

# Eutrophication as an opportunity for multispecies water justice



## The Mar Menor case

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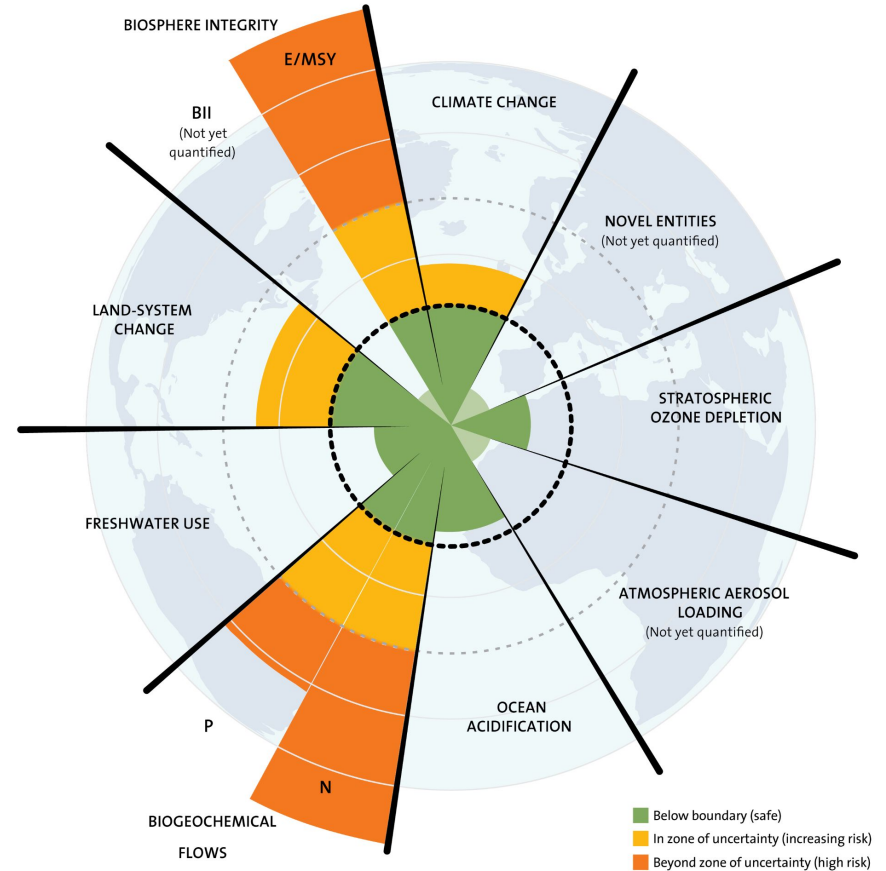
**bc<sup>3</sup>**

BASQUE CENTRE  
FOR CLIMATE CHANGE  
Klima Aldaketa Ikergai  
Sustainability, that's it!

NEWAVE 

# Eutrophication as a hydrosocial problem

- Land-sea continuum?
- Local struggles
- Scientific controversies
- Local-global industrial networks
- Lack of effective public action



Levain, A., Barthélémy, C., Bourblanc, M., Douguet, J. M., Euzen, A., & Souchon, Y. 2020. Environment and Society: Advances in Research, 11(1), 115.

Noisy



Baltic Sea, Europe

Disturbing



Mar Menor, Spain

Hydrosocial  
assemblages

Overwhelming



Red tides in Philippines



Silenced



Maracaibo lake, Venezuela



Noisy



Baltic Sea, Europe

Disturbing



Mar Menor, Spain

Hydrosocial  
assemblages

What  
drives a  
transition?

Overwhelming



Red tides in Philippines



Silenced



Maracaibo lake, Venezuela



# The Mar Menor

135 km<sup>2</sup>, watershed 1270 km<sup>2</sup>

Sub-desert Mediterranean context (300 ppm)

