China – ASEAN Academy on Ocean Law and Governance

Paradigm Change in Coastal Governance

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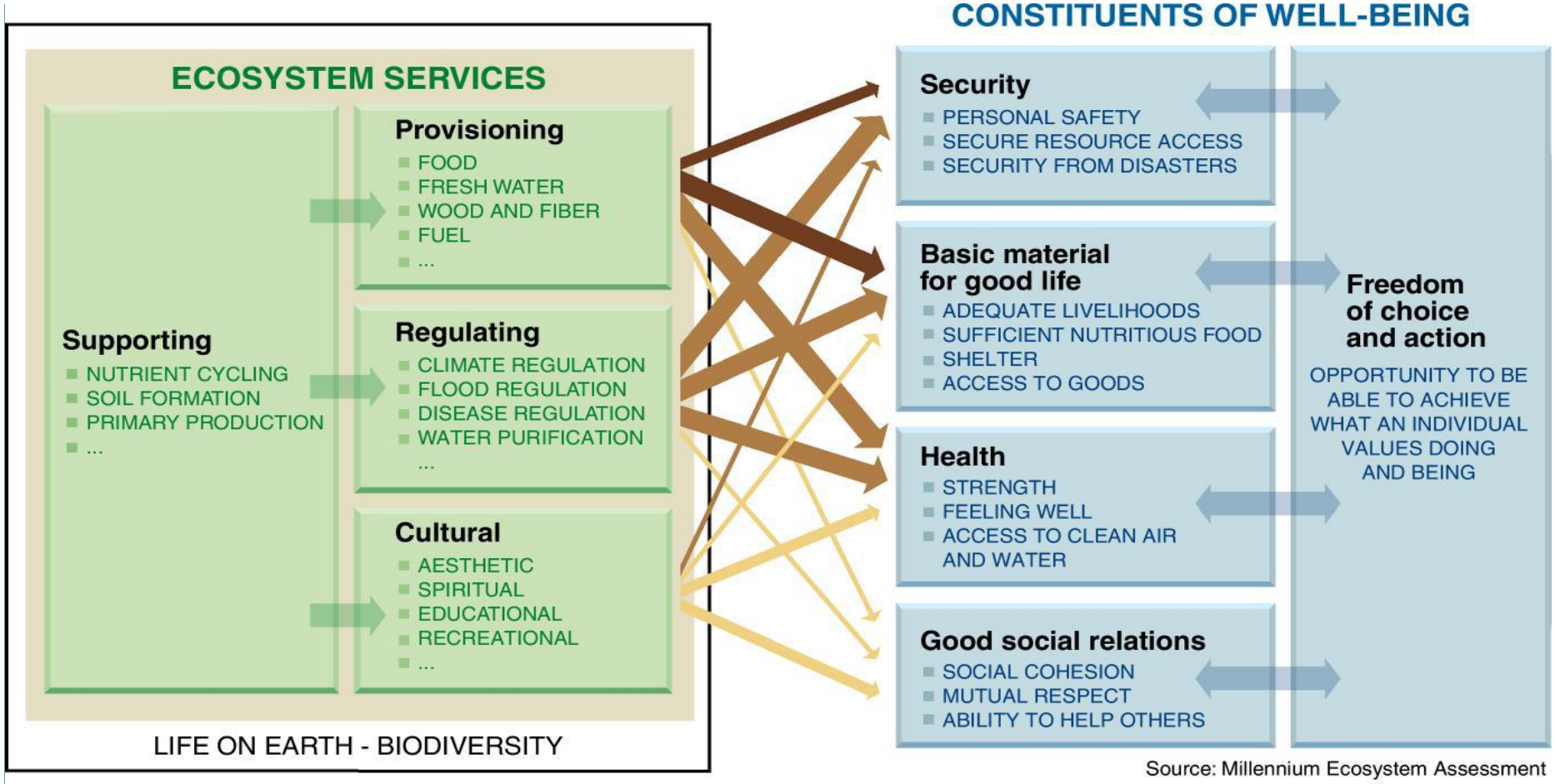
Context

- Internationally, we are seeing changes in governance – re: **communities** and **coastal ecology** & livelihoods
- **This lecture**: What are these changes and why they are occurring
- **Next lecture**: What are some of the solutions or policy responses to these changes
- In this lecture, we start with a redefinition of **natural resources** and **management**
- Then discuss three **paradigm changes** in shaping the background for a new interdisciplinary science of the coastal and ocean governance

Evolution of the notions of natural resources and management

- Historically, natural resources were considered “free gifts of nature” disconnected from the ecosystem
- Assets for the creation of utility, economic growth
- But as manufacturing became the engine for economic growth, natural resources declined in relative importance
- Does this mean resources have become irrelevant?
- They remain important as integral parts of ecosystems and biodiversity, and as ecosystem services for human well-being (MA 2005)



