Governance of Marine Fisheries and Biodiversity Conservation
Interaction and Coevolution

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EU Intergroup on climate change, biodiversity and sustainable development. Brussels, 23-06-2015

TWO STREAMS OF GOVERNANCE

FISHERIES

UN, FAO, RFMOs, Ministers of fisheries, fisher's organizations

BIODIVERSITY
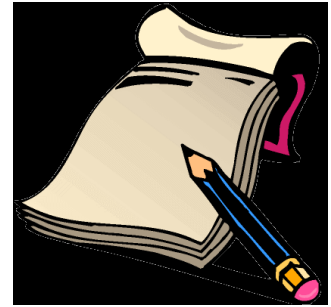
UNEP, CBD, IUCN, Ministers of environment, ENGOs

?

How did they evolve and why??

# DEFINITIONS AND ASSUMPTIONS

<u>Definitions</u>:

- <u>Convergence</u> results from common forcing

- <u>Coevolution</u> results from interactive adaptation

- They are emergent properties which should reduce <u>functional distance</u> and facilitate <u>integration</u>.

<u>We assumed that:</u>

- Understanding the evolution of the 2 streams may help finding future solutions

- Reducing functional distance is *a priori* good for both streams

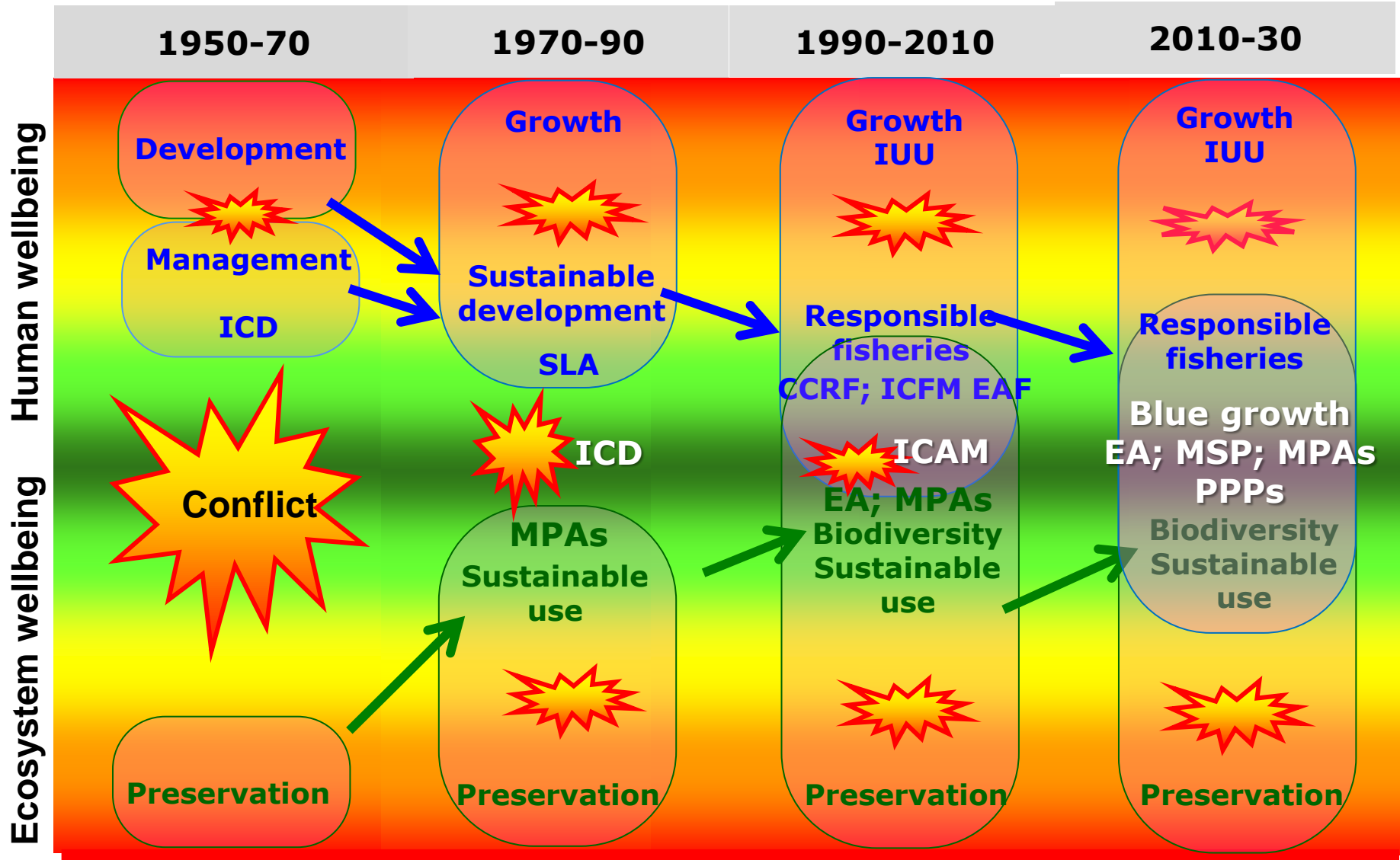- A sustainable outcome should optimize the costs/benefit ratio for society.

