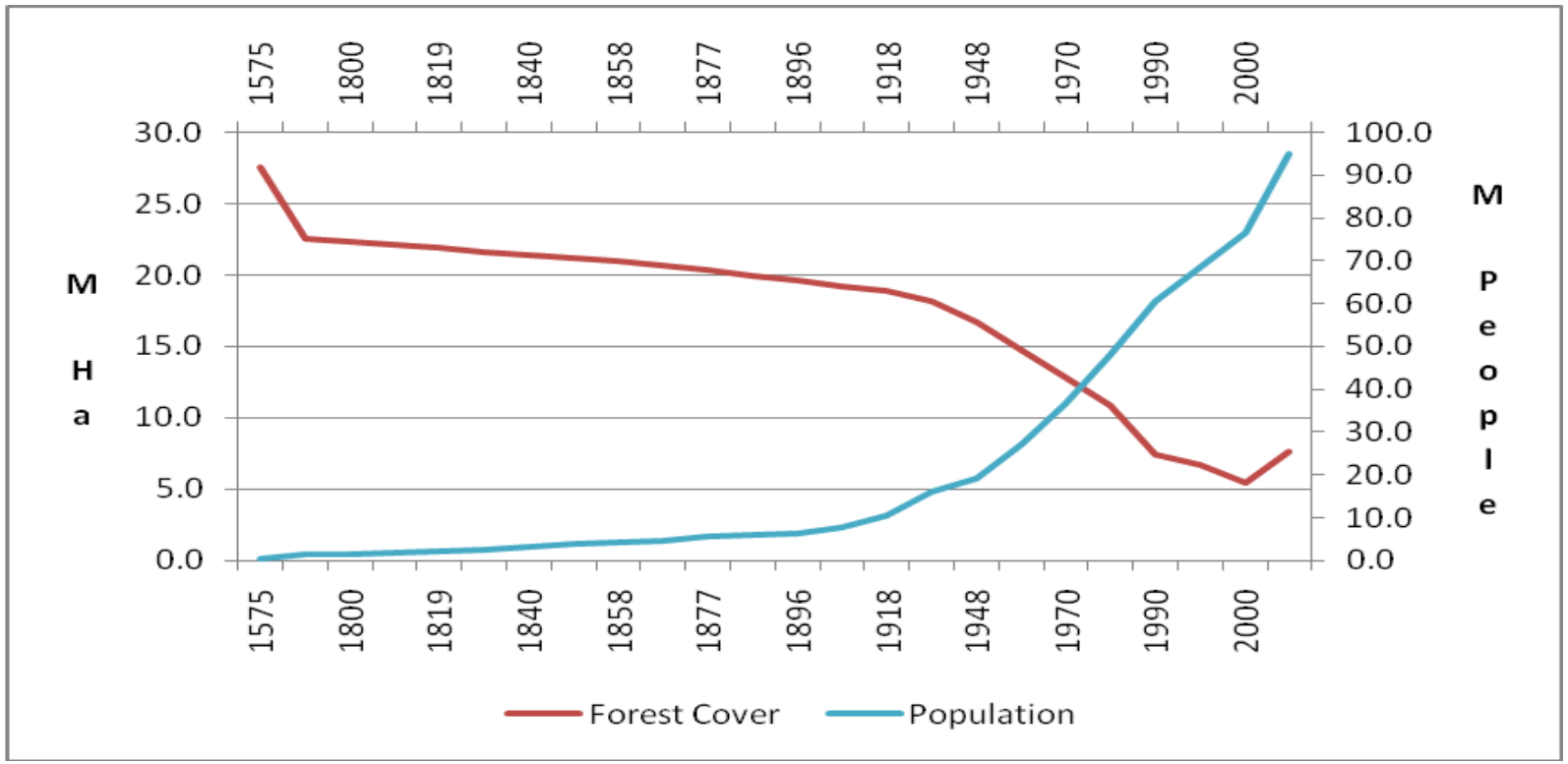
Part A: Linking People and Ecosystems
Dr. Rico Ancog, SESAM UP Los Banos

