



EUROPEAN  
REGIONAL  
DEVELOPMENT  
FUND



# Beach Wrack as a Resource and Asset

Coastal Biogas Conference 09 December 2020

Jane Hofmann  
EUCC - Die Küsten Union Deutschland e.V.  
Friedrich-Barnewitz-Str. 3  
D-18119 Rostock-Warnemünde

Phone: +49 381 5196 423  
Email: [hofmann@eucc-d.de](mailto:hofmann@eucc-d.de)



# CONTRA

Baltic Beach Wrack - COntersion 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 € 2,565,180.87

ERDF Co-financing € 1,924,940.32



# CONTRA: Structure

Project management and administration (**UROS/REM**)

Capacity Building & Communication (**EUCC-D**)  
Output: Transnational Stakeholder Network

Capacity Building &  
Socio-economics

EUCC-D

Sustainability and  
Ecological Assessment

Uni Tartu

Resource Management  
& Framework

Krinova Science Park

Innovative technology  
for beach wrack  
handling and toolkit  
Atlantic Branch of Shirshov  
Institute of Oceanology

**Output**

Socio-economic  
Impact Assessment  
(report)

**Output**

Ecologically sound  
& sustainable  
beach wrack  
management  
solutions (report)

**Output**

Guidance on  
processing options  
(report) incl. legal  
framework  
document

**Output**

Demonstration of  
innovative recycling  
solutions for beach  
wrack  
(report)

**Main Output**

"Tool kit" Beach Wrack Management  
(publication)

# Recycling/Reuse options



## Seven case studies (in collaboration with municipalities and companies):

1. Poel, DE: Düngemittel/Einsatz zur Bodenverbesserung
2. Rügen, DE: Vapothermische Karbonisierung – Herstellung von Biokohle
3. Gemeinde Køge, DK: Kompostmaterial für Deponie-Bioabdeckungen
4. Kuhrische Nehrung, RU: Küstenschutz (Bau von Dünen und Sandfängern)
5. Kalmar, SE: Biogas - anaerobe Vergärungsprozesse
- 6a. Danziger Bucht, PL: Analyse des Schadstoffflusses in die Küstenzone
- 6b. Danziger Bucht, PL: Kompost für Biofilteranlage

# Socio-economics



- Stakeholder interests, actions and engagement
- Impact of management decisions on eco-system services
- Financial burden on communities
- Cost factors associated with management options
- Fostering cooperation incl. public/private (knowledge & offset costs)



- Working groups in each partner country
  - Min 2 meetings per year
  - Public Interviews, 2019
  - Management questionnaire, 2019
- Transnational Beach Wrack network

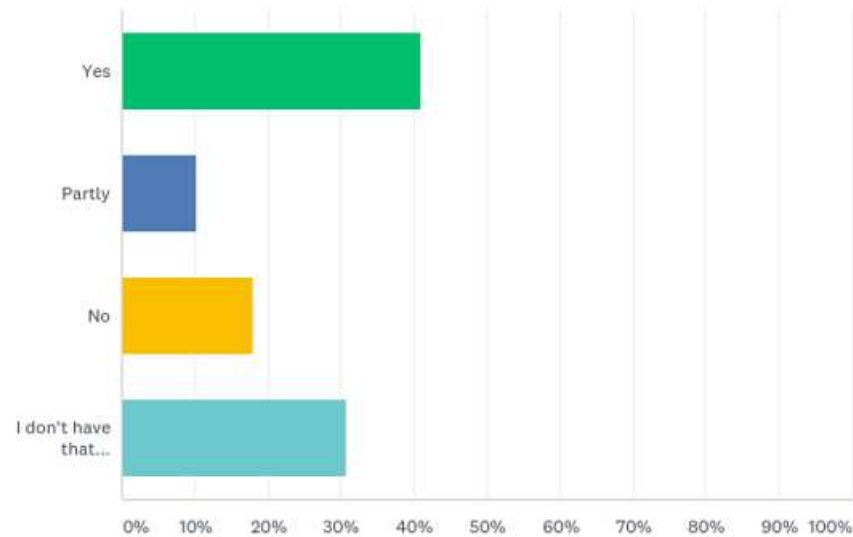


# Beach wrack management challenges

- Municipality resources
- Time pressure
- Confusing legal framework
- Lack of knowledge
- Means of cooperation

