

# ADDRESSING THE DRIVERS OF MEDITERRANEAN ECOSYSTEM DEGRADATION: THE SCP APPROACH IN THE APPLICATION OF THE ECOSYSTEM APPROACH TO THE MANAGEMENT OF HUMAN ACTIVITIES IN THE MEDITERRANEAN

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CP/RAC,  
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# Introduction: the Ecosystem Approach in the Mediterranean Action Plan

Convention on Biological Diversity - COP 5  
(2000):

Adoption of the Ecosystem Approach (EA)  
framework



Johannesburg Plan of Implementation (2002):

Encourage application of EA in coastal and  
marine ecosystems



European Union Marine Strategy Framework  
Directive (2008):

Application of EA in European marine  
environment



Barcelona Convention - COP 15 (2008)  
Implementation of EA in Mediterranean marine  
and coastal environment

“a strategy for the integrated  
management of land, water and  
living resources that promotes  
conservation and sustainable use  
in an equitable way (...)”



Ecosystem  
Approach Roadmap  
by MAP



# Introduction: the ecosystem approach in the Mediterranean Action Plan

## STEPS OF THE ECOSYSTEM APPROACH ROADMAP BY MAP

1. Definition of an ecological Vision for the Mediterranean.



2. Setting of common Mediterranean strategic goals.



3. Identification of important ecosystem properties and assessment of ecological status and pressures.



4. Development of a set of ecological objectives corresponding to the Vision and strategic goals.



5. Derivation of operational objectives with indicators and target levels.



6. Revision of existing monitoring programmes for ongoing assessment and regular updating of targets.



7. Development and review of relevant action plans and programmes.



**2011-2012**

**2013-(...)**

**2014-2015**





# Key environmental concerns in the Mediterranean and the ecological objectives

The **main environmental issues of concern** in the Mediterranean are:

**coastal development and sprawl**, driven by urbanisation and tourism development, leading to habitat loss and degradation, and erosion/ shoreline destabilisation

**over-fishing**, and accidental or by-catch, affecting community structure, ecological processes, and delivery of ecosystem services

**destructive fishing**, including bottom trawling and fishing methods resulting in benthic disturbance

**contamination of sediments and biota** caused by pollution, primarily from urbanisation and industry, but also from anti-foulings and atmospheric inputs of hazardous compounds

**nutrient over-enrichment**, leading sometimes to eutrophication and hypoxia, more regularly leading to ecological imbalances (reduced water quality and growth of algae)

**disturbance and pollution caused by maritime industries**, including shipping, energy, aquaculture, and desalination

**invasive non-indigenous species spread**, in many cases mediated by climate changes and compounded by shipping



# Key environmental concerns in the Mediterranean and the ecological objectives

## DESCRIPTORS TO DEFINE THE ECOLOGICAL OBJECTIVES

1. Biological diversity
2. Non-indigenous species
3. Harvest of commercially exploited fish and shellfish
4. Marine food webs
5. Eutrophication
6. Sea-floor integrity
7. Hydrography
8. Coastal ecosystems and landscapes
9. Contaminants
10. Marine and coastal litter
11. Underwater noise





# Objectives of the report

The **specific objectives** of the assessment are to:

- Formulate the relation between Sustainable Consumption and Production (SCP) approach; and the Ecosystem Approach in the framework of MAP.
- Identify the main potential contributions of the SCP approach to the Ecosystem roadmap of MAP and the ways to insert SCP in this process.
- Identify current challenges when applying the SCP approach in the framework of the Ecosystem roadmap of MAP.

## STEPS FOR THE ASSESSMENT THE POTENTIAL CONTRIBUTION OF SCP TOOLS TO MAP ECOSYSTEM APPROACH ROADMAP

The framework: the ecosystem approach roadmap  
of MAP and SCP policies



Which are the key environmental concerns  
in the Mediterranean and the ecological  
objectives established in the ecosystem roadmap?



Linking the ecological objectives  
to the consumption and production models



Mapping the main relationships between human activities  
and the ecological objectives in the Mediterranean



Contributing to achieving the ecological objectives by using  
the Sustainable Consumption and Production (SCP) approach



Assessing the opportunities and potential applications of SCP



Proposing the next steps on the application of SCP  
in the framework of the Ecosystem approach