Part B: The Philippine EIA System
Dr. Rene Rollon, IESM UP Diliman

Socio-economy and Environment Linkages



Forest cover and population trend over the years(Revised MFDP 2005, NCSB 2004, Cruz et al. 2011)



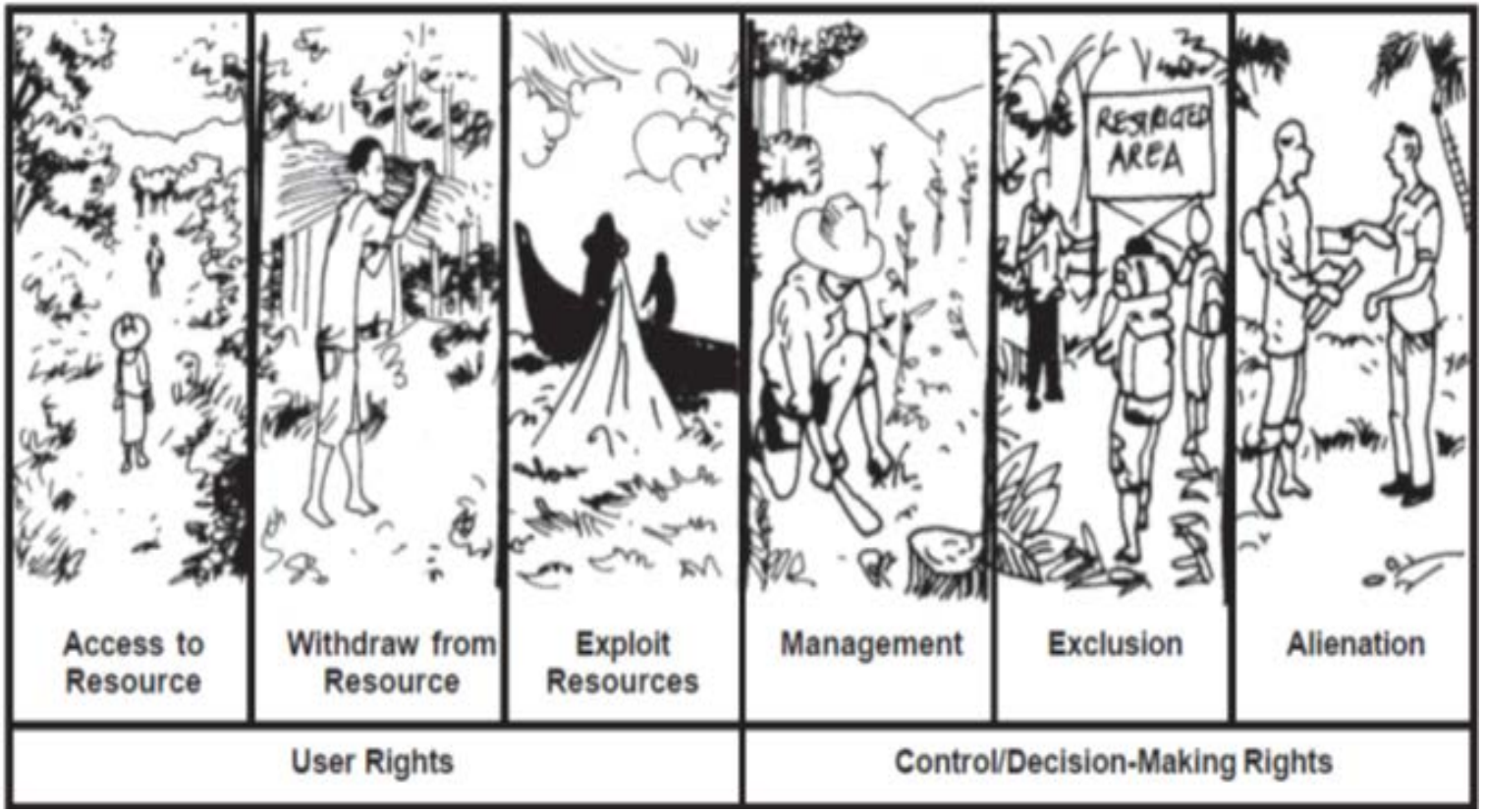
Source: Cruz 2012

NEED: Assessment and calculation of tipping thresholds of environmental systems vis-à-vis current rate of resource extraction.