THE SUSTAINABILITY BACKGROUND
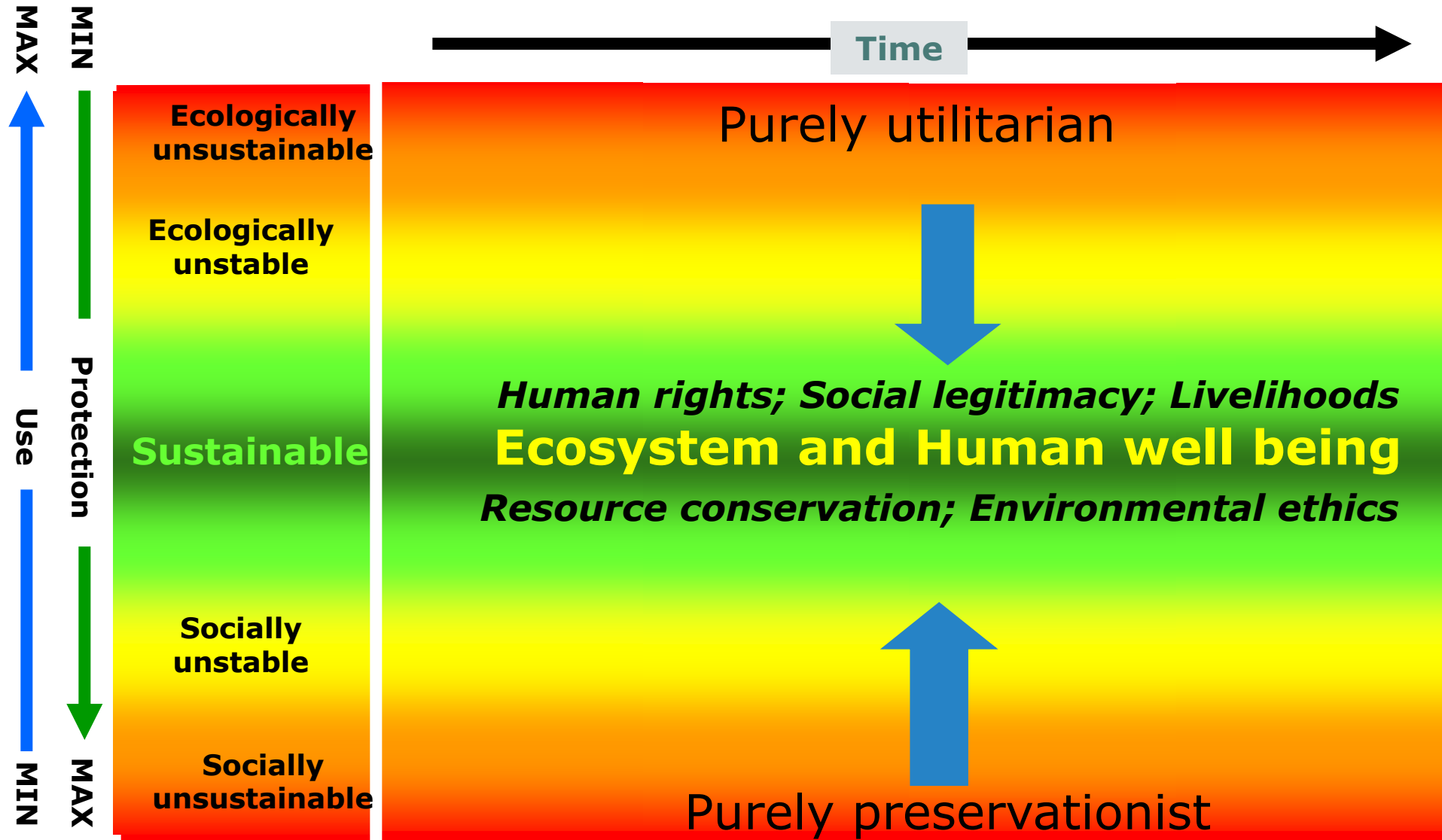
HISTORICAL EVOLUTION
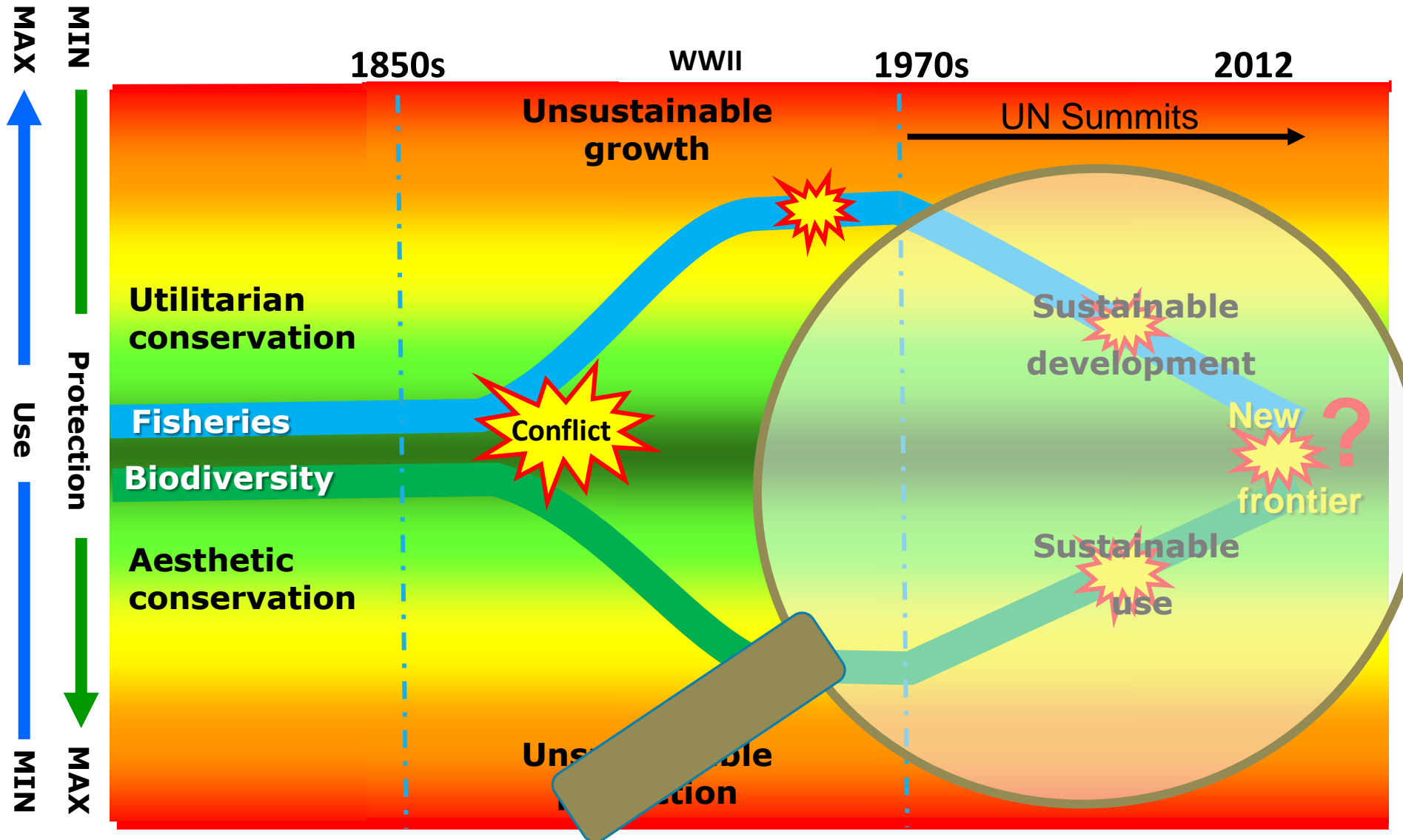
MODERN CONVERGENCE

