



Cluster On Anaerobic digestion environmental Services and nuTrients removalAL

Reduction of eutrophication by using cast seaweed

Thies Fellenberg
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(FNR)



Final COASTAL Biogas Conference
9 December 2021
Online

Partners



Universität
Rostock



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Starting point



Eutrophication of the Baltic Sea

- Major environmental problems
- Negative social consequences

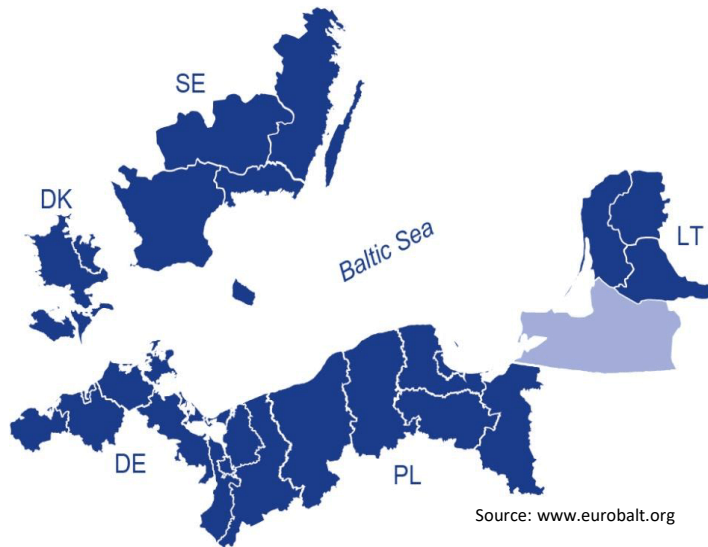
→ COASTAL Biogas aimed to tackle this problem and provide solutions



