EuYmast Forum: Towards a European Young Marine Scientist and Technologist Forum







# Challenges in capacity building... The Science Vision

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# Global Change

- 100 years ago
  - Overpopulation
    - Technical Capacity



- Overexplotation crisis
- Biodiversity Crisis
- Climate Change Crisis





### Oxygen Crisis

3.500.000.000 years ago

4.500.000.000 years ago

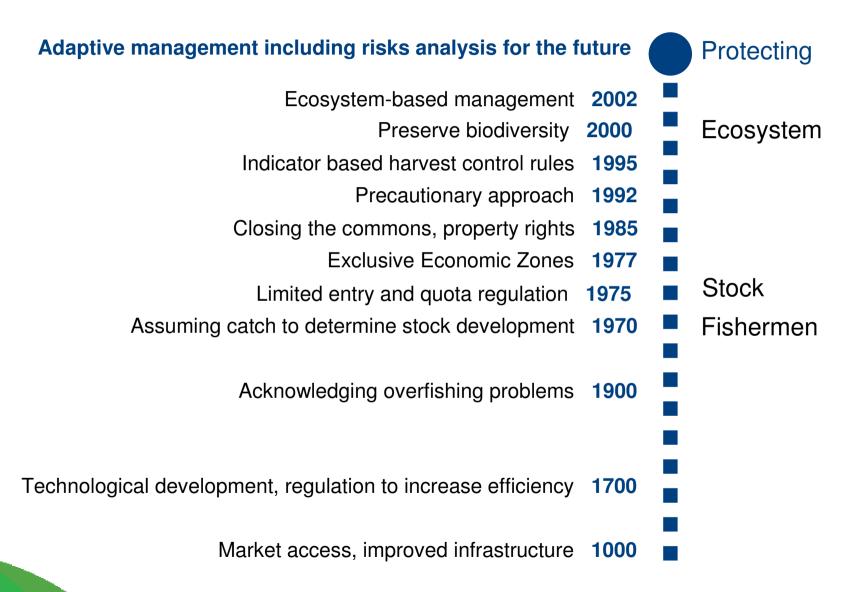
Cyanobacteria developed capacity to use water as a source of electrons

### Changes in marine science paradigms

- •Science is additive with brusque shifts when enough critical knowledge mass is gathered
- Technical developments open new views
- •New Paradigms appear periodically representing a new challenge
  - Humankind is the planet owner
  - •Infinite seas confidence of the seas confide
  - •Marine r Arc xhaustible
  - •Human acts can have evolution by effects due to the me scales in the scale in the scales in the scale in the scales in the scales in the scale in t
  - •The dee a is almost ab nd easonal
  - •The techn will allow us to me all limitations

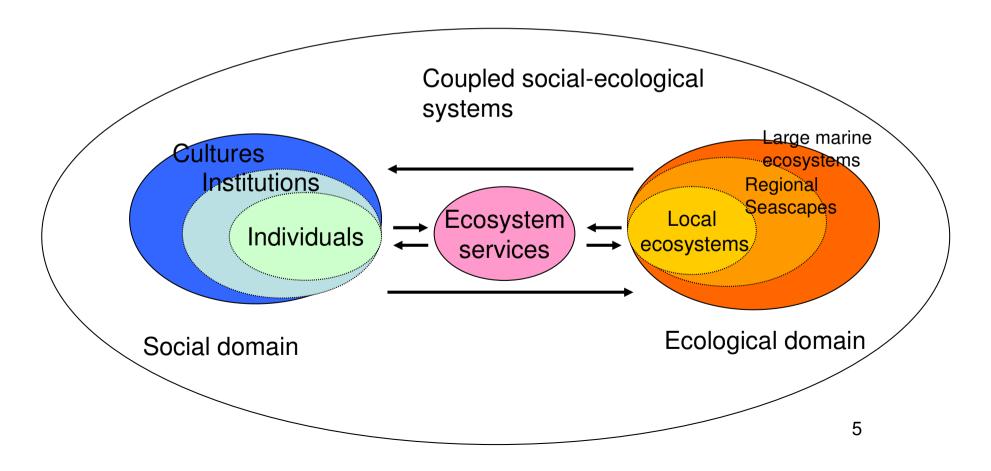


### Fisheries change of paradigms



### **Protect Nature**

Knowledge based management: ecosystem approach to management



# Challenges

- •Discovering the unknown (from molecules to ecosystems..)
- •Understanding the macro and micro scales on space and time (for evolution, environment and biota)
- •Learning the mismatch between humans and anthropogenic environment
- •Determining the **drivers of global change** (from causal factors to consequences)
- •Establish common protocols, quality control and sharing facilities for knowledge and data
- •Technological developments to monitor, measure and explore Nature
- •Construct holistic models to understand and manage the ecosystem
- Develop innovative management and governance
- •Establish an **efficient pipeline** between science based knowledge and the stakeholders and managers
- •Increase the public awareness on the issues at stake

## Challenges

#### 1. Conceptualize

- · Define initial team
- Define scope, vision, targets
- Identify critical threats
- · Complete situation analysis

#### 5. Capture and Share Learning

- Document learning
- Share learning
- Create learning environment

# Conservation Measures Partnership Open Standards

### 2. Plan Actions and Monitoring

- Develop goals, strategies, assumptions, and objectives
- · Develop monitoring plan
- · Develop operational plan

#### 4. Analyze, Use, Adapt

- · Prepare data for analysis
- Analyze results
- Adapt strategic plan

#### 3. Implement Actions and Monitoring

- Develop work plan and timeline
- · Develop and refine budget
- Implement plans

# What is necessary?

- Capacity to interpret and critic knowledge
- Synthesis capacity
- Awareness of our partial vision
- •An open mind to recognize new opportunities, to work transversally
- Capacity to work in interdisciplinary teams
- Communication abilities
- Technological capacities
- •Enthusiasm, hope, courage and dedication!!









## Thanks for your attention!

Questions?

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