

Effects of climate change on the world's oceans are not important in current marine management

Third International Symposium
Effects of Climate Change on the World's Oceans
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Context

Human CO₂ emissions will likely alter marine ecosystems beyond recognition.

Renewable energy is needed, offshore wind is an important source in Sweden.

...

But the environmental benefits of offshore wind are not fully recognized.

Instead, the precautionary principle is applied with over-emphasized worry about local impacts regarding offshore wind.

This is due to narrow system boundaries in Swedish environmental legislation.

This is a problem.





Shipping

MARPOL Convention (IMO)

High NO_x and SO_x emissions, oil spills
Weak regulations

Jet skis

The Decree on Jet skis

Potential impact in shallow water
Weak regulations

Fisheries

The EU Commons Fisheries Policy

Heavy overfishing
Inefficient regulations

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Swedish Environmental Code (1998)

- >Sustainable Development
- >Precautionary Principle
- >Polluter Pays Principle

Industry emissions: 25 Mt CO₂e per year

Nuclear cooling water: 10⁵-10⁶ dead fish per year

Hydropower dams : 21 of 24 rivers exploited

Underwater noise: indirect regulation

Underwater explosions: unknown impact

Chemical pollution: 2/3 of S Baltic coastal water

Baltic sea: eutrofication and oxygen depletion

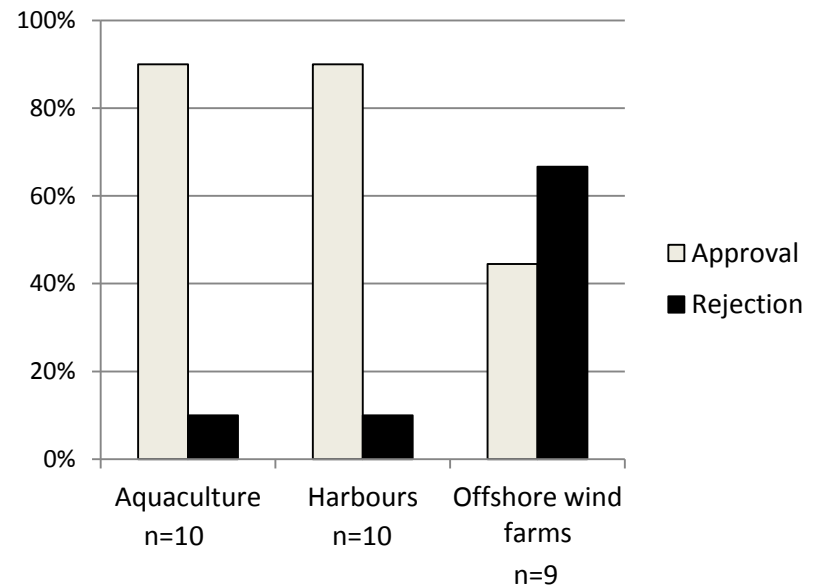
Offshore wind: **hypothetical impact**

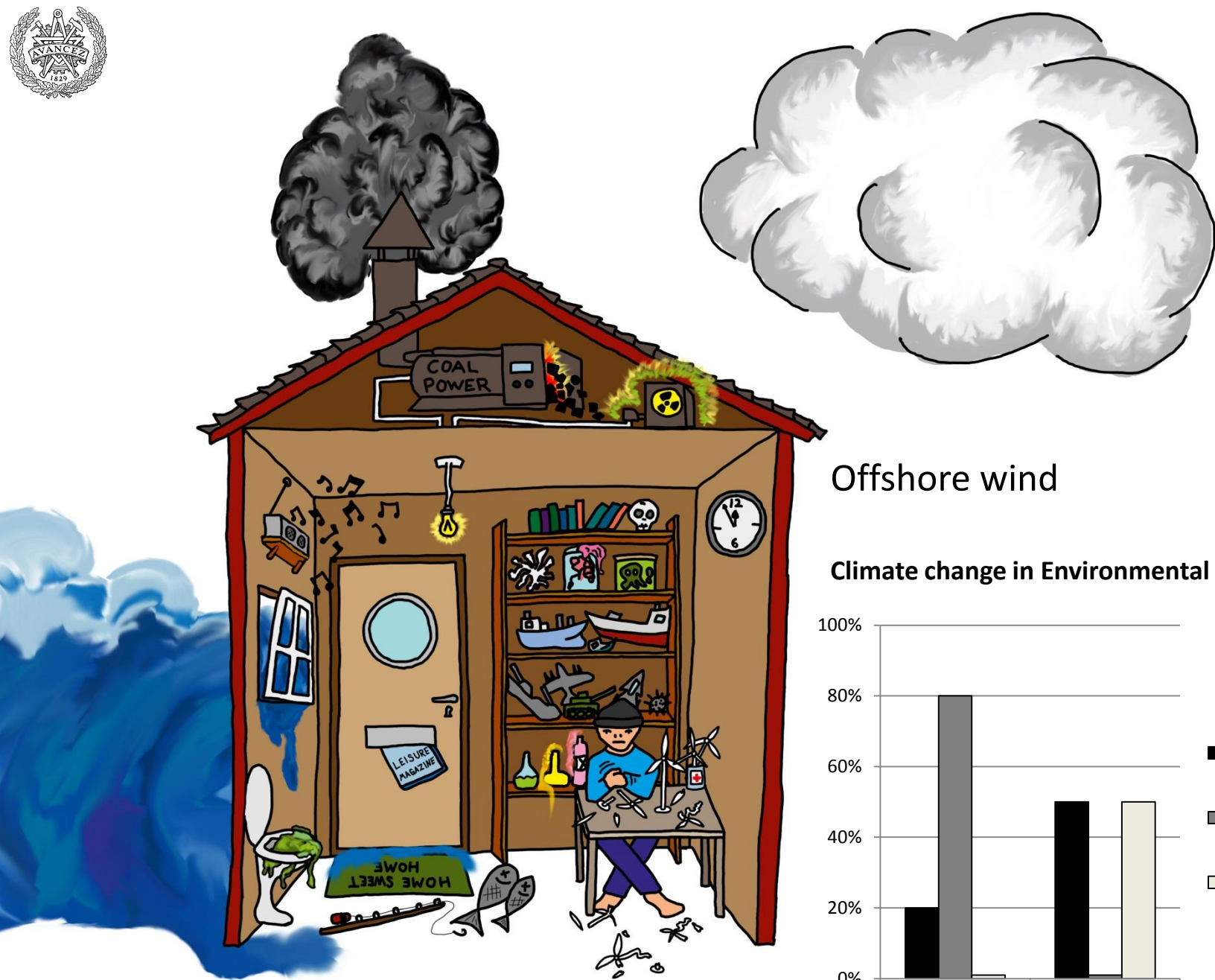
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Offshore wind

Environmental Court – outcomes per activity

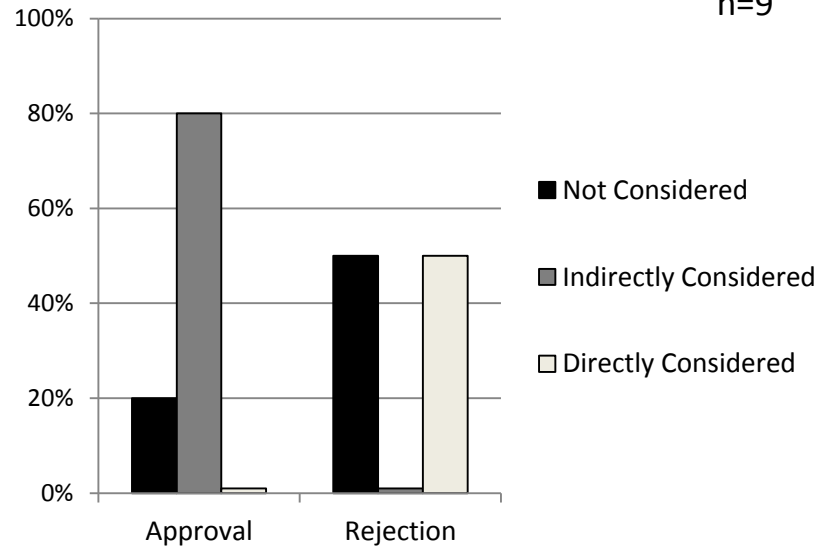




Offshore wind

Climate change in Environmental Court decisions

n=9





Offshore wind

Index Competent interest (organization)