Overview

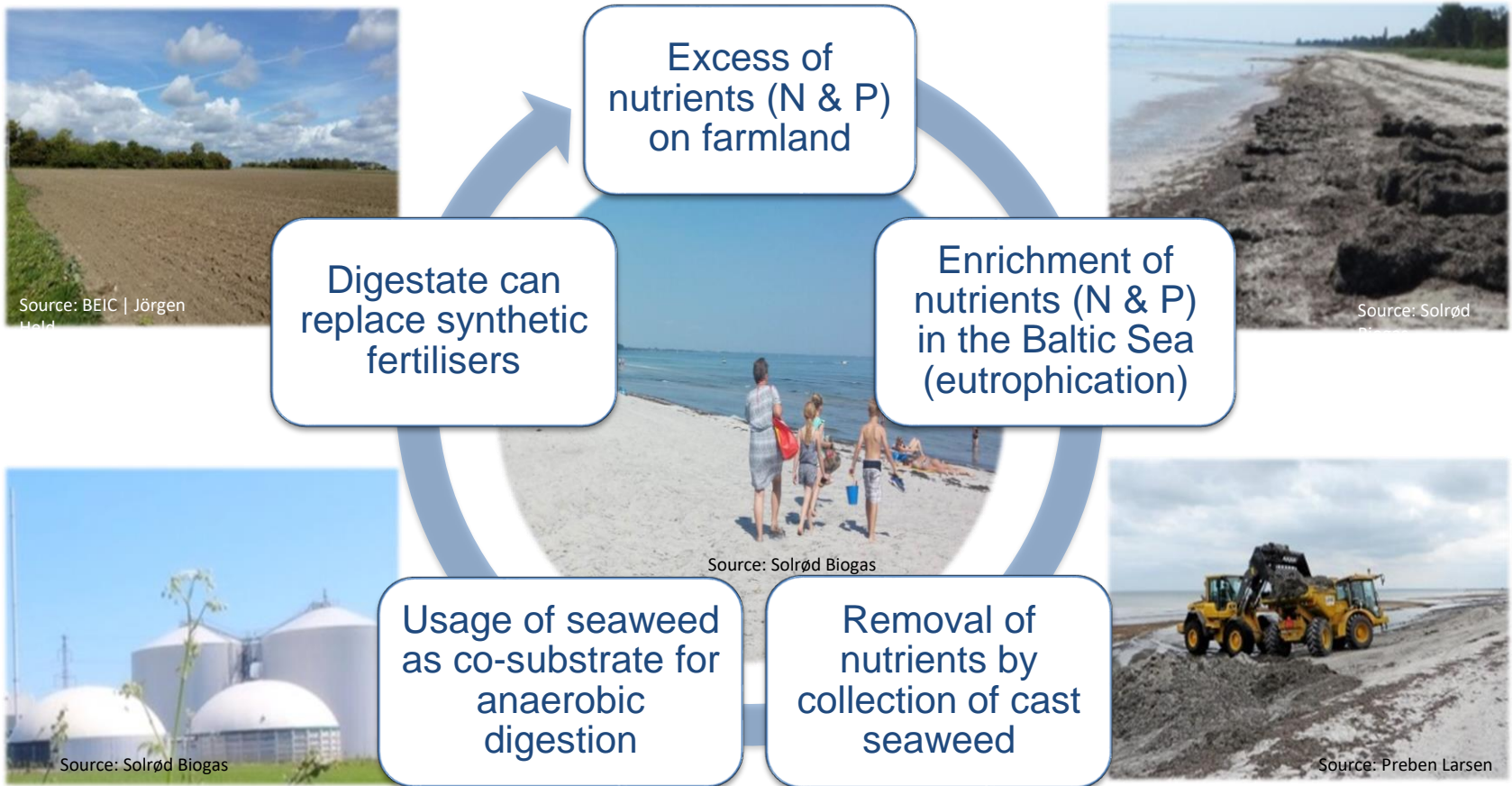


- Funding programme: Interreg South Baltic
- Project Budget: 1.67 Mill. €
- Duration: 3.5 years (07/2018– 12/2021)
- Participation: 6 partners from 5 countries (DE, DK, LT, PL, SE) + 11 associated partners

