



Blue economy: "the sustainable use of ocean resources for economic growth, improved livelihoods and jobs while preserving the health of ocean ecosystems"

--The World Bank 2017

The Ocean as Earth's Life Support System



- 80% of life on Earth
- Critical nutrition for over 3 billion people
- Modulates the weather (temperature, CO₂ mitigation)
- Creates >50% oxygen
- Absorbs 90% extra atmospheric heat
- Provides energy
- Central to identity and cultures of people around the world

The Ocean a Foundation for Vibrant Economies

- Fisheries and aquaculture sector supports the livelihoods of 10-12% of the world's population
- Goods and services from the ocean generate about \$2.5 trillion each year
- Seventh largest economy in the world today
- Supports multiple industries and jobs, including global transportation, ports, tourism, fishing, aquaculture, mining, construction, and energy generation
- Emerging sectors: blue C, restoration, renewable energy, biotechnology, sustainable seafood

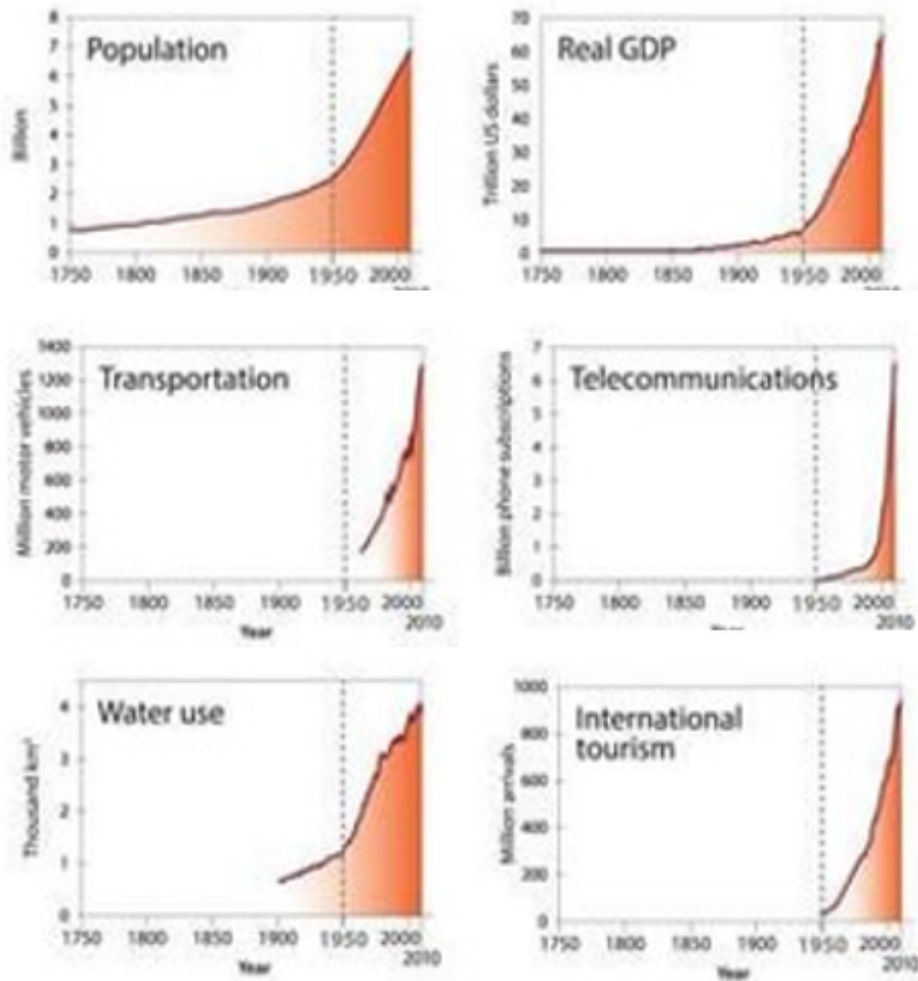
natural
capital
PROJECT

Stanford University

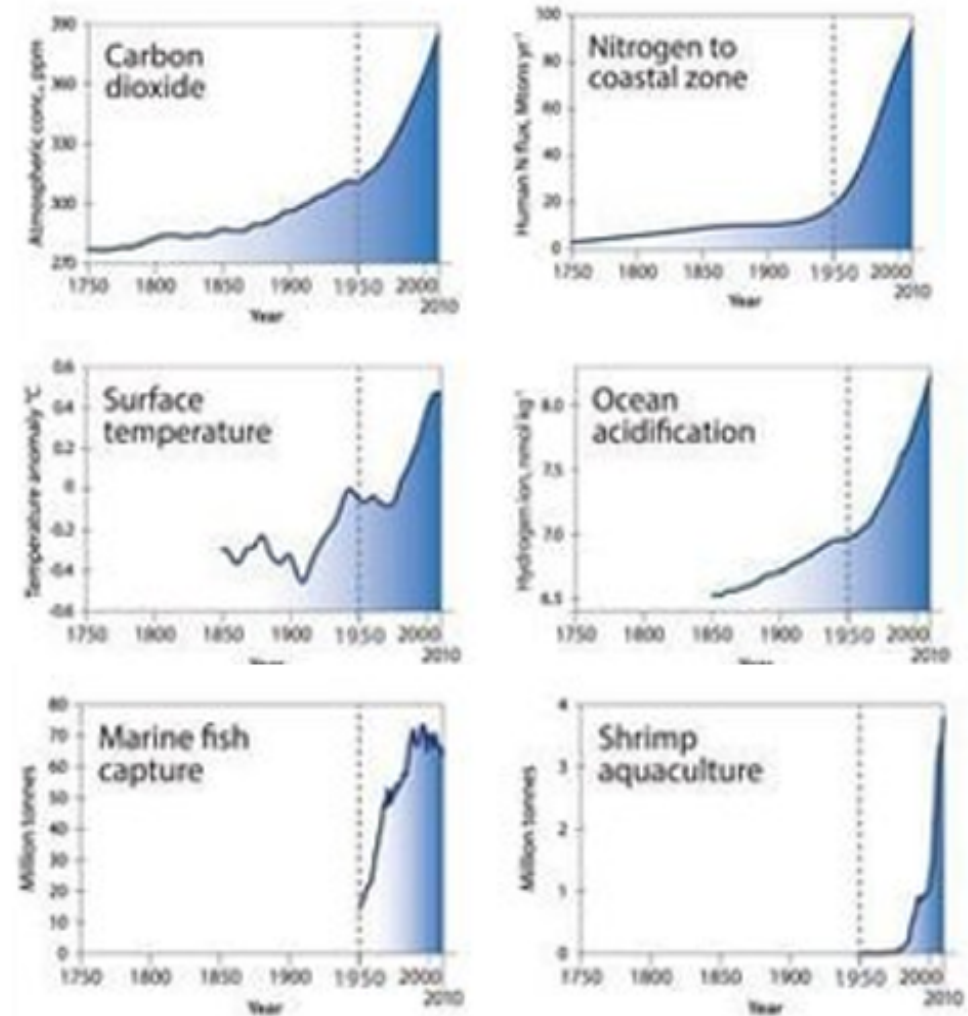


Urgency-- Ocean Pressures

Socio-economic trends



Earth system trends



High Level Panel for a Sustainable Ocean Economy



Enhancing
humanity's
relationship with
the ocean

Harnessing the
latest ocean
knowledge

Working with
diverse
stakeholders

Bridging ocean
health and wealth

Developing an
action agenda for
transitioning to a
sustainable ocean
economy



Principles for a Sustainable Ocean Economy



A global commons, a common approach

- New system of ocean governance
- Recognizing intrinsic linkages between ocean, climate, and all other ecosystems
- 4 opportunities for action



