



Roundtable report

Maritime Spatial Planning and Aquaculture, 28th Aug 2014, WMU, Malmö

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Goals of the workshop

The goal of the workshop was to bring MSP and aquaculture stakeholders together and discuss how MSP should relate to aquaculture.

Participants

Participants were aquaculture users, authorities, NGOs and academia with representatives from Sweden, Norway, Denmark, Germany, Poland and Latvia (see attached participation list).

Summary of presentations and discussion points

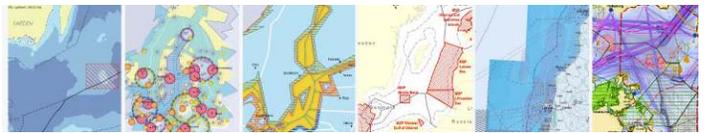
Susanna Minnhag, Kalmar Sound commission

Susanna presented the [Aquabest project](#). The project aimed to find 12 suitable locations for mussel farms in Kalmar County, on the Swedish east coast. After selecting the areas using a GIS data analysis, 12 areas were selected for real life testing. Despite several minor issues with regulations and conflicting uses, the local county administration saw no obvious conflicts and issued an official statement of this. Local consultations revealed that a few of these areas were in fact unsuitable for aquacultures, mostly because of conflicts with tourism or industry, for example water recreation, wastewater discharge areas or protected seal and bird areas. A successful public mussel farm competition was organised to raise awareness and to test the areas, a few attempts of mussel farms had previously been made in the area. Today, there are three small-scale mussel farms in the area, one owned by the municipality and two owned by private actors. It was concluded that public consultations are important, and that a lack of experience in large-scale mussel farming is a problem. This is because small-scale examples do not adequately reflect the difficulties and conflicts of a large scale farm when it comes to the effects on other organisms, legal issues etc. Kalmar County has received seed money for another project on aquaculture called [Baltic Blue Growth](#).

The discussion underlined the need for environmental subsidies for mussel farming to become economically viable. In addition to nutrient uptake, mussel farms have a positive impact on the transparency of the water, which is currently not subsidised. The drivers of MSP locally were also discussed. Is the industry, the municipality or the regional planners the driving force? The existing regulatory problems both spring from conflicting the EU directives and regulations, and from a lack of basic data in many areas.

Eva Hammarström, County administrative board Kalmar

Eva reinforced what Susanna said, as they have worked closely together and underlined that there has never been any large-scale aquaculture so far. Other issues of importance are the settling conditions in different parts of the sea.



The application process in Sweden starts with the question: Who owns the actual water? A permit from the owner is needed, as is a permit under the fisheries legislation. Questions concerning species, risks and localisation are addressed during the permit procedures. An approval is then required from the municipality, based on compliance with the Environmental Code in Sweden, which corresponds to an Environmental Impact Assessment. This approval is linked to the obligation to conduct environmental monitoring. Monitoring is also required, if the aquaculture products are intended for consumption, in accordance to the food legislation.

Malin Skog, Swedish Board of Agriculture

Malin introduced the Swedish Board of Agriculture that, among other things, is responsible for the promotion of aquaculture and the [national strategy for aquaculture](#). Tied to the national strategy is an [action plan](#), which is currently under development. The Board is also responsible for collaborations and external monitoring. It is the Swedish Government's expert authority towards the EU, contributes to dissemination and information through [a webpage](#) and as partners in research projects, for example [Aquabest](#) and [Submariner](#). The board handles applications for the Swedish part of the [European Maritime and Fisheries Fund 2014-2020](#), which is late and has an expected start during summer 2015. One of these measures relates to aquaculture and you can apply for funds for innovation projects, investments, new aquaculture farms, municipality and region identification and mapping of suitable areas, animal health and welfare and knowledge transfer and information. Of note is that closed systems get a better evaluation score and corresponding chance to get funding. This funding is around 30% of the investment.

Future issues that the Board is examining are fish culture clashes with eutrophication goals in the WFD, MSFD and HELCOM and the national legislations these goals results in. As the mussel farms take up nutrients, they were also interested in compensation measures for fish cultures, land based recirculating systems and extremely oligotrophic hydropower dams.

Malin emphasized the need of an overview of what is going on in the Baltic Sea in the field of aquaculture and to further examine the different conflicts of interest on a deeper level.

