

Linking Sustainable Fisheries and Biodiversity Conservation: Transdisciplinary Approaches to Governance

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The Basic Idea of this Presentation...

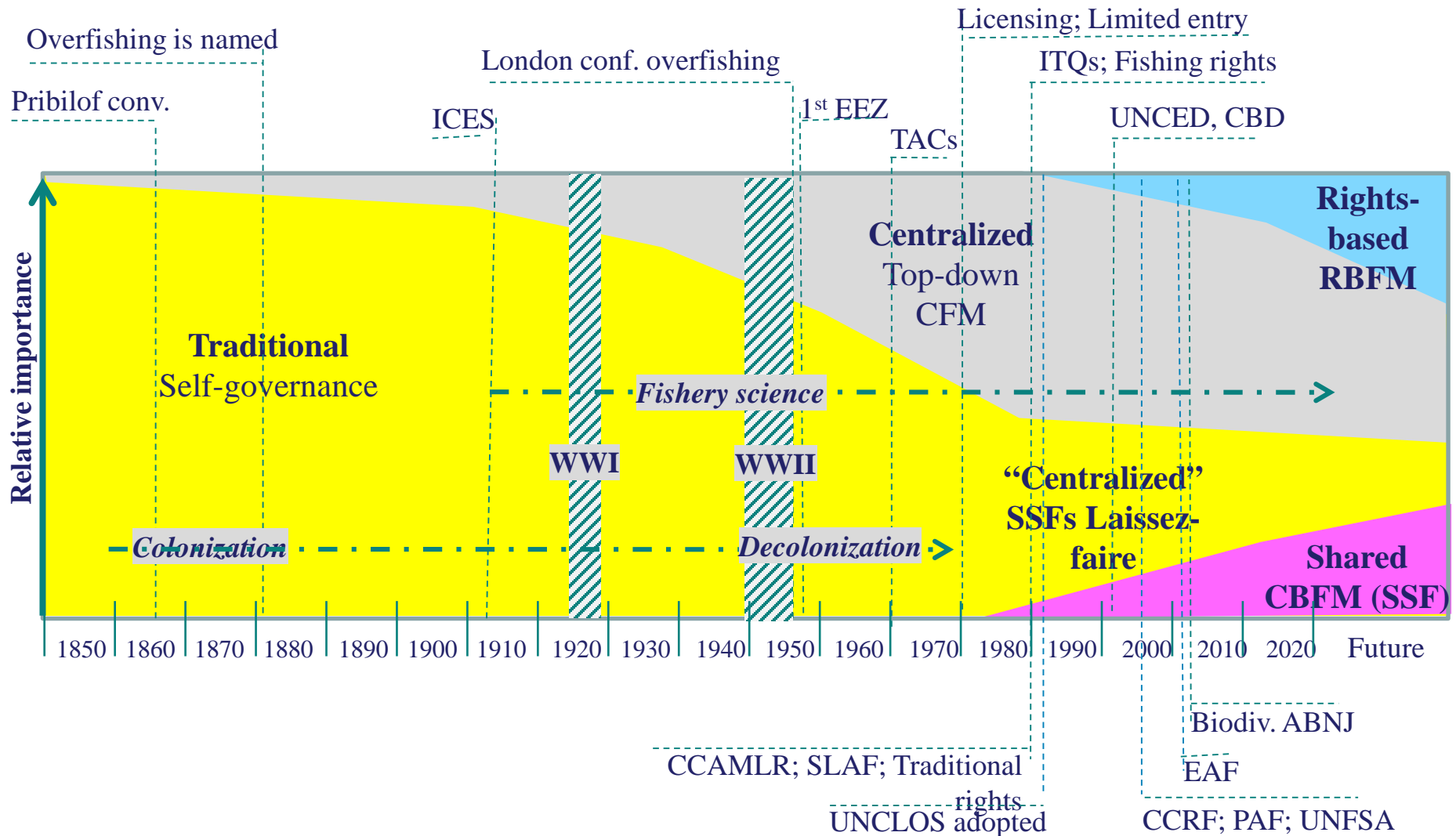
- What decisions are being made in using and conserving the world's oceans?
- How are those decisions being made?
- This presentation is based on applying a conceptual framework (at all scales and levels from local community to nation, region, globe) to understand the decisions being made, who is making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