Source: Millennium Ecosystem Assessment

ARROW'S COLOR
Potential for mediation by socioeconomic factors

- Low
- Medium
- High

ARROW'S WIDTH
Intensity of linkages between ecosystem services and human well-being

- Weak
- Medium
- Strong

Redefining natural resources

- The old concept of natural resources carries a sense of free goods, solely human-centric use, and commodification of nature
- A redefinition needs to reflect emerging views, changing priorities and historic realities
- Natural resources are important for local economies and livelihoods, producing ecosystem services for human well-being
- As well, they maintain biodiversity and social-ecological system resilience

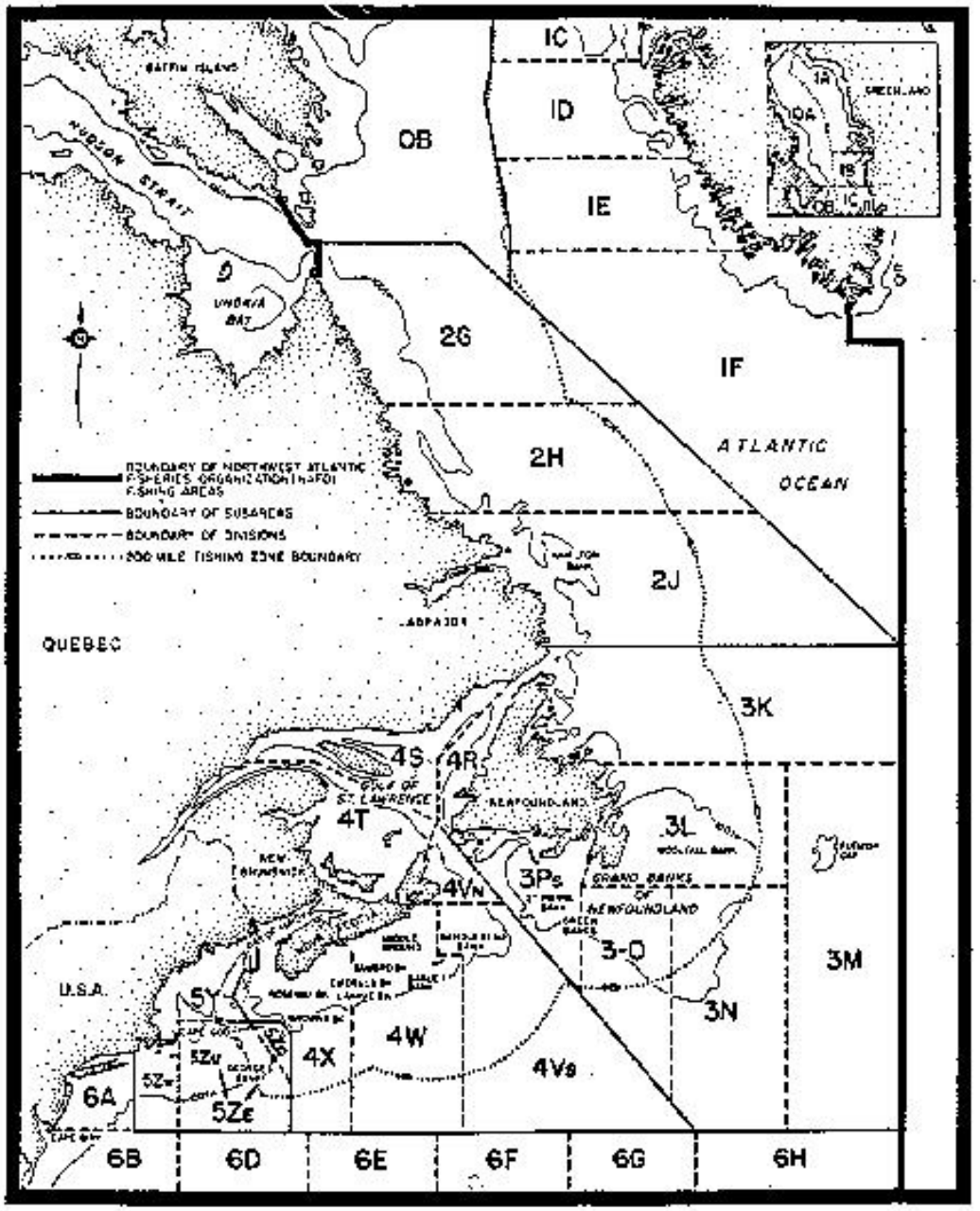
Redefining management

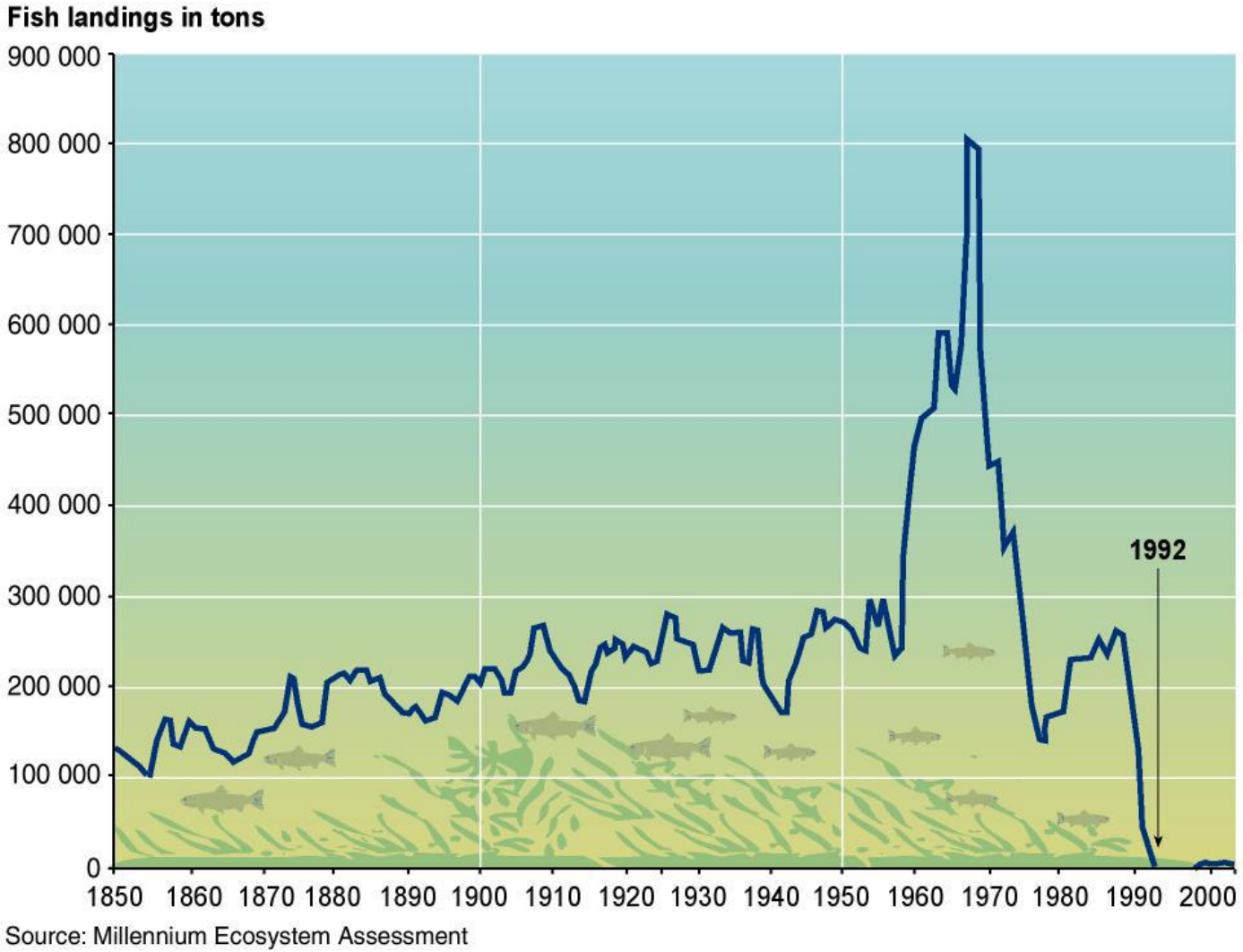
- The old concept of management carries implications of domination of nature, efficiency, and expert-knows-best, command-and-control approaches
- But many of the assumptions behind this concept have been abandoned
- Hence, the term management can be updated to emphasize **stewardship** in place of domination and control of nature
- **Economic efficiency** objectives need to be balanced against **ecological** and **social** objectives

(1) Paradigm change from reductionism to a systems view

- Far-reaching implications: forces the abandonment of stock-by-stock and sector-by-sector approach
- It also undermines management tools designed for a predictable and controllable nature
- These assumptions have been refuted
- Instead, we need to work with unpredictable and uncontrollable, using learning-based approaches such as adaptive management and resilience (Gunderson and Holling 2002 *Panarchy*)

Collapse of the Newfoundland cod stocks, Canada:
Failure of centralized management for a predictable and controllable nature



