



Presentation from  
**2016 World Water  
Week in Stockholm**

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# Bringing blue bioeconomy into practice

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# What is blue bioeconomy?

## Nordic definition (draft)

***Blue Bioeconomy means value creation based on sustainable and smart use of renewable marine and freshwater resources.***

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# Blue bioeconomy and the Agenda 2030

## Blue bioeconomy can deliver on most of the UN SDG's, if not all, for example

- End hunger, achieve food security and improve nutrition (Goal 2.)
- Ensure access to water and sanitation for all (Goal 6.)
- Promote inclusive and sustainable economic growth, employment and decent work for all (Goal 8.)
- Build resilient infrastructure, promote sustainable industrialization and foster innovation (Goal 9.)
- Reduce inequality within and among countries (Goal 10.)
- Conserve and sustainably use the oceans, seas and marine resources (Goal 14.)
- Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss (Goal 15.)

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# Examples of blue bioeconomy

**1. Farming fish and recycling nutrients**

**2. Full utilisation of fish**

**3. Blue care**

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# Case 1

## Farming fish and recycling nutrients



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# The importance of fish farming

- **Fish is a major food source for people throughout the world and the main source of protein for 3 billion people**
- **Most of those who rely on fish for their livelihood are in developing countries**
- **Fish farming is the fastest growing sector of global food production**

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# More farmed fish than wild fish

- **Most of the fish for human consumption is already farmed. The volume of farmed fish has also exceeded the production of beef.**
- **It has been predicted that fish farming will produce nearly two thirds of the global food fish supply by 2030**
- **Aquaculture thereby makes a significant contribution to global food security and economic growth**

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# Effects of fish farming

- **Fish farming can have negative effects on the aquatic environment e.g. in the form of excessive nutrient (phosphorous and nitrogen) release**
- **This is a specific problem in enclosed water areas such as the Baltic Sea or inland waters**

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# Recycling nutrients through fish feed

- **A new fish feed made of Baltic herring now offers the possibility to increase fish farming for the benefit of the consumers and the marine environment**
- **The more we farm fish with this feed the more we will take out phosphorous from the Baltic sea**
- **This closed loop of nutrients is being introduced in Finland and can serve as an example for other areas**

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# Case 2

## Full utilization of fish



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# Using all parts of fish

- **Fish as food is good for your health**
- **Also other parts of fish can be utilised for high value products such as fish oil, fish meal, collagen from fish skin, calcium, dried products etc.**
- **A lot of research is underway and new products are coming into the market**

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# Case 3

## Blue care



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# Wellbeing from aquatic environments

- **Scientific studies show that exposure to aquatic environments is associated with lower psychological distress**
- **Nature also reduces blood pressure, muscle tension and the level of stress hormones**
- **These findings may lead to new and effective treatment methods and therapies**

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# A Nordic Road Map for Blue Bioeconomy

- **Finland leads a Nordic program for the development of a Nordic Road Map for Blue Bioeconomy**
- **A draft Road Map has been formulated and will be implemented from the start of 2017**
- **The main objective is to enhance Nordic research, development and innovation collaboration on Blue Bioeconomy**

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# The Road Map (draft)



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# Thank you!



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