LEGAL ASPECTS OF BEACH WRACK MANAGEMENT IN THE BALTIC SEA REGION

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ABSTRACT

Beach wrack is often regarded as a nuisance, particularly when it lands unexpectedly and in large quantities on tourist beaches. Beach wrack is any marine generated organic material that is washed up onto the beach by waves, tidal forces and currents. It can generally be found in the swash zone, in lines along the foreshore and sometimes at the back of the beach, especially after storms. It is a result of what is growing in the near-shore waters and usually consists of drifting and decomposing marine life debris – which for the Baltic Sea region mostly includes torn off seagrass, macroalgae (brown, red and green species) and shells. Subsequently, it can decompose and transform into a rotten soup, which smells bad and from which nutrients may leak back into the water. As the materials drift on currents and are washed ashore without respect to coastal boundaries, local authorities often spend a lot of money to collect and dispose of them. Thus, managing beach wrack constitutes an issue for local authorities and the tourism industry alike, particularly in the Western and Southern Baltic Sea[1].
This document has been written as part of the CONTRA project (2019-2021) which compiled the knowledge required for more sustainable management of beach wrack.

It is financially supported by the Interreg Baltic Sea Region Programme 2014-2020. Operating at six case study sites, it assessed the environmental, social and economic impact of beach wrack removal. The project also opened new opportunities for treatment and use options as well as water quality improvement. It developed a 'toolkit' of management and recycling options that will ensure that all BSR municipalities can balance tourists' demands for clean beaches with environmental protection. In its project lifetime, CONTRA has established an international network of stakeholders for knowledge exchange, capacity building and awareness-raising.

The need to formulate this document came about because the majority of existing national legislation does not cover the specific issue of beach wrack. This document remains an elaboration over the legal aspects of beach wrack, as it includes the determination of the sources of law, provides various existing definitions of beach wrack, compares the approach to beach wrack regulation/management in the legal systems of the countries participating in the project. The report aims to identify legal barriers that prevent effective management of beach wrack as well as to formulate remedial solutions.

[1] https://projects.interreg-baltic.eu/projects/contra-179.html(access: 02.02.2020 , t. 21:00).

Findings to achieve the goal were made through the interpretation of national and EU sources, which could have an impact on beach wrack management as well as an interview with the CONTRA participants and partners and a survey of stakeholders.

1. Introduction

The following framework document constitutes the implementation of the activity: "Creation of the framework document on regional regulations for beach wrack management". The cooperation assumes knowledge sharing between public authorities, enterprises, academic circles and non-governmental organizations originating from six countries (Denmark, Germany, Estonia, Poland, Sweden and Russia). With regards to the subject, the consortium also includes marine systems, coastal tourism, and sustainable development as administrative structures of the Baltic Sea[2] and encompasses potential products and services of the seven CONTRA case studies including fertilizer/soil conditioners, biochar, biological protection, preservation of the coast, biogas production and amelioration of water quality.

Since the case studies sites should be given special consideration, special emphasis is placed on the regulations of the European Union and the Russian Federation as well as the regional provisions and regulations from Poland, Germany, Sweden, Denmark, Estonia and the Kaliningrad District (RUS). Thus the following elaboration focuses predominantly on the legal analysis of beach wrack processing in the aforementioned domestic and EU jurisdictions as well as, to a certain extent, international law, drawing conclusions from the said analysis and making certain recommendations.

The elaboration constitutes a kind of guide into legal provisions valid as of the date of its preparation. It also includes recommendations, in line with the CONTRA Policy Brief, and postulates as to the ways the challenges associated with beach wrack may be solved at the general – systemic - level and in a more focused manner with reference to precisely determined entities. The document attempts to address, among others, the following issues: national/regional legislation gaps, shortages and constraints that are preventing energy & nutrient recovery, beach wrack processing and manufacturing it into market products.

[2] https://projects.interreg-baltic.eu/projects/contra-179.html (access: 02.02.2020 , t. 21:00).

Terminology regarding beach wrack/cast

At the outset, it must be stated that the notion of beach wrack remains ambiguous and various terms (definitions) for it may be encountered in different countries.