An Imperiled Ocean System

Weak, fragmented governance

System-wide impacts



Food scarcity

Economic instability

Inequity in ocean resource sharing

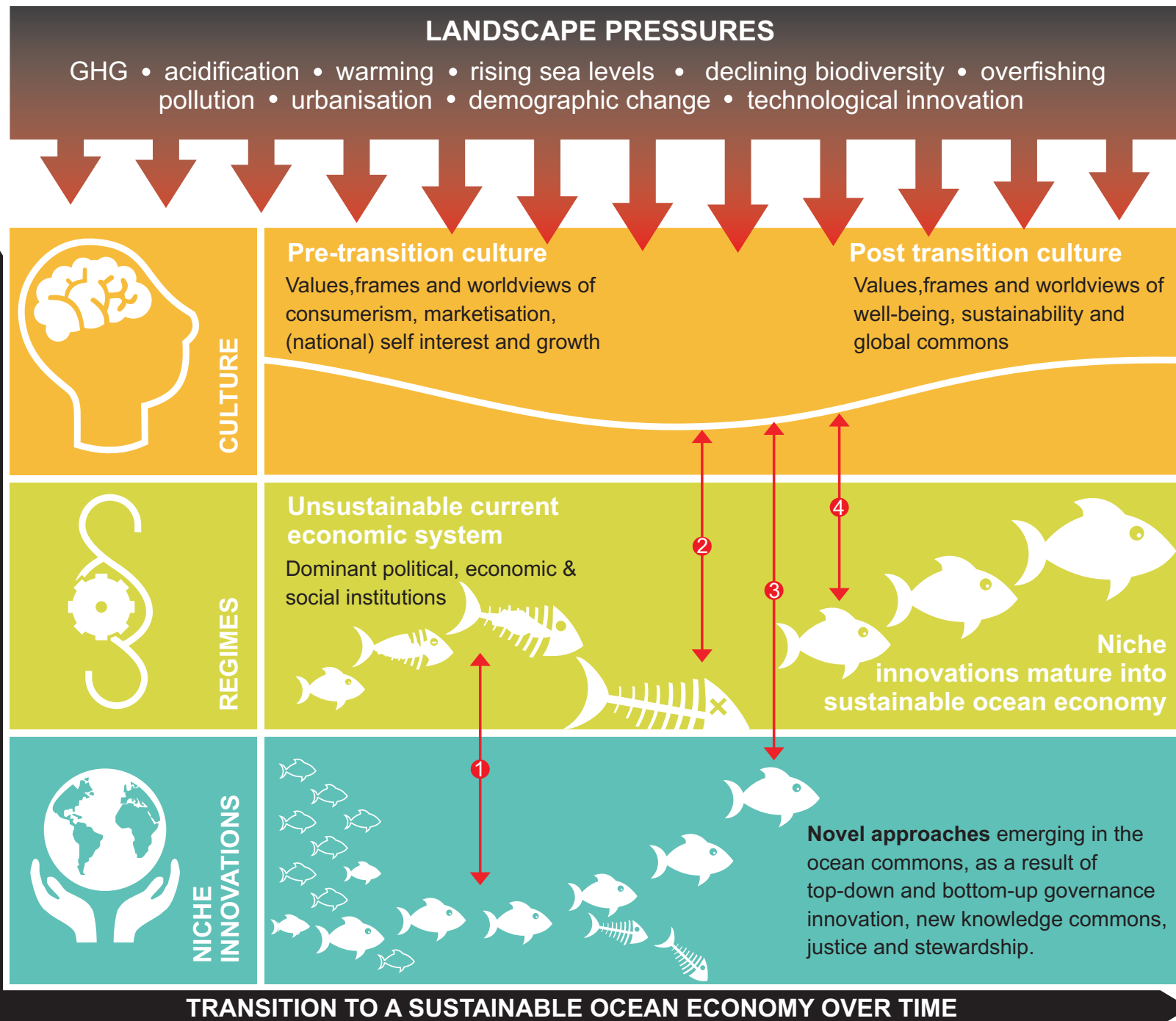
Biodiversity loss

Increased threat from climate change



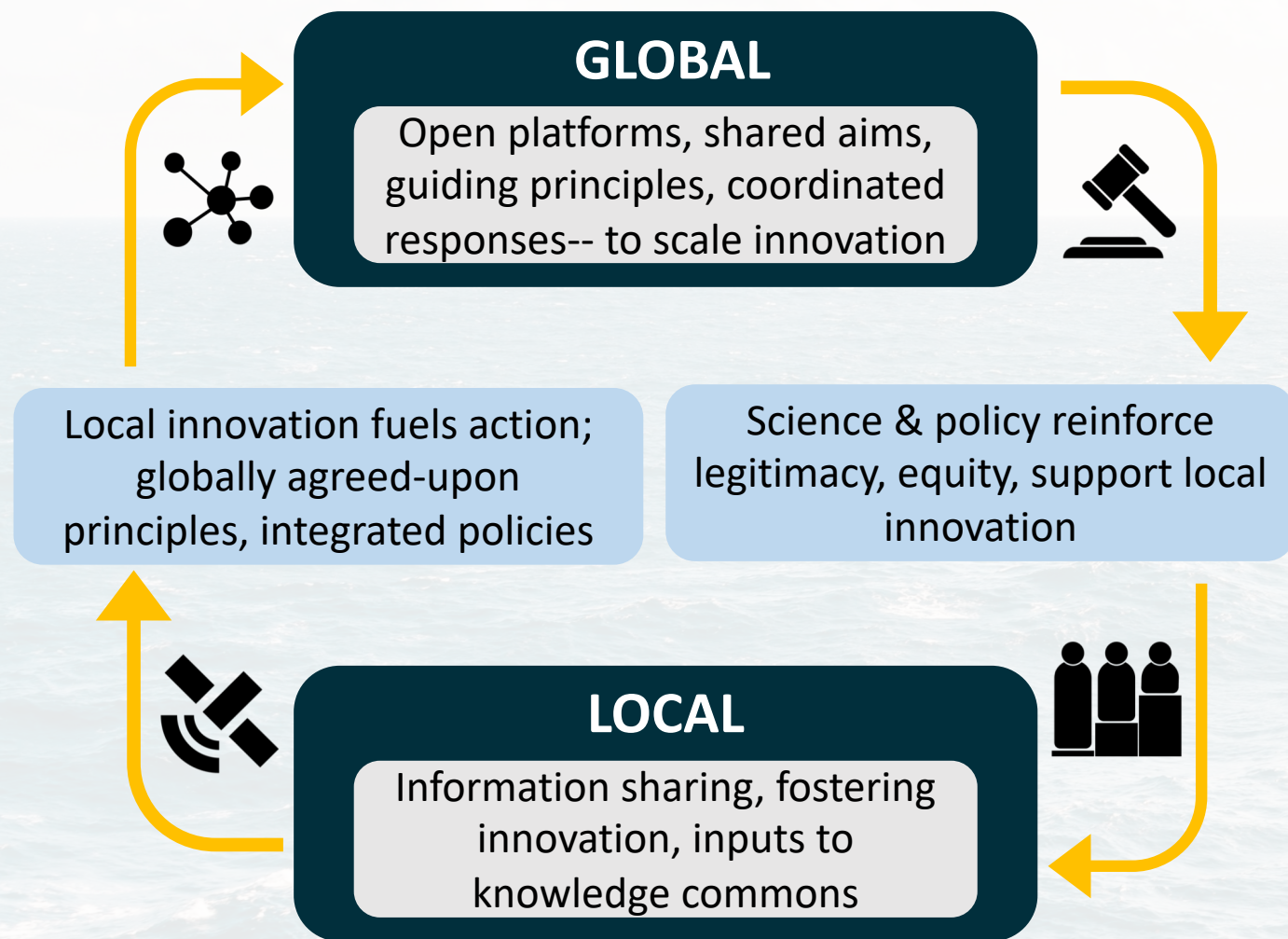
HIGH LEVEL PANEL for
A SUSTAINABLE
OCEAN ECONOMY

