



Mussel farm location in the Baltic sea – Community acceptance or distrust

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Tasks

Investigation of social conflict/ acceptance regarding mussel cultivation facilities

- They are located in marine spaces already charged with local interests.
 - Natura2000 area, scenic qualities.
 - Local residents and summerhouse owners/users.
 - Leisure activities: e.g. angling, yachting, kayaking.
- Explorative investigation of local concerns

Guidelines for addressing social acceptance

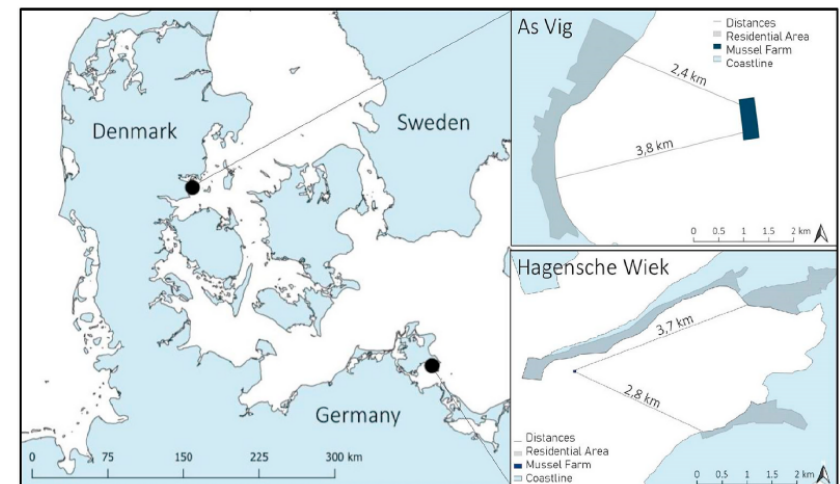


Fig. 1. Map.

Empirical studies

Questionnaire surveys

- Horsens Fjord / As Vig, Denmark, June-August 2018
 - 192 full replies, summerhouse owners
- Greifswald Bay / Hagensche Wiek, Germany 2018
 - 216 full replies, 75% holiday visitors, 25 % residents