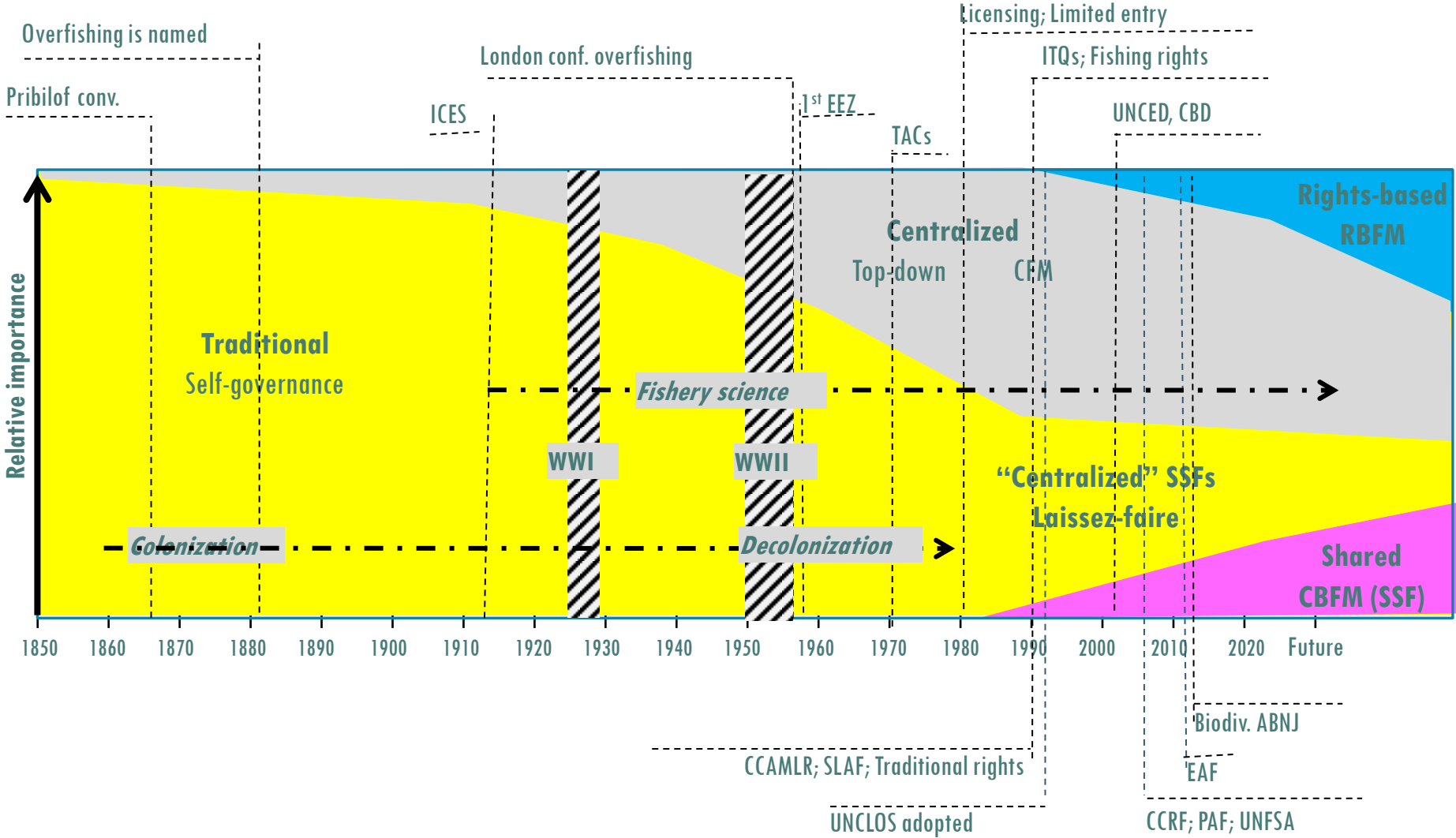**BIODIVERSITY** **TENSIONS** **FISHERIES**

WITHIN STREAMS
- Radical vs moderate thinking
- State-driven versus market-based approaches
- Effectiveness of the % coverage targets strategy (e.g. Aichi targets)
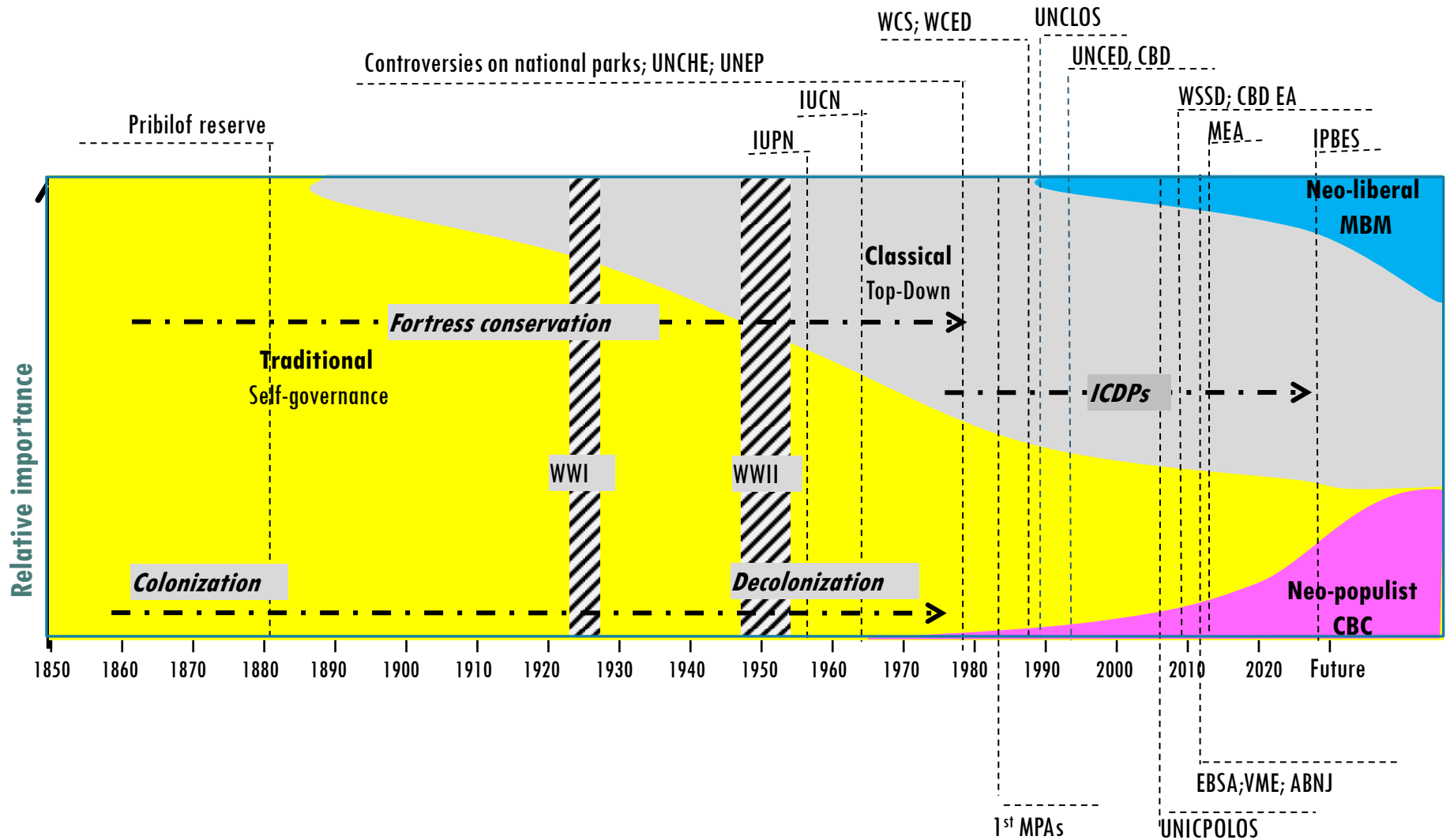
BETWEEN STREAMS
- Sustainable Development/Use vs Protection
- Fishery-MPAs vs Conservation-MPAs and No-Take MPAs
- EBSAs vs VMEs
- Acceptable level of impact, reversibility criteria and tolerance to risk
- Distribution of costs, benefits and risk in time and space (equity)
- Development vs Environment primacy in decision-making

