

LiveLagoons

Improving the water quality in eutrophicated lagoons
by the use of innovative floating wetlands for nutrient
removal

Svenja Karstens & Jane Hofmann

EUCC – Die Küsten Union Deutschland e.V.

Pol-Eco, Poznan, Poland, 23.10.2018

“Green Projects in the Interreg South Baltic Programme”



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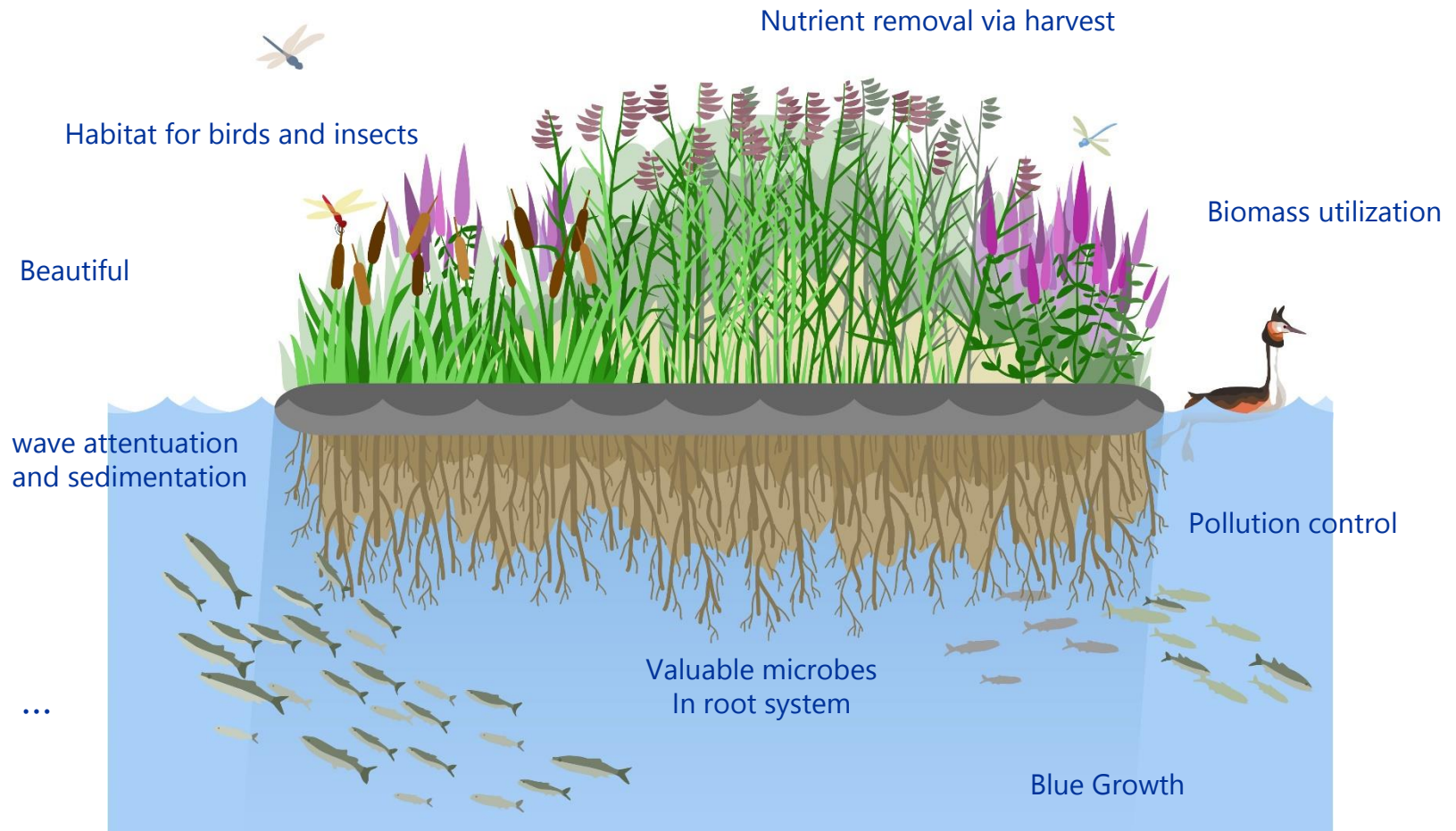