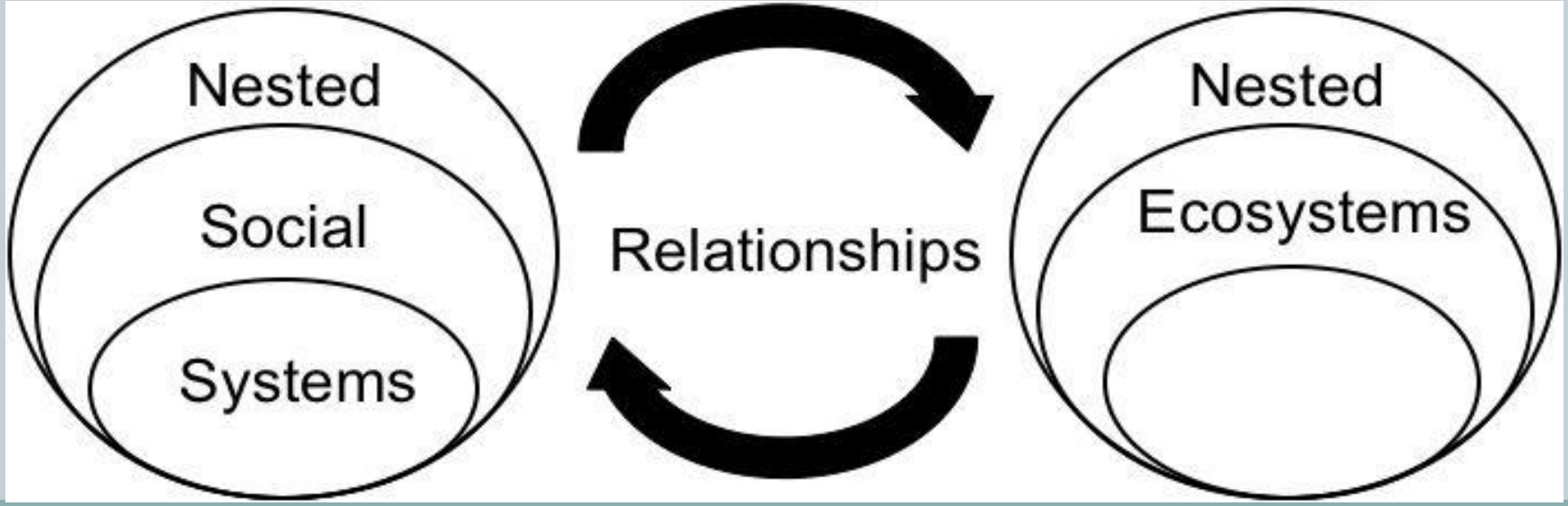


Source: Millennium Ecosystem Assessment

Designing holistic approaches:
The Japanese concept of *sato-umi,* a mosaic of coastal ecosystems

Resilience theory: social-ecological system (SES) as unit of analysis

- SES: the complex adaptive system that includes human and biophysical
- Coupled, interdependent, co-evolutionary
- Multi-level (nested) systems



(2) Paradigm change in commons governance

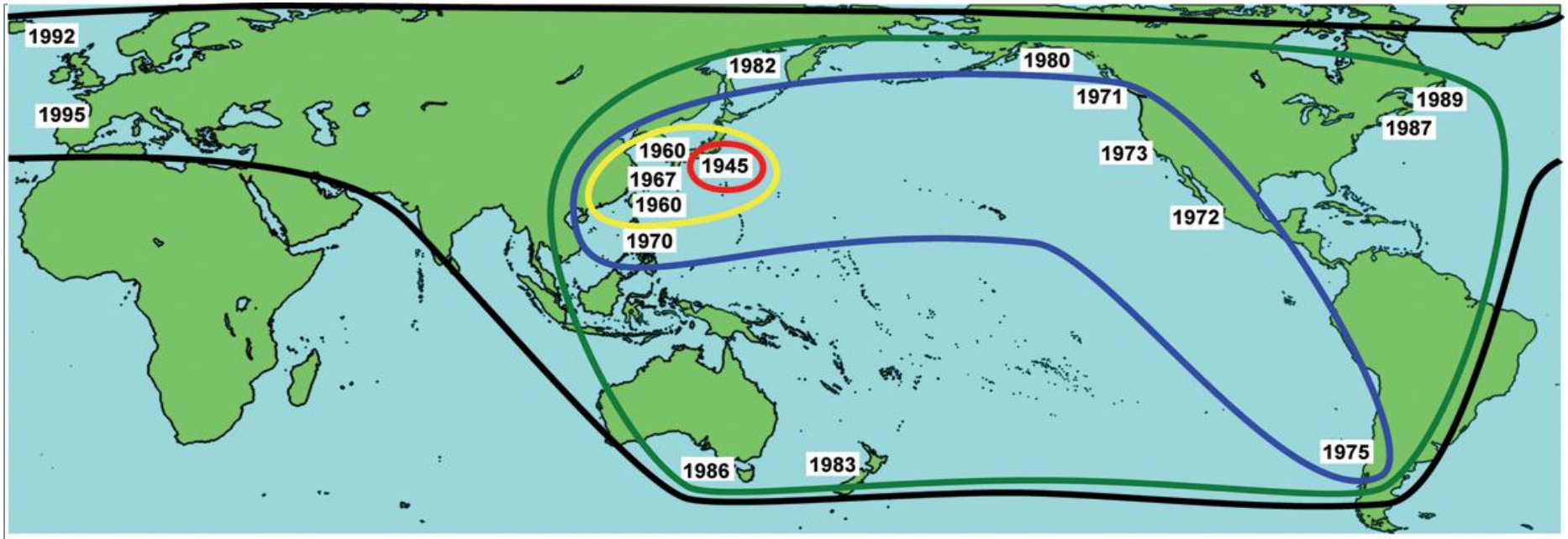
- Commons deals with resources in which (a) the exclusion of potential users is difficult, and (b) exploitation by one user reduces resource availability for other users (Ostrom et al. 1999. *Science*)
- Commons could be held in one of four basic property rights regimes: open-access; private property; state property; and common-property
- These four regimes are pure analytical types; in practice, resources are usually held in combinations of property rights regimes