Based on Millenium Ecosystem Assessment (2005), nearly 2/3 of the services provided by nature are in rapid decline!

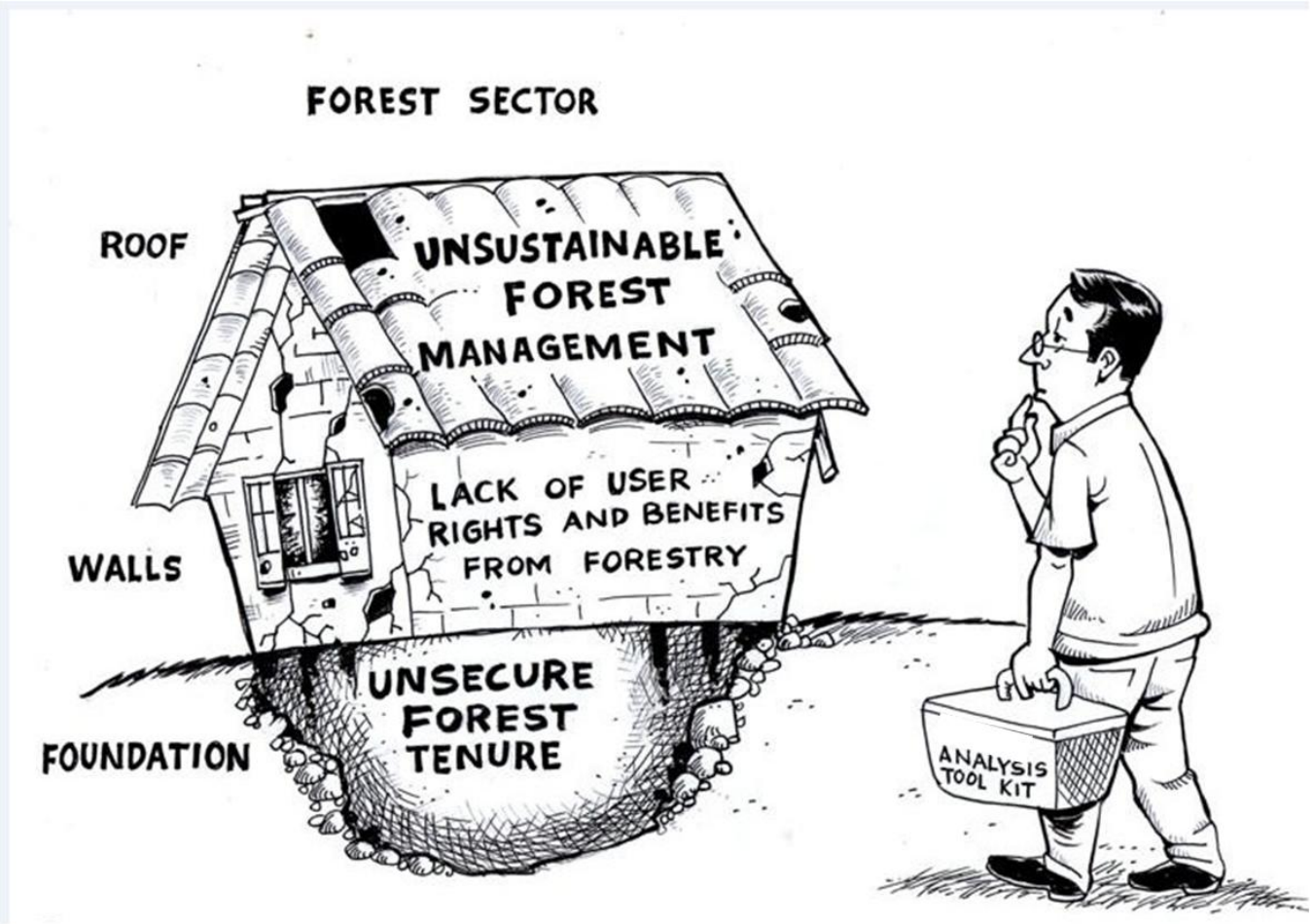
1. Property rights system and externalities
2. Ecosystem services are not accounted for