Conceptual Framework: Two Interacting Streams

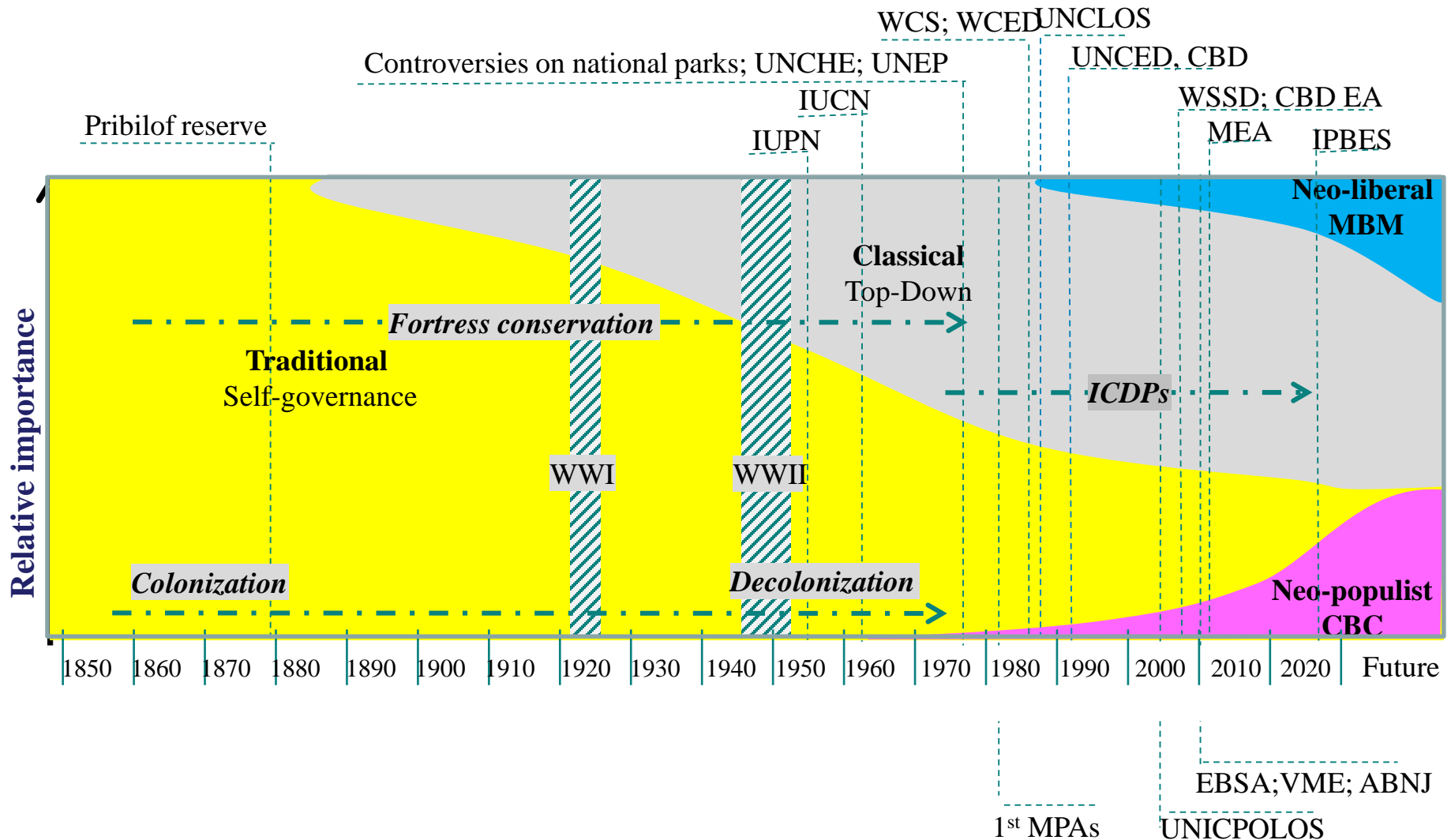
1. Fisheries Governance
UN-FAO, Ministers of fisheries, fisher organizations
2. Biodiversity Conservation
UNEP, CBD, Ministers of environment, ENGOs