DP



## Diapositiva 6

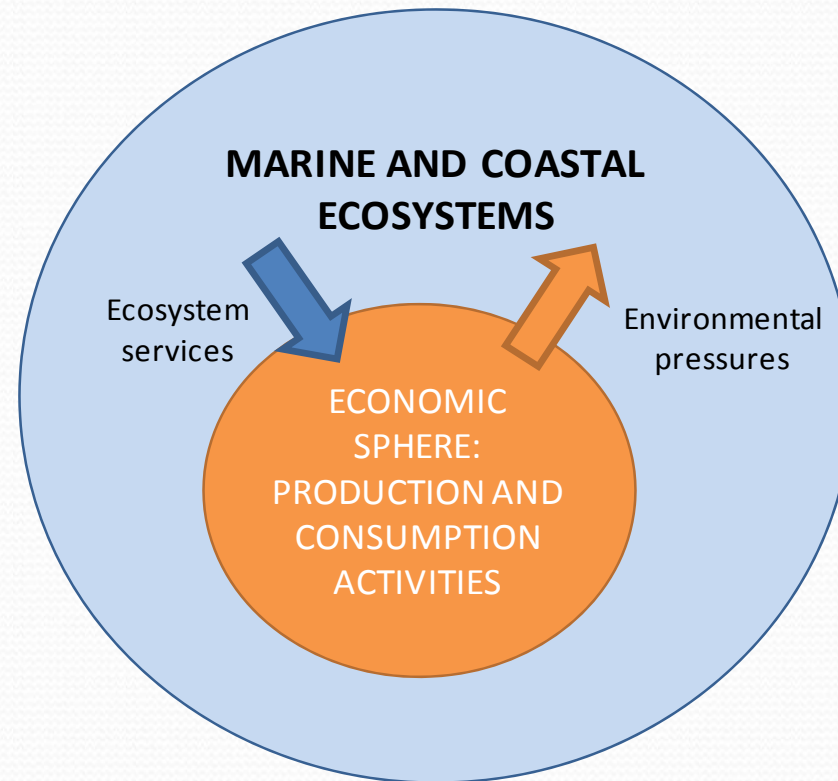
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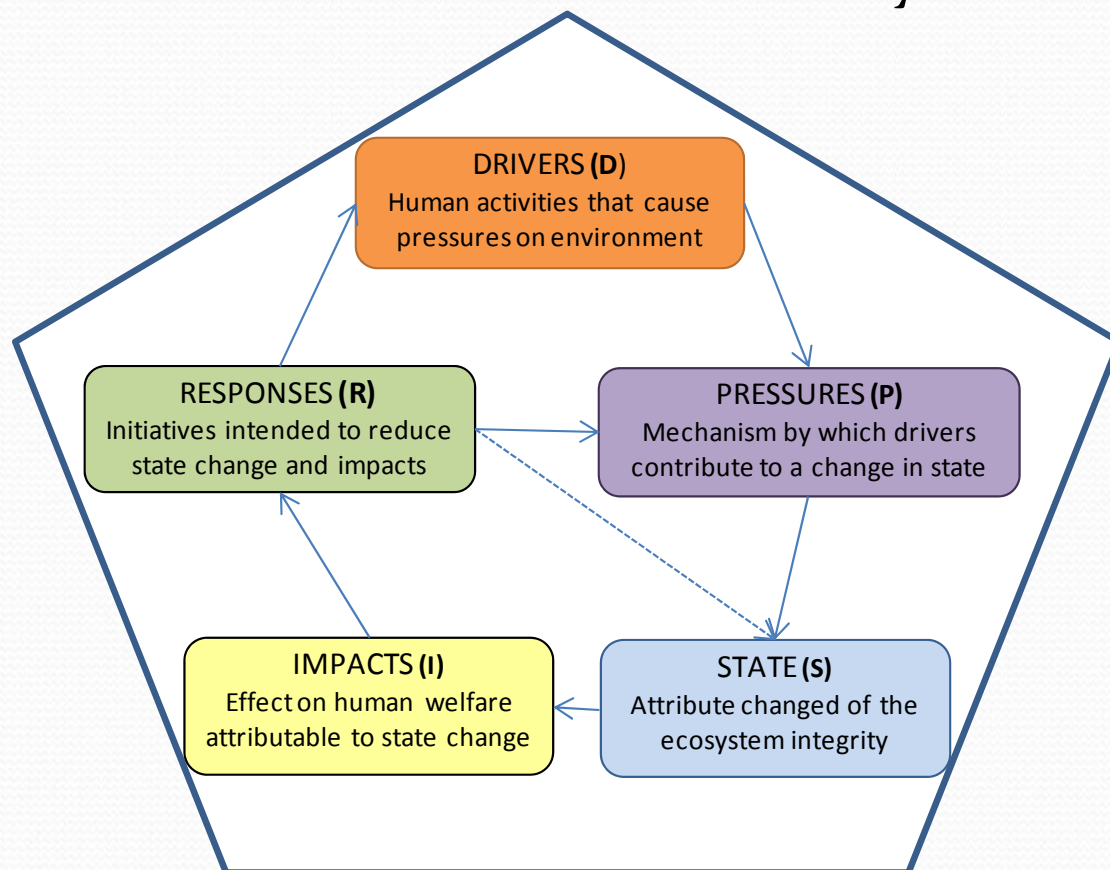
DavidPon; 13/01/2012

# Linking lifestyle and consumption options to the environmental state of marine ecosystems: methodology





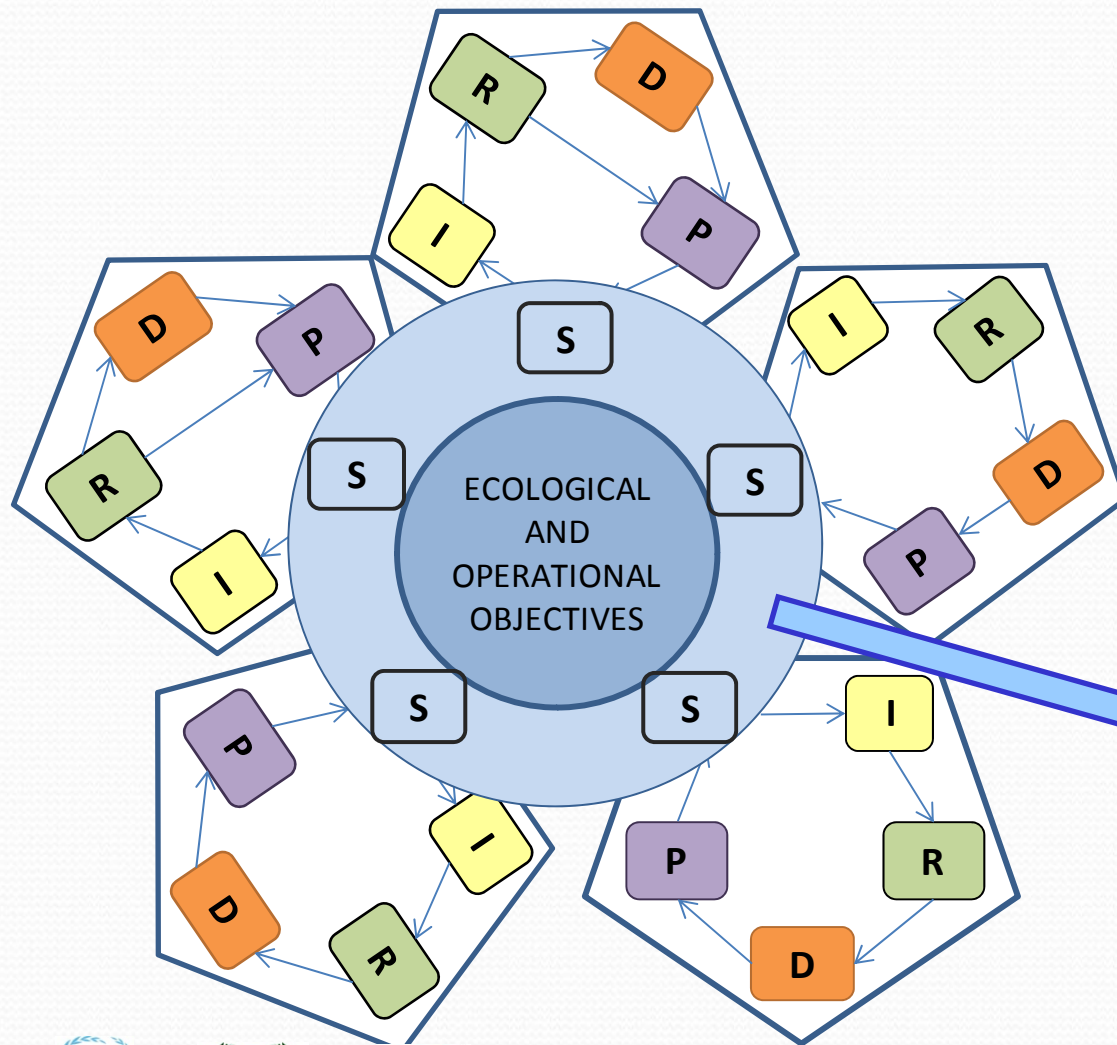
# Linking lifestyle and consumption options to the environmental state of marine ecosystems: methodology



