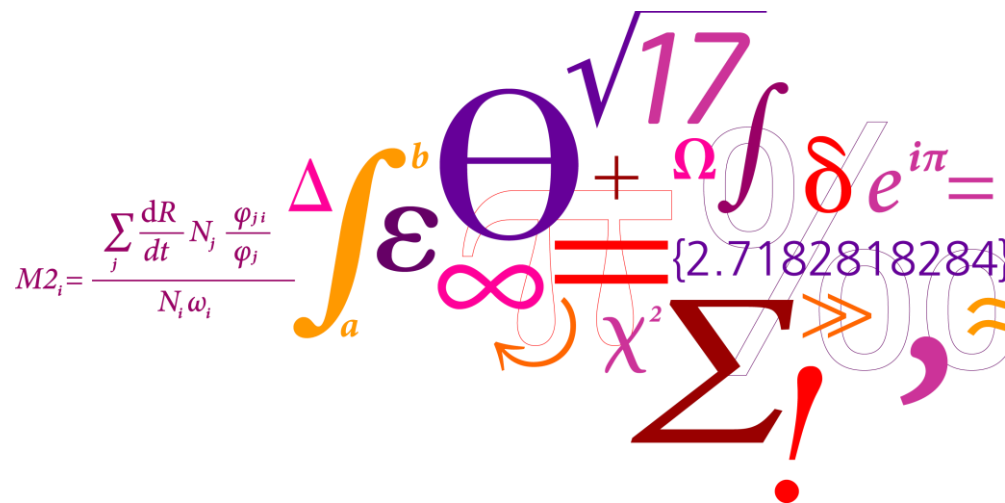


Aquaculture – challenges and possibilities examined through Danish case studies

Jens Kjerulf Petersen
 Danish Shellfish Centre



Challenges

Environmental impact

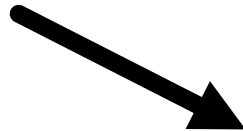
EU Water Framework Directive
EU Marine Strategy Framework Directive
EU Species and Habitats Directive

Coastal zone management

EU Maritime Spatial Planning Directive

Social acceptance

Place attachment
Trust and distrust



Case study L111

With Bill no. L111, the Ministry of Environment and Food in Denmark may allow the installation of new marine finfish aquaculture:

1. In WFD waters under condition of full compensation of emitted nutrients through mitigation farming (mussels/seaweed)
2. Outside WFD waters (MSFD waters) based on calculation of an environmental "scope" based on HELCOM recommendations on nutrient reduction demands and/or by compensation



Vedtaget af Folketinget ved 3. behandling den 1. juni 2017

Forslag

til

Lov om ændring af lov om miljøbeskyttelse

(Kompenserende marine virkemidler ved etablering eller udvidelse af havbrug)

§ 1

1. Lov om miljøbeskyttelse, jf. lovbekendtgørelse nr. 1189 af 27. september 2016, som ændret senest ved § 2 i lov nr. 463 af 15. maj 2017, foretages følgende ændringer:

1. I § 35 indsættes som stk. 3:

»Stk. 3. Miljø- og fødevarerministeren kan fastsætte regler om vilkår om etablering og drift af kompenserende marine virkemidler ved godkendelse af havbrug.«

2. I § 37 b, stk. 1, 3. pkt., ændres »§ 41, stk. 3,« til: »§ 41, stk. 4,«.

3. I § 41 indsættes efter stk. 1 som nyt stykke:

»Stk. 2. Medfører et havbrug, der er godkendt med vilkår om kompenserende marine virkemidler efter regler udstedt i

medfør af § 35, stk. 3, væsentlig forurening eller risiko for væsentlig forurening, kan tilsynsmyndigheden meddele påbud om at nedbringe næringsstofbelastningen. Miljø- og fødevarerministeren fastsætter nærmere regler om adgangen til at meddele påbud.«

Stk. 2 og 3 bliver herefter stk. 3 og 4.

§ 2

Loven træder i kraft den 1. juli 2017.

§ 3

Loven gælder ikke for Færøerne og Grønland.