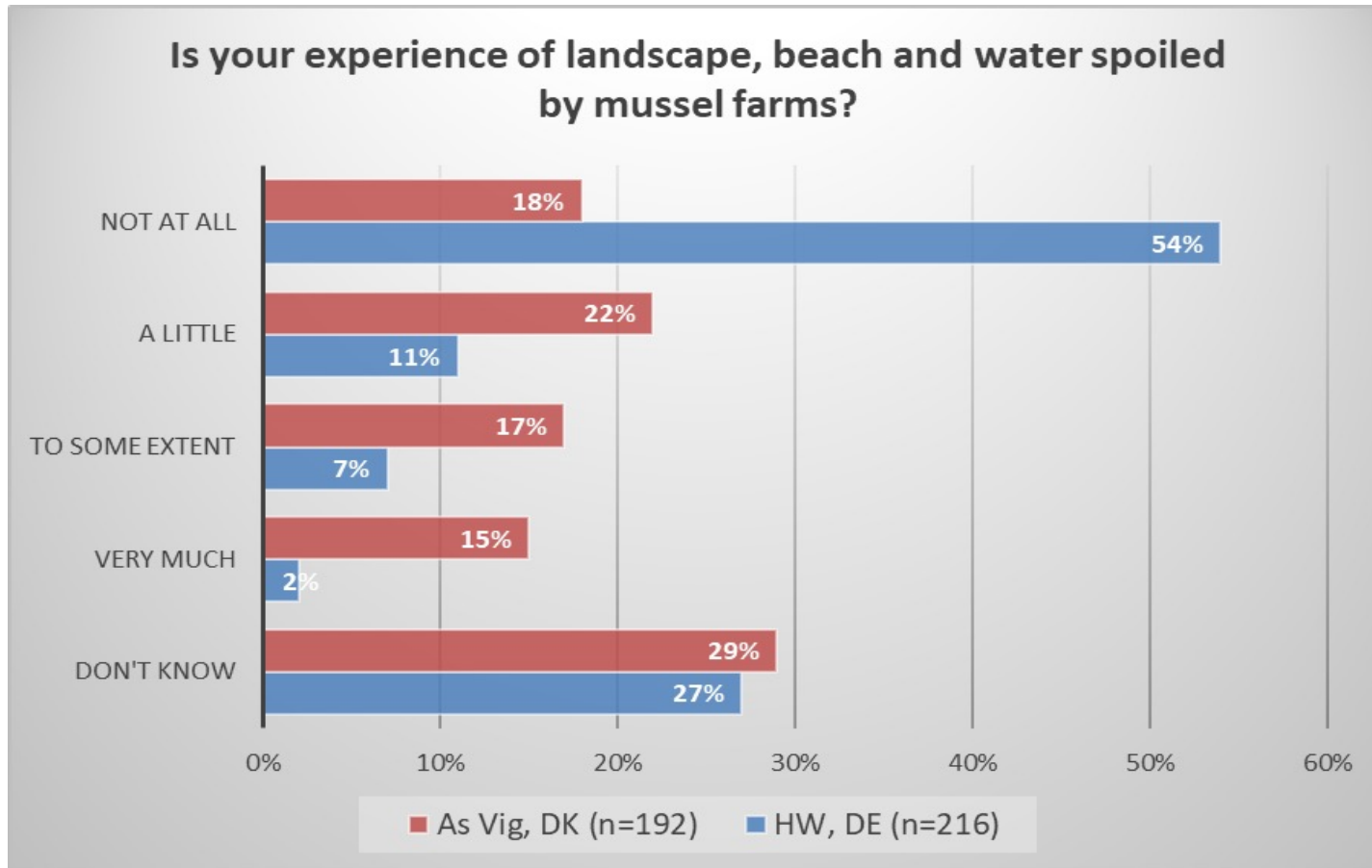
Stakeholder workshops

Stakeholder interviews

Media analysis (2013-2018)

Research results

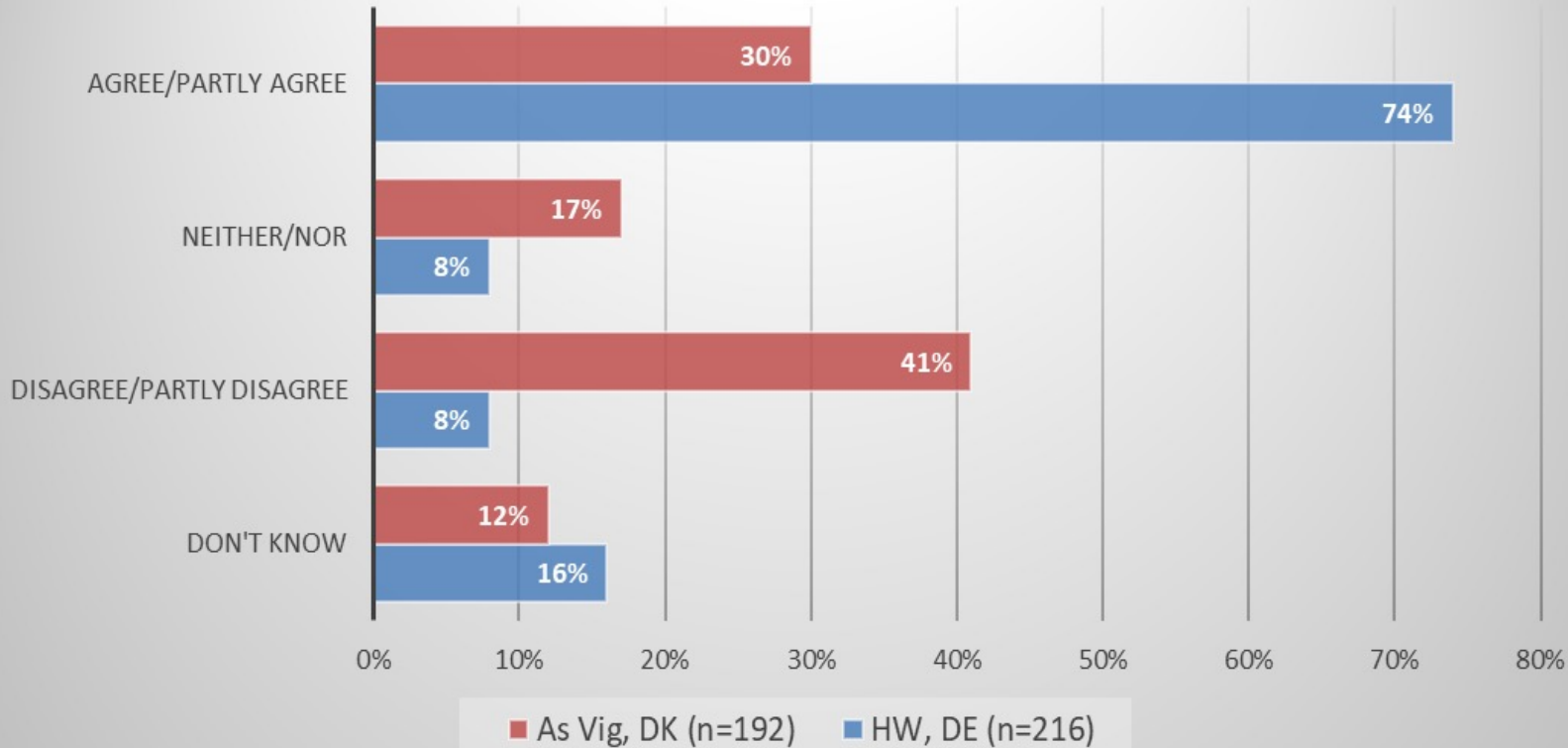
Approval rates (DK and DE)