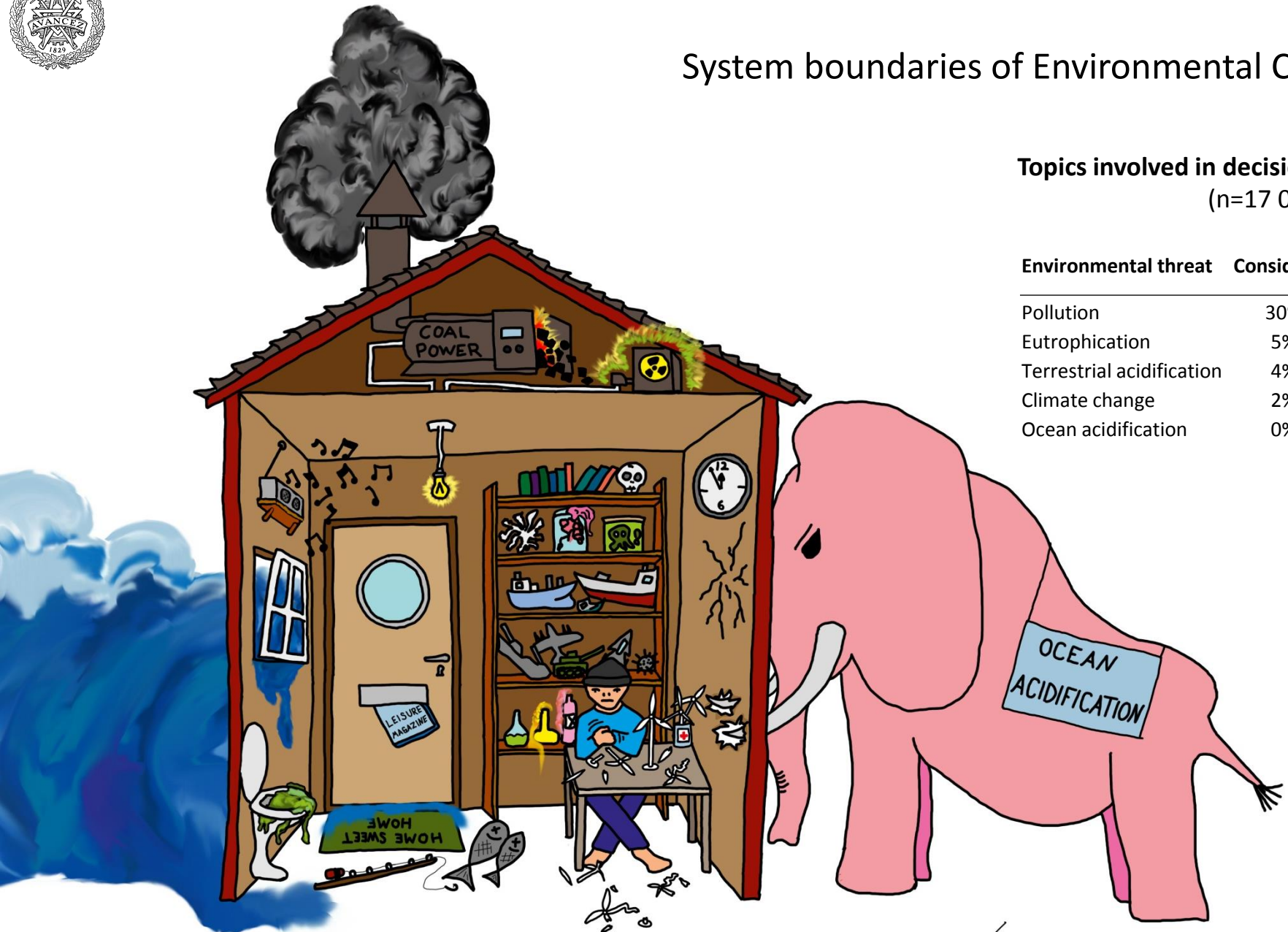
5	Energy Agency
4	Nature Protection Organization (NGO)
4	Municipalities
4	County Boards
1	Swedish Geological Institute
0	Coast Guard
0	Agency of Maritime Affairs
-1	Environmental Protection Agency
-1	Agency of Archeology and History
-1	Swedish Association of Geology
-1	Ministry of Defence
-2	Fishermen Organization (non gov)
-3	Real Estate Agency
-4,5	Marine and Fisheries Department



System boundaries of Environmental Court

Topics involved in decisions (n=17 000)

Environmental threat	Considered
Pollution	30%
Eutrophication	5%
Terrestrial acidification	4%
Climate change	2%
Ocean acidification	0%



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Conclusions from the Swedish case

- The precautionary principle triumphs over sustainability goals
- Local impacts are rated higher than looming threats with catastrophic potential
- 'Green technology' need legal support and recognition of its benefits
- There is an elephant in the room

Thank you

