

Baltic Sea blue mussel farming Operational Decision Support System ODSS



Figure 1: Homepage of the ODSS tool.

Introduction

As part of the Baltic Blue Growth project, a new tool called the Operational Decision Support System (ODSS) has been developed. The ODSS allows farmers and relevant stakeholders to share and consult data regarding mussel farming in the Baltic Sea. With the help of the ODSS, the most optimal locations for mussel farms and their environmental impacts can be assessed.

The Operational Decision Support System

The ODSS is a user-friendly geoportal tool that combines novel spatial modelling products of environmental background (e.g. mussel growth potential) and mussel farm related ecosystem services (e.g. nutrient extraction services) with spatial data related to marine resources usages with an emphasis on fishery, eutrophication, shipping, nature protection. Thanks to this, it is possible to quickly identify spatial conflicts between the farms and other users.

The geoportal features an innovative spatial modelling framework which shows in which locations mussel production has the greatest

potential as well as where nutrient removal is the highest – this enable quick identification of the most suitable areas for mussel's cultivation.

The ODSS provides relevant stakeholders with valuable data and thanks to easy to grasp visualisation of spatial conflicts it can support management decisions and facilitate dialogue between mussel farmers and other stakeholders about the socioeconomic and environmental impacts and benefits of the mussel's cultivation in the Baltic Sea region. The ODSS tool may advance the transboundary co-operation among end-users, improve the access to knowledge and data as well as creation of joint responsibility and common understanding on the mussel farming potential and its sustainability aspects in the Baltic Sea region.

The pan-Baltic maps are visible in the portal under the subsection "Plan your FARM". These layers include also the growth production (biomass yield) and nutrient removal (closing the nutrient loop). If the users are interested to achieve additional data for the potential location, this tool enables to separate/extract some information for any

hypothetical farm areas by drawing a polygon in the map. Thus, besides the prediction of biomass yield and nutrient removal service, the portal offers

information on the local physical and chemical parameters, and some important human uses in the indicated area (see Figure 2).

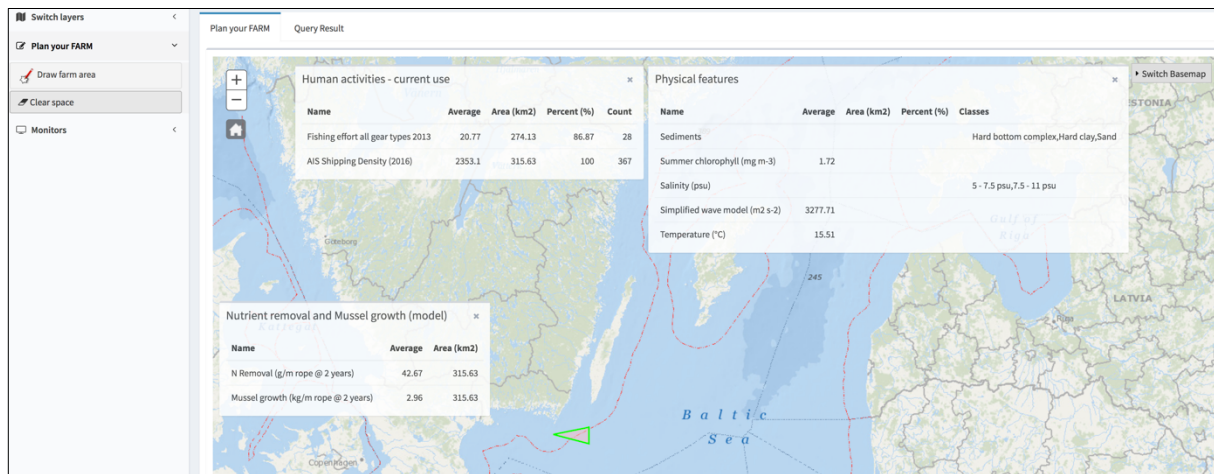


Figure 2: Planning a mussel farm through the ODSS tool.

As the Baltic Sea ecosystem is fragile with its processes and human impacts (e.g. eutrophication), it is important to address the key challenges internationally. The Baltic Blue Growth project offered an opportunity to focus on the transboundary issues of marine environmental protection and management in a holistic cross-border manner by seeking sustainable solutions to mitigate adverse impacts of eutrophication caused by the legacy nutrients. Multidisciplinary

cooperation and communication between stakeholders across the Baltic Sea Region, ensured an effective transboundary engagement of key actors. The ODSS is integrated into the SUBMARINER website, it will be included in the promotional activities of the INTERREG BSR Blue Platform, and the plan is to integrate it with GRASS project that is developing new layers for macroalgae production.



This factsheet has been elaborated by the Baltic Blue Growth project. The aim of Baltic Blue Growth is to advance mussel farming in the Baltic Sea from experimental to full scale to improve the water quality and to create blue growth in the feed industry. 18 partners from 7 countries are participating, with representatives from regional and national authorities, research institutions, private companies. The project is coordinated by Region Östergötland (Sweden) and has a total budget of € 4.7 million. It is a flagship project under the Policy Area "Nutri" of the European Union Strategy for the Baltic Sea Region (EUSBSR).



Lead Partner:
Region Östergötland
Contact: Lena Tasse
Lena.Tasse@regionostergotland.se



Project communication:
SUBMARINER Network for Blue Growth EEIG
Contact: Lisa Simone de Grunt
lsdg@submariner-network.eu

www.balticbluegrowth.eu
#BalticBlueGrowth