Research Agenda 1:
Property Rights



SOURCE: CAPRI, 2010; Toon, 2012

One tenure image



Source: O'Hara, 2012; Toon, 2012

Rights and Duties

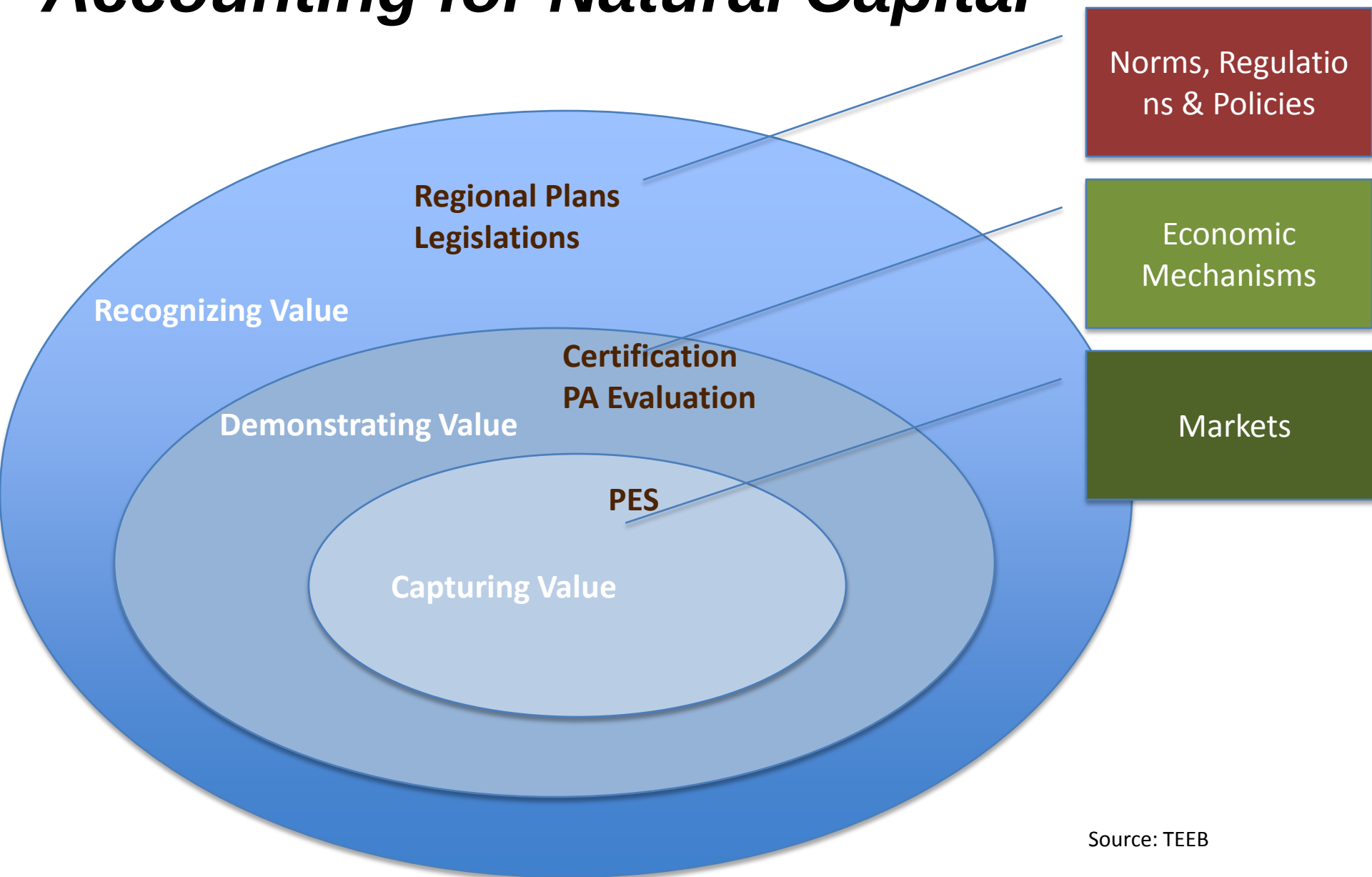
- Rights to certain things are only meaningful if people are aware, understand, realize/apply them, and can claim / enforce them:
  - INDIVIDUAL / COLLECTIVE RIGHTS
  - RESPONSIBILITY
  - SOURCE: formal (statutory) and informal (customary)

