

Agenda item 3.1

In-depth review: application of the ecosystem approach

Applying an Ecosystem Approach for Forestry, Fisheries and Agriculture

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Content

- Sufficiency of the Ecosystem Approach (EA)
- What processes required to Apply the EA?
- Status of the EA in context of Fisheries, Forestry and Agriculture
- Why is the EA not more widely implemented?

The EA is a clearly and concisely articulated and a sufficient Normative Framework, with global mandate for the management of biodiversity

- While much work has preceded it, the CBD's EA is the first globally comprehensive statement of principles that covers all sectors
- The motivation to see these ideals realized in concrete terms has led to elaboration, by specific sectors, of a set of **Operational Frameworks (OF)**

Normative → Operational (Policy → Strategies → Action Plans)

- Transforming abstract and general principles into the concrete, specific, pragmatic outcomes of each respective sector

Fisheries, Forestry, Agriculture: a large and important fraction of the ecosystems on earth

- Natural Resource Production Systems (NRPS) :
40 % of the land surface, consumes 70 % of global
water resources; manages biodiversity at genetic,
species and ecosystem levels
- NRPS derive from a relatively small pool of species, but
depend on much greater pool of “natural biodiversity”
embedded within larger landscapes and seascapes

EA recognizes:

- Ecological, social and economic interactions among managed and unmanaged elements determine productivity, ecosystem services and ecosystem resilience
- EA therefore has direct and important bearing on livelihoods and food security

Application of EA to NR Production Systems: proven effective across NRPS sectors

- Goals of EA in context of Production Systems: to ensure ecosystems continue to deliver goods and services needed to sustain and fulfil human life
- The good news : Managing with the goal of sustainability should tend to maximize biological diversity – and visa versa

Ecosystem Approach and Fisheries



Ecosystem Approach for Fisheries (EAF)

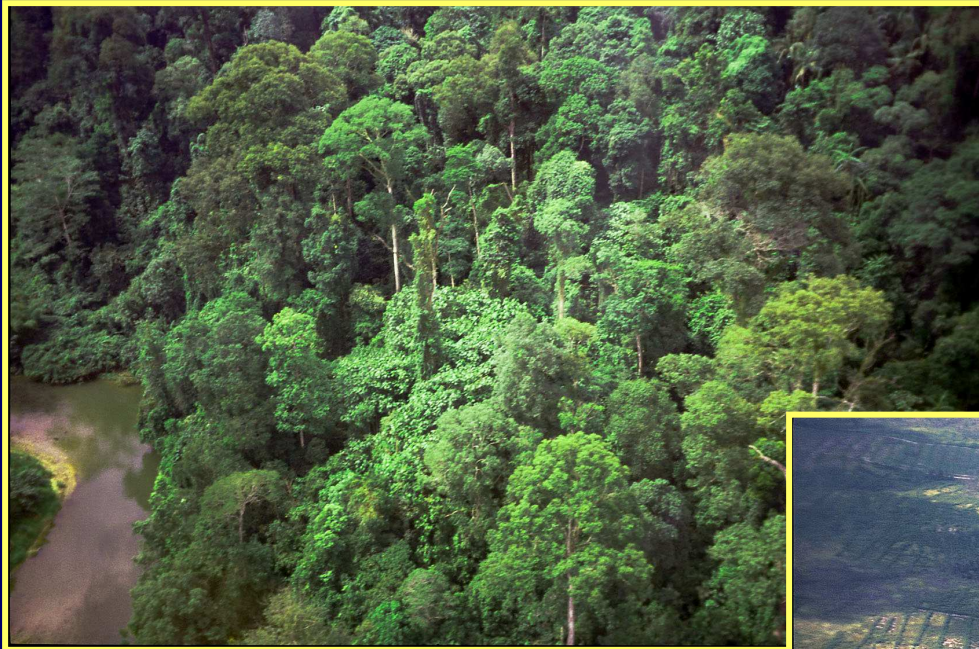
- Fisheries: one of the most developed Sectoral EA over the longest time
- *Code of Conduct for Responsible Fisheries* built upon an EA perspective
- Reykjavik Declaration : more than 50 countries ; pledged to begin immediately *to introduce ecosystem considerations into fisheries management*

Ecosystem Approach for Fisheries (EAF)

- Recent review of implementation noted “many countries were addressing several aspects of EAF”, including:
 - the impact on associated species, by-catch
 - selectivity of fishing gear
 - stakeholder involvement in fisheries management
 - restocking and restoring of critical habitats and species interactions

Yet...everywhere capture fisheries is in decline ...