Commons: not always a 'tragedy'

- The Western literature until the 1980s and 1990s equated "commons" with a "tragedy"
- Since then, we have developed a theory of commons that tries to explain the conditions under which commons can be governed successfully or not (Ostrom 1990. *Governing the Commons)*
- The paradigm change has been slow to impact entrenched management practices for coastal and ocean resources
- The 'roving bandits' story illustrates commons issues

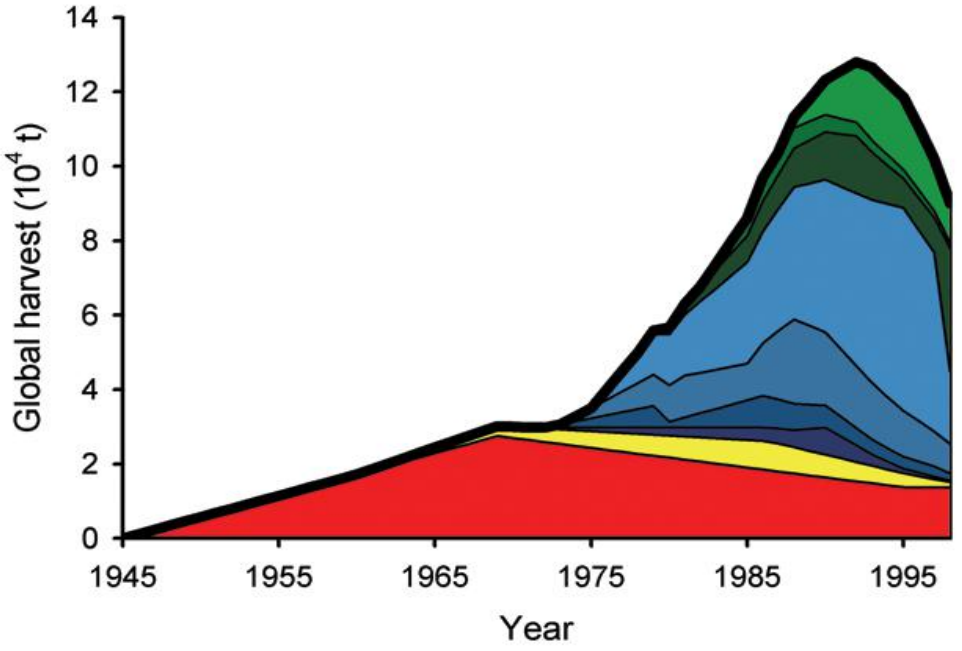
‘Roving bandits’ and the tragedy of the commons

- ‘Roving bandits’, highly mobile fishing enterprises or buyers and their local harvesters
- They move around the globe, exploiting resources in response to global market opportunities
- Deplete the resource base from one area and move on to the next
- Roving bandits have no incentive to conserve -- whatever they do not take will be taken by others
- Case: global trade in sea urchins (Berkes et al. 2006. *Science*)