Source: Toon, 2012

Research Agenda 2: *Accounting for Natural Capital*

- Economic valuation of ecosystem services
- Business Sector: *Corporate Ecosystem Services Review (CESR)*
- Economic Valuation →Policy Making

Research Agenda 2:
Accounting for Natural Capital

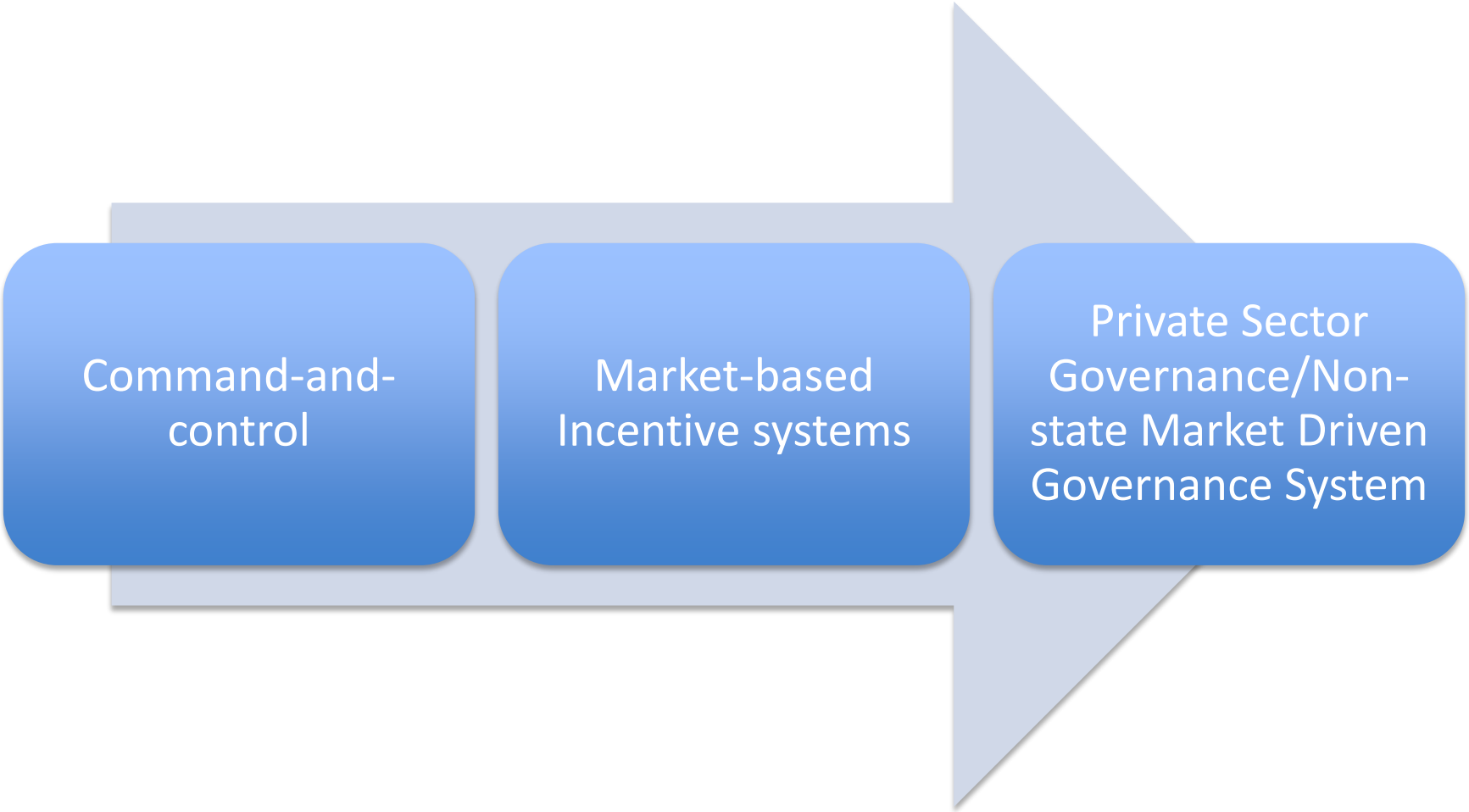


Source: TEEB