Ocean Panel Perspectives, June 2020



Dynamics of system-level change in the ocean economy

Solutions & Opportunities



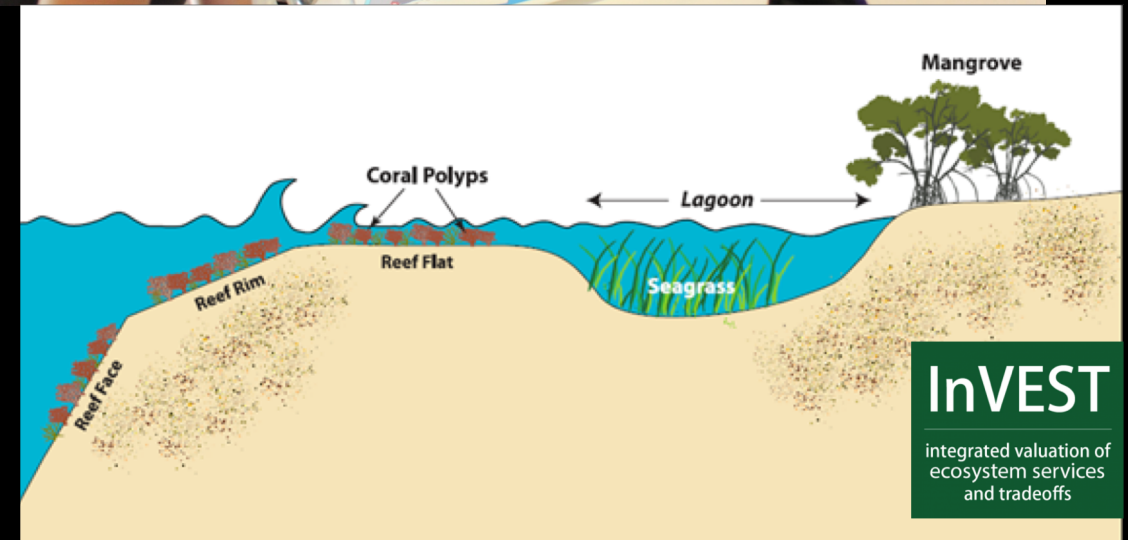
3 Key Shifts:

- *Our relationship with the Ocean*
- *Our relationships with each other*
- *The relationships between nations*



Innovative example: Co-Developed Sustainability Plan in Belize

- Integrated development plan
- Implementation \$ from IDB
- Reef removed from UNESCO World Heritage Risk site
- New ministry
 - *The Ministry of Agriculture, Fisheries, Forestry, the Environment, and Sustainable Development*
- Improved local capacity
- Keen interest by infrastructure businesses, climate financiers



Spatially quantified diverse values of marine ecosystems in multiple currencies of value

