

Training Workshop on Ecosystems
Approaches to Coastal and Ocean
Management: Focus on Ecosystem-Based
Management in East Africa

*Institutions as basis for understanding
responses to ecosystem change and
management*

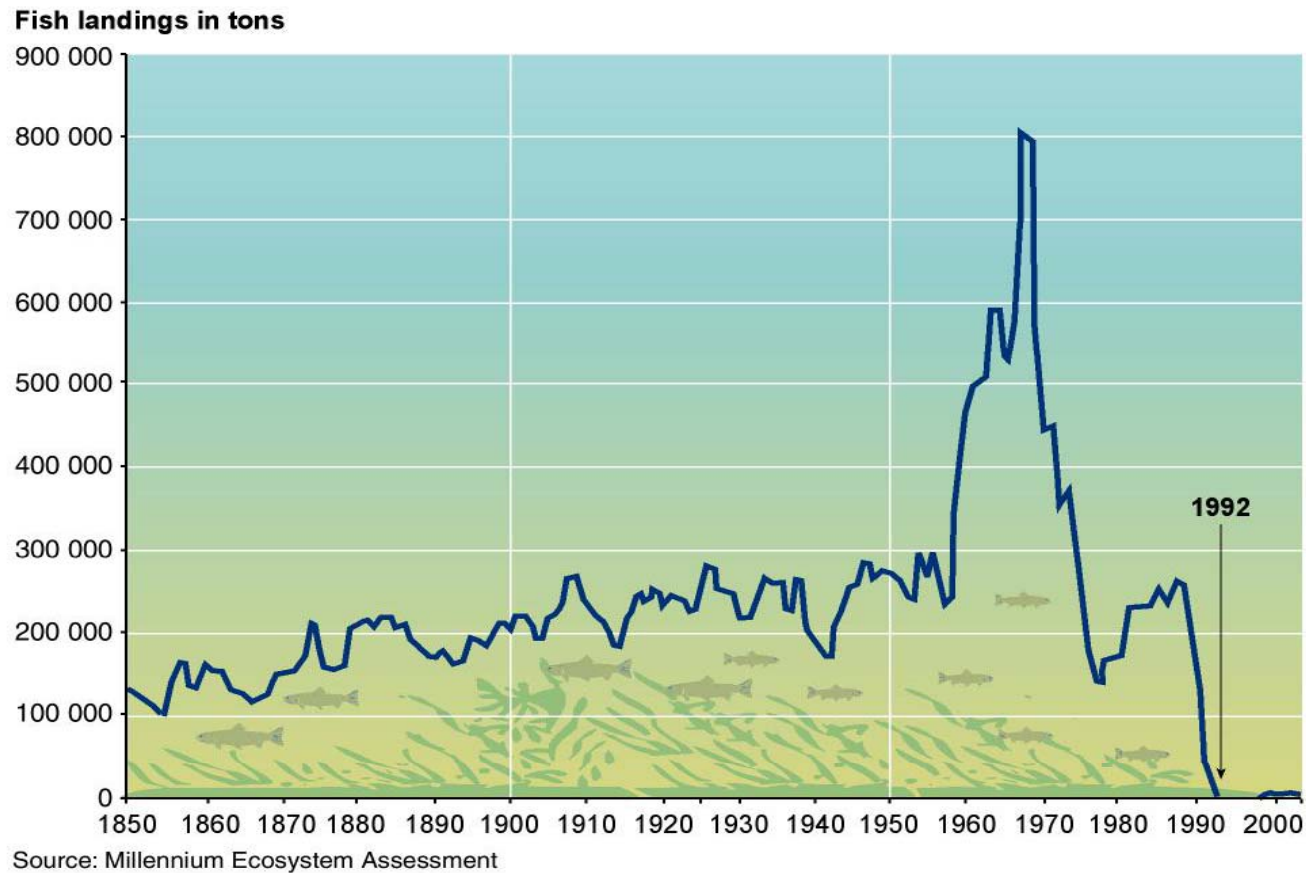
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State of ecosystems and their services

- We are having increasingly larger impacts on ecosystems and their services.
- Among the outstanding problems identified by the Millennium Ecosystem Assessment are the dire state of many of the world's fish stocks.
- 20% of the world's coral reefs were lost and more than 20% degraded
- 35% of mangrove area has been lost in the last several decades.

State of ecosystems and their services



Changes to the ecosystems and their services are caused by intense human activities.

What can we do about it?

- Responses: legal, social and behavioral, economic, and technological interventions.
- Starting place to understand responses is institutional frameworks as they define the 'rules of the game', which shape human action. Institutions moderate human behavior/action and thereby powerfully shape the nature of human interaction with nature.
- Scales (global, regional and sub-regional, etc).
- Types (formal and informal).

What can we do about it?

- Legal Responses
 - They have an overall function of providing the formal rules by which all other responses are framed and operationalized.
 - They exist and operate at multiple scales (international, regional and national).
 - Forms (legally binding, soft, customary, regulatory, administrative and constitutional rules).
- ***Issue***: These rules remain static without implementation, compliance, and enforcement in their respective jurisdictions.
 - Innovative ways are necessary: sharing of responsibility and mobilization of scarce resources, etc.

What can we do about it?

- Economic Responses
 - They work through self-interest of people and their efforts to improve their economic welfare. They intervene with how ecosystems services including coastal and marine ecosystem services are traded in often-imperfect markets that also provide explicit valuation of the traded item.
 - Types: command and control instruments, incentive-based instruments, voluntarism-based instruments, financial and monetary measures and international trade policies.

What can we do about it?

- Economic Responses
 - **Issue:** Ecosystem services go without a price tag in markets or are either undervalued.
 - Problem can't be solved so long as we treat ecosystem services as free and limitless.
 - Measure ecosystem service values.
 - Incorporate into cost-benefit analyses.
 - Remove production subsidies while strengthening developing country environmental regulation.
 - Payments for ecosystem services.



What can we do about it?

- Social and Behavioral Responses
 - They drive change by affecting the norms, values, attitudes, and knowledge of individuals and society.
 - Types: provision of political rights and liberties (empowerment of youth, women, and minority groups); transparency and awareness over matters of eco-system degradation (education and public programs influence attitudes and norms that invariably drive change in relationships between society and nature; participation in decision making.
 - **Issue:** Insufficient, not constant, and biased.

What can we do about it?

- Technological Interventions
 - They work through the products, devices, processes, and practices adopted in ecosystems management directly and in other human activities affecting ecosystems indirectly. They are applied in managing ecosystems, preventing degradation, as well as rehabilitating degradation that has already taken place.
 - Providing incentives for innovation and technological research and development is a powerful response option that can sometimes have unexpected negative side effects.

Final thoughts

- Use of responses by different institutions and actors.
- Application of interventions at various scales.
- Using the responses as a packaging and avoiding stand-alone uses.
- Enabling environment : appropriate legal, policy and institutional frameworks.

THANK YOU