For the needs of the project arrangements, the following definition has been adopted, stating that *beach wrack*[3] remains the term commonly applicable for organic material that is washed ashore by the wind, waves and tides (cf. introduction section). Beach wrack, as a natural phenomenon, occurs worldwide, however it differs as far as its quantities and composition are concerned. However, from a social and economic perspective, beach wrack is often perceived as waste especially by tourists as it occurs in excessive quantities at the resort beaches and with time it is subject to putrefaction processes[4]. In legal affairs beach, wrack is sometimes substituted by the following terms: *beach waste, beach litter* or simply - *wrack*. The term denotes both wastes having organic character and artificial ones – caused by human beings.

Policy recommendations *de lege ferenda* constitute the majority of conclusions in this framework document, and are dedicated primarily to local legislators, subsequently to the local authorities and finally to entities responsible for beach management as well and the removal and processing of unwanted material from such beaches.

Currently, there is no differentiation in EU legislation and the individual countries subject to a more detailed examination between the concept of seaweed as organic waste and man-made waste, i.e. there is no distinction for beach waste destined for further processing, such as seaweed, seagrass, algae, etc. This results in the situation where the dominant course of activities is outsourcing beach cleaning to specialized city cleaning companies (municipal companies). In the contractual conditions addressed to contractors (professional cleaning companies), there is only a general provision to perform all activities in accordance with the generally applicable regulations. As soon as beach wrack is removed from the beaches and thus the will of the authority to discharge occurs, it is legally defined as waste. The lack of unequivocal legal regulations that address beach wrack processing directly results in circumstances where the possibility of using beach wrack is not considered as an obvious option. The problem is mainly felt by companies that have to recycle this „waste" without further description within legislation because it is not defined as a resource.

[3] www.beachwrack-contra.eu/about/ (access: 28.02.2020).
[4] Survey Results CONTRA Questionnaire 2020.

Beach wrack is not a notion used universally in legal affairs and is not unified in the Baltic sea area, including the European Union. For that reason, the authors will present an overview of how the notion of beach wrack is challenged globally.

In the first place, one can refer to the definition adopted by the California Coastal Commission[5] (USA), whose predominant statutory task is to maintain the ecosystem of beaches and coasts of California for future generations. In line with the said definition, "wrack" and beach wrack is an organic substance, like seaweeds or seagrass which is cast ashore by the sea currents, waves and wind[6]. A more general definition refers to the „items cast ashore from an open sea including plastics, glass and maritime metal debris[7].

It must be noted though, that the said definition inherently encompasses all impurities and is not limited to organic ones only, similar to the European legislation (cf. section?). Beach wrack is frequently referred to as a tangled seagrass mass that can be found on beaches[8]. P.I. Macredie, an Australian professor related to the Deakin University and Blue Carbon Lab, formulated the definition of beach wrack with a focus on the global character of the process of casting organic material ashore as well as on the possibility of its reprocessing[9].

The adoption of a more general definition (differentiating beach wrack as organic from artificial/anthropogenic waste – resulting from human actions) is advocated strongly by and necessary due to the distribution of pollution in the Baltic Sea. According to the report drawn up by HELCOM[10], also referred to as the Helsinki Commission, plastics constitute approximately 70% of pollution in the Baltic Sea. Plastics remain a dominating pollutant in the Baltic regardless of the fact whether we talk about a municipal beach, an unguarded beach, beaches marked with intensive visits from tourists or the beaches located within rural areas. Beach wrack accumulations can trap and promote plastic accumulation on the beach.

[5] www.coastal.ca.gov/, (access: 29.11.2019).

[6] http://www.beachapedia.org/Wrack(access: 28.11.2019)*"wrack" or "beach wrack" as "organic material such as kelp and sea grass that is cast up onto the beach by surf, tides, and wind."*

[7] *Ibidem. A more inclusive definition is "items washed onto the beach from the open sea" which includes plastic, glass and metal marine debris.*

[8] artykuł „All Washed Up and Somewhere to Go" - access: https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=124910&org=NSF (access: 28.11.2019)

[9] P.I. Macreadie, S.M. Trevathan-Tackett, J.A. Baldock, J.J. Kelleway, Converting beach-cast seagrass wrack into biochar: A climate-friendly solution to a coastal problem, Science of the Total Environment nr 574/2017, s. 90-94.

[10] http://stateofthebalticsea.helcom.fi/pressures-and-their-status/marine-litter/ (access: 29.11.2019).

Furthermore, at some sites, decomposing beach wrack increases heavy metals concentrations (cf. CONTRA reports).