Source: Berkes et al. 2006. Science 311: 1557-1558

Data from: Andrew *et al.* 2002. Oceanogr Mar Biol Annu Rev 40: 343



Global sea urchin harvests:
Initiation year of major fishery by area

- Japan, 1945
- Korea, 1960
- Washington and Oregon (USA), 1971
- Baja (Mexico), 1972; California (USA), 1973
- Chile, 1975
- Alaska and BC (Canada), 1980; Russia, 1982
- Maine (USA), 1987; NS & NB (Canada), 1989

Globalized world: new markets can develop so rapidly that the speed of exploitation overwhelms the ability to respond

Local and national institutions are caught by surprise, unable to constrain harvesting

Solutions to 'roving bandits'? (Berkes 2010 Bull Mar Sci)

Solutions are difficult, but they may include:

- Enforcing local commons rights
- Local monitoring with regional coordination (a solution in the case of the live reef fish trade, with its center in Hong Kong)
- Developing local stewardship and a sense of place
- Using flexible management approaches that can adapt to rapid change (adaptive management)
- Multi-level governance, from local to international (partially done in the case of the live reef fish trade)

(3) Paradigm change in governance practice

- Governance refers to the collective efforts of society to define and achieve societal goals (Young et al. 2008)
- It is the whole of public as well as private interactions taken to solve societal problems and create societal opportunities (Kooiman et al. 2005)
- Governance is no longer a task only for government managers
- Dividing lines between public and private sectors have become blurred, as indicated by the phrase "public-private partnerships"

Changing concept of governance

- **Governance** is considered the broader arena in which institutions operate, governance covers some of the area previously captured by the terms **policy** and **management**
- The trend is to use governance as the more inclusive term, followed by policy, and finally by management
- Management is about action, governance is about politics – sharing of responsibility and power, and setting the policy agenda and objectives (Kooiman et al. 2005 . *Fish for Life*)

Changes in resource governance

- Several major changes are occurring in resource governance
- First, **participation** of users in governance is becoming the norm, rather than the exception
- Second, the role of **technical expertise**, along with centralized management, is being redefined
- Third, **capacity development** to enable local institutions to engage in management

3.1 Participation of users in governance

- Citizens are no longer treated as subjects but as participants in governance
- Emphasis on **horizontal** processes such as collaboration, partnership and community empowerment
- Literature on governance only developed in the 1990s, with emphasis on problem solving and opportunity creation as a joint responsibility
- Viewed this way, governance is a broad responsibility to be shared, as in “governance without government”

Good governance

- Governance that is participatory, consensus oriented, transparent, accountable, responsive, effective and efficient, equitable and inclusive, and follows the rule of law (UN 2008)
- **Transparency** refers to openness and the free availability of information in a language that stakeholders can understand
- **Accountability** means that decision-makers should be available to answer to the people who are affected by the decisions

3.2 Role of technical expertise

- Conventional management: important role played by professional and technical expertise
- However, many of our environmental problems, including those related to ocean governance, do not lend themselves to analysis by the conventional rational approach of defining the problem, collecting data, analyzing data, and making decisions based on the results
- There is too much uncertainty; targets keep shifting, and issues get redefined over and over