Per Dolmer, Orbicon & Hjarnø Havbruk

Per described the multitrophic aquaculture at [Hjarnø Havbruk](#) and the fish, mussel and seaweed system used. He highlighted the problem that only around 12% of the nitrogen output from the fish farms is bioavailable to the mussels as particles and that an intermediary of phytoplankton is needed. He also highlighted the additional goods and services the aquaculture provided in the form of a reef effect in the farm area and the food source the farm provide for an eider population in a protected area nearby. The challenges Per saw were primarily the optimisation of low cost production, the impact on the ecosystem, the development of a mussel market, getting subsidies for ecosystem services in the form of restoration and nutrient, and the public opinion on site location of the farm.

The regulations in Denmark mean that the reduction of nutrients due to the mussels is deducted from nutrient production from the fish farms and strive towards a zero emission goal. No direct compensation is paid for the mussel farm's nutrient reduction service. The MSFD has still not been translated into any real regulations, but the Danish aim is to increase the aquaculture production by 50% by 2020.

Johan Wagnström, County Administrative Board, Skåne



Johan discussed the Skåne County view on aquaculture and highlighted that, contrary to Denmark, Sweden wants a net loss of nutrients, rather than zero emissions. Environmental impacts were also discussed in relation to areas that were close, but in different nations, for example Bornholm and Skåne. It was argued that the same rules should apply in these areas. Another point was the CO₂ emission cost for mussel and fish farms, and the public view on and acceptance of aquaculture.

Helene Ek Henning, County Administrative Board Östergötland

Helene from the [LOVA funded Baltic EcoMussel](#) project presented the application procedure in Sweden, including the permits needed and regulations that must be taken into account when applying, as well as the environmental monitoring and national food agency regulations.

A question arose about selling locally produced mussels branded as such straight to the restaurants, as a German producer named Tim Staufenberg did [in Kiel](#). Would that be viable, as organic and locally produced food is increasingly in demand? There is still a difference between national laws and EU regulations in the aquaculture sector, which can have adverse effects. This was illustrated by Tim's story, when he lost an entire season harvest due to a EU administrative issue beyond his control. Malin also interjected that a group of municipalities on the northwestern Swedish coast are developing a [joint maritime spatial plan](#) that includes aquaculture.

Øivind Bergh, Institute of Marine Research

Øivind presented the [COEXIST project](#). The project has identified the spread of pathogens as a key issue for large-scale aquacultures. It is an expensive "learning by doing" process where diseases can amplify if not managed correctly. This would give significant pressure to the wild stock, as the collapse of the Chilean salmon farms due to insufficient regulation have proved. Management tools used are the distance between the farms, the number of animals per farm, fallowing, restriction of movement of animals and on the restriction of sources of juveniles. The problem is industry wide. It does not matter what one fish farm does, it matters what all fish farms do, for example in coordinating fallowing, plans for new farms and synchronized treatments.

There are no mussel farms in Norway, probably due to the small market.

Conclusions

There are still several challenges in the relatively new area of aquaculture in the Baltic Sea. The projects that have been tested all emphasise problems of economic viability and the need to demonstrate the value of mussel farming for the environment. International guidelines and cooperation would be helpful for resolving conflicts with nature conservation, recreation/tourism (sailing, boating, marinas, landscape), fish recruitment, shipping etc.

From the mussel farming perspective, focus should be on the identification of areas with good growing conditions. These conditions are well known in most coastal areas today.

Of great importance is the issue of public acceptance: On land, the agricultural production of food is widely accepted, but at sea, acceptance is not strong. An additional issue for the public may also be the landscape view. The social and cultural acceptance takes time and could be facilitated by a structured process. Within this process, there is a need to resolve what ecological footprint can be accepted. The policies of the Baltic Sea countries differ quite a lot here today.



The most favourable solution from the discussions would be subsidies to the mussel farms. This would be compensation for providing ecosystem services in the form of nutrient uptake and improved water transparency. The experience of large-scale aquacultures in the Baltic Sea is very limited and real cases are needed to investigate the effects of scaling, for environmental regulations and permits, environmental impact and placement of aquacultures. Aquacultures outside a single nation's jurisdiction will probably be too inefficient to be viable (mostly because of logistical challenges), but regulations and permits need to be more harmonised between neighbouring countries. One very concrete example is the lack of corresponding contact persons in Baltic Sea neighbour countries for question like aquaculture. This harmonisation might be an area where transnational MSP can play a role.