## Q27: Are the laws about beach wrack collection and its removal from the beach clear?

Answered: 39 Skipped: 4



50% of municipalities need more information about the legal framework surrounding beach wrack operations

# Beach Wrack - Framework

- *“Beach cast is defined as **all material** deposited in the wash zone of a beach by wind, wave and particularly tidal forces. It consists of beach wrack, terrestrial debris, litter and living animals inhabiting it, excluding materials such as sand, stones or pebbles, and even amber [Chubarenko and Stepanova 2017], which is regarded as a resident part of the beach and deposited there over a long period.*
- *“Beach wrack is defined as all **marine organic items** cast and deposited onto the beach. It consists of all sorts of marine autotrophs (micro-as well as macroalgae and marine higher plants e.g., seagrass) and animals, including their carbonate and silica shells.” (Chubarenko et al., 2020)*

[www.sciencedirect.com/science/article/pii/](http://www.sciencedirect.com/science/article/pii/)



# Beach Wrack - Framework

- Beach wrack, is the marine generated organic part of beach cast and is a unique management object
- There is a movement of organic material between water and beach.
- We are only concerned with 'beach wrack' and beach cleaning operations. We are not dealing with organic material in the water.

Definitions are important on a legal level especially when describing beach wrack as a resource







Photo: EUCC-D

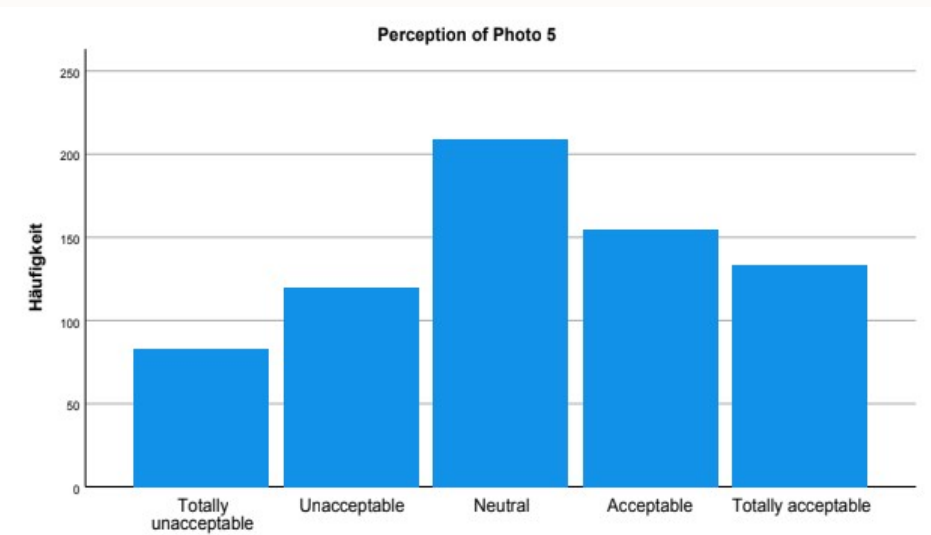
# Beach Wrack - Public Opinion

- It reduces recreation area
- Gives off unpleasant odours;
- It obstructs access to the water;
- It's uncomfortable under foot
- It can be populated with insects

- 19% of people totally accept small amounts shown in photo 5
  - 22% feel somewhat accepting
  - 30% feel neutral
- 18% of people think that beach wrack is hazardous to humans
  - 30% of people didn't know

*CONTRA Socio-economic questionnaire, 2019*

*CONTRA, Socio-economic questionnaire, EUCC-D, 2019*  
*Results from 703 public interviews*



# Beach Wrack – Health & Safety

**'It can kill you in seconds': the deadly algae on Brittany's beaches'**

*theguardian.com, Sept 2019*

**Mexico's top Caribbean beaches hit by seaweed infestation**

*bbc.com/news, June 2019*

**Brittany beaches after toxic fumes**

*connexionfrance.com, Aug 2011*

**Sargassum Continues to Swamp Environment & Economy in Caribbean Sea**

*theyucatantimes.com, Sept 2020*

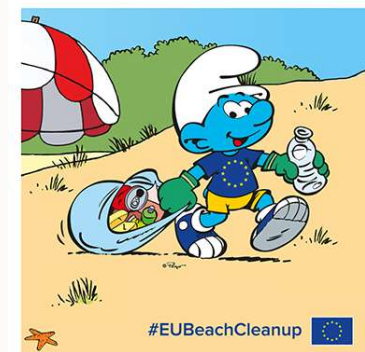
**How do you deal with 9m tonnes of suffocating seaweed?**