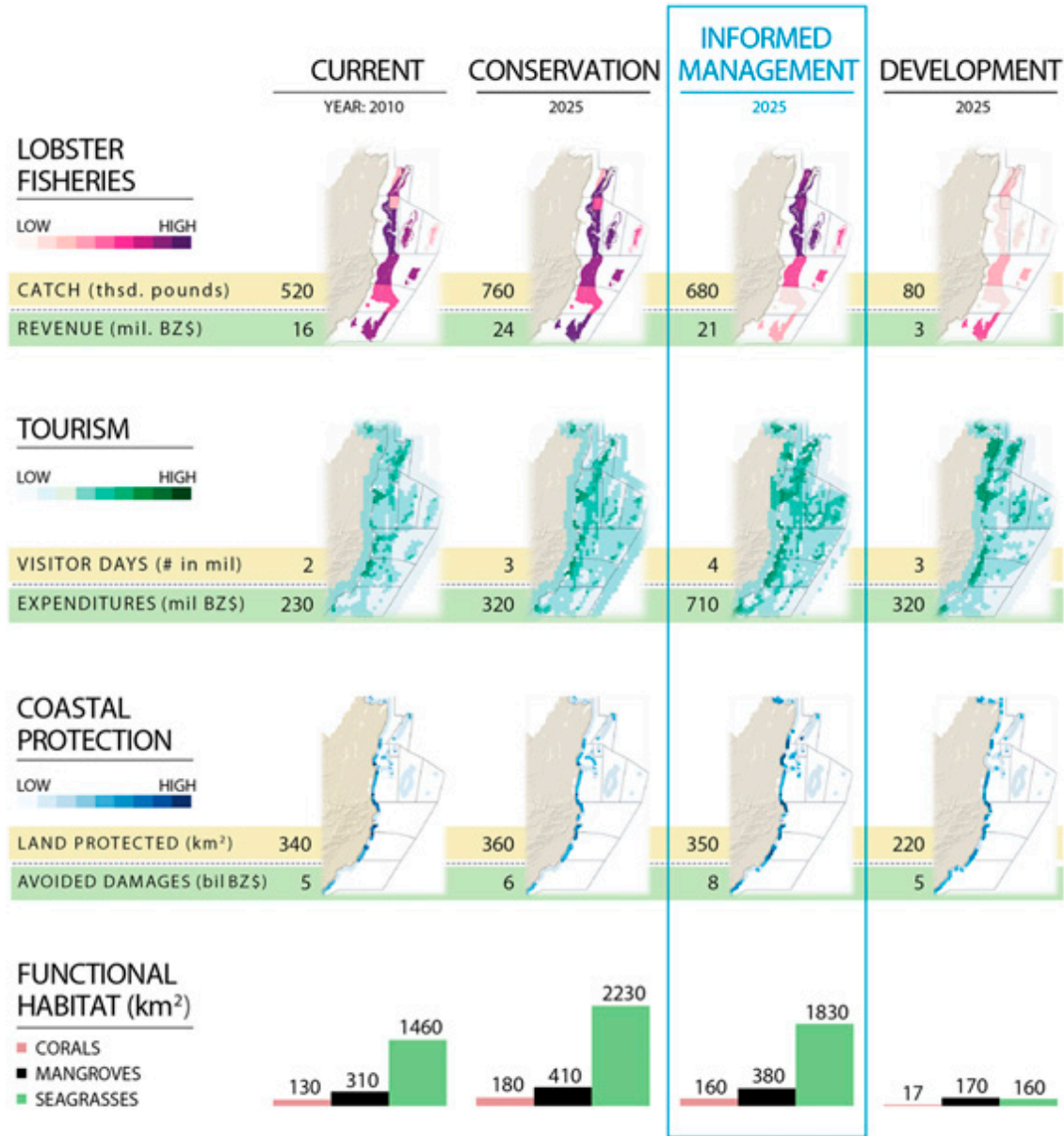
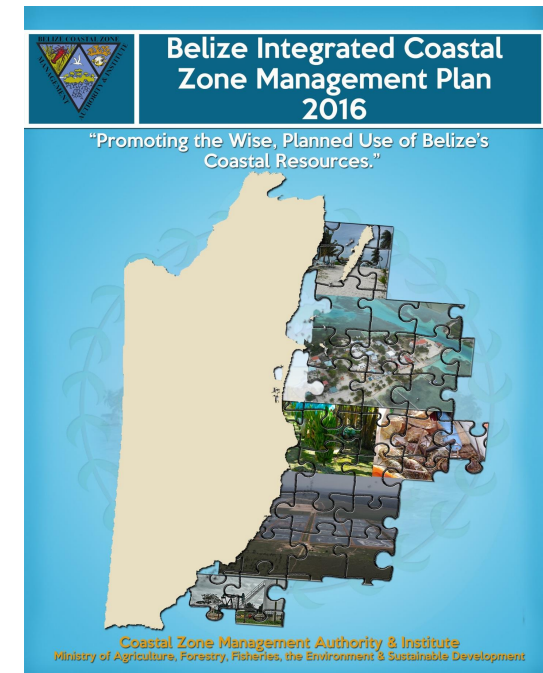