Fishery Governance Trends



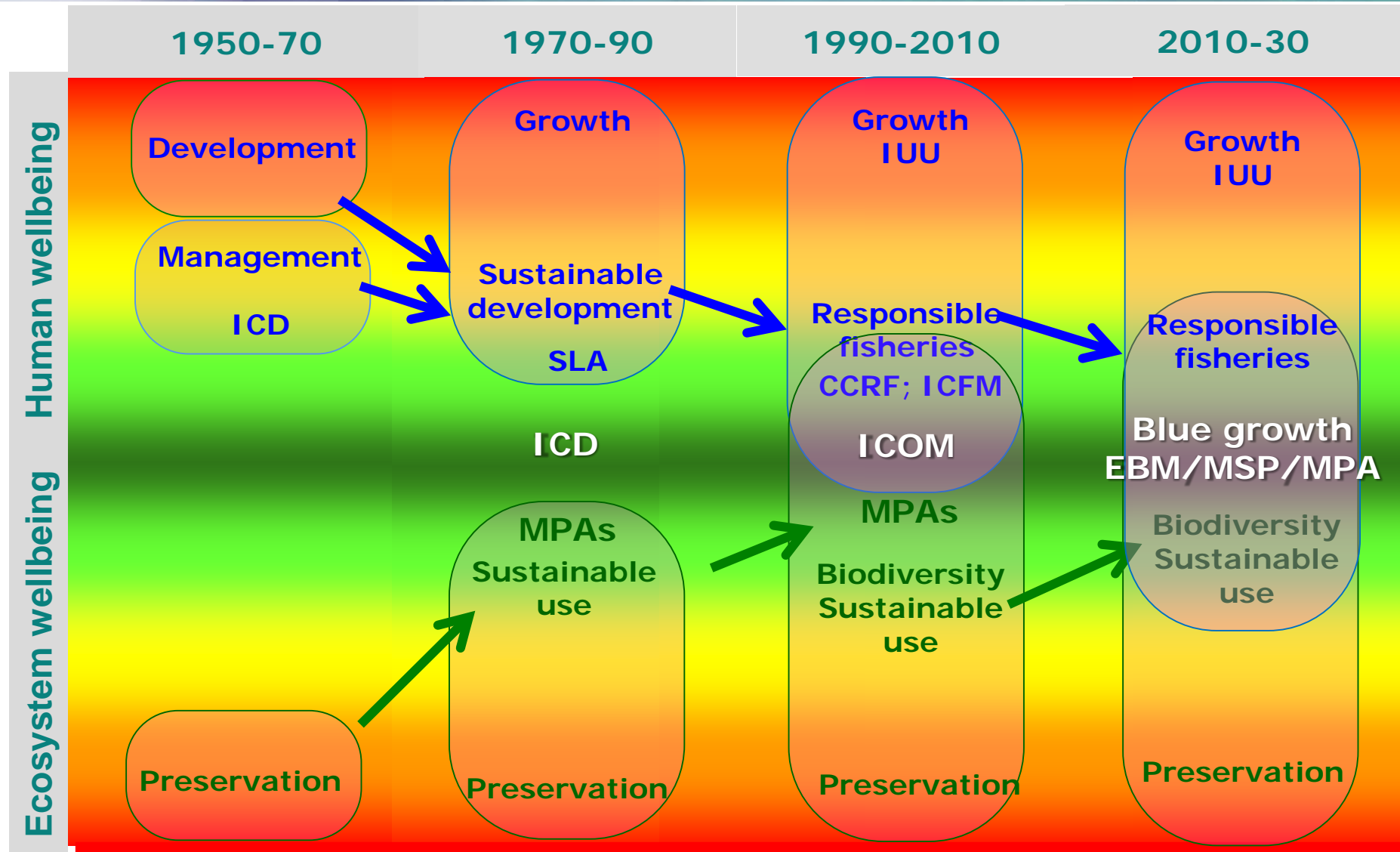
Biodiversity Conservation Trends