COMPONENT	EXAMPLES
Drivers (D)	Agriculture production to satisfy food demands
Pressures (P)	Use of fertilisers that cause Phosphor and Nitrogen loading
State Changes (S)	Increments of the concentration of Phosphor that provokes eutrophization
Impact (I)	Lost of water quality for recreational activities
Responses (R)	Techniques for optimizing the use of fertilizers



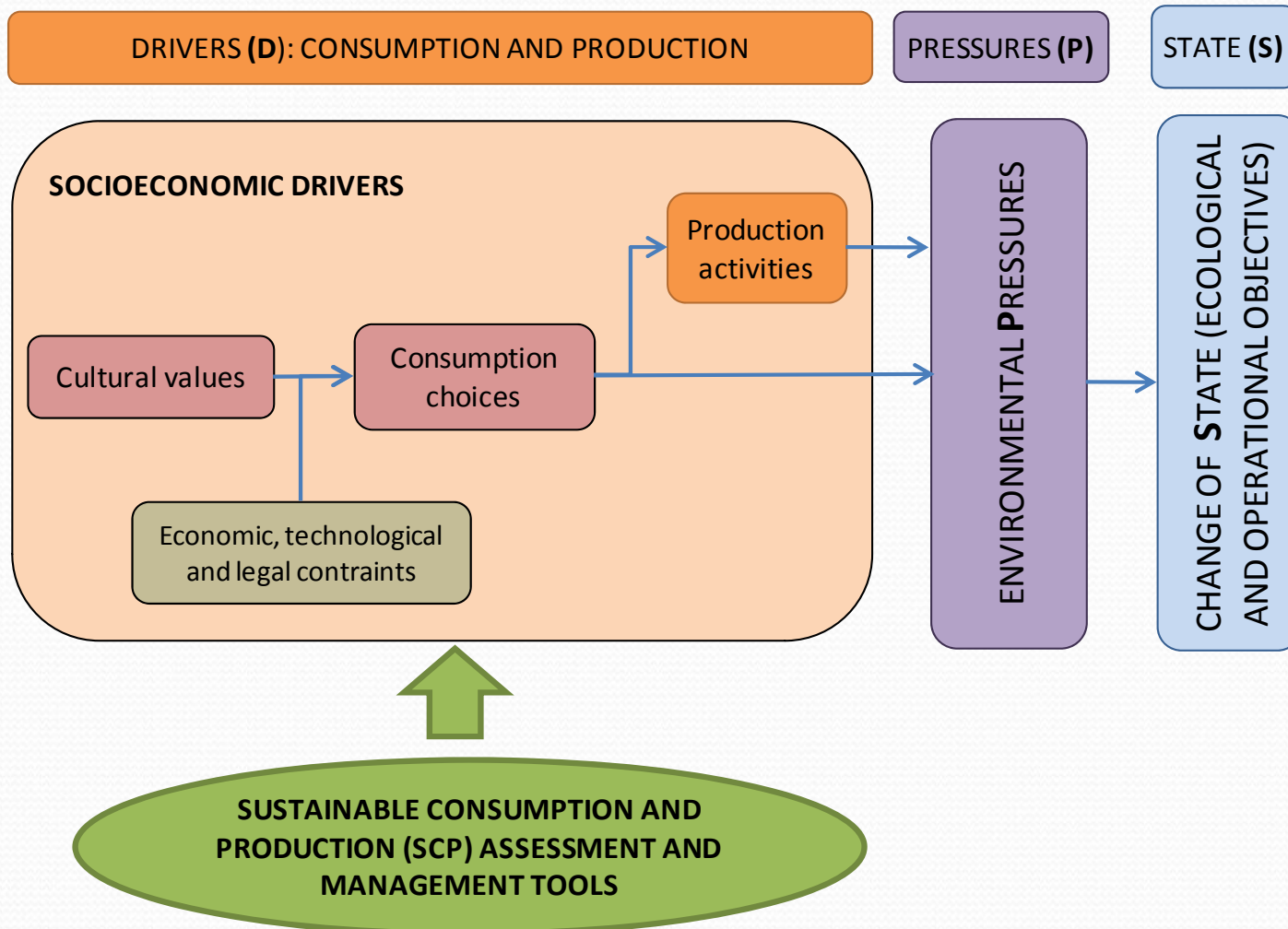
# Linking lifestyle and consumption options to the environmental state of marine ecosystems: methodology



