CONTRA

Baltic Beach Wrack - COnversion of a Nuisance To a Resource and Asset

Start 01.01.2019
End 30.06.2021

Interreg Baltic Sea Region
Partnership DE, SE, DK, PL, EE, RU

Total Budget: 2.6 Mio €
ERDF Co-financing: 2 Mio €

CONTRA About

Challenge: to find a balance between public demand for 'clean' beaches, environmental protection and the economy

Objectives

- Test and propose utilization/recycling options that are sustainable & economically viable
- Investigate and define value chains & market opportunities for wrack based products.
- Analyse its recycling potential for pollution & nutrient remediation
- Improve knowledge about the role & importance of beach wrack
- Raise awareness about the impact of beach cleaning operations

Centrepiece: 7 case studies

Outputs

- A 'Toolkit' of innovative & sustainable recycling options for beach wrack
- Guidance to help municipalities put sustainable processes into daily practice
- Information on tourism trends & socio-economic responses to beach wrack management
- Transnational & cross-discipline stakeholder support network

CONTRA Structure

WP1: Project Management	WP2: Capacity Building	WP3: Sustainability & Ecological Assessment	WP4: Resource Management & Value Chains	WP5: Innovative Technologies
Project administration	Capacity building: Knowledge & awareness raising	Quantitative assessment of wrack landings	Regulations & requirements: Legal and policy frameworks	Development & demonstration of recycling solutions (Case Studies)
Progress reporting and project goal fulfilment	Local Working Group co-ordination	Impact of beach cleaning techniques	Opportunities: Business models & markets	Analysis of site and case specific challenges
Management of project budget	Socio-economic Study	Evaluation of beach management strategies	Comparing the case studies: Sustainablity, legal and economic aspects	7 case studies: fertilizers, soil improvers, bio-coal, bio-cover, coastal protection, bio-energy, water quality
Transnational partner meetings	Project communication	Eco-system services: Assessment of Case Studies	Analysis of value chains for pollution & nutrient reduction	Development of guidance and reference document ‚Toolkit'

CONTRA Case Studies

CS1: Soil Improvers /Fertilizers

Location: Bad-Doberan/ Island Poel, DE

Lead: Hanseatische Umwelt GmbH

CS2: Biocoal

Location: Island of Rügen, DE

Lead: KS-VTCtech GmbH

- Carbonisation trials at pilot plant
- Economically viable with multi-waste streams

CONTRA Case Studies

CS3: Landfill Biocover
Location: Koege, DK
Lead: Municipality Koege

- Compost-layer containing bacteria that can convert methane into carbon dioxide

CS4: Coastal Protection
Location: Kaliningrad, RU
Lead: Atlantic Branch of Shirshov Institute of Oceanology, RAS

- Pilot for soft engineering techniques
- Similar manner to natural processes
- Beach wrack compost for dune greenery

CONTRA Case Studies

CS5: Gasification

Location: Kalmar, SE

Lead: Linnaeus University, Sweden

- Small amount of methane is generated from dry organic matter without pretreatment
- Pretreatment of samples avoids salts inhibition and thus better biomethane production

CS6: Waste Water Treatment

Location: Swarzewo, Puck Bay, PL

Lead: Gdańsk University of Technology

- Reeds bed pilot facility at the wastewater treatment plant (wtp) in Swarzewo has been installed.
- Over 12 months tests conducted on beach wrack as a co-composting material in wetland technology

CONTRA Activities

Ecological Assessment

- Biomass, species composition
- Litter estimations
- Organic matter content (sediments)
- Aeolian dispersal
- Decomposition/degradation, residence time
- Nutrient enrichment of sediments
- Biodiversity
- Disturbance on wildlife/ Noise nuisance /Scare effect
- Heavy metal content


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CONTRA Activities

Socio-economic study

- Financial burden on communities
- Cost factors associated with management options
- Impact of management decisions on eco-system services (no treatment, low treatment & high treatment)
- Stakeholder perceptions incl. public expectations & tolerance
- Conflict resolution
- Fostering Cooperation incl. public/private (offsetting costs)