To sum up, beach wrack shouldn't be treated merely as waste to be disposed of, but as a raw material/resource with high potential to be used. It is important to separate these terms beach wrack from litter/trash, although both are found in the swash zone or even at the back of the beach. The legal requirement to control the bathing water quality is expressed under Article 9 of the Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 – "*When the bathing water profile indicates a tendency for the proliferation of macroalgae and/or marine phytoplankton, investigations shall be undertaken to determine their acceptability and health risks and adequate management measures shall be taken, including information to the public*."[11]There are no legal acts specifically on beach wrack matter in the EU legal system, which is the reason for the lack of one clear definition. The legislators of the countries subject to examination, including the Russian Federation, have not passed any relevant definitions yet. The authors were forced to take advantage of similar definitions and treat them as analogues, i.e. be based on the definitions for beach wrack components (as specified above in the introduction section). In the authors' opinion, as the annual vegetation of the drift lines remains the closest notion determining beach wrack, however still failing to reflect it fully, the most extensive definition can be found in the description of a habitat protected by Nature 2000 programme – referred to annual vegetation of the drift lines on a seashore.

The definition is as follows: *Halophilous and nitrophilous annual plant communities on the berm formed from organic material. Its characteristics are: berms are formed due to accumulative activity of the waves and sea currents which settle the transported material on the beach; in this case, these are organic remains of sea vegetation (Zostera, rockweed, etc) while in the vicinity of the estuaries the material includes pieces of timber and other plants. The zone for the organic remains to occur keeps within the summer and winter shoreline. As the entire system gets damaged during winter storms marked with high force and strength, often accompanied by water level rise in the sea, every year and under favourable conditions the restored annual vegetation of the drift lines is inhabited by annual plants and its occurrence remains highly changeable in time and space. The conditions prevailing therein are unique. The base is rich in nitrogen compounds originating from decomposing plants and location*

[11]https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32006L0007 (access: 27.11.2020, t. 13:32)

within the impact of salt water brings about permanent or temporary salinity. The aforementioned conditions result in the presence of plants characterized by highly peculiar features – being simultaneously nitrophytes and halophytes[12].

The above-mentioned definition is therefore very comprehensive in its nature and the characteristics correspond, to a great extent, with what beach wrack is. The authors recommend the above definition as the starting point for further steps to be taken by the legislators, together with the definition of beach wrack adopted in the CONTRA project: *organic material that is washed ashore due to wind, waves and tides*.[13] The most important part of the definition is therefore that not all material washed ashore is beach wrack, only the organic part, and that inorganic materials, such as plastics together and other litter, should not be classified as beach wrack, but regular waste that is to be separated. Therefore, the authors' proposition for beach wrack definition could be as follows: ***Organic material of marine origin that is washed ashore due to wind, waves and tides.***

The most important parts of this definition are:

- **organic material** – to differentiate it from common - litter such as plastics,
- **marine origin** – to underline, that debris of plants and algae are considered as the main part of beach wrack as well as other components of marine origin: -e.g. shells, dead animals, infauna (insect larvae, microbes).
- **washed ashore** beach wrack is the material already cast onto the beach. It does not include free-floating material in the water. **due to wind, waves and/or tidal forces** – natural transportation of beach wrack is underlined. Therefore, beach wrack comes from natural ecosystem processes, not human interference – is a natural phenomenon.

The final definition should be a matter of further discussion.

1.1. Regulations regarding *beach wrack* – regulation assessment table

A table is conducted - to summarize regulations regarding beach wrack and conclusions as well as to introduce the reader to the general idea of this document (Table 1),

[12] https://natura2000.gdos.gov.pl/files/artykuly/52912/1210_Kidzina_na_brzegu_morskim.pdf (access: 29.01.2020, t. 16:00).
[13] https://www.beachwrack-contra.eu/about/ (access: 10.12.2020, t: 17:00)

Table 1 Division of the existing legal regulations regarding the individual stages of beach wrack management

Table 1 *Summarizing all legislations of this report which are addressing some beach wrack handlings, indicated by crosses*