## DESCRIPTORS OF THE ECOLOGICAL OBJECTIVES

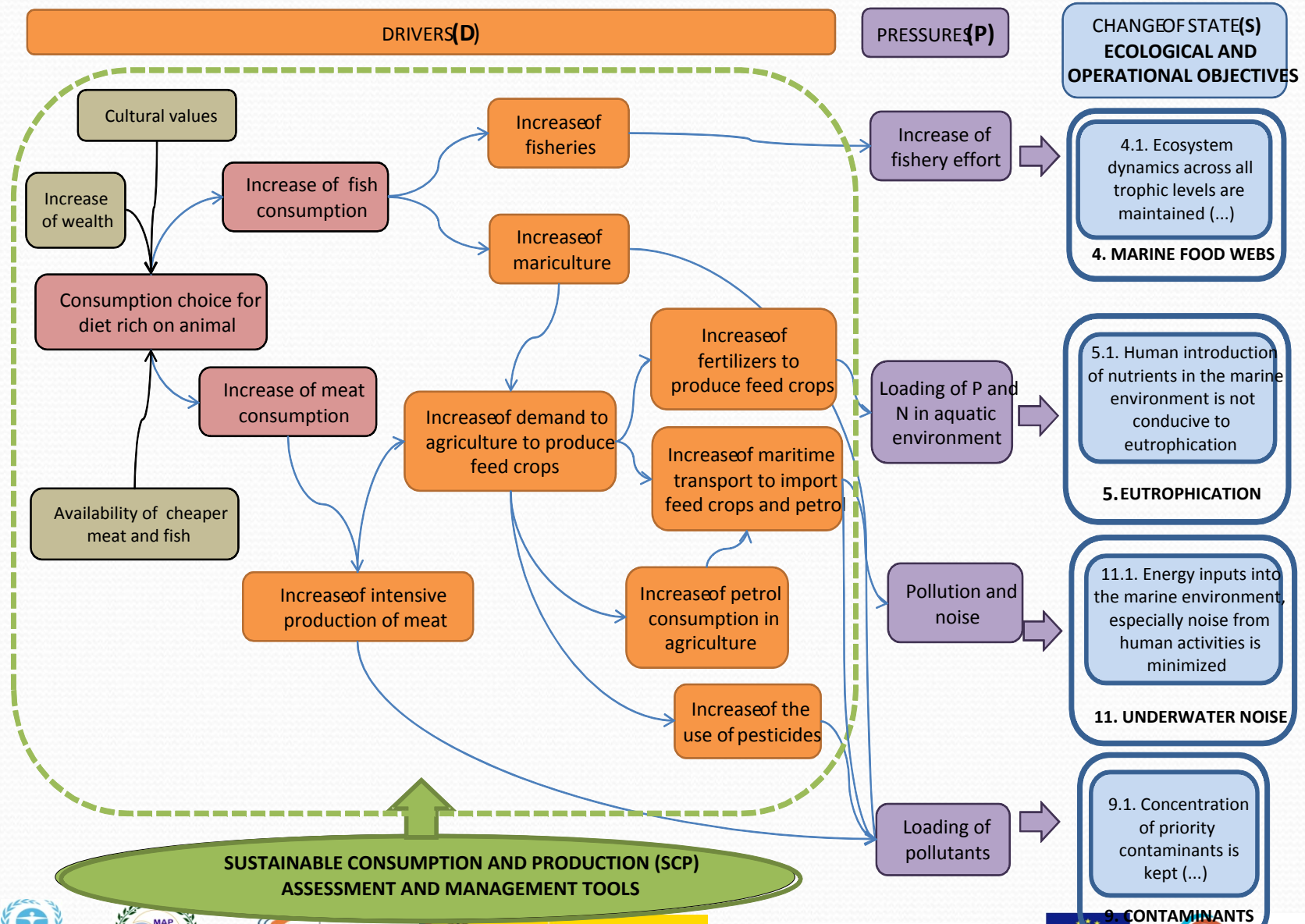
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# Drawing the link between lifestyles (e.g. CP) and state of the environment