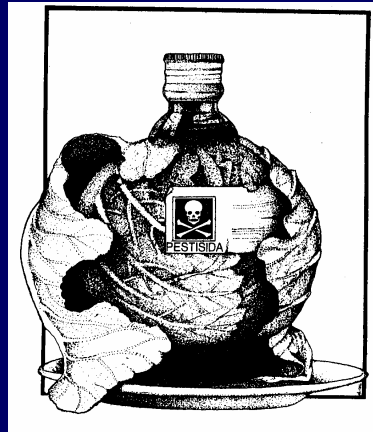
Ecosystem Approach and Forestry



Sustainable Forest Management (SFM)

- More than 20 years experience. UNCED adoption of “Non-legally Binding Authoritative Statement of Forest Principles” : Basis for much of CBD EA
- More than 100 countries currently involved in initiating SFM
- Concept continues to evolve through country-led and eco-regional initiatives to translate the concept into practice

EA and Agriculture



2 *EA and Agriculture*

- EA for Agriculture does not yet formally exist in a single policy statement, but many elements present
- Agriculture emerging from overly “industrial” conventional approach, monocultures ; synthetic chemicals
- Temperate experiences were applied without question to tropical settings (e.g., pesticides, monocultures, mechanization), where ecologies were fundamentally different
- EA suggests we have much to learn from studying production systems in tropical developing countries with historical, anthropological, economic and ecological viewpoints

3 *EA and Agriculture*

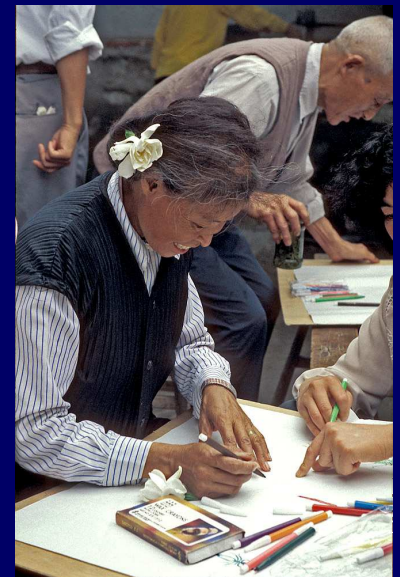
Early efforts in Ecologically-based Agriculture:

Organic Agriculture and Integrated Pest Management (IPM) since the mid-1960s

- Biological control: manipulating *trophic-level interactions*
- Managing landscapes and vegetation to *optimize ecosystem services* for soil fertility, pollination, pest control

4 *EA and Agriculture*

- *Community-based participation & training: a core value of Adaptive Management;*
 - **Example : Farmer Field School (FFS)**
 - IPM, Soils, Aquaculture, Livestock; Poultry, Disease vectors, HIV AIDS, etc.
 - Strong support for training on relationships between biodiversity and ecosystem function at the community level



5 *EA and Agriculture*

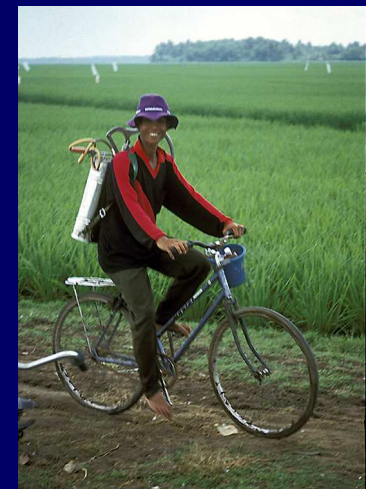
- Recent International Forum : the *Commission on Genetic Resources for Food and Agriculture* (CGRFA)
 - Recommends: “...to continue to advance the application of the EA in relation to biodiversity for food and agriculture”
 - to provide support to developing countries to assist in applying the EA

6 *EA and Agriculture*

- Pesticides : while a range of Global Initiatives and International Instruments exist:

Pesticides are a classic example of a fight between science and industry, **where industry continues to have the upper hand**

- **Myths and perverse incentives**
- **fixed in mindset of 100s millions farmers**
- **untold, massive negative consequences for human health and biodiversity**



Why is the EA not more widely Applied?

- it is being widely adopted ... Within policy frameworks of many sectors and at international, regional, national levels
- Needs to be applied at local levels

Implementation will take time:

- to translate from normative to operational
- To move from international to regional and national scales
- To build capacity at all levels
- To overcome Institutional constraints at each step

2 Application

Scale: Eco-regional Initiatives are needed to translate the EA into concrete outcomes

- EA only meaningfully applied at a scale that is operationally real and effective
- The eco-region is the highest level that still provides a robust and efficient unit of analysis, for monitoring and (adaptive) management
- Organizing human and information resources with an ER focus would provide multiple benefits:
 - Optimize human and information resources
 - Provide strong cross-disciplinary synergies, leading to :
 - » Better strategic planning
 - » Better preparedness for future crises (climate change)
 - » And, more...

3 *Application*

Understanding:

- Emphasize value to stakeholders of key pragmatic concepts e.g., Adaptive Management, resilience and tools for valuing Ecosystem Services
- continue building the toolbox with useful frameworks for analysis and planning (problem definition / system characterization)
- Seek better ways to develop, analyze and use case studies to promote awareness and understanding
- Develop case studies on the successful use of case studies
- Develop better ways to market the EA
- Promote community-based education on EA (get it into the schools)

Thank You