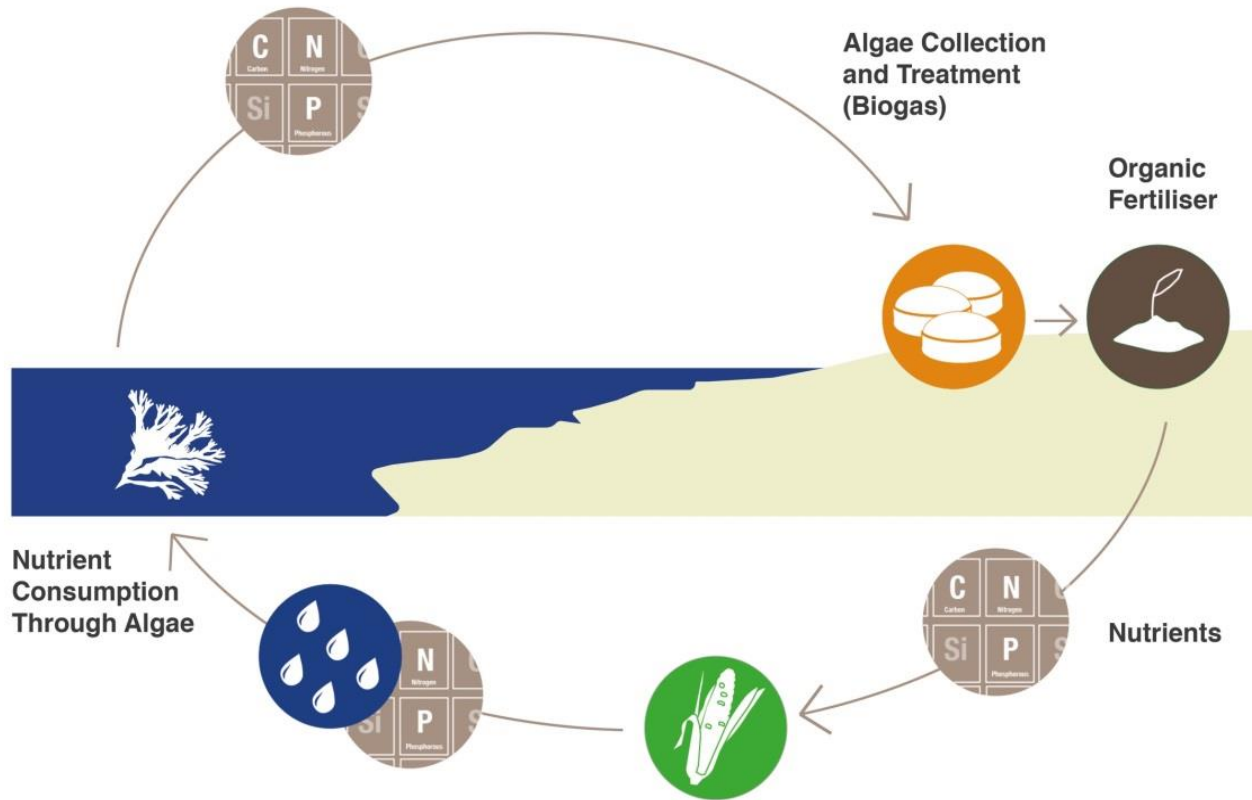


Source: www.eurobalt.org

Turn problems into potential



Closing the nutrient cycle



Source: Angela Clinkscates, UROS

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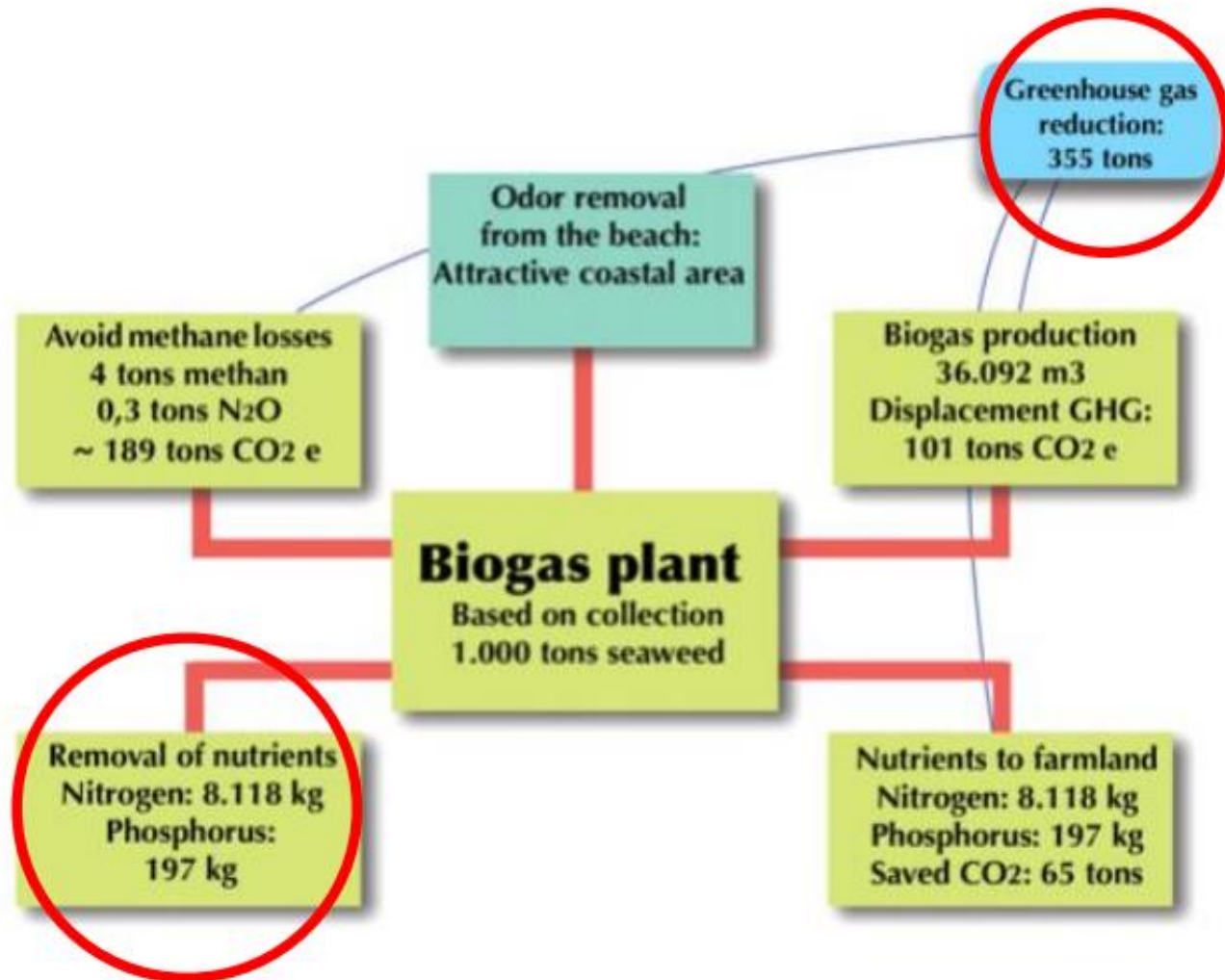
Usage of seaweed as co-substrate

- co-digested in industrial scale at Solrød Biogas plant in Denmark;
- 1,522 t of cast seaweed processed in 2019;
- Total capacity of the biogas plant is 226,000 t of substrate.



Source: Solrød Biogas

Environmental benefits



Source: Prof. Tyge Kjær, Roskilde University.



Socio-economic benefits

- Eliminate the inconveniences with rotten seaweed on the beaches (smell, flies, GHG emissions and release of toxic H₂S);
- Improve the water quality for the benefit of recreation, tourism and value of coastal residential properties;
- Create local value chains – regional development and new job opportunities.

Outputs



COASTAL Biogas – a cost-efficient way to mitigate eutrophication

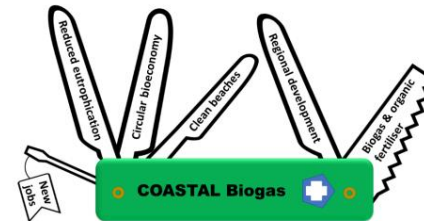
May, 2021

team target algae project growth fertiliser
cost efficient digestate Solrød nutrients
nitrogen goal digest potential biogas
seaweed goal mitigate eutrophication

A success story

COASTAL Biogas – a Swiss army knife of socio-economic benefits

September, 2021



A success story



Cluster On Anaerobic digestion,
environmental Services
and nuTrient removal

COASTAL Biogas Trainer English ▼ Polskie ▼ Svenska ▼ Lietuvių ▼ Deutsch ▼ Dansk ▼

Take a look at the project website → <https://www.coastal-biogas.eu/>

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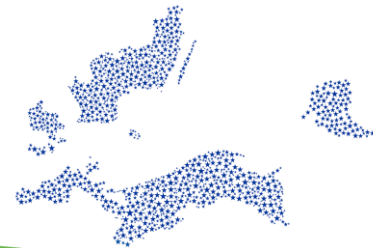
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Thank you!

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