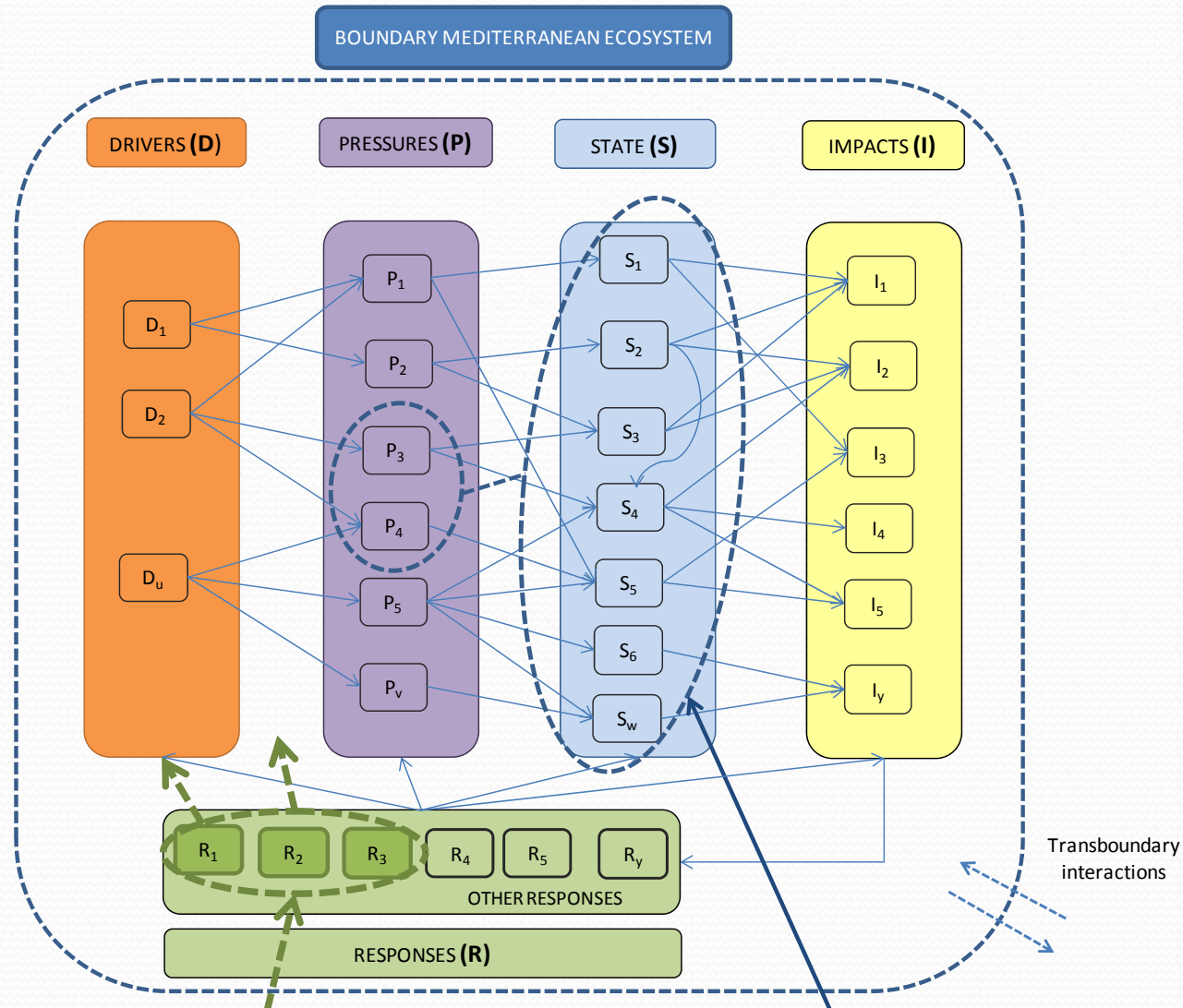




# Drawing the link between lifestyles (e.g. CP) and state of the environment



# Responses: Linking consumption and production and ecological objectives of the Mediterranean



**SUSTAINABLE CONSUMPTION AND PRODUCTION (SCP) TOOLS ASSESSMENT AND MANAGEMENT TOOLS**

**ECOLOGICAL AND OPERATIONAL OBJECTIVES : ECOSYSTEM APPROACH ROADMAP**



STRATEGIC CONVENTIONS

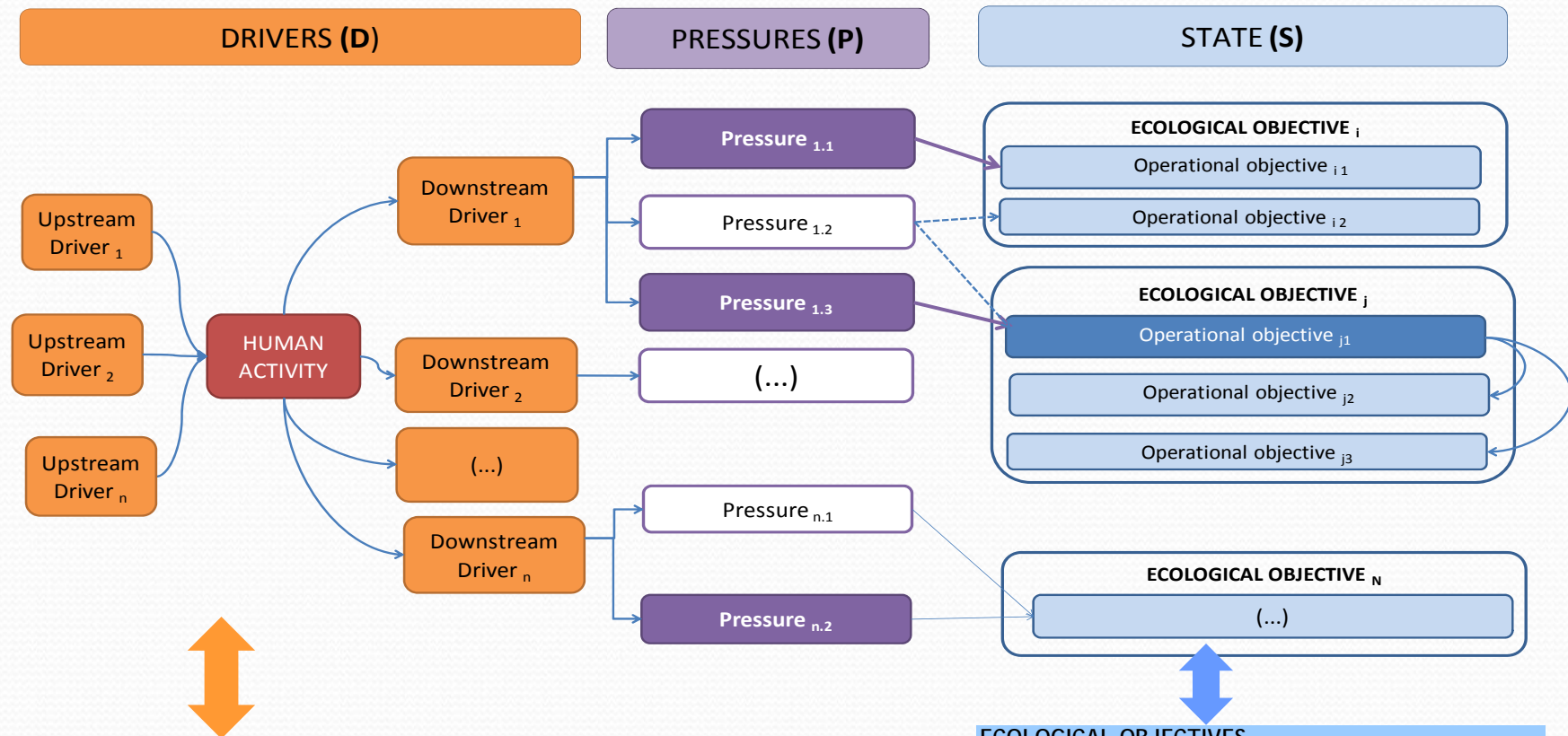
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# Mapping links between human activities and the ecological objectives