Research results

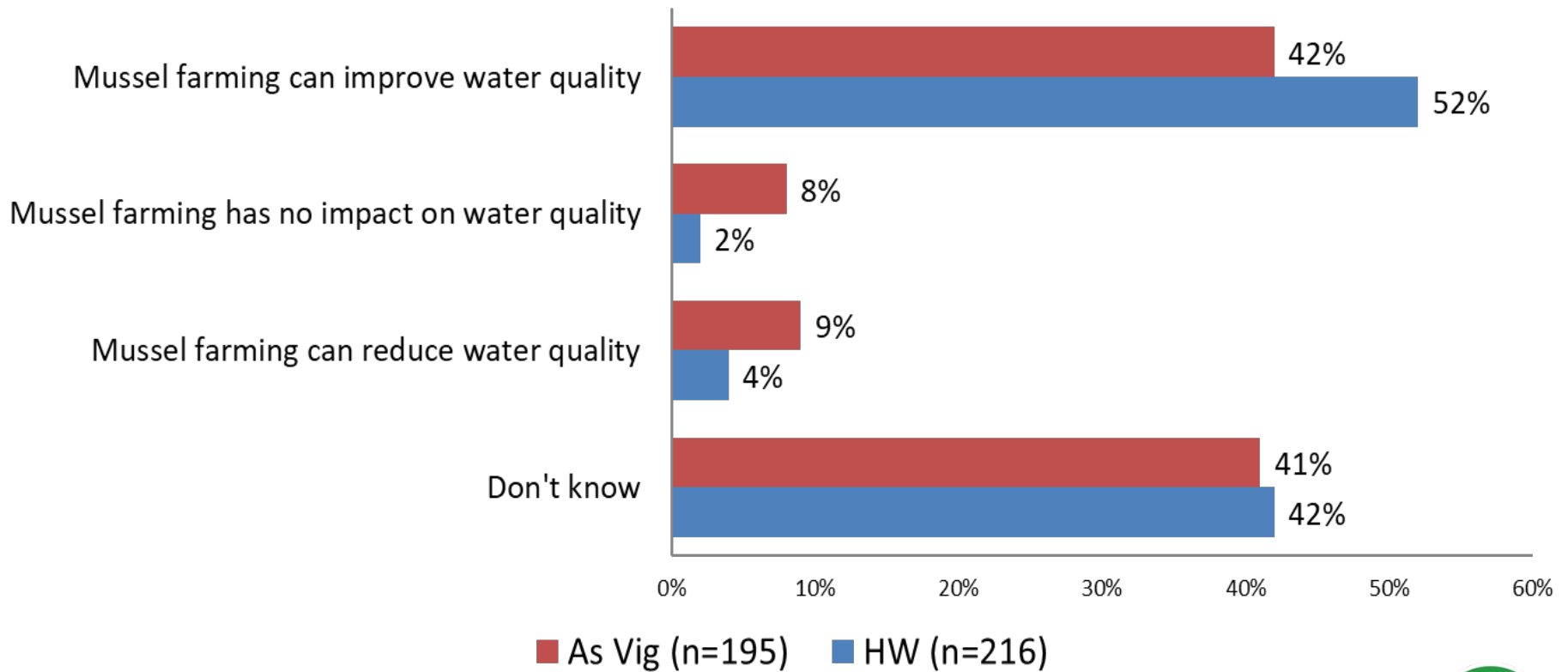
Approval rates (DK and DE)

