Linking Sustainable Fisheries and Biodiversity Conservation: Transdisciplinary Approaches to Governance

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The Basic Idea of this Presentation…

- What decisions are being made in using and conserving the world’s oceans?
- How are those decisions being made?
- This presentation is based on applying a conceptual framework (at all scales and levels from local community to nation, region, globe) to understand the decisions being made, who is making them, and how.
Conceptual Framework: Two Interacting Streams

1. **Fisheries Governance**
   UN-FAO, Ministers of fisheries, fisher organizations

2. **Biodiversity Conservation**
   UNEP, CBD, Ministers of environment, ENGOs
Historical Phases

- **1850-1970**: Governance streams diverge with industrial development & low concern for environmental degradation.

- **In the 1970s and 1980s**: Development of an environmental agenda and an increasing role of environmental NGOs.

- **In the 1990s**: Global policy commitments. UNCED & Agenda 21: major agreements, sluggish implementation.

- **In the 2000s**: Recognized lack of progress. International commitments (WSSD, MDGs; Aichi Targets; Rio+20).

- **In the 2010s**: Energy, economic and financial crises. Social and environmental tensions. Shift to private sector reliance.

- **Now**: Demographics & shift to the coasts; Economic and market globalisation and privatization.
The Streams

Ecologically unsustainable

Ecologically unstable

Sustainable

Socially unstable

Socially unsustainable

Purely utilitarian

Human rights; Social legitimacy; Failures

Ecosystem and Human well being

Resource degradation; Environmental ethics; Failures

Purely preservationist
Underlying Dynamics: Convergence and Co-Evolution

- Convergence is “forced” by external drivers imposing a common direction of change
- Coevolution is an emergent property resulting from internal decisions: resulting directions are less certain or predictable
- Convergence and coevolution co-exist, and indeed, suitable convergence may permit coevolution to take place. Both also facilitate integration.

Challenges:

- Finding the right degree of integration
- Achieving equitable distribution of costs and benefits
- Paying attention to vulnerability and risk in both domains
- Acceptable impact and reversibility (tolerance of risk)
Socially unstable
Ecologically unstable

Transdisciplinary Analysis

1. GOVERNANCE TRENDS
2. GOVERNANCE DIMENSIONS
3. GLOBAL GOVERNANCE
4. REGIONAL GOVERNANCE
5. NATIONAL GOVERNANCE (and local/community governance)
6. SYNTHESIS
Main Governance Insights

1. New Common Ground
2. Integration
3. Limitations of Coevolution
4. Three SD pillars
5. 21th Century integration
1. New Common Ground

Risk for intrinsic bioecological vulnerability

- Sustainability
- Food security
- Food chain
- Demography
- Economic value
- Good governance
- Ecol. viability
- Intrinsic value
- Gene resources
- Human rights
- Biodiversity
- Traditional rights
- Resilience
- Overarching policies
- Livelihoods
- Dest. Isching

Risk from market value and management

- VMES
- Ino-discards
- Ecolabelling
- Fishing reserves
- Multi-use MPAs
- SEA
- Regular Process
- Responsible fisheries
- Sustainable use
- Space integration
- IUU-Capacity control
- Blue Growth
- Traceability
- Trade controls
Integration = f(Convergence, coevolution)

- Requires cross-scale processes, active consensus building
- May be fostered by opportunistic and strategic alliances
- Improved by use of common data, tools and processes
- Enhanced by cross sectoral framework (global - national)
- Stops when fundamentals threatened (e.g. risk perception)
3. Limitations of Co-evolution

- Full ‘merger’ of streams would be costly and non-viable.
- Pushing too much integration may create a ‘monoculture’ of approaches and policy.
- Misses and False Alarms:
  - Biodiversity bears costs of misses (undue damage) while fishers bear costs of false alarms (undue costs). Implies bias in tolerance of streams for the two types of errors.
- The accumulation of errors has long term costs to both streams.
4. The Three SD Pillars

- Both streams (resource management & biodiversity conservation) typically ignore the social pillar of sustainable development.
- Must deal explicitly in both fisheries & biodiversity conservation with the broader goals: poverty, food security, and equity.
- Instead focus on avoiding the most undesirable outcomes (precautionary approach)
- Most ‘wins’ (or “success stories”) are transient… sustainability is a complex dynamic process.
5. 21st Century Integration

- Mining
- Navigation
- Oil & Gas
- Pollution
- Coastal development
- Cables
- Eolian
Conclusions

• A transdisciplinary governance framework was utilized for multiple scales and levels (from local community to nation, region, globe), to assess the decisions being made, who makes them and how.

• The 2-stream model led to emergent insights on governance; policy processes; risk perception; and mechanisms of convergence & co-evolution.

• There are other possible streams, e.g. integrated management stream of multi-sectoral governance (not just fisheries and biodiversity).
THANK YOU!