Biodiversity & tourist hotspot



Intensive export-oriented agriculture

Intensive urban development

Open mining, now abandoned

Floods

# Scientific-political controversies



Current  
agriculture

**What's origin of the  
nutrients?**

Previous  
agriculture &  
other sources

Mostly  
surface water

**How do nutrients  
travel to the lagoon?**

Mostly  
groundwater

Nature based  
solutions &  
agricultural  
change

**How to avoid  
nutrient income?**

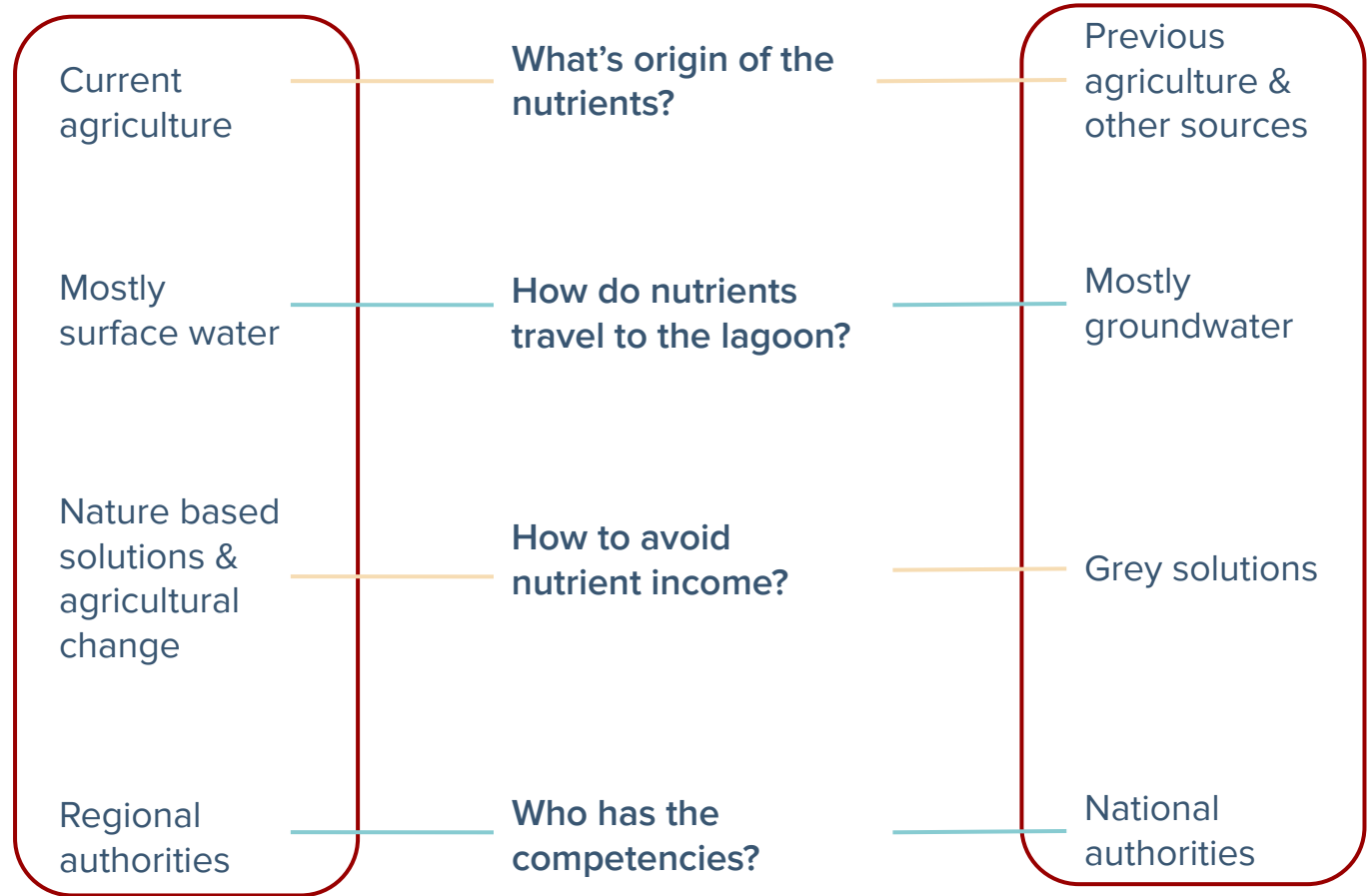
Grey solutions

Regional  
authorities

**Who has the  
competencies?**

National  
authorities

# Social conflict over the role of agriculture



The dilemma of non-point source pollution

Algal blooms 2015, 2016

Fish death 2019, 2021

Major social reaction





Eutrophication is an underexplored wicked issue

The Mar Menor is a living-lab of transition between hydrosocial assemblages

Loss of aquatic animals may act as trigger for multispecies justice

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# Thanks!

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