Research Agenda 3: *Towards Adaptive Governance*

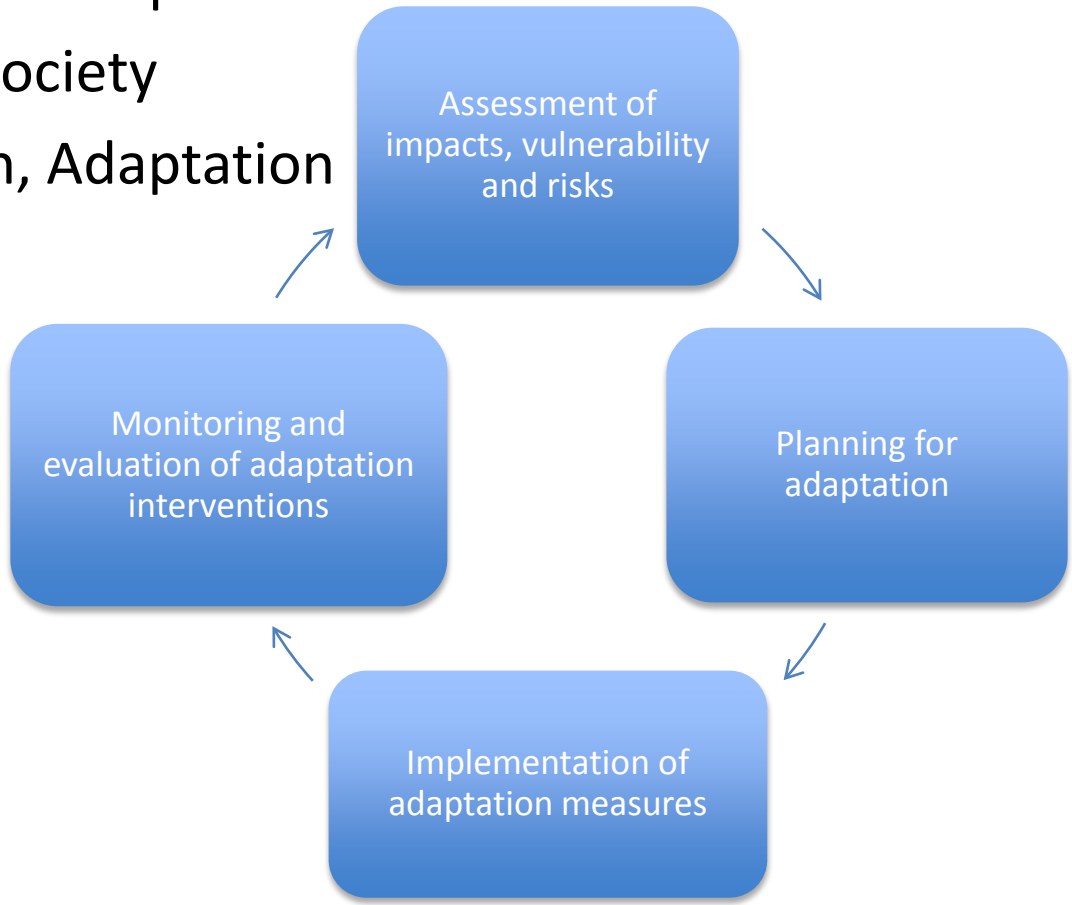
- Move from rigid sector-based resource management to ecosystem-based management (Ex. Fisheries vs ICRM)
- Adaptation ecosystem-based management
- Multi-level adaptive governance, tax incentives and more investments on Research *for* Development to enhance ingenuity.