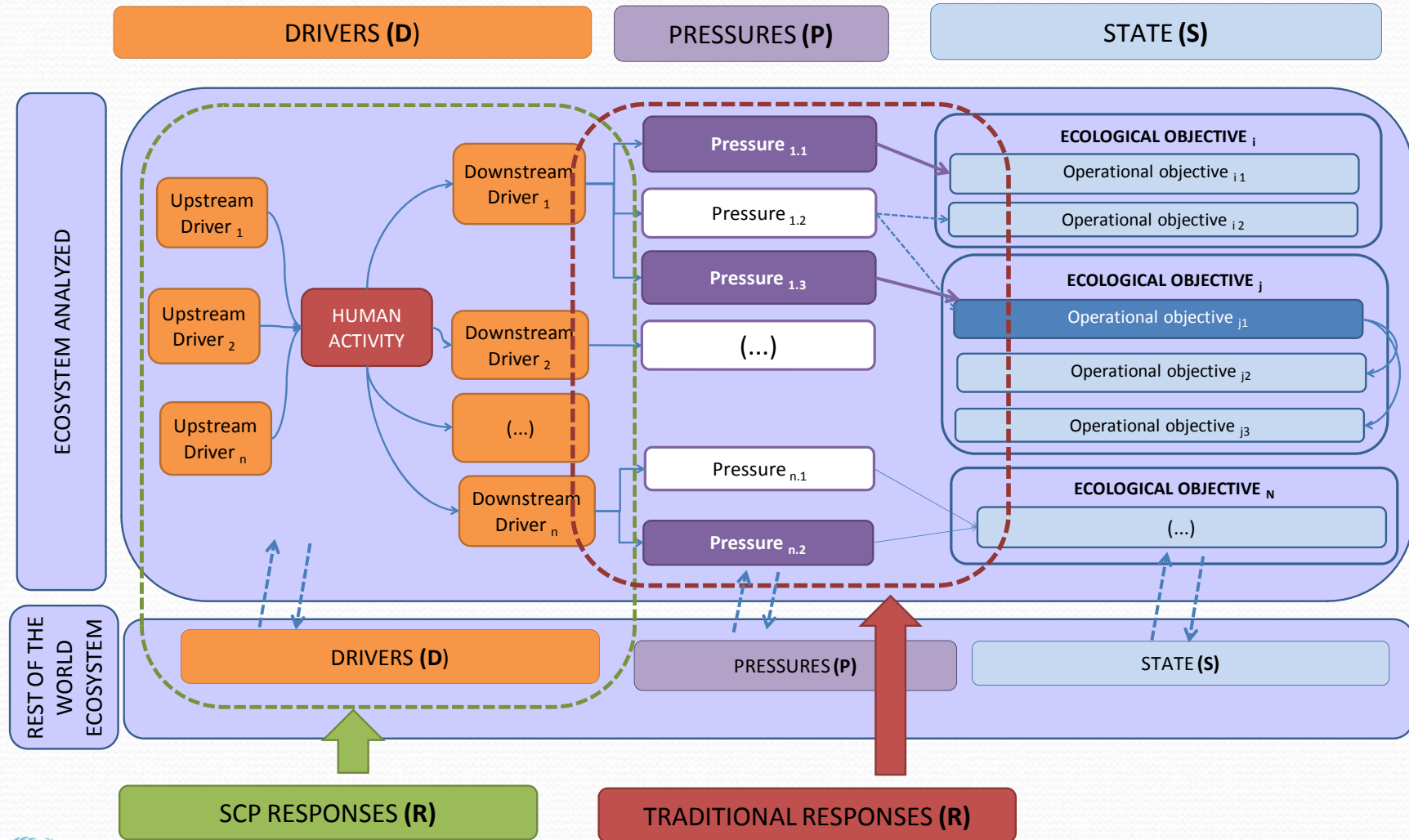
- HUMAN ACTIVITIES:**
- Urbanisation
  - Fisheries and Mariculture
  - Extraction of non-living resources
  - Placement of infrastructures
  - Maritime transport
  - Tourism and recreational activities
  - Discharges from land-based sources and activities
  - Dumping of wastes.