	Jurisdiction	Collection	Storage	Processing
EU level	**Habitat directive**	**x**		**x**
	Bird directive	**x**		
	Water Framework directive	**x**	**x**	
	Marine Strategy Framework directive	**x**	**x**	
	Environmental Impact Assessment directive	**…**	**….**	
	Recommendations/Comments by the authors	***Introduction of the legal definition of „ beach wrack" has to be made, so that one official legal definition is used across the EU. Set„ Healthy" levels (amounts) and distribution of beach wrack at the beaches, which ecologically optimal and have to be measured spatially and seasonally. Means by which the norms will be monitored need to be evaluated. Infringements on the levels and optimal levels and distribution of the beach wrack due to, for example, over-collecting need to be property sanctioned across the whole region. European Union legislation is crucial while introducing effective legal means across the whole region, changes in the national jurisdictions only will not be satisfactory. Processing and reusing of beach wrack should be encouraged.***		
	Regional legislations			
Poland	**The Environmental Law**	**x**	**x**	
	The Act on Waste			**x**

	The Act on marine areas and maritime administration	**x**		
Germany	**Waste control, disposal and management under the Closed Cycle Management Act**	**x**	**x**	**x**
	Water control and management under the Federal Water Resources Act	**x**		
	Environmental Impact Assessment Act		**x**	
Denmark	**The Environmental Protection Act**	**x**	**x**	**x**
	The act on marine environment protection	**x**		
	The Environmental Objectives Act	**x**		
Sweden	**Swedish Environmental Code**	**x**	**x**	**x**
	Rule on the Marine environment	**x**		
	Waste Ordinance	**x**		
Estonia	**Fishing Act**	**x**	**x**	
	Nature Conservation act	**x**		
	Environmental Code Act	**x**	**x**	**x**
Russian Federation	**Federal Act on production and consumption of waste**	**…**	**….**	**….**
	Federal Law no 74-FZ referring to the Water Code	**…**	**…**	**….**

Legend:

Collection – pluses mean that collection of beach wrack is generally possible in the current legislation,

Transport/storage –pluses mean that transport/storage is generally possible in the current legislation,

Processing –pluses mean that processing is generally possible in the current legislation, pluses in brackets "(+)" is the authors' subjective assessment of these regulations.

Table 2 *Division of the existing legal regulations regarding the individual stages of beach wrack management*

		Collection	Transport/storage	Processing	Fazit of the author's opinion
1.	**EU**	+	+	(+)	Introduction of the **legal definition** of „beach wrack" has to be made, so that one official legal definition is used across the EU. **Set„Healthy" levels (amounts) and distribution of beach wrack** at the beaches, which ecologically optimal and have to be measured spatially and seasonally. Means by which the norms will be monitored need to be evaluated. Infringements on the levels and optimal levels and distribution of the beach wrack due to, for example, over-collecting need to be property sanctioned across the whole region. European Union legislation is crucial while introducing effective legal means across the whole region, changes in the national jurisdictions only will not be satisfactory. **Processing and reusing of beach wrack should be encouraged.**
2.	**Poland**	+	-	-	Due to the current legal status of beach wrack mainly as a waste, it is not possible to dispose of beach wrack back into the sea in another area as financial fines are possible. For environmental reasons, the collection should be possible as well. Encouragement of processing/reusing of beach wrack as a raw material is poor to none. Local authorities should be encouraged to introduce innovative ways of beach wrack processing/reusing. Special protection of the Marine areas should be deepened and not limited to Nature 2000 areas only.
3.	**Germany**	+	+	-	German legislation promotes recycling of waste, especially using the closed-circuit model and Germany itself is a pioneer in that field. It is also allowed to reuse/process the material about the individual products that are made from Bw, e.g. compost, which is

					subject to the biowaste ordinance, while biogas is subject to the immission laws There are legislation differences between particular the Federal States. However, the use of already managed beach wrack should be introduced into the national waste management programme. The crucial role of beach wrack should be underlined, as the beach wrack translates directly into the sea water quality. The protection of the coastline could be deepened and Marine area protection shouldn't be limited only to Nature 2000 areas.
4.	**Denmark**	+	+	+	Denmark could be presented as a role model, as the state aims at effective beach wrack management as well as projects concerning beach wrack processing and reusing are encouraged, as seen on local levels. Also, there is great pressure put on Marine areas environmental issues as a whole. All marine areas are highly protected, marked as „special areas"
5.	**Sweden**	+	+	+	Similarly to Denmark, environmental protection and beach wrack processing are on a satisfactory level from an ecological point of view as much pressure is put on the necessity of marine environment preservation. Although, only part of marine areas are specially protected with regards to Nature 2000 programme, not wholly as in Denmark, so the authors recommend that this protection is extended to the whole Marine area. Although, the so-called „buffer zone" introduction by the Act on environmental protection has to be appreciated here.
6.	**Estonia**	+	+	+	At the moment Estonian legislation does not regulate nor mention beach wrack in any of its regulations or laws. Beach wrack is only indirectly regulated by the Fishing act which makes beach wrack responsibility of the local municipalities. Beach wrack processing as a renewable source of energy is encouraged by Circular Economy and Bioeconomy strategic documents. Special protection of the Marine areas should be expanded beyond Nature 2000 areas.
7.	**Russian Federation**	(+)	-	-	Tightened co-operation concerning environmental protection of Marine areas and the health of the sea and the beaches needs to be executed. Only collective efforts will lead to truly effective Baltic Sea region protection and beach wrack processing/reusing.