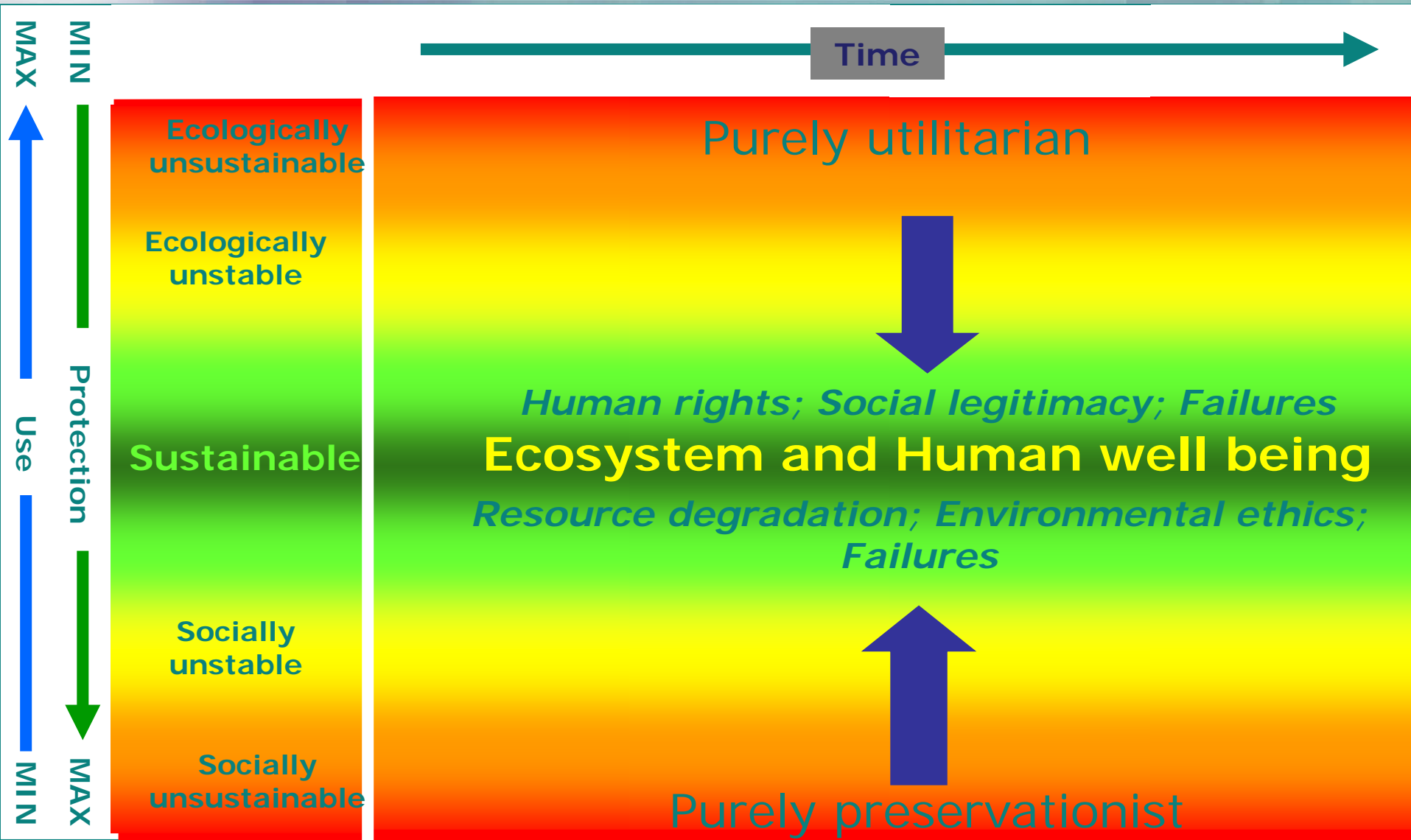
Historical Phases

- **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.