"I don't mind that there is mussel farming in the area"



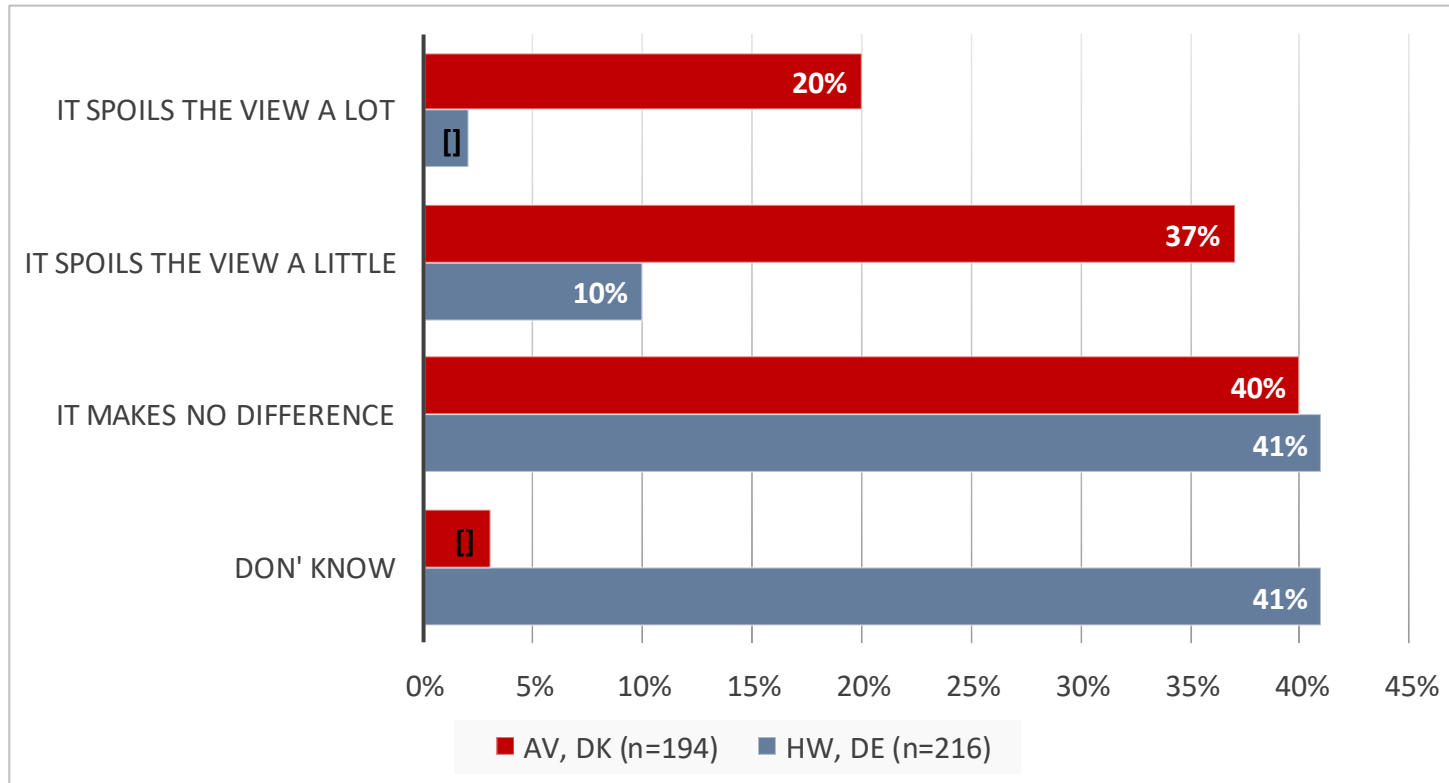
Research results

What is to your knowledge the impact of mussel cultivation on water quality?