## ECOLOGICAL OBJECTIVES

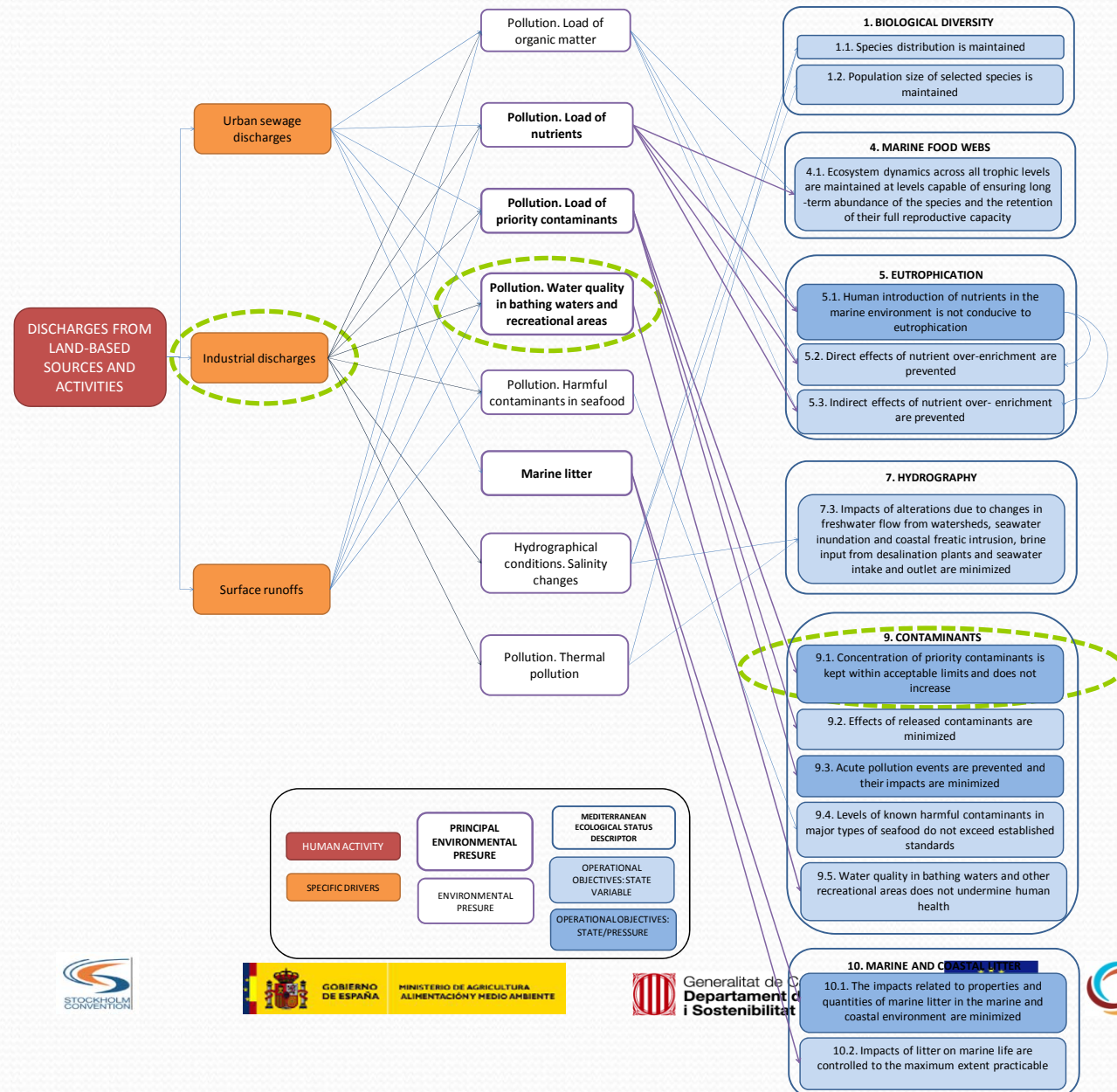
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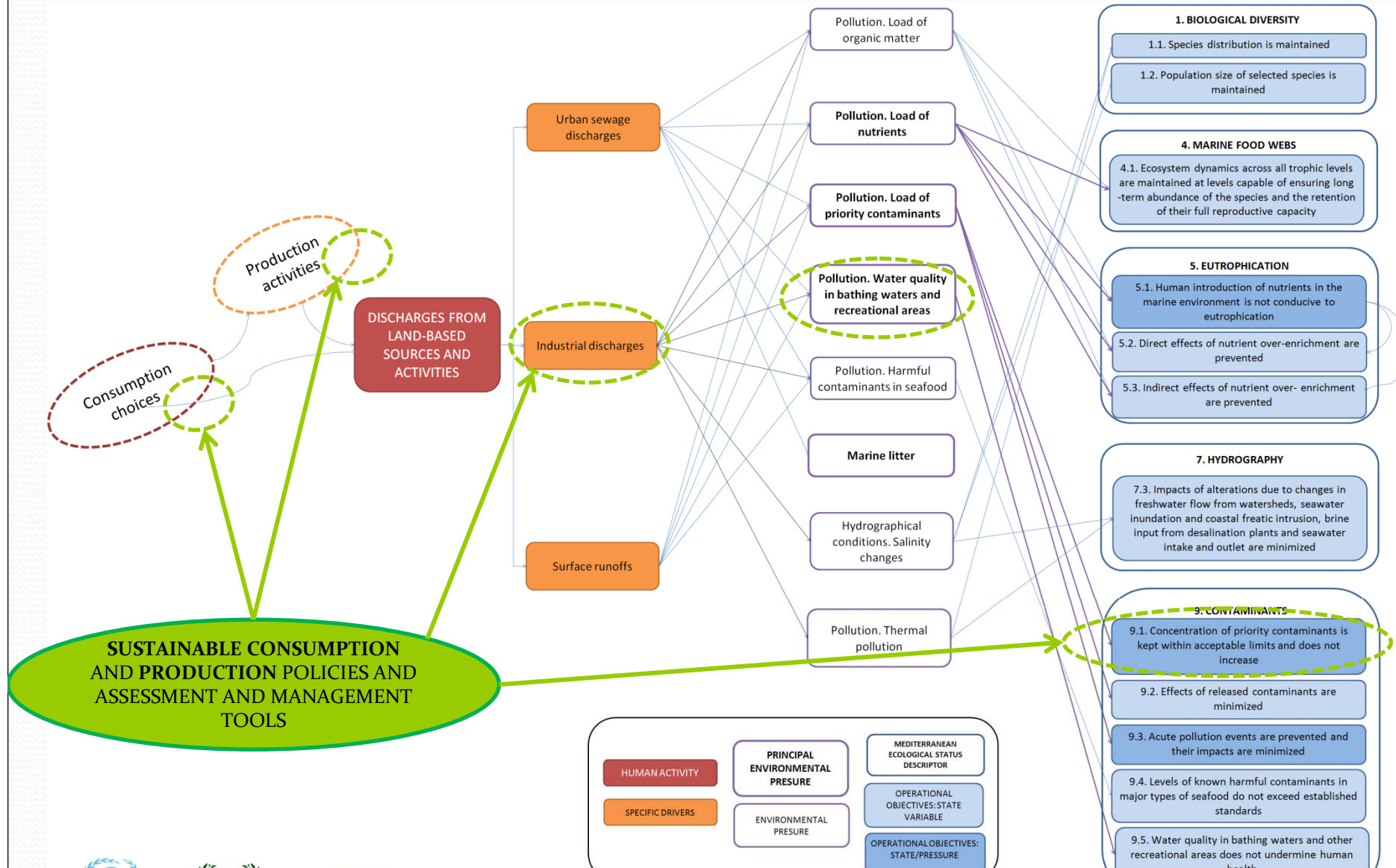
# And introducing the SCP tools as Responses