*Theguardian.com, June 2020*

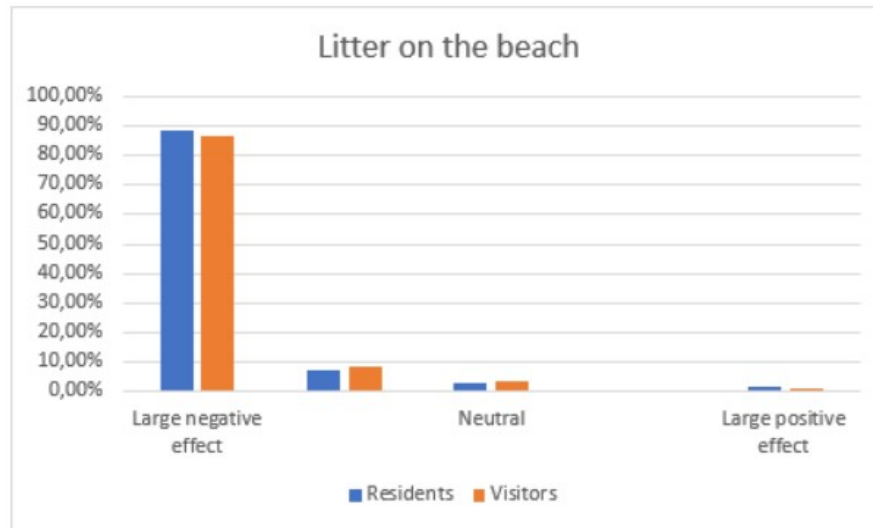


Summer 2019 (Julius-ruh, Island of Rügen, Germany)

# Beach Wrack and Litter

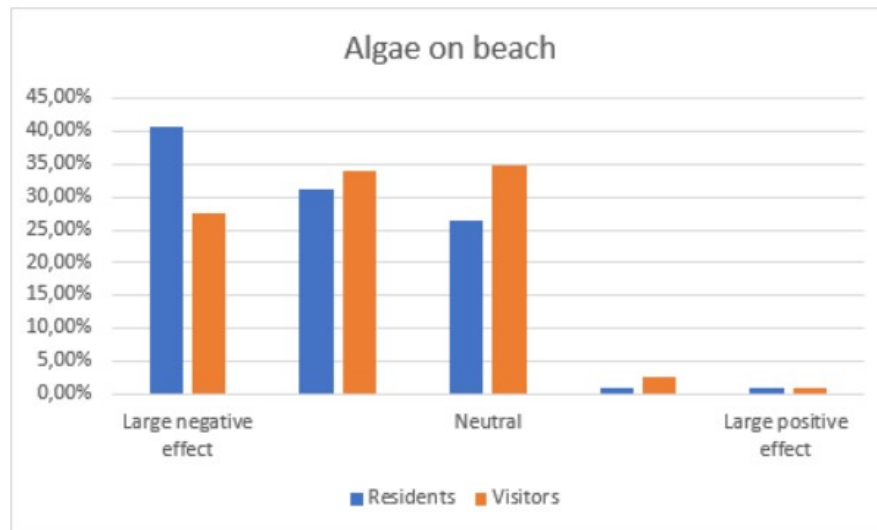


# Beach Wrack and Litter



- Litter has a large negative effect on all beach visits.
- Overall, local residents are less tolerant of algae than visitors