A Graphical History



The Streams



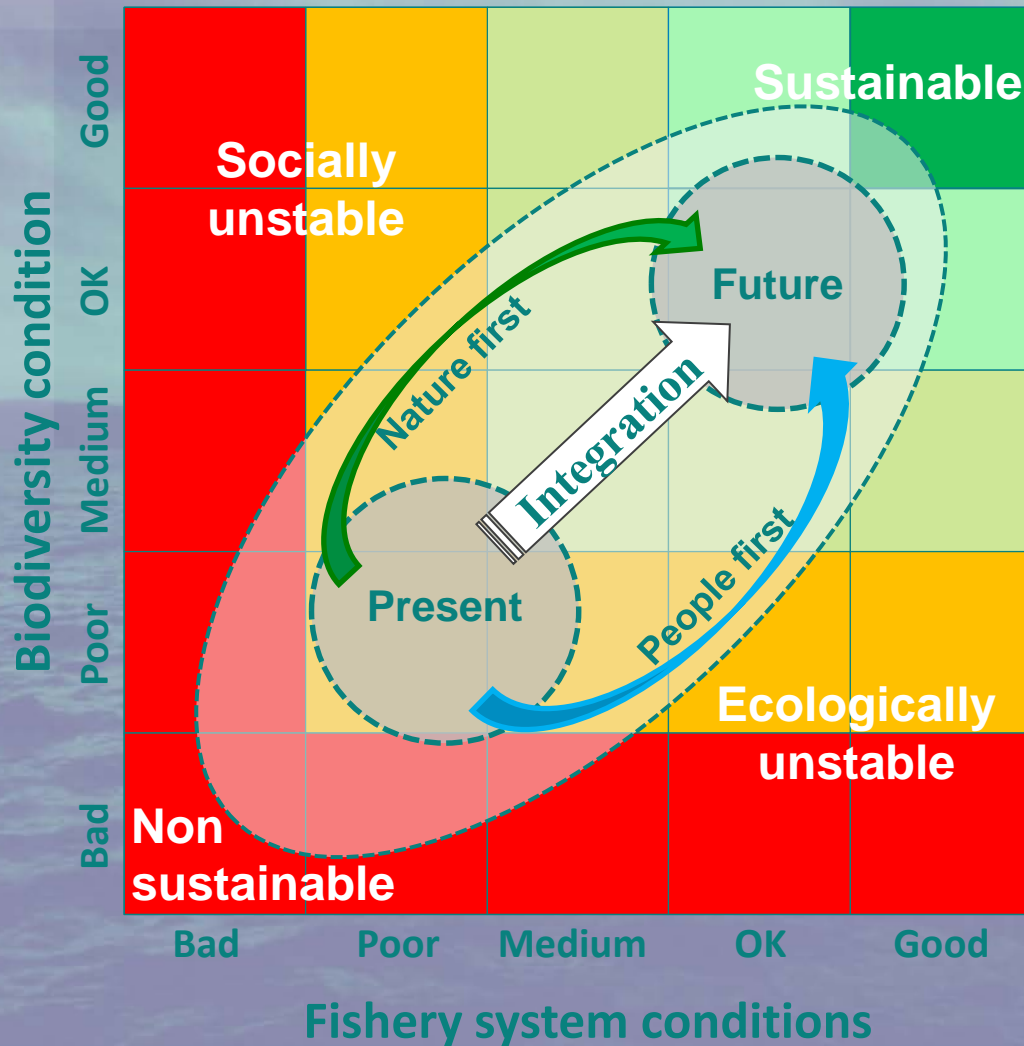
Underlying Dynamics: Convergence and Co-Evolution