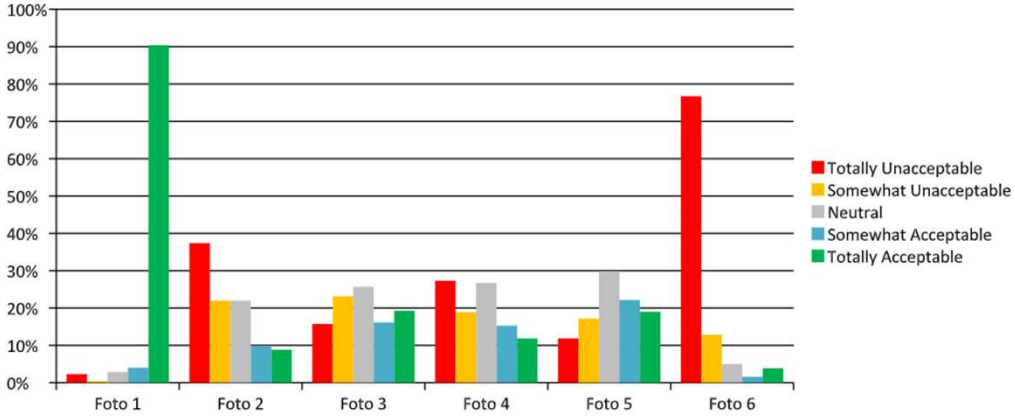
CONTRA Activities

Socio-economic study – Public tolerance

1

2

3



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CONTRA Activities

Beach Wrack Network

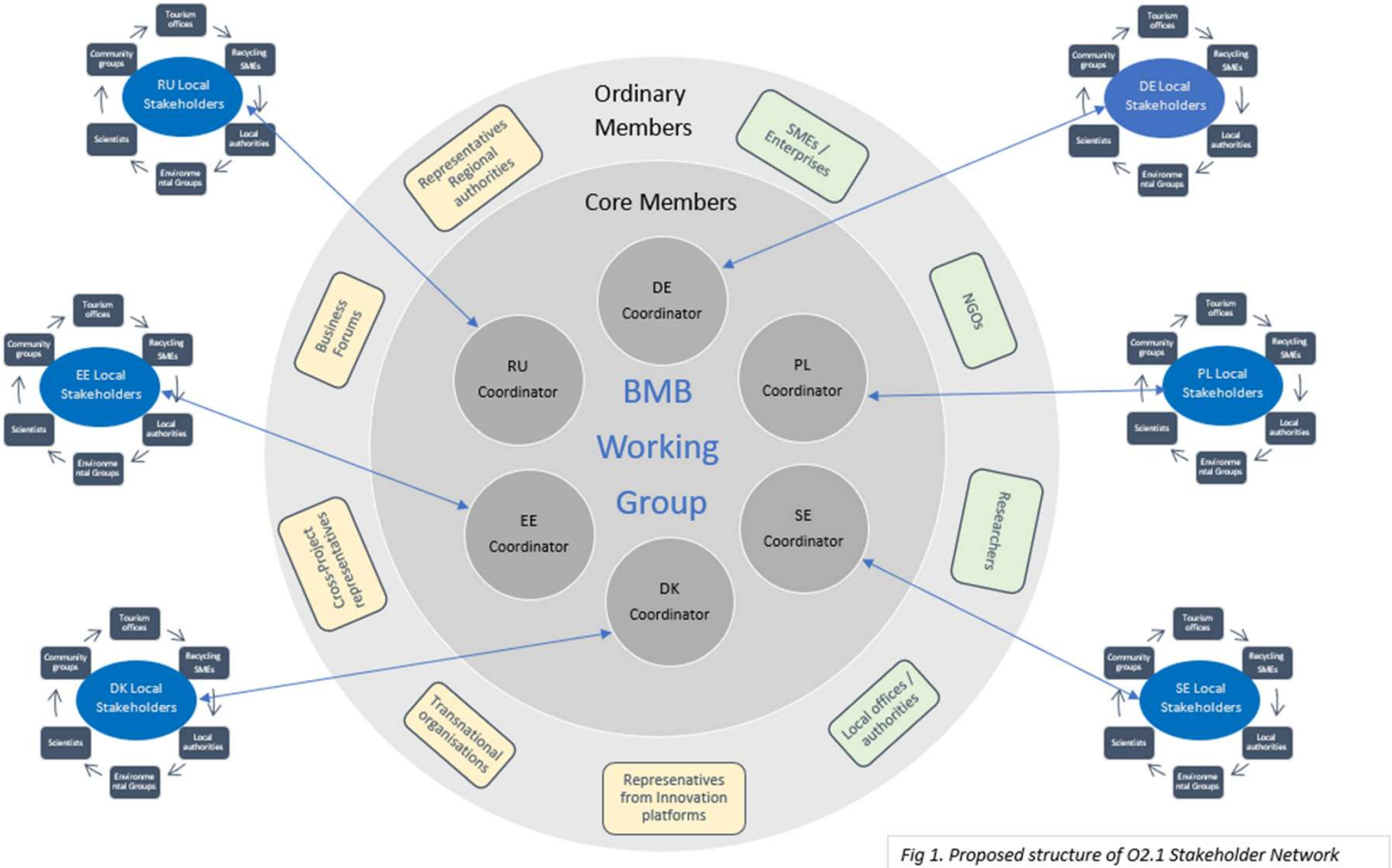

Fig 1. Proposed structure of O2.1 Stakeholder Network

CONTRA Partnership

14 international partners

- University of Rostock, DE (Lead Partner)
- Hanseatic Environment CAM GmbH, DE
- EUCC - Coastal Union Germany, DE
- KS-VTCtech GmbH, DE
- Institute of Oceanology of the Polish Academy of Sciences, PL
- Association of Polish Communes Euroregion Baltic, PL
- Gdańsk University of Technology, PL
- Linnaeus University, SE
- Krinova AB, SE
- Estonian Ministry of Environment, EE
- University of Tartu, EE
- University of Southern Denmark, DK
- Municipality of Køge, DK
- Atlantic Branch of Shirshov Institute of Oceanology, RAS

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