It seems easier to agree on endpoints and general approaches than on transitional impact and specific operational pathways
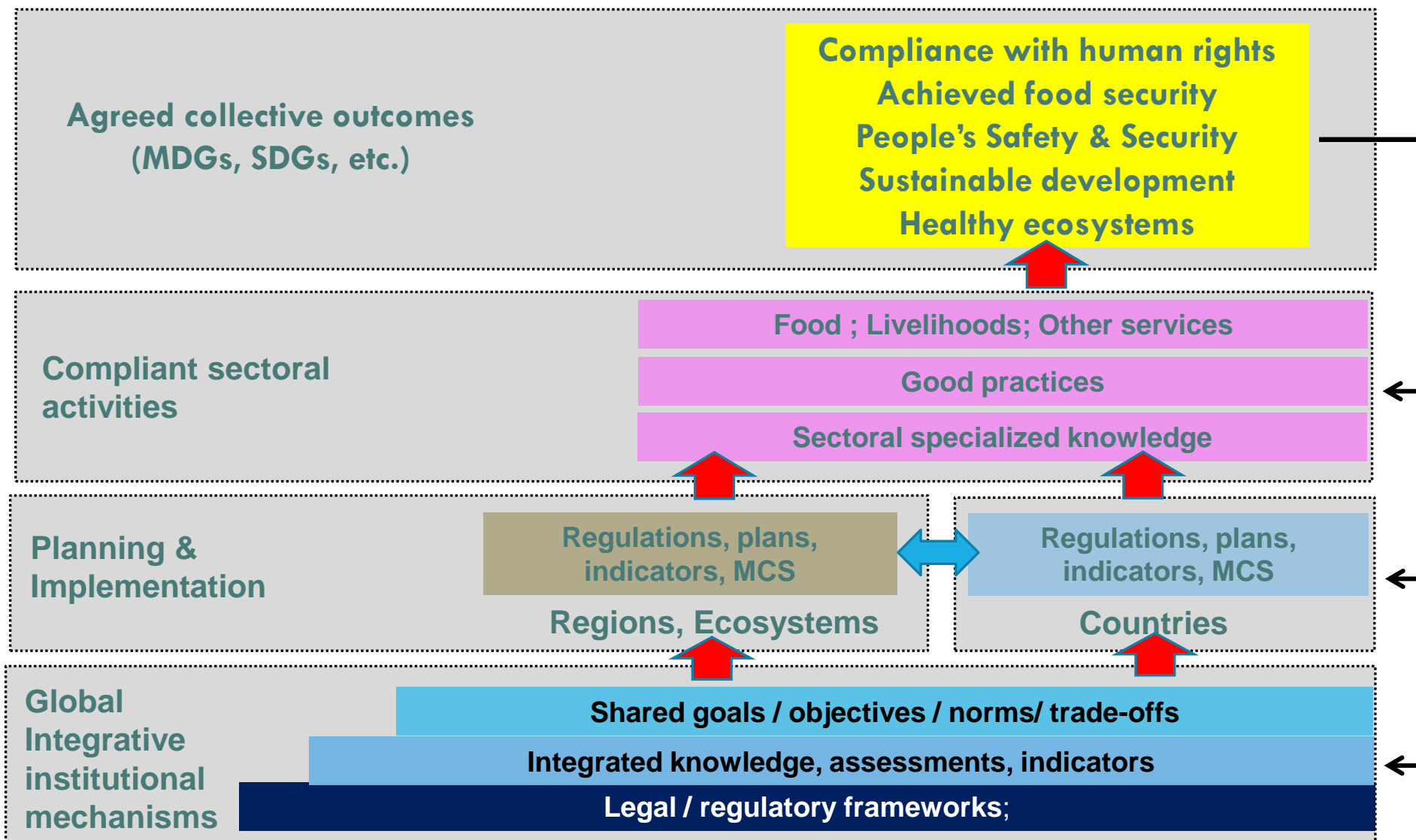
TRENDS: FISHERY GOVERNANCE

TRENDS: BIODIVERSITY GOVERNANCE

ROLE OF OVERARCHING POLICIES

	1945	1955	1965	1975	1985	1995	2005
Dev. policy	Fordist dev. Model/Growth /innovation/infrastructure dev.			Sustainable development / Integration			
	Investment		Lowering tariff barriers / Equity		Poverty reduction programmes / Entitlements		
Economic Policy	Support to growth/subsidies				Liberalization / Structural adjustment/Privatization		Green growth
Public policy	Centralized /bureaucratic			Decentralized / Contractual		Participative/shared/delegated	
Legal framework	Pre-UNCLOS process		UNCLOS process		UN LOSC is adopted	UN LOSC is in force CBD CCRF UNFSA	
Env. Policy	Little concern			Focus on pollution		Focus on biodiversity	
Fishery Science	Discovery / Stock focus			Multispecies focus	System/Ecosystem focus		
	Cartesian determinism/Equilibrium/prediction			Post-modern/uncertainty Adaptive flexibility/Dynamics			
Fishery policy	Conflict reduction / Technical optimization		Catch control	Licensing/Effort control	Capacity control / Fishing rights/		
	Subsidized expansion				Crisis	Reduction of environmental impact	
	Focus on industrial fisheries				New focus in SSFs		High seas
Conservation policy	Limited interest in marine conservation			Growing interest for MPAs		MPAs in fisheries	
	Protection first			Sustainable use process		Sustainable use	

ROLE OF GLOBAL GOVERNANCE PROCESS

Agreed collective outcomes (MDGs, SDGs, etc.)