- 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)

Pathways



Redrawn and modified from Garcia (1997) based on Prescott-Allen (1996)

Transdisciplinary Analysis

Governance of Marine Fisheries and Biodiversity Conservation

Interaction and Coevolution

Edited by Setge M. Garcia, Jake Rice and Anthony Charles



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

Main Governance Insights

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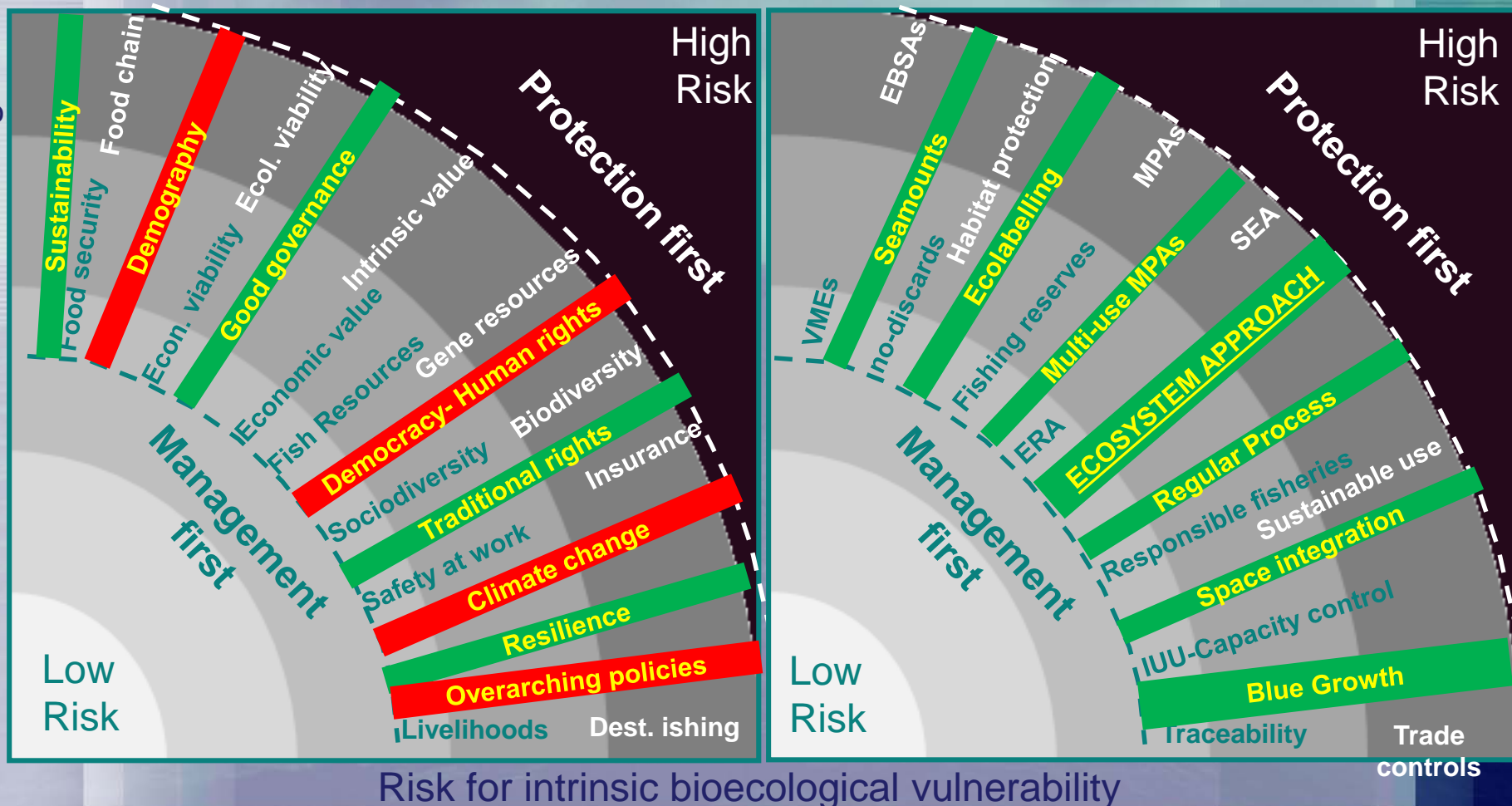