A Paradigm Shift?



Research Agenda 4: *Towards Resilience*

- **Resilience Thinking**
  - From research framework to practice
  - Focus: Ecosystem and Society
  - Vulnerability, Mitigation, Adaptation



Environmental Science National Research Agenda

HUMAN SPHERE: The Philippine EIA System

(Output of the workshop on EIA – 1st National Symposium and Workshop on Environmental Science, 7-8 May 2012)

For all development projects, the Philippines has an Environmental Impact Statement System (PEISS) ...

Key sections of an EIS document ….

- Project Description
  - Where (proposed location)?
  - Magnitude (size)?
  - Activities (operation)?
  - Duration (lifespan: until when)?

- The Environment (Baseline): land, air, water, life, people

- The Potential Impact

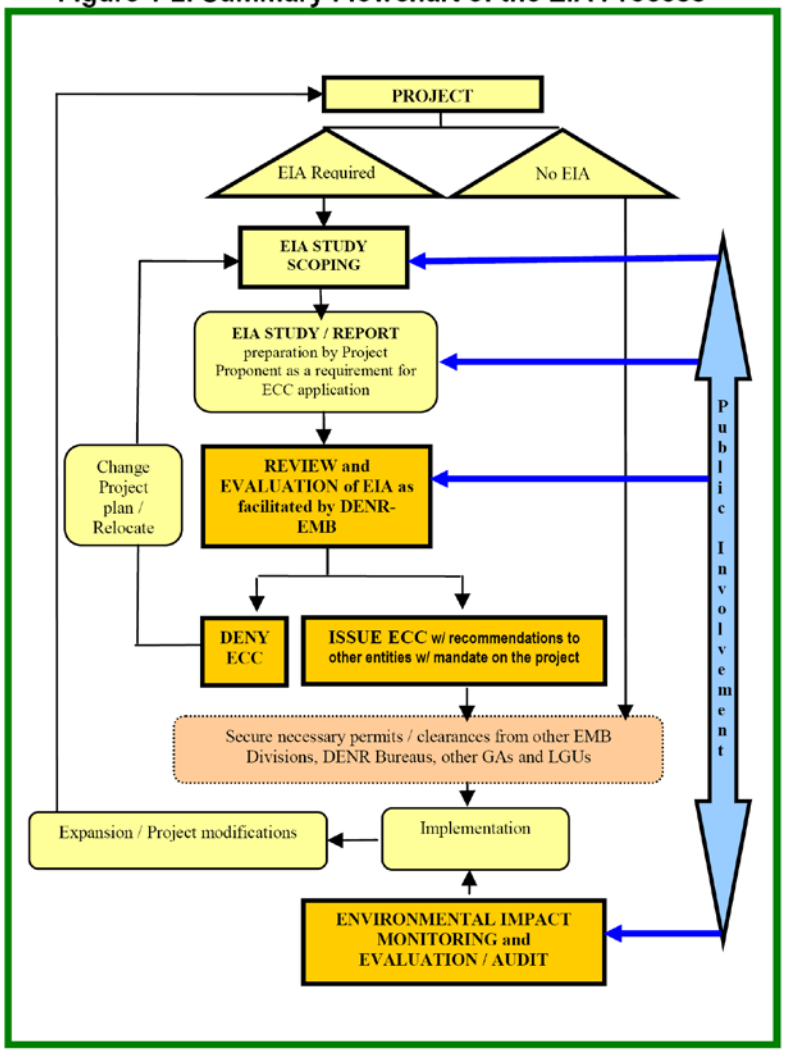
- Mitigating Measures (EMP/EMS)