Folketinget, den 1. juni 2017

PIA KJÆRGAARD

Environmental foot print of aquaculture matters – choice of crop important!

Aquaculture environmental impact can be mitigated (in terms of nutrients)

Social acceptance (or lack of)

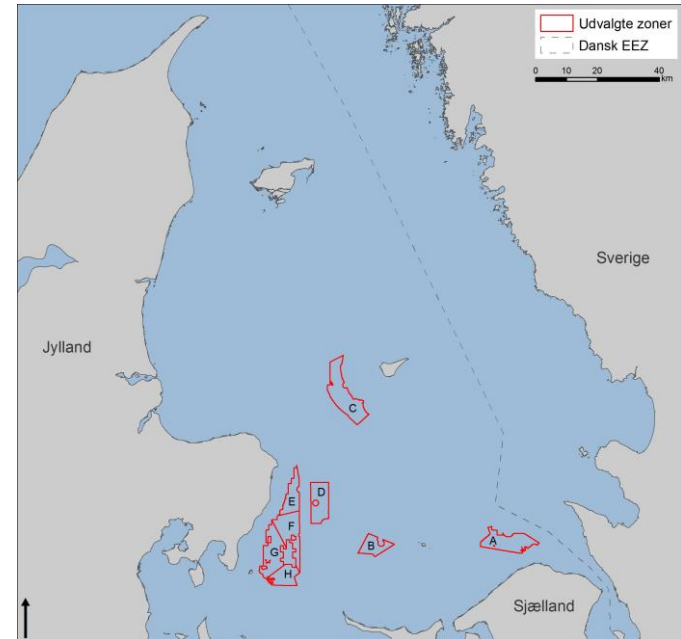
Protest

Several new targeted local action groups

Mayors across political parties

National NGO's

Local news media



Perceived threats:

- Marine environment –locally and nationally
- Failing income from tourism
- Escapees
- Salmon louse



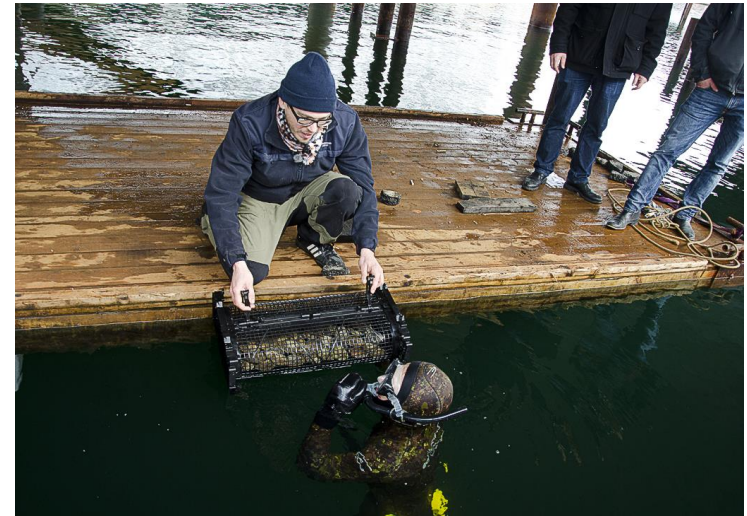
VS.



Case study sea gardens



A small piece of publically owned coastal water let to people organised in associations for social and recreational purposes (provisioning of sea food)



Not a restoration project It is about awareness of (farmed) seafood

Mini SWOT of aquaculture in EU

Strengths	Weaknesses
<ul style="list-style-type: none"> • EU and national strategies to increase aquaculture production • Sea food security with declining wild populations • Low feed conversion – low environmental foot print • Healthy food 	<ul style="list-style-type: none"> • Environmental impact in relation to EU directives especially nutrients but also additives eg medicine, copper • Visual impact • The “undisturbed sea” in contrast to land
Opportunities	Threats
<ul style="list-style-type: none"> • Choice of crop - extractive species • Mitigation • Empowerment of consumers/local communities in relation to farmed seafood - sea gardeners (\approx anglers) • Rural job creation 	<ul style="list-style-type: none"> • Social acceptance • Social acceptance • Social acceptance • Space in the coastal zone