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1. New Common Ground
2. Integration
3. Limitations of Coevolution
4. Three SD pillars
5. 21th Century integration

1. New Common Ground

Risk from market value and management



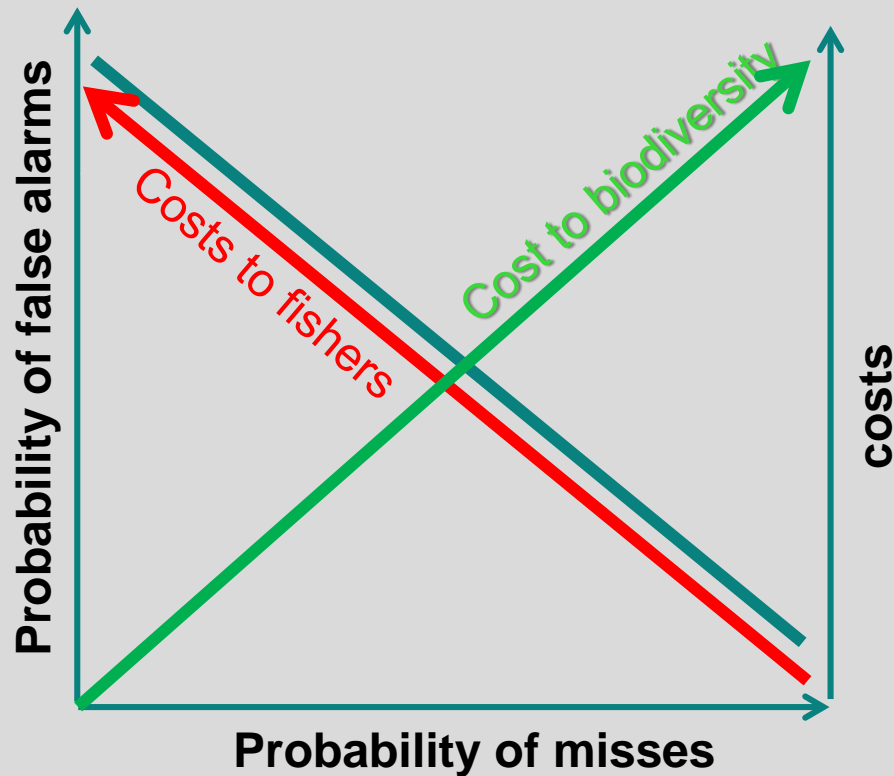
2. Integration

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.
- Are win-win-win solutions realistic? Unlikely.
- 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



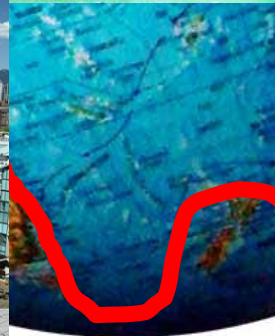
Oil & Gas



Pollution



Coastal dev



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!

Governance of Marine Fisheries and Biodiversity Conservation

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