Compliance with human rights
Achieved food security
People's Safety & Security
Sustainable development
Healthy ecosystems

Compliant sectoral activities

Food ; Livelihoods; Other services

Good practices

Sectoral specialized knowledge

Planning & Implementation

Regulations, plans, indicators, MCS

Regulations, plans, indicators, MCS

Regions, Ecosystems

Countries

Global Integrative institutional mechanisms

Shared goals / objectives / norms/ trade-offs

Integrated knowledge, assessments, indicators

Legal / regulatory frameworks;

Inspired from Chapter 10-Ridgeway

ROLE OF "COMPETITIVE COLLABORATION"
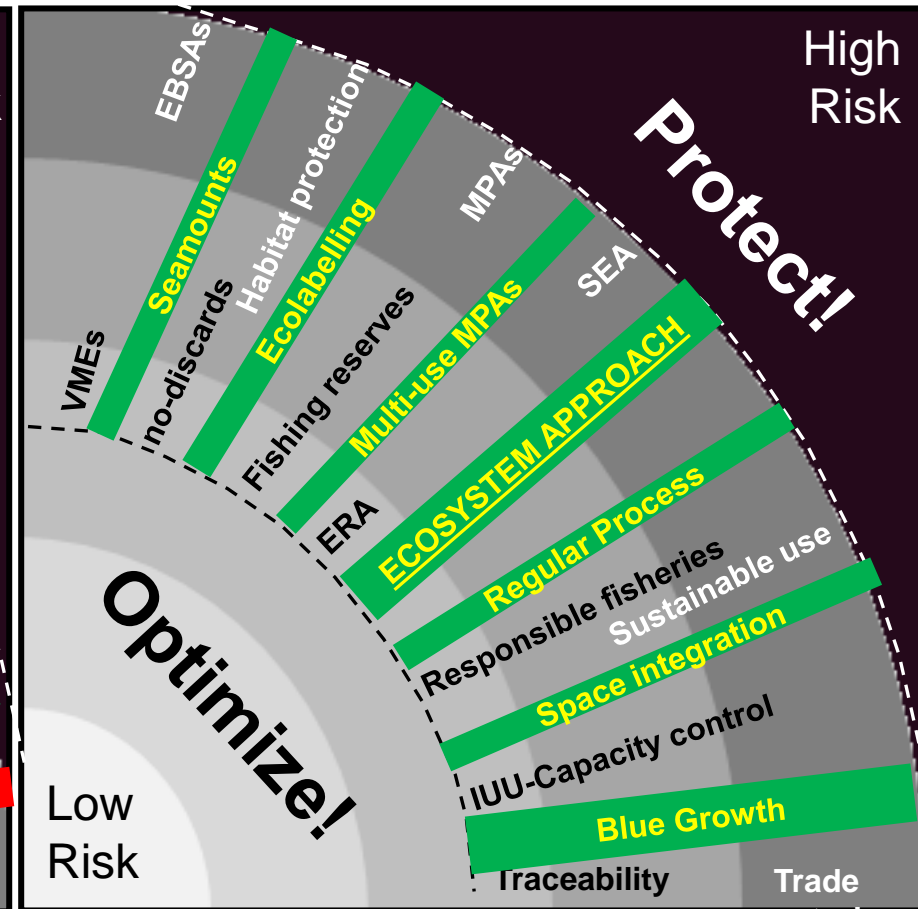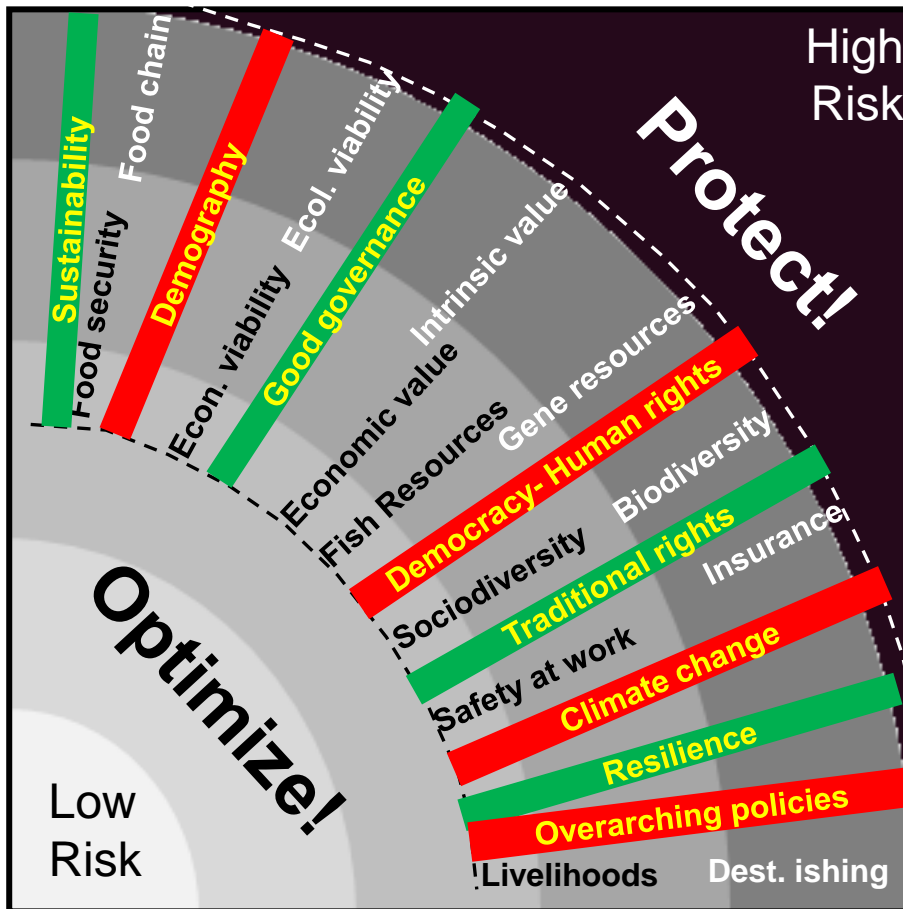
PREFERRED BUT UNSTABLE PATHWAYS
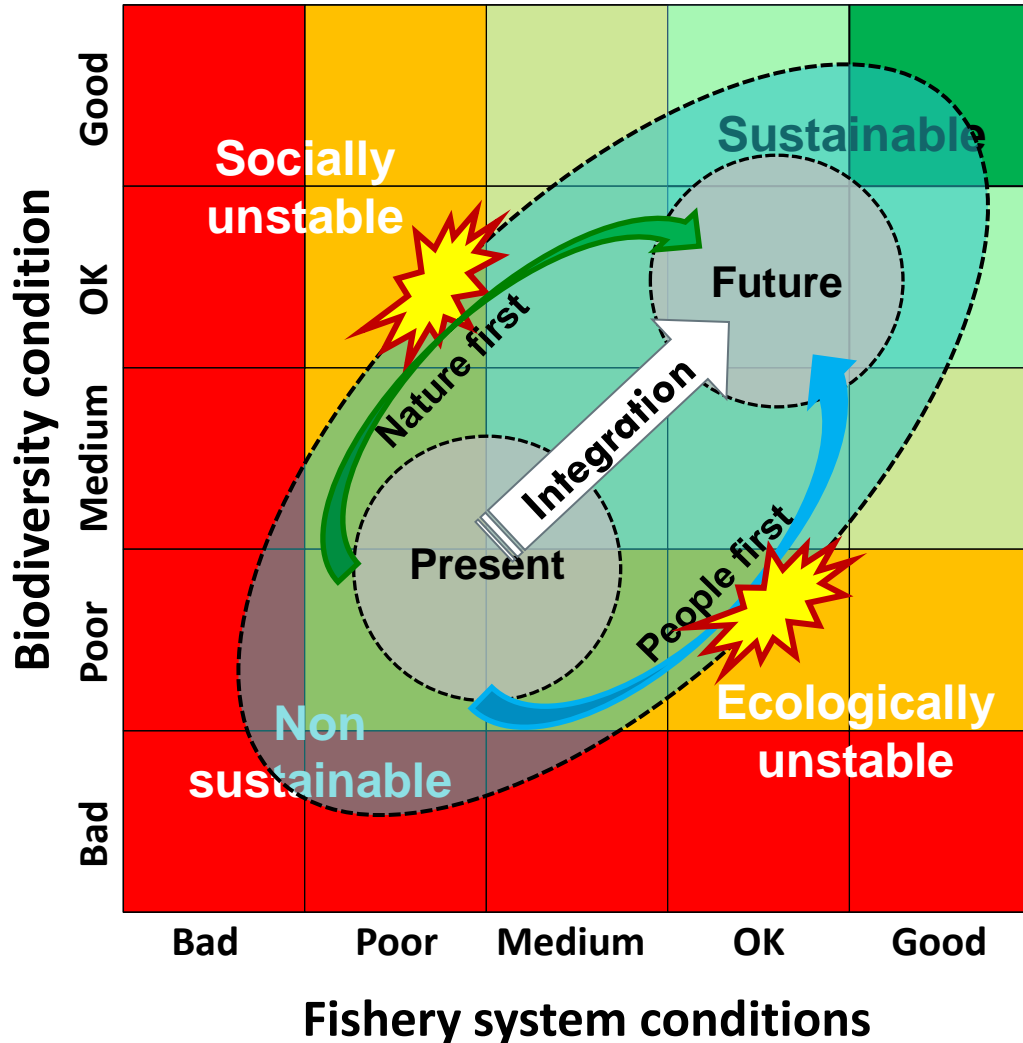
Without a better integration of assessment, decision and performance evaluation processes, both streams are likely to fail to achieve their main goals