Wicked problems

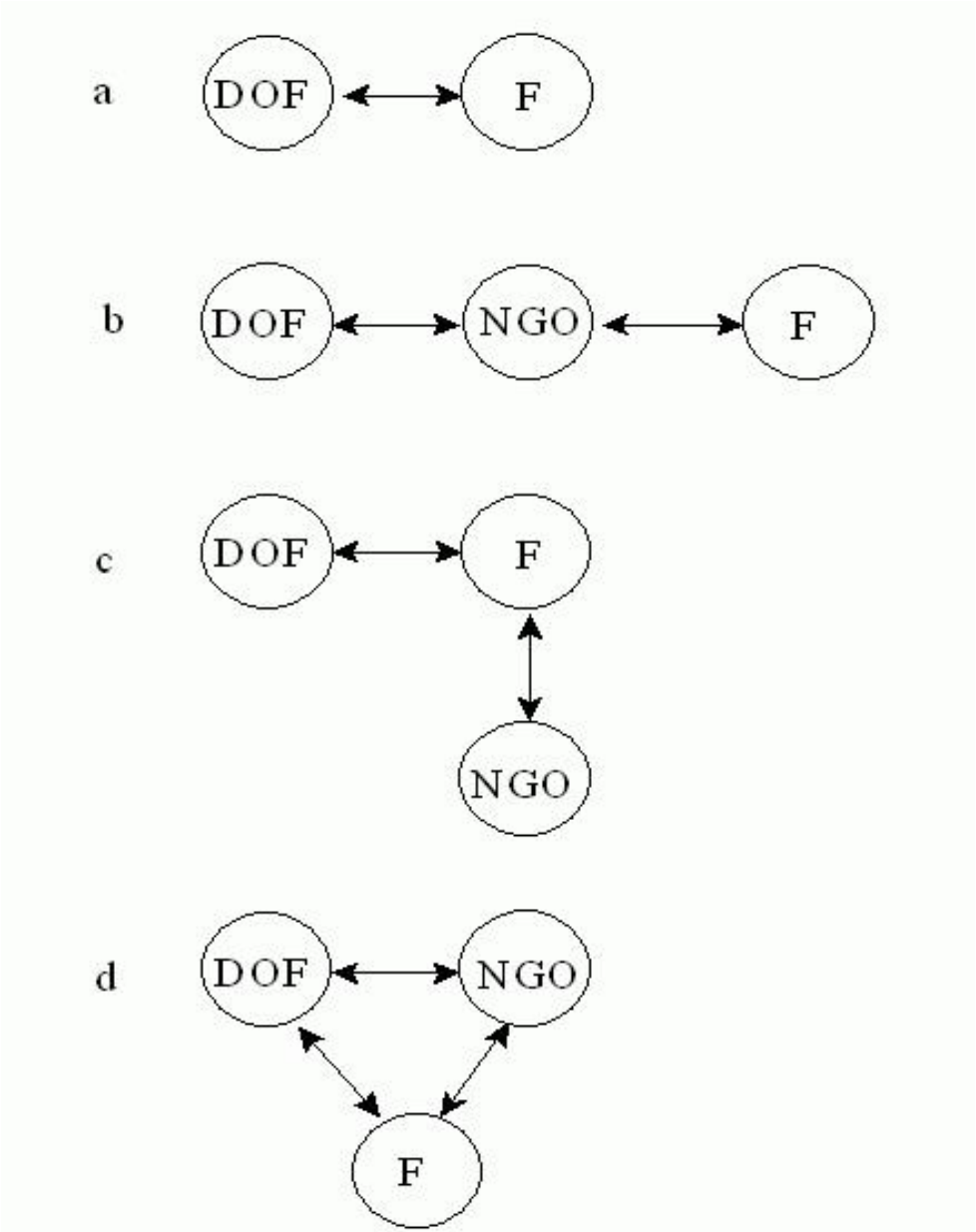
- **Wicked problems** have no definitive formulation, no stopping rule, and no test for a solution
- They could not be solved once and for all but continue to pose an ongoing challenge
- This is because it could not be known for sure when and if they were solved (Ludwig 2001. *Ecosystems*)
- Each wicked problem is unique and has no technical solution; they are persistent and tend to reappear
- They have no right or wrong solutions that can be determined scientifically – hence require public and stakeholder input

3.3 Capacity development for local institutions

- **Stakeholder participation** to deal with wicked problems requires collaborative approaches
- **Building partnerships**: stakeholders need to be sufficiently well organized and well informed Building partnerships requires a favorable policy environment, and presence of appropriate government institutions to interact with users
- Capacity development can take many forms

Capacity development: alternative arrangements in Bangladesh

DOF: Department of Fisheries
F: Fishing communities
NGO: Non-governmental organizations



Capacity development model (Habermas)

Three phases of the model, initially based on the three forms of action of Jurgen Habermas (1981):

