

cool blue: baltic

Policy brief



Funded by
the European Union

September 2024

POLICY BRIEF

REGENERATIVE OCEAN FARMING IN THE BALTIC SEA REGION

Regional flagship projects supporting sustainable blue economy in EU sea basins



Executive Summary

The Baltic Sea coastal and inland fisheries are mainly regulated by each Member State in the region through their **national legislation**. While coastal fisheries are managed nationally, fisheries advice is provided by ICES and STECF. The key species in Baltic Sea are **cod, herring, sprat, salmon, and plaice** and these fisheries are all managed using **TACs** (total allowable catches). To overcome the effects of **pollution, eutrophication** and **climate change** on marine **ecosystems, fisheries** and **aquaculture**, policymaking relies on input from the scientific community in an **ecosystem-based approach**, one of the key principles of the CFP. These scientific data clearly demonstrate **negative ecological and economic trends** in the Baltic Sea. **This calls for a new approach** to ecosystem, fisheries and aquaculture management, beyond MSY (maximum sustainable yields), compensation (e.g. fuel, repair or loss-of-income subsidies) or passive conservation measures (e.g. MPAs). This policy brief advocates reversal of these negative trends via **integration of regenerative ocean farming (or low-trophic aquaculture of algae, shellfish and salt-tolerant plants) into national legislation and fisheries management strategies**, to provide a lifeline for small-scale coastal fishers, constituting 92% of the Baltic fleet, while creating new opportunities for **bioremediation, young people, community-led local development, socioeconomic diversification, coastal community cohesion and resilience**, as well as supporting **urban-to-rural migration** and **year-round employment in coastal areas**.

The problem

- The problems identified are 1) **chronic eutrophication** in the Baltic Sea; 2) **chronic depopulation** of rural areas; 3) **deteriorating employment** in small-scale coastal fisheries; 4) **loss of indigenous skills and knowledge** and 5) **lack of new recruits** to sustain local and regional maritime economies
- Projections in global seafood production anticipate a **50 million tonne seafood supply gap** from “business as usual” fisheries and aquaculture by 2050.

Its significance

- In 2021, as much as **92%** of the total number of Baltic Sea vessels belonged to the small-scale coastal fleet (SSCF)
- The total number of people employed onboard the small-scale vessels amounted to about **4.650 fishers** (11% less compared to 2020) or 2.040 FTE (12% less compared to 2020).
- In 2021, the SSCF contributed **75%** (or 62% in FTE) of the total employment in the Baltic Sea fishery.
- The small-scale fleet accounts for **8% of weight** and **26% of the landed value** from the Baltic Sea.
- From the top 10 most profitable segments, 7 belonged to **pelagic trawlers**, 2 to **demersal trawlers** and 1 to **passive gear vessels below 10 metres**

Further implications

- Continued decline of Baltic fisheries can lead to negative impacts on **employment** levels, **health services**, local coastal **economies**, **food security**, **social cohesion** while compounding **rural-to-urban migration**.
- Regenerative ocean farming can contribute to achieving **Good Environmental Status (GES)**; to **soil remediation** through biostimulants; **mitigate methane emissions** and in agriculture feeds; **store carbon** in biomass and biochar; **displace fossil-based products** (e.g. bioplastics); improve animal and **human nutrition** and **secure domestic seafood supply** in the face of emerging geopolitical threats.

Methodology

- Data and policy input for this policy brief were taken primarily from the STECF 2023 Annual Economic Report on the EU Fishing Fleet (STECF 23-07), the PlanetTracker “Aquafailure” report (2023); the COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL “Sustainable fishing in the EU: state of play and orientations for 2025” and Underwood et al “Settlement and recruitment of fish in mussel farms”, 2023.

Key messages

- The Baltic Sea is **chronically eutrophicated**, which hinders fish stock recovery
- Fishing efforts (Days at Sea) have **decreased by 25%** between 2013-2020
- In 2021, Baltic Sea fleet consumed an estimated **51.1 million litres of fuel**
- TAC (total allowable catch) quotas of commercially important species (cod, herring, sprat and salmon) in the Baltic are **on a downward trend** to protect fish stocks
- As a result, the **volume** and **value** of Baltic fish landed in 2021 were **21%** and **28%** lower compared to the 2013-2020 average respectively
- Cod **landings’ value decreased** as much as **91%**, Baltic herring **declined by 31%** and sprat **decreased by 6%** in 2021 compared to the 2013-2020 long term average
- The profitability of the Baltic fleet **decreased** in 2021 (42% net profit decrease compared to 2020) with Sweden, Poland and Finland making most profit.
- Increased fuel costs** and **lower landings revenues** (caused by TAC cuts) were two main reasons that negatively affected profitability of the Baltic fisheries in 2021
- The **GVA** generated by the Baltic fleet in 2021 was **EUR 88.1 million**, a **19% decline** compared to 2020 GVA (EUR 109.2 million), with an especially sharp decline in Germany and Denmark.

Whereas...

- Low-trophic aquaculture can **support fish stock recovery** and **reverse eutrophication**
- Low-trophic aquaculture creates **alternative income streams** for small-scale fishers and **economic diversification** in **processing, tourism** and **retail sectors**
- Subsidies must shift** from e.g. fuel subsidies towards **restoring and managing the marine environment, monitoring** and **data collection**.
- Subsidies must shift** from fisheries to the development of **regional regenerative aquaculture value chains** and **business support** for small-scale fishers, young **entrepreneurs** and **coastal communities**
- National aquaculture **licensing procedures** for low-trophic aquaculture **must be simplified** and **harmonised** to **allow economic diversification and innovation to emerge**

Policy options, pros & cons

Option 1: Do nothing

PRO: No action required CON: Future costs (unemployment, environmental damage)

Option 2: Continue compensating fishers for fuel, repairs, or not to fish

PRO: Reduced fishing pressure CON: Unsustainable; creates dependence

Option 2: Continue reducing fishing TAC quotas

PRO: Reduced fishing pressure CON: Increased pressure on fishers (unemployment)

Option 3: Provide re-training of fishers in offshore energy

PRO: Increased employment CON: Training costs; skills gap

Option 4: Extend trawling limits

PRO: Reduced environmental damage; ecosystem and fish stock recovery

CON: Political and administrative effort; lack of standard monitoring frameworks

Option 5: Extend MPAs and passive conservation areas

PRO: Reduced environmental damage; ecosystem and fish stock recovery

CON: Monitoring and enforcement requirements; exclusion of other activities

Option 6: Subsidise active ecosystem restoration measures

PRO: Ecosystem and fish stock recovery

CON: Political and administrative effort; lack of standard monitoring frameworks

Option 7: Subsidise fishers in low-trophic aquaculture

PRO: Transferable skills; employment; economic diversification

CON: Political and administrative effort; lack of standard monitoring frameworks

Option 8: Integrate regenerative aquaculture into national aquaculture and bioremediation strategies

PRO: Economic diversification; potential for co-location & multi-use of space; improved ecological and economic outcomes

CON: Political and administrative effort; lack of standard monitoring frameworks

Option 9: Develop dedicated licensing and monitoring procedures at the national or EU level for low-trophic aquaculture

PRO: Economic diversification; business development; innovation; improved access to space

CON: Political and administrative effort; lack of standard monitoring frameworks