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

# CONVERGENCE AND COEVOLUTION
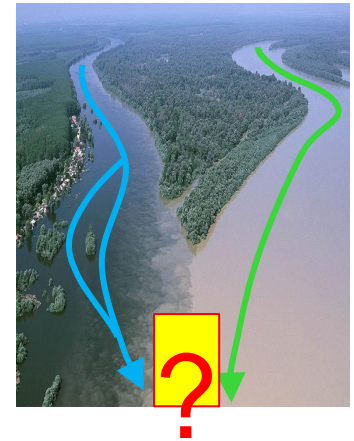
We have realized that:

- <u>Convergence</u> being "forced" by external drivers is to be expected (direction of change)

- <u>Coevolution</u> being an <u>emergent property</u> of the streams' interaction is is less predictable

- Convergence and coevolution <u>co-exist</u>. Convergence may stimulate coevolution and together, they <u>reduce functional </u>distance

- In order to occur and be sustainable, convergence and coevolution should have a net positive impact <u>on both streams</u>.

MISSES AND FALSE ALARMS

Risk for biodiversity

Probability of false alarms

Costs to fishers

Cost to biodiversity

costs

Probability of misses
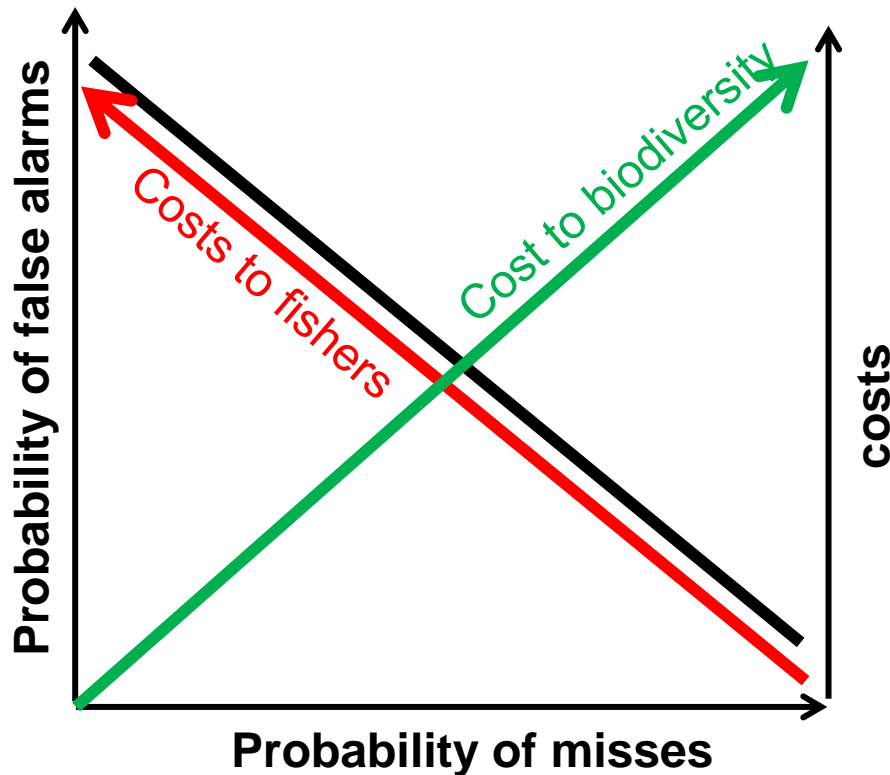
- Biodiversity bears costs of misses (undue damage). Fishers bear the cost of false alarms (Undue costs)

- The asymmetric cost allocation leads to a bias in tolerance of the streams for the two types of errors and in their response to it.

- The reverse asymmetry exists in relation to socioeconomic risk

- The accumulation of errors has long term costs to both streams.

It should be in the interest of both streams to jointly make an assessment balancing misses and false alarms, reducing costs to both.
In real life, both parties try to exploit uncertainty to their advantage

THE 3 SUSTAINABLE DEVELOPMENT PILLARS

- Separate efforts to optimize resource use and biodiversity conservation have tended to ignore the **social pillar** of sustainable development.