(1) communicative action aimed at the generation of understanding,

(2) strategic action aimed at dealing with relationships, and

(3) instrumental action

(1) Communicative action

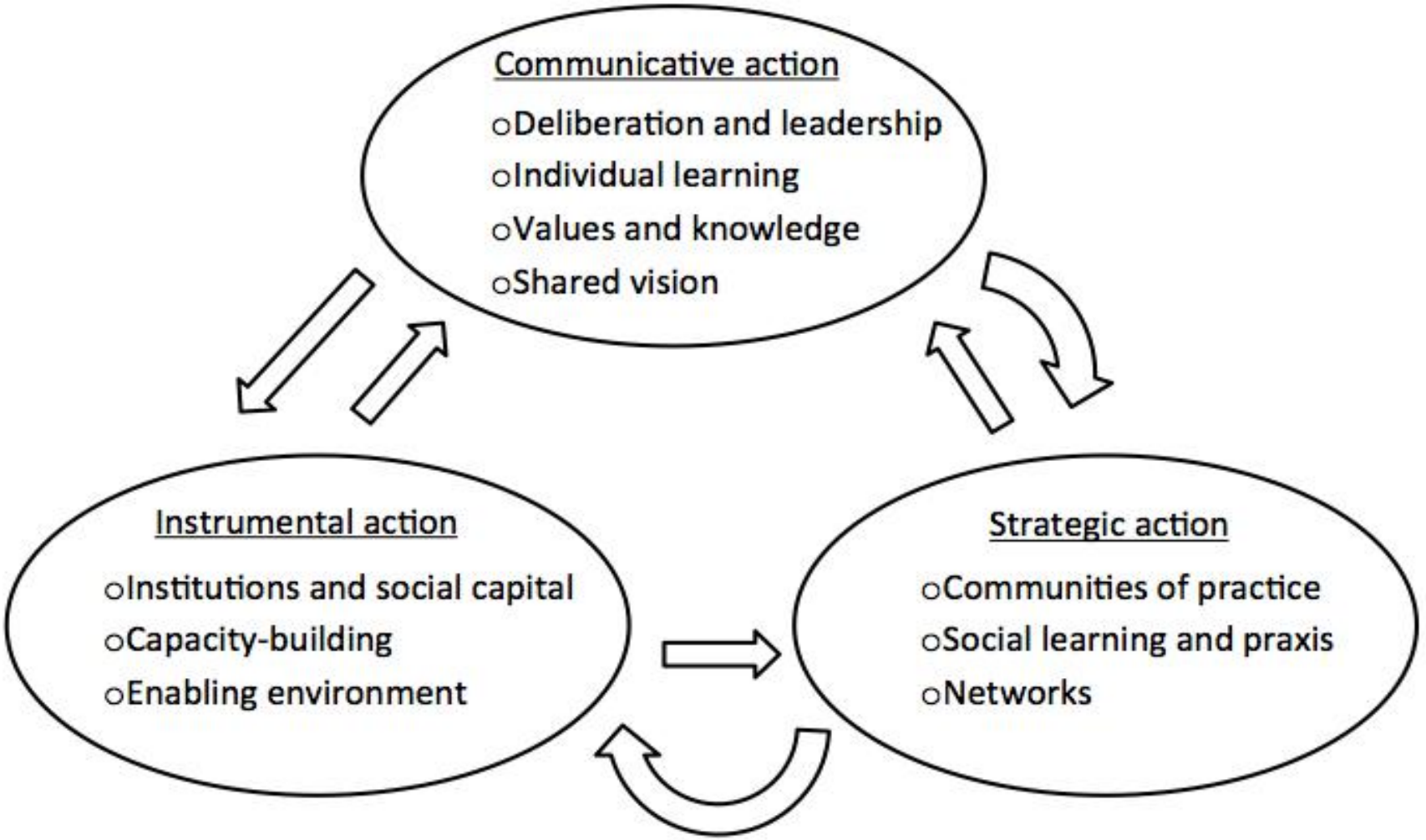
- Communication aimed at reaching a shared understanding of issues, creating a shared **vision**
- Individual learning
- **Deliberative process** to think through objectives and to reflect on values and knowledge
- **Bridging organizations** to provide a platform for knowledge development, deliberation, and visioning
- Combining science and stakeholder knowledge (local knowledge or indigenous knowledge)

(2) Strategic action (self-organization)

- Turns visions into plans that can be turned into action
- “Communities of practice”: learning-as-participation; learning networks
- Participatory approaches central to social learning
- Individual learning shared by the larger group, becomes **social learning** and is reinforced
- Spirals of action-reflection-action process

(3) Instrumental action (joint action)

- Emergence of rules-in-use (**institutions**)
- **Social capital** (trust, reciprocity, shared rules, norms and sanctions)
- Enabling environment, in political, social and economic sense
- Knowledge and capacity-building, skill-building: often through networks and partners


Communicative action
oDeliberation and leadership
oIndividual learning
oValues and knowledge
oShared vision
Instrumental action
oInstitutions and social capital
oCapacity-building
oEnabling environment
Strategic action
oCommunities of practice
oSocial learning and praxis
oNetworks

Conclusions

- Sharing of governance responsibilities is key, requiring building knowledge and capacity
- Need a rich network of partners for support function, including government agencies, NGOs, universities
- Bridging organizations
- Developing knowledge and capacity **takes time**
- Learning from experience, social learning requires fostering learning institutions; adaptive co-management

Conclusions II

- The three paradigm changes (systems view, commons, governance) are related
- They all pertain to an emerging understanding of ecosystems as **complex adaptive systems** in which human societies are necessarily an integral part

  - Systems view is important as the basis of governance

  - Commons is important because most ocean and coastal resources are commons

  - Governance is important as it pertains to the rules of the game for decision-making

Conclusions III

- **These three** historical developments in management philosophy regarding (1) adoption of a systems view, (2) a new vision of commons, and (3) shift to participatory governance are **cross-cutting themes**
- In view of these changes, how do we build a new interdisciplinary science of ocean governance? What are the elements of such a science?
- The second lecture will deal with these questions