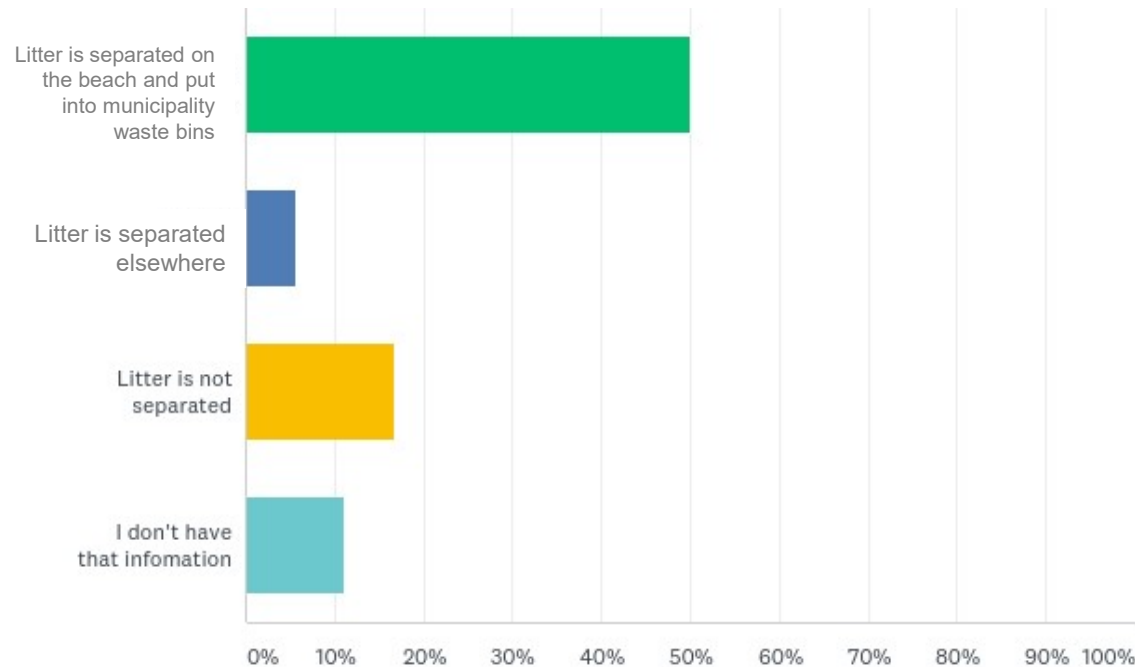
*CONTRA public interviews, 2019*



Algae on beach	Residents	Visitors	Total
Large negative effect	40,69%	27,59%	31,94%
	31,17%	33,84%	32,95%
Neutral	26,41%	34,70%	31,94%
	0,87%	2,80%	2,16%
Large positive effect	0,87%	1,08%	1,01%
<b>Total</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>

# Beach Wrack and Litter

How is manmade rubbish dealt with?



Findings:

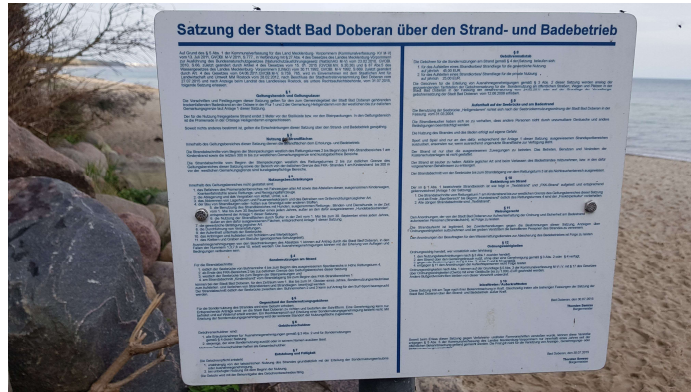
1. The amount of litter in beach wrack is very low with 35% of all sites reporting zero.
2. 50% of municipalities separate litter on the beach
3. 17% of municipalities don't separate litter

*CONTRA management questionnaire, 2019*

*Respondants: 40 municipalities (BSR)*

---

# Beach Wrack – Health & Safety



- Responsibility of landowner / local authority
- Risk free and safe environment for all to enjoy
- Public information and warning signs
- Responsibilities laid out in the [Bathing Water Directive 2006/7/EC](#)

## Support to the assessment of Member States' compliance with the Bathing Water Directive 2006/7/EC (BWD)

Final EU Overview Report

Service Contract 070201/2017/760013/SFRA/ENV.C.2.



March 2019

Tc VO DE

milieu  
Water & Policy Consulting



Symbols for informing on bathing water classification





© Markus Frick, spa manager Island of Poel





EUROPEAN  
REGIONAL  
DEVELOPMENT  
FUND



# Thank you!

Jane Hofmann  
EUCC - Die Küsten Union Deutschland e.V.  
Friedrich-Barnewitz-Str. 3  
D-18119 Rostock-Warnemünde

Phone: +49 381 5196 423  
Email: [hofmann@eucc-d.de](mailto:hofmann@eucc-d.de)



[www.beachwrack-contr.eu](http://www.beachwrack-contr.eu)

 [@beachwrack.CONTRA](https://www.facebook.com/beachwrack.CONTRA)