- Both fisheries and conservation governance need to deal explicitly with **broader goals**: e.g. poverty alleviation, food security, and equity.
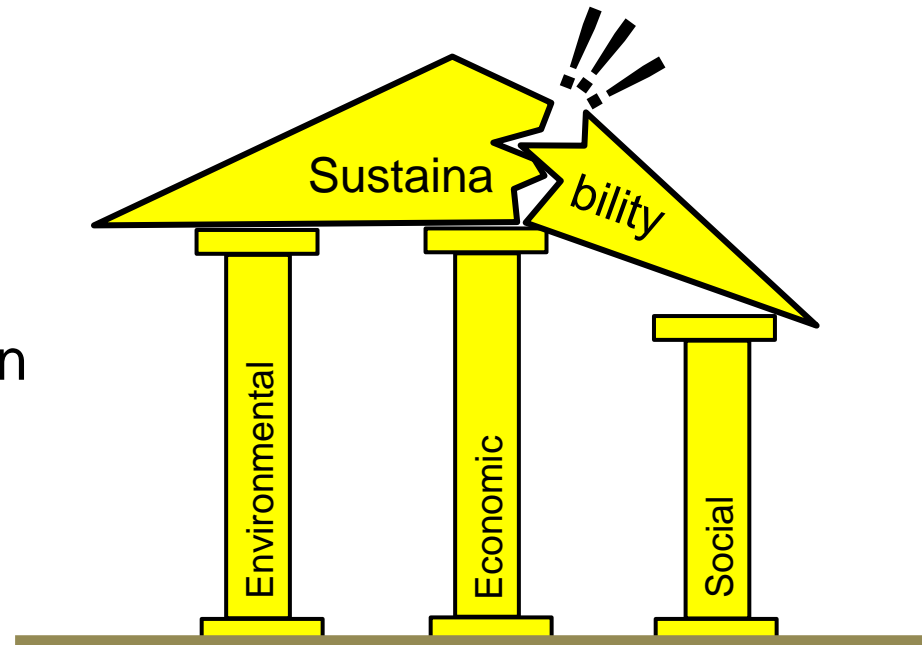
Addressing these issues jointly might reduce failure rates in both streams.

THE WIN-WIN-WIN "ILLUSION"

- 'Win-win-win' solutions are usually not realistic. They hide or ignore trade-offs that will fail them

- Avoid the most undesirable outcomes (precautionary approach) especially for most vulnerable components

- Note that many "wins" (or success stories) have been short-lived because sustainability is a complex dynamic process requiring continuous dynamic adjustments.

IN A NUTSHELL

- Since WWII, the functional distance between streams has decreased

- Overarching policies have forced convergence, generating tensions

- Efforts to release tension and resolve conflicts have facilitated coevolution

- Some differences are ironed out but hard-core differences will be harder to resolve