Nutrient reduction via the removal of coastal biomass

- Collection & recycling of beach wrack
- Cultivation of micro – or macro algae
- Mussel farming
- Harvest of emergent macrophytes in natural coastal wetlands ...
- ... or on **floating wetlands**
-



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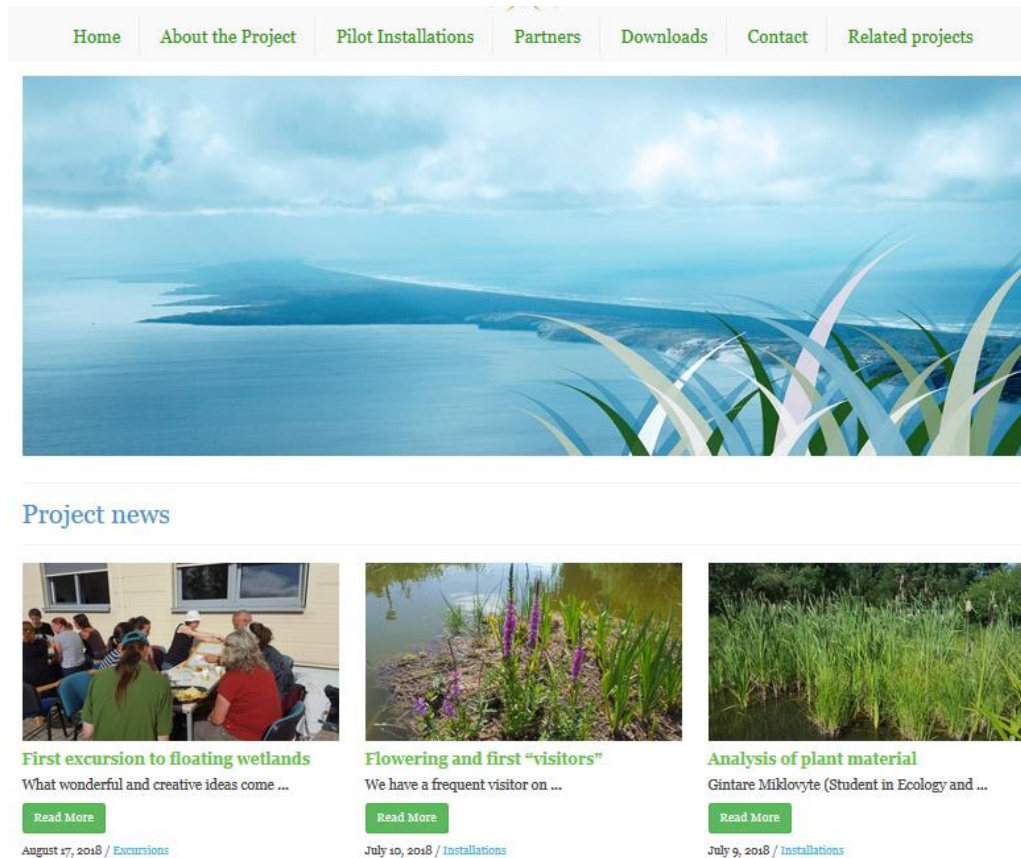


