



## **Form for organisers of seminar or workshop at the 7<sup>th</sup> Strategy Forum of the EUSBSR in Stockholm 8 – 9 November**

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### **Heading for webpage**

Save the Sea in 20 years – innovative methods to extract nutrients surplus from the sea water

### **Heading for Smartphone app**

Save the Sea in 20 years, extracting nutrients

### **Category**

Political Seminar

### **Main organiser & contact details**

Swedish Board of Agriculture, Hans-Olof Stålgren,  
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### **Partners and participants**

Moderator: Angela Schultz-Zehden, Managing Director SUBMARINER Network/Sustainable-projects GmbH

Speaker: Sven-Erik Bucht, Minister of Rural Development, Sweden (t.b.c)

Speaker: Bengt Simonsson, Teknikmarknad and KTH Royal Institute of Technology, Stockholm

Speaker: Susan Løvstad Holdt, Assistant Professor, Technical University of Denmark, National Food Institute

Speaker: Fredrik Gröndahl, Associate Professor, KTH Royal Institute of Technology, Stockholm

Speaker: Otilia Thoreson, WWF

In the panel: Gunno Renman, Professor, KTH Royal Institute of Technology, Stockholm

In the panel: Anna Thore, Kalmarsunds Commission

In the panel: Jari Setälä, Natural Resources Institute Finland, LUKE (t.b.c.)

In the panel: Dalia Gurskienė, Chief Expert of Foreign Relations, City of Panevėžys, Lithuania

### **Time and venue**

[To be filled out after consultation with your contact person from the Strategy Forum Team.]

### **Description**

Can the eutrophication of the Baltic Sea be tackled by extracting nutrients from the sea water? Can biological methods like mussel or algae farming have an impact? Are technical methods for extracting oxygen free sediments from the sea floor another solution? What are the benefits and risks?

EUSBSR Sub objective: Save the Sea, Clear water in the sea



### **Message to press**

To save the sea we need to reduce the nutrients also by extracting them directly from the sea water

### **Elaboration**

Eutrophication is one of the foremost biggest threat to the marine ecosystem in the Baltic Sea. The input of nutrients (N,P) increase the primary production and causes severe environmental and social problems around the Baltic Sea region. That is why reduction of nutrients in the Baltic Sea is one of the major tasks to save the sea. Great efforts have with success been done to reduce the nutrient input from land, which need to be continued.

Phosphorus is a major driver for algae blooming and disturbance in the nutrient balance in the Baltic Sea. The increased bottom deposit of organic matter can cause anaerobic conditions and release of phosphorus from the sediments (internal loading). Even with large investments to further reduce the run off from land there will still be major problems in the sea. Extracting nutrients directly from the water of the Baltic Sea is therefore a necessary complementary activity in order to fulfil the priority “Save the Sea”.

Mussels or algae farms which extract nutrients from the water is a promising method which combines environmental services with a bio-production, which is truly in line with the concept of bioeconomy. The products can be used as food, animal feed, energy source etc. What are the impacts on the nutrients level at a local and a more general level? Is there an economy in this? Another method is to extract oxygen free sediments from the sea floor. The phosphorus could then be extracted and recycled and used in agriculture, contributing to a circular economy in practice. What are the benefits and risks? There are also methods to bind the phosphorus in the bottom sediments.

The seminar will present examples of extractive aquaculture as well as sediment extraction from the point of view of aquaculture businesses, researchers, tourism entrepreneurs politicians, and environmental protection organisations. The outcome will be a better understanding of many complementary methods to decrease the nutrient load of the Baltic Sea as ways of saving the sea faster.

The seminar specifically addresses the objective 'Save the Sea in the EUSBSR and the sub-objectives: achieved good environmental status by 2020, ensuring clean waters in the sea and rich and healthy wildlife. It also addresses the aims of the PA Bioeconomy where it is stated in the Action Plan: “Aquaculture forms part of the developing blue bioeconomy which strives to find new innovative uses of aquatic resources that adds value to the conventional value chains.”