COASTAL BIOGAS – **C**LUSTER **O**N **A**NAEROBIC DIGESTION, ENVIRONMENTAL **S**ERVICES AND NU**T**RIENT REMOV**AL**

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The challenge

Eutrophication has both ecological and social consequences and is one of the major environmental problems in the Baltic Sea. At the same time there is a need for a transition from a fossil based to a sustainable bio-based society.


Algae blooming
©Riku Lumiaro/SYKE


A dead zone
©Baltic Eye

The project focuses on the removal of nutrients from the Baltic Sea by collecting cast seaweed to counteract eutrophication. The seaweed will be used as a co-substrate for anaerobic digestion.

Furthermore, the digestate can replace synthetic fertilisers and hence, contributes to closing the nutrient (N & P) cycles.

The produced biogas can be utilised for electricity, heat and bio-fuel production.

The main objective of the COASTAL Biogas project is to provide solutions based on anaerobic digestion of cast seaweed to coastal regions to tackle eutrophication, contribute to the transition to a circular bio-economy and improve prosperity.

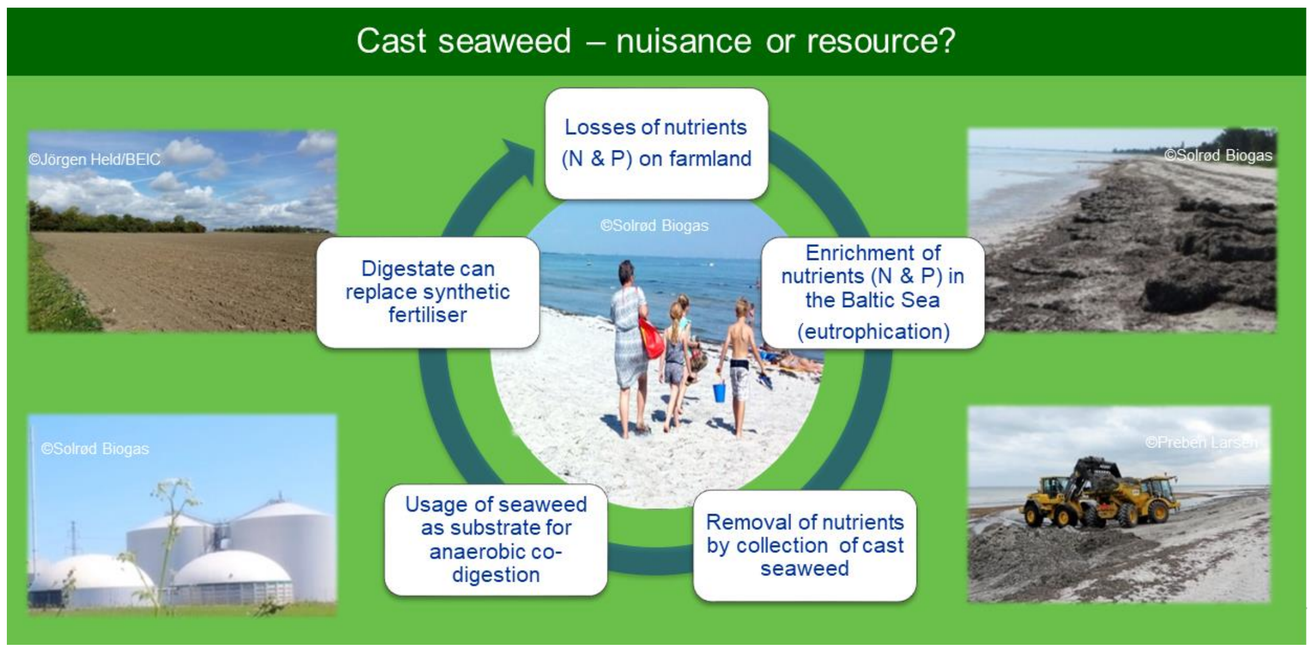
Eutrophication in the Baltic Sea

Eutrophication is caused by excessive nutrient input to the marine environment and is one of the major threats to biodiversity in the Baltic Sea. The surplus of nutrients (N & P) leads to increased algae blooming and a lack of oxygen in the water.
One origin of nutrients can be leaching of nutrients into the groundwater or surface runoff caused by disproportionate use of fertilisers on farmland.

Anaerobic digestion

Anaerobic digestion is a collection of microbial processes by which biodegradable materials (e.g. animal waste, whole crop silage, sewage or food leftovers) are broken down in the absence of oxygen. It can be used to manage waste and to produce energy (electricity, heat), bio-fuels as well as bio-fertilisers.

Cast seaweed – nuisance or resource?

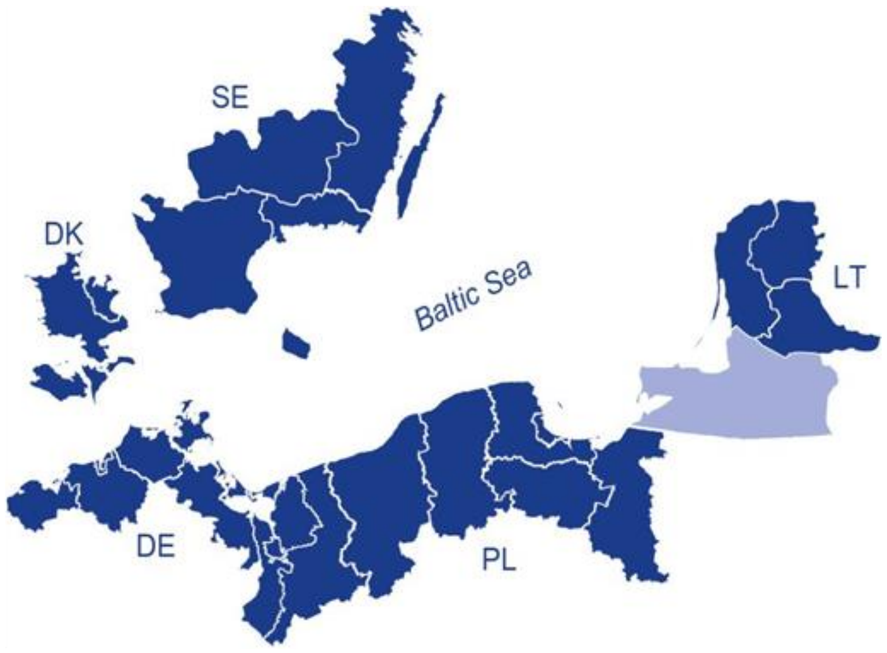


Project outputs

Cross border technology guidance and transfer in seaweed co-digestion will be supported.

A decision support tool and training kit for biogas plant operators, municipalities, local authorities as well as cleaning companies, farmers, waste management companies, etc. will be developed.

The process of anaerobic digestion of seaweed and digestate utilisation in the South Baltic area will be improved.



Project budget: 1.6 M €

Duration: 01.07.2018 – 30.06.2021

Project coordinator

FNR
Fachagentur Nachwachsende Rohstoffe e.V.

Partner

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