→ so, scope of study is project-dependent

The General Process

- Screening: EIS needed?
- Scoping
- EIA (Study) Report
- EIA Report Evaluation: EI, EMP
- Decision/Recommendation
- Monitoring/Audit
- Recall? Cancellation?

Figure 1-2. Summary Flowchart of the EIA Process



Legend:

- Proponent-driven
- DENR-EMB driven
- Proponent-driven but outside the EIA Process as requirements are under the mandate of other entities
- Public involvement, which typically begins at scoping but may occur at any stage of the EIA process.

An ideal EIA System would:

1. Apply to all projects (with expected significant impacts);
2. Compare alternatives to a proposed project, management techniques, mitigation measures;
3. Result in a clear EIS, conveying the likely impacts;
4. Include broad public participation and stringent administrative review procedures;
5. Be timed to provide information for decision making;
6. Be enforceable, and;
7. Include monitoring and feedback procedures

Some notes on the Philippine EIA

(Briffet et al. 2003)

- EIA practice: longer than most other countries in Asia!
- Familiarity of stakeholders, very strong
- Implementation: exceedingly weak!
- General impression: EIA failed to protect the natural resources from degradation, etc.
    - Institutional problems
    - EIA as bureaucratic red tape!
    - Lack of data management systems
    - Inappropriate monitoring mechanisms
    - Lack of skilled and trained manpower
    - Political interference
    - Decentralization
- Evidence of well-established procedures
- Translation of paper to practice: wanting!

Major issues

(Workshop on Human sphere: The Philippine EIA System, 8 May 2012)

1. **Lack of Integrated (vs. Modular) Impact Analysis**: *cut-and-paste; generic; redundant; costly exercise*

2. **Lack of Appreciation on the Value of Resources (habitats)** to be affected by the proposed development

3. **Ambiguity in the implementation EIA Review process and post-ECC monitoring**: *choice of Reviewers, key decision parameters for ECC granting, capability of MMT*

Workshop Output: EIA/HUMAN SPHERE MATRIX

(08 May 2012, 1st Nat'l Symp & Workshop on Environmental Science)

		HOW	WHAT	
Aspect	**Major Problems & Issues (From whose perspective?)**	**Information Needs (How can R & D be addressed…)**	**Data available (Existing efforts of various Institutions)**	**Gaps/Needs; (Contribution of R & D?) (What methods do we need to address?)**
EIA	**1.** Lack of integrated impact analysis (vs. modular, etc.); cut-and-paste; repetitive info; costly exercise	Comprehensive, accessible, digital archive of spatio-temporal environmental profiles	Multitudes of previous EIA Reports (EMB; Consulting Firms; Consultants)	• EIA database to be updated periodically (digital e-library); • public access to approved EIS in order to compare the predicted and actual impact during project implementation; • Substantive and strategic assessment; programmatic EIA • Streamlining of Integrated EIA methodologies (Assimilative capacity assessment; Cumulative Impact Assessment)
	2. Lack of appreciation on the value of resources / habitats	Resource Valuation/ Resource Economic Valuation / Habitat Valuation		• Cost-benefit analysis; • Economic valuation of ecosystems (goods and services)
	3. Ambiguity in the implementation of the EIA Review process; Monitoring not streamlined;no parameter in choosing the review committtee	Revision of EIA policies; Consortium of experts		• Creation a technical review panel (stronger academe involvement); MOA between academe and DENR; • development of key parameters to make ECC decisions (e.g., thresholds for decisions to DENY ECC applications)

Thank you.