# Mapping links between human activities and the ecological objectives. An example



# Introducing SCP management tools



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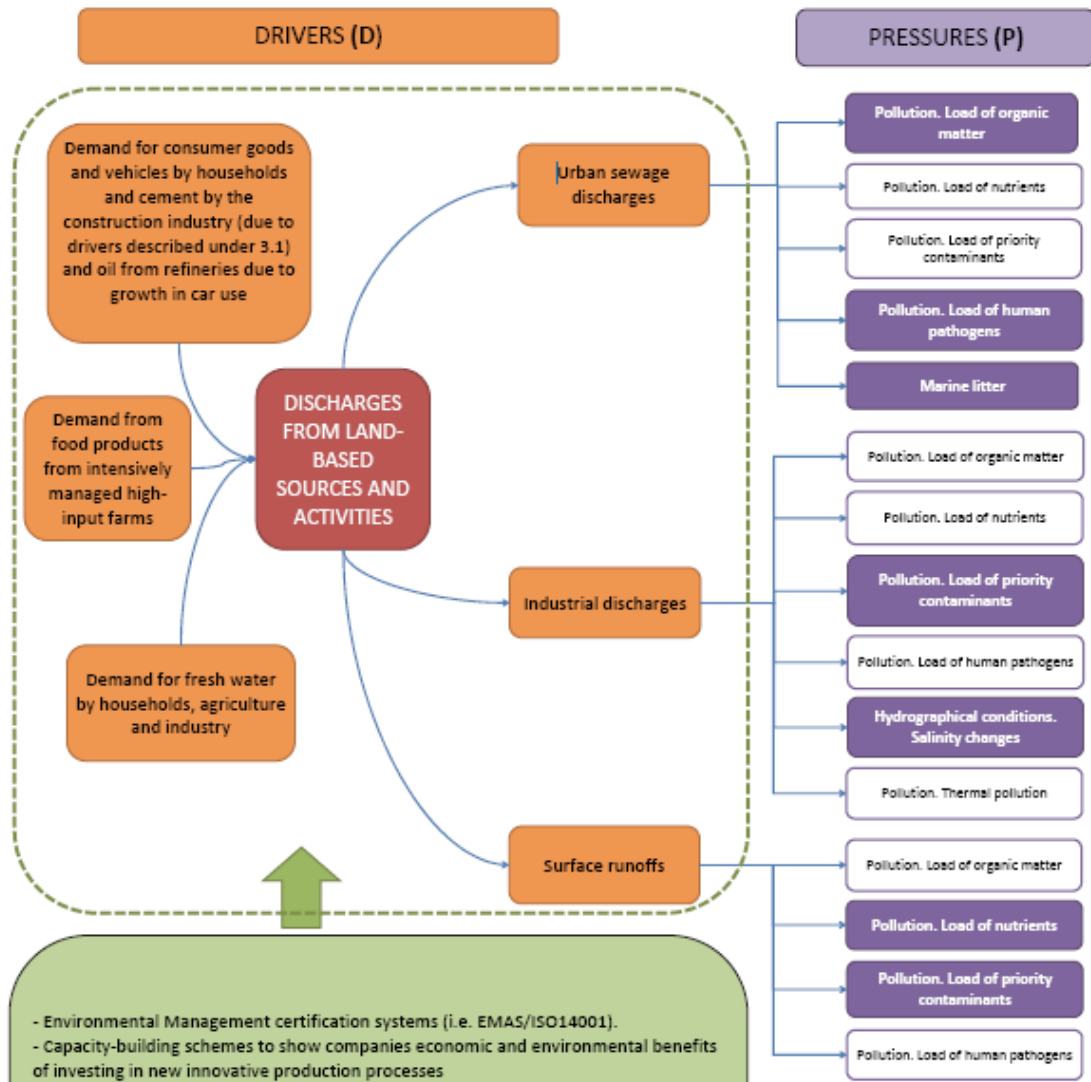


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# IDENTIFYING SCP TOOLS TO ACHIEVE ECOLOGICAL OBJECTIVES. AN EXAMPLE



- Environmental Management certification systems (i.e. EMAS/ISO14001).
- Capacity-building schemes to show companies economic and environmental benefits of investing in new innovative production processes
- Environmental tax reforms aimed at taxing products with high environmental impacts
- Consumer awareness-raising and Eco-label schemes aimed at constant improvements to key products whose production or use lead to harmful emissions to water
- Taxes on products whose production or use lead to harmful emissions to water
- Banning specific damaging compounds from agricultural pesticides
- Organic farming certification and labeling schemes for food products
- Integrated Crop Management certification and labelling schemes for food products
- Reducing demand for fresh water through water metering in households and pay by use, raising water prices for all users to encourage use of water saving products, encouraging re-use of water etc.

**HUMAN ACTIVITY**      **PRINCIPAL ENVIRONMENTAL PRESSURE**

**SPECIFIC**      **Generalitat de Catalunya**  
**Departament de Territori i Sostenibilitat**



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## **Conclusions of the report for analyzed activities**

Sectors where the SCP management tools are likely to support the implementation of EcAp:

- Fisheries and mariculture
- Extraction of non living resources
- Discharge from land-based sources and activities
- Tourism and recreational activities



## **Human activities monitoring added value to the Monitoring programme**

- Allows to monitor the cause/effect relationship between human activities and the state of the ecosystem
- Better sense of the human activities management efficiency in order to meet the project vision
- Consolidate the Integrated Monitoring Program



## SCP tools for the monitoring of human activities

- LCA hybrid models
- EEIOA
- Ecological footprint
- Set of indicator to capture the impacts of human activities

### Gaps and challenges:

- Lack of data
- Limitations in Locational Information

# Thank you for your attention!



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