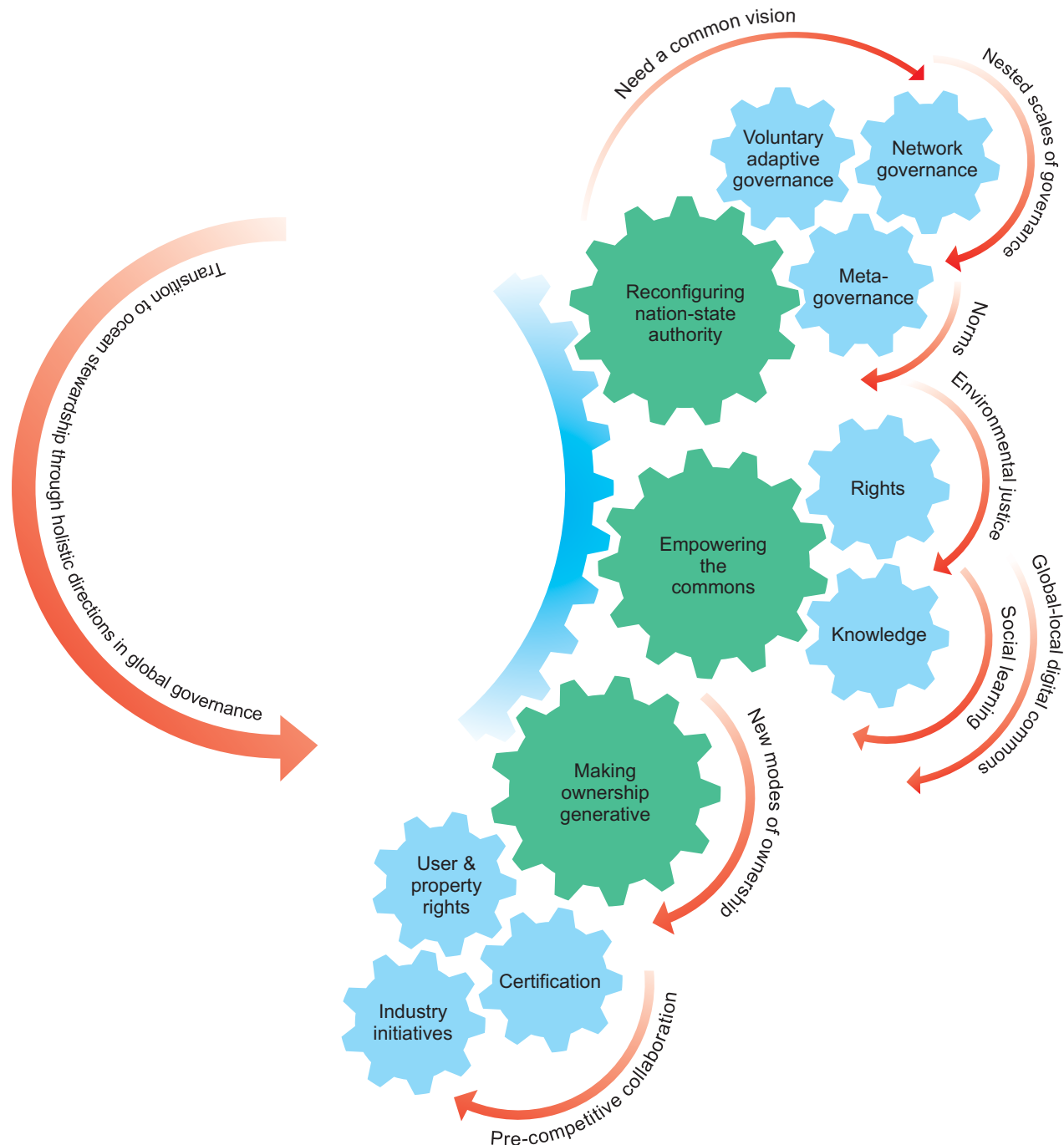
Fig. 2. Biophysical and economic values for three ecosystem services and the area of habitat capable of providing services under the Current and three future scenarios for the ICZM Plan for Belize.



Arkema et al. PNAS, 2015; CZMAI 2016;
Verutes et al. 2017

Changing Decisions--Valuing Economic Contributions of Ocean Natural Capital to Human Wellbeing

- Data, science co-developed with decision makers to incorporate ocean ecosystem values in policies, investments
- Social, political, financial tradeoffs weighed by stakeholders
- Governance and other institutional changes needed
- Private sector role is crucial—financing, job creation
- Capacity building supports durability of solutions
- Ongoing science-policy processes needed for learning, adapting, inclusion



Elements of a governance transition to ocean stewardship