2. Project LiveLagoons



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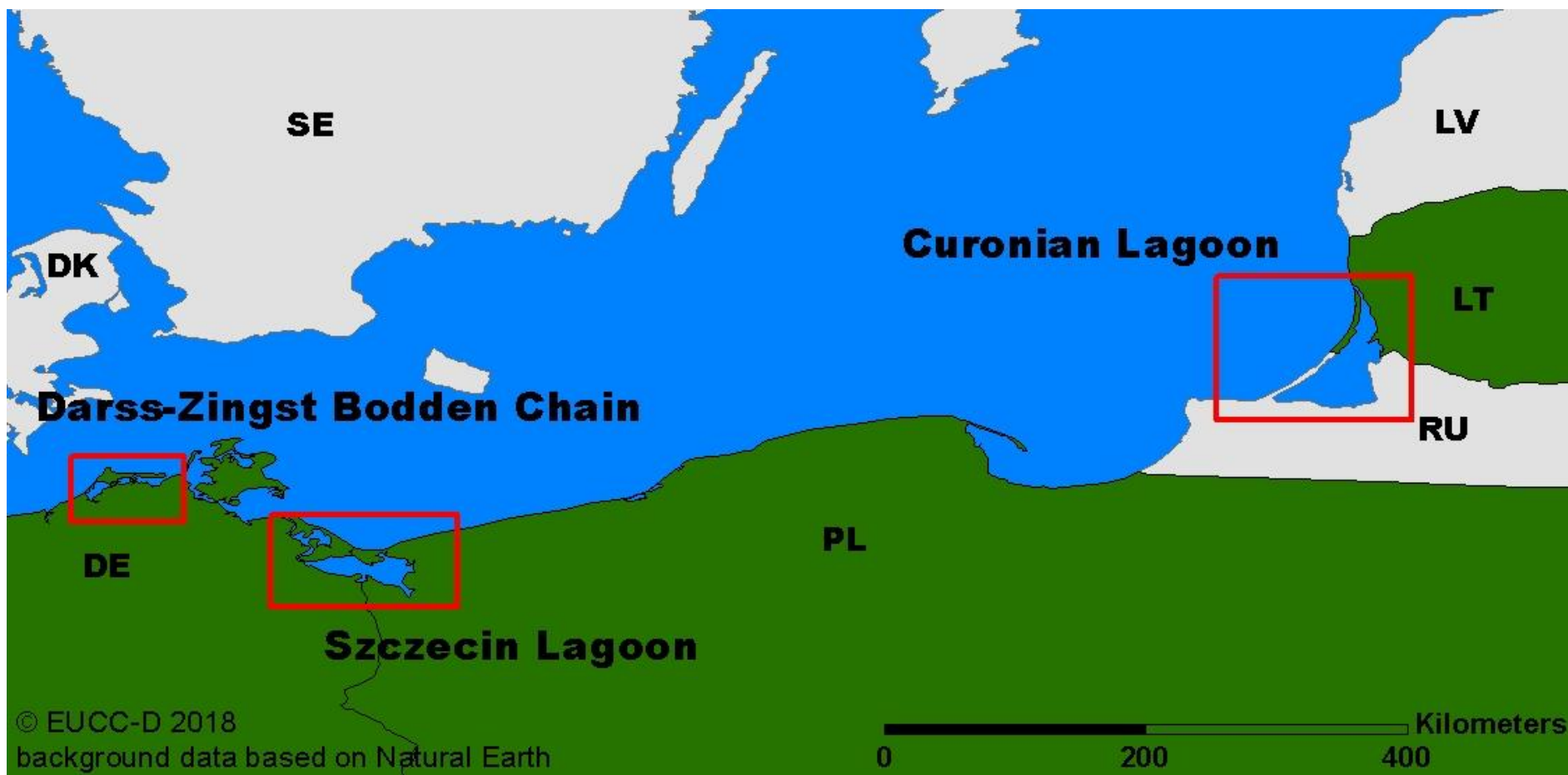
- Duration: 08/2017 to 07/2020
- Funded by: EU South Baltic Programme 2014-2020
- Homepage: www.balticlagoons.net/livelagoons/



Project LiveLagoons



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Island design and macrophytes



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A variety of floating wetland producers exists. What was important for us?

- Total buoyancy > 25 kg/m²
- Island must withstand impact forces of > 350kg without loss of buoyancy or damage, in order to withstand pressures from waves, boat wash and winter ice
- All materials used must be non toxic and fully recyclable
- Polystyrene, polyurethane foam and PVC should not be used in the system
- Pieces shall be connected using only corrosion resistant stainless steel hardware
- ...



2D matrix

3D & 4D Matrix



3D & 4D Matrix



Island design and macrophytes



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Examples of island design and macrophytes used at the study site Born, Germany

Plants on island No. 1 in Born, Germany



Carex acutiformis

Typha latifolia

Juncus effesus

Bolboschoenus maritimus



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Plants on island No. 2 in Born, Germany



Butomus umbellatus

Iris pseudacorus

Schoenoplectus lacustris

Lythrum salicaria



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Examples of island design at Wicko Lake, Wolin National Park, Poland



Island design and macrophytes



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Choice of plants for German installation:



Typha latifolia

Butomus umbellatus



Schoenoplectus lacustris

Lythrum salicaria



Iris pseudacorus

Carex acutiformis / riparia



Bolboschoenus maritimus

Juncus effesus



Island design and macrophytes



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Keep in mind! → Floating wetlands offer more than nutrient removal, e.g. **habitats**, wave attenuation, tourist attraction...



Contact:

Svenja Karstens, karstens@eucc-d.de - LiveLagoons

Jane Hofmann, hofmann@eucc-d.de - CONTRA

Thank you very much
for your attention!



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