Research results

In your opinion, how is the view affected by mussel/fish farming



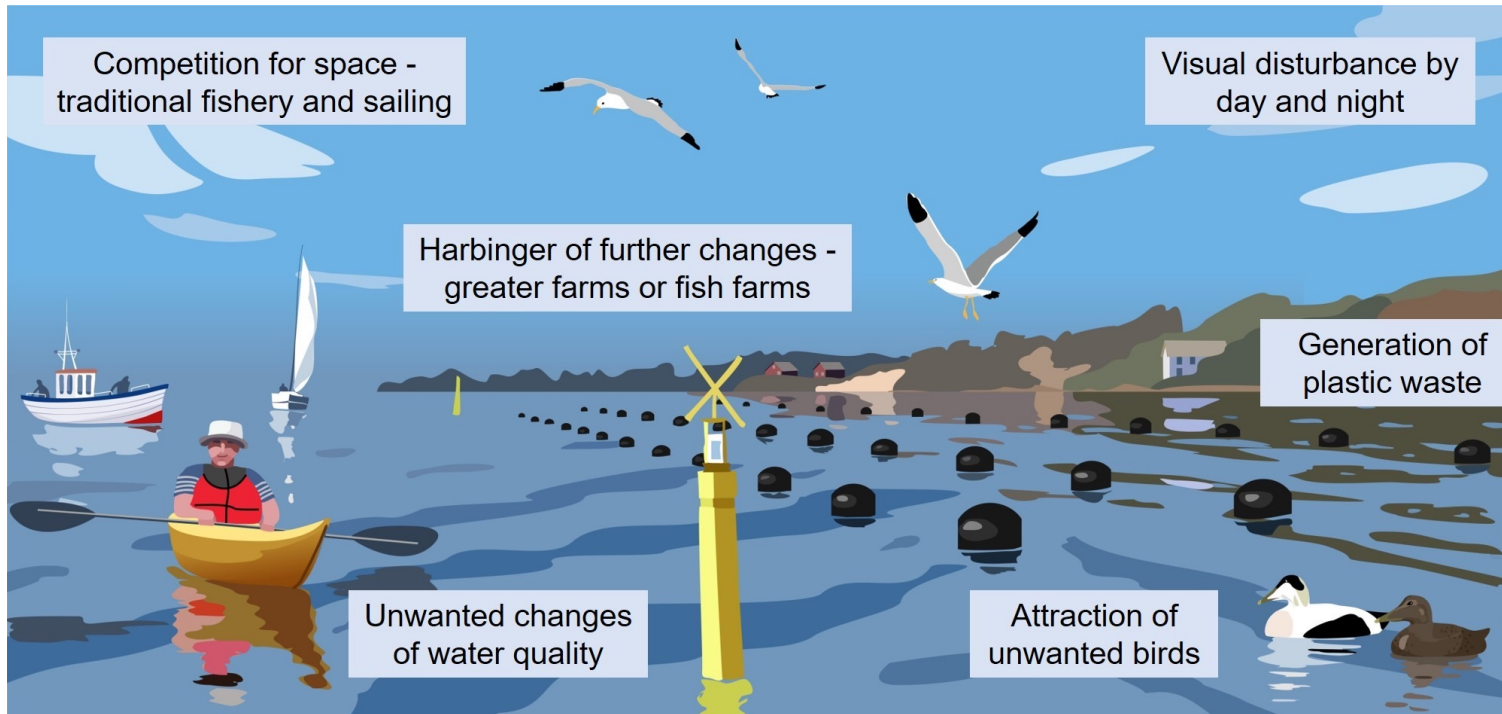
Differences between DK and DE cases

	As Vig/Horsens Fjord, DK	Hagensche Wiek / Greifswalder Bay, DE
Experience with aquaculture	Decades	One year
Assessment of water quality	50 %: It has deteriorated	45 %: Don't know + "No need for improvement"
Have visited the area 20+ years	72 %	37 %
Accommodated in their own summerhouse	98 %	13 %
First time visitors	None	36 %
Had not noticed any facilities	2 %	83 %

Main issues

Potential sources of in-acceptance

- Fish farming affects mussel farming
- Space matters
- Longing for undisturbed scenery/nature
- Lack of proper regulation and management



Fish farming affects mussel farming

- 82 % of the respondents in As Vig find that fish farming reduces water quality
- 67 % find that fish farms spoil their experience of the beach and the water
- Of 87 replies to the open question “Why do you think the water quality has changed?” 70 mention fish farms as a primary source.
 - Respondents complain that fish have vanished from the cove
 - and that the seabed has become muddy and slimy, where it once was sandy

All this affects people’s perception of mussel cultivation

Trust issue: Engenders distrust in aquaculture companies

Space issue: Waterscape gets crowded with production facilities

Space matters

Risk that all aquaculture facilities put together take up too much space.