- Good governance and market incentives may facilitate progress, but only if we pay more attention to the social pillar.
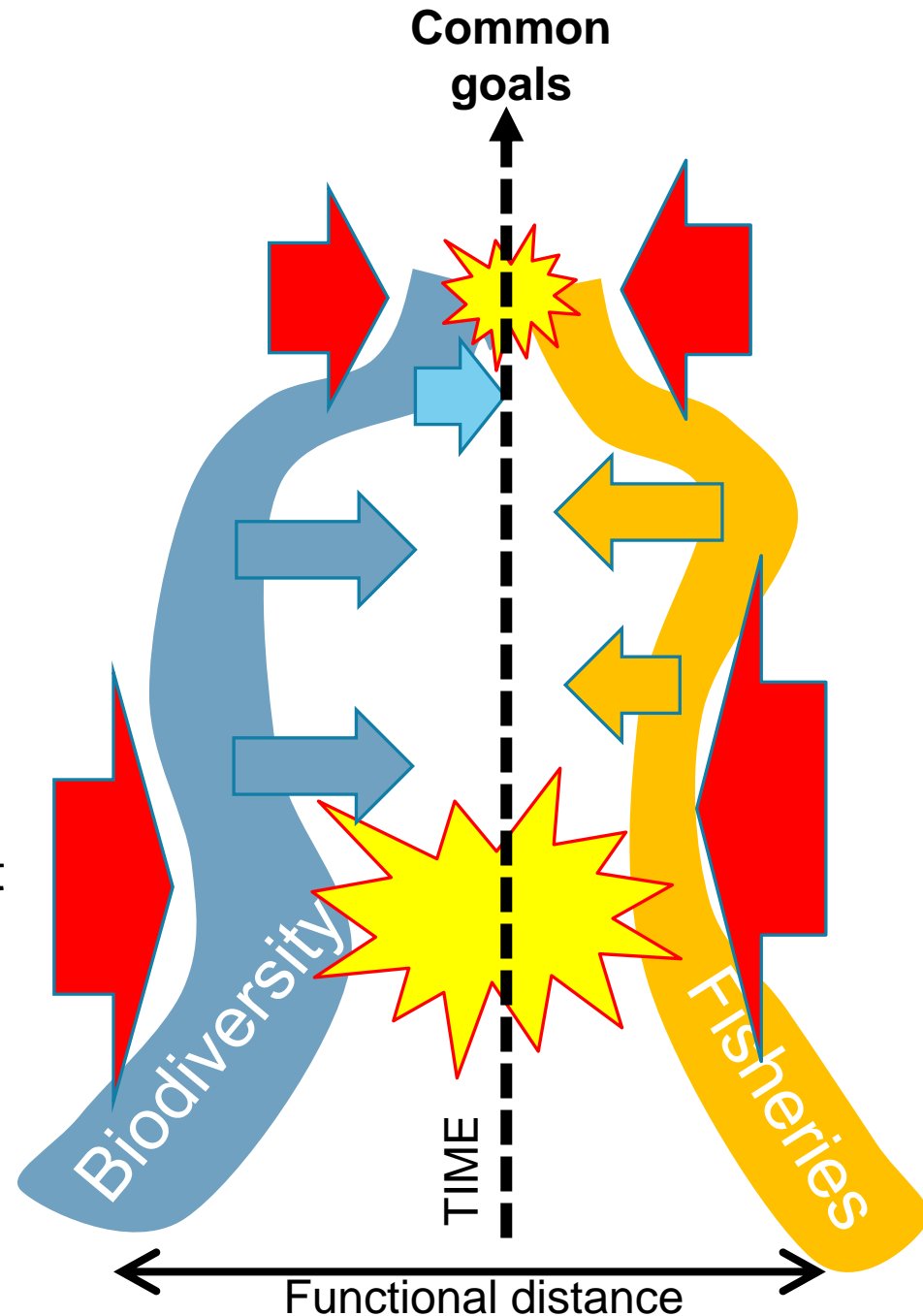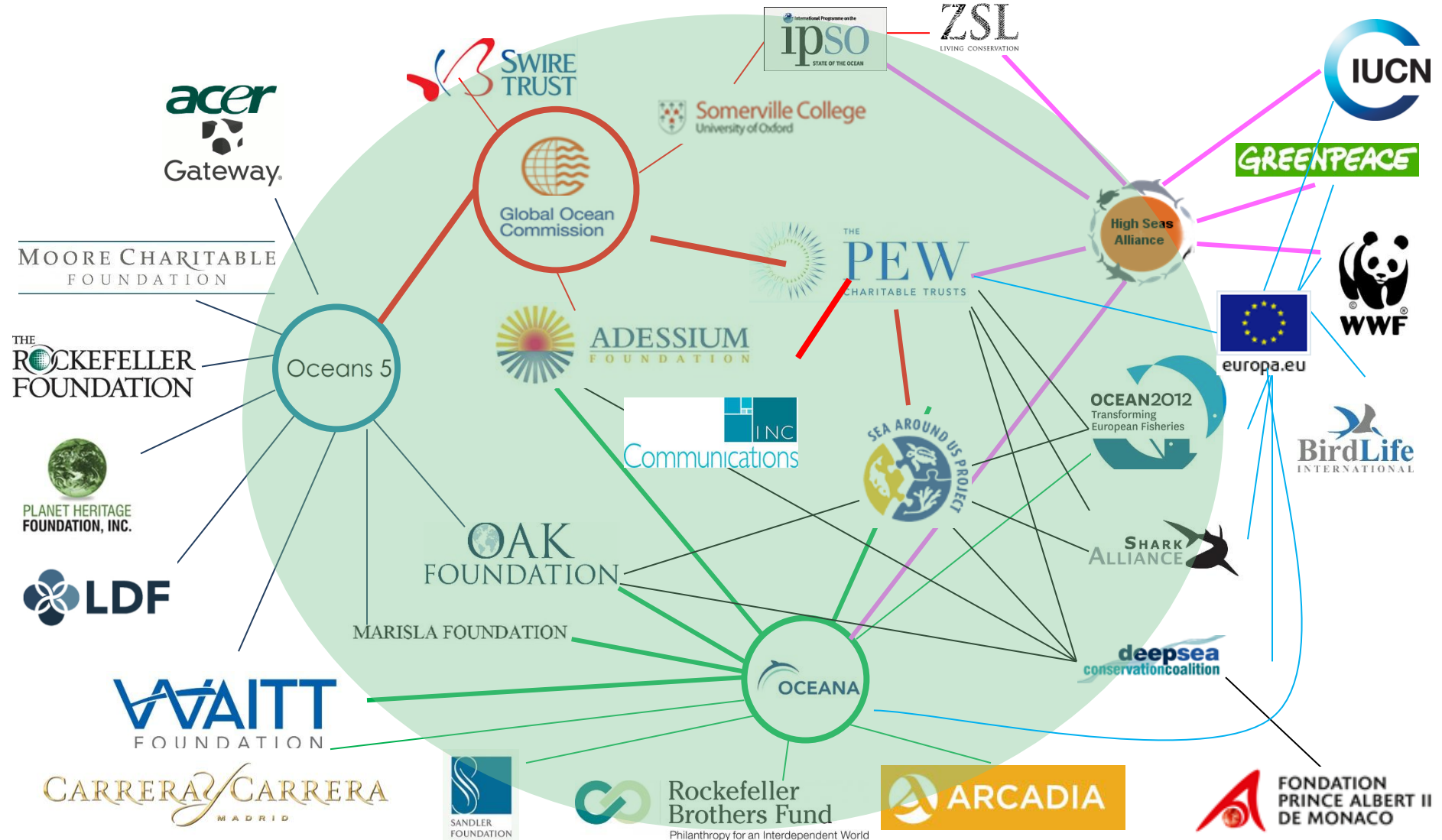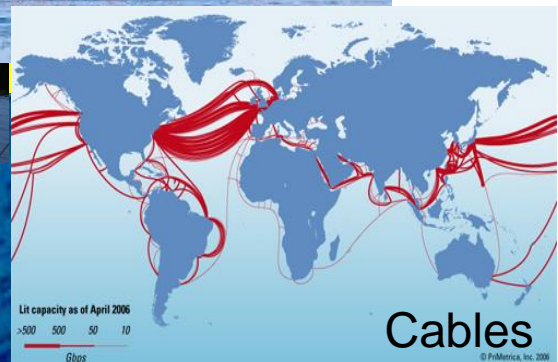

Common goals

Biodiversity

Fisheries

TIME

Functional distance

THE ENGO NETWORK

21ᵀᴴ CENTURY INTEGRATION CHALLENGE

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

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INTEGRATION

- Requires <u>cross-scale</u> processes (e.g. from community to country) and active consensus building

- May be fostered through opportunistic and strategic <u>alliances</u> between stakeholder groups

- Is improved by use of <u>common data, tools and processes</u>

- Would be enhanced by <u>cross-sectoral frameworks</u> (global to national)

- Stops when non-negotiable <u>fundamentals are seen as threatened</u> (core values; risk perception)
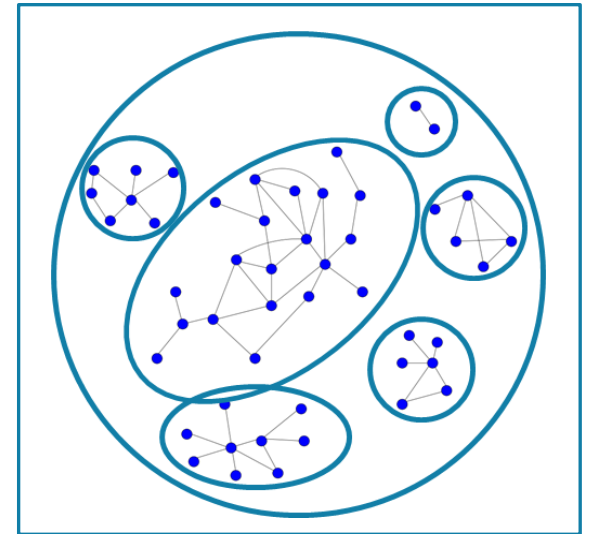
THE "2-STREAMS" METAPHOR

- <u>The streams metaphor may be oversimplified</u>. Governance streams have self capacity to decide on where to go and how; they are not merely water driven downhill by gravity.

- It provided, however, a conceptual framework with assumptions to test. It helped us improve understanding and rationale for historical change and figure out avenues for progress.

- It provided insights on importance of governance dimensions and scales; on the role of frameworks and their structure; on the policy-making processes; on risk perceptions; and on mechanisms of convergence and co-evolution.

- <u>Note</u>: The cross-sectoral complexity increases from sea to land with more sectoral governance streams interacting in the coastal areas