- Concern that mitigation effect of mussel farms is insufficient (DK)
 - Especially if they are supposed to mitigate emissions from agriculture and fish farms
- Concern that the waterscape will be covered by aquaculture facilities (DK).
 - Cluttering the view/nature
 - Disturbing other activities.
- Concern that larger farms will cause problems for boating & fishing (DE)

“If the fish farms were on land, there would be many places you could put mussel farms without anyone being bothered.”

Scenery and nature

Facilities ruin the sense of undisturbed views over an open waterscape

Production facilities are located in Natura 2000 areas

- Against the point of marine protection
- Ruin the sense of real nature

(According to stakeholder interviews and local newspaper debate in DK & SE)

However: Perception of cluttered views is conditioned by the knowledge that fish farms are a source of pollution

Sources of acceptance

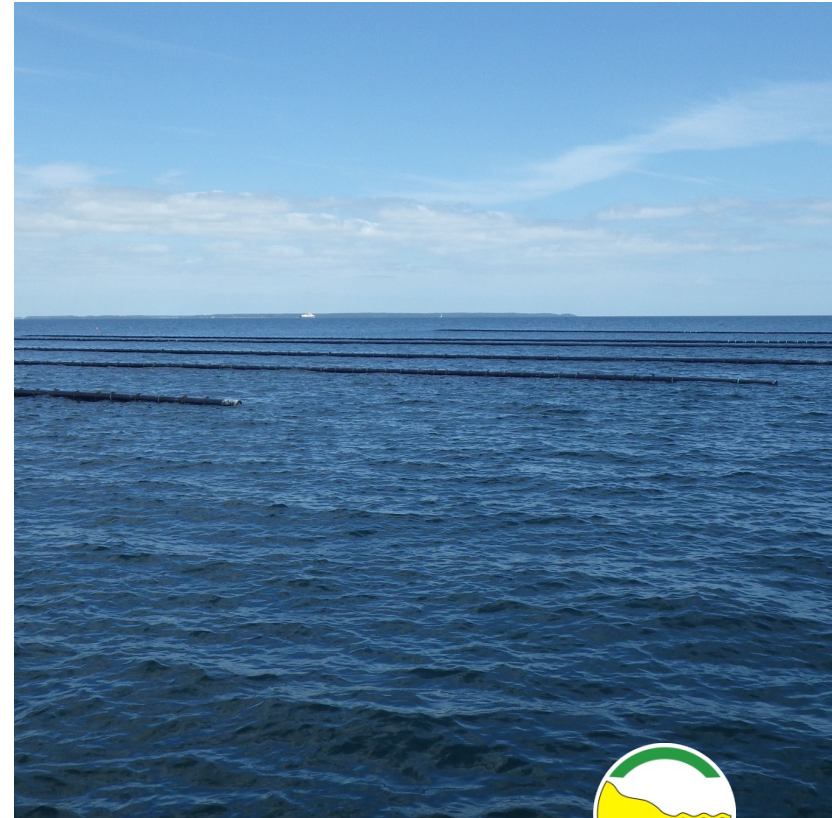
Mussel cultivation in accordance with local values

- Sustainability
- Common values
- Local identity

Stimulates local development

Good to be frontrunner

Prevents unwanted measures on land



Guidelines for social accept

- Identify, inform and involve key stakeholders
 - enables the use of local knowledge and identification of local concerns
- Inform the public actively and regularly (at public events, direct mails, local information channels or newspapers based on own press releases)
- Clarify the differences between fish farms and mussel farms
- Clarify the potential for water quality improvement in a clear and easily understandable manner, but do not overstate it.
- Investigate and consider all local uses and attractions in the area selected for a potential facility siting, including recreational uses, commercial uses, scenic values, protection status and the overall level of waterscape usage.
- Investigate, consider and address previous local experiences with aquaculture.
- Make sure that facilities are managed properly.



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Regulation and operation problems

Skive Fjord: Problems with loose buoys, loose lines and other waste
Block fairway, litter the beach

Owners of mussel farms do not always follow the state of their facility and react quickly to problems.

Greifswald: Plastic pollution from farms must be avoided

Horsens Fjord: Suspicion of cheating with mitigation measures

Bohuslän: Mussel farmers use areas on land against permissions

Blocking the space for other uses

Misuse of recreational and protected areas

Social acceptance depends upon proper operation of the facilities and no misuse of spaces which serve other functions for the public.