Details concerning particular jurisdictions are discussed in sections 3-5.

2. Regulations regarding *beach wrack* in European Union legislation

a) **"Birds Directive"(2009/147/WE)[14]**

Commonly referred to as the "Birds Directive", it refers to the conservation of species of wild birds in order to protect the biodiversity of the marine area. The beach is a habitat for wild birds. The Baltic Sea is a wintering area for millions of different species of waterbirds. Some of these bird species feed not only on fish and plants placed on the water bottom but also on the surface layer area of the sea, collecting insects and invertebrates.[15] Therefore, while drawing specific regulations concerning beach wrack, it should be taken into account that it is an important part of the ecosystem. The overcollection of beach wrack should be prevented as it can translate into depopulation of wild bird species.

b) "Habitats Directive" (92/43/EEC)[16]

Commonly called the "Habitats Directive", it refers to the conservation of natural habitats and of wild fauna and flora., whose aim is to safeguard Europe's most important wildlife areas and protect the bio-diversity. EU legislator included the protection of the so-called annual vegetation of the drift lines. In line with the provisions of the directive it is forbidden to damage the natural habitats at the seashore – the deliberate picking, collecting, cutting, uprooting or destruction of the plants in their natural range in the wild. Moreover, keeping transport and sale or exchange and offering for sale or exchange of specimens of the protected species taken in the wild, are prohibited as well. Regarding to the beach wrack, special attention must be paid to the preservation of the so-called annual "vegetation of the drift lines". According to the Habitats Directive, annual vegetation of the drift lines on the seashore remains a protected habitat marked with code 1210.

"*This type of vegetation is formed by annually growing plants on gravel or sand, enriched by decomposing organic matter such as seagrass, very common on the shore of Europe. The habitat is of dynamic character and occurs in the form of small patches, which makes it difficult*

[14] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009L014(access: 10.12.2020, t: 17:00)
[15] http://marmoni.balticseaportal.net/wp/wp-content/uploads/2012/04/TALLINK_12.03.2015.pdf(access: 10.12.2020, t: 17:00)
[16] https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A31992L0043(access: 10.12.2020, t: 17:00)

to determine its size. The vegetation is specified as "inadequate" in all regions and its structure and functionality as unfavourable due to human impact related to tourism and activities of a similar nature."[17].

c) "Natura 2000" programme[18]

Firstly, there was the Habitats Directive and the Birds Directive in there was this Natura 2000 program of protected areas developed. That means in the content sequence, this protection must come after the habitats and bird protection directive. Natura 2000 programme remains a network of special areas of conservation of both the habitat and birds directive also called "FFH areas, Areas of Fauna and Flora Habita)" Its predominant objective is to protect specific types of habitats and species which are threatened with extinction.

It must be underlined that EU regulations prevail over state legislations. Application of the EU legislation allows to increase the effectiveness of environmental conservation. However, the Natura 2000 (the Habitat Directive and the Birds Directive) refer only to limited areas described as special areas of conservation in the European Union, whereas the Water Framework Directive and the Marine Strategy Framework Directive listed below refer to all areas, which makes Natura 2000 protection comprehensive when it comes to the specific areas, but unsatisfactory when it comes to the whole shoreline, as big parts of it remain unprotected.

Water Framework Directive (Directive 2000/60/EC)[19] The directive commonly referred to as the "Water Directive" establishes the framework for community action in the field of water policy. The main objectives of the directive include:

- protecting all forms of water (surface, ground, inland and transitional);
- restoring the ecosystems in and around these bodies of water;
- reducing pollution in waterbodies;
- guaranteeing sustainable water usage by individuals and businesses.[20]

[17] European Environment Agency European Topic Centre on Biological Diversity, Report under the Article 17 of the Habitats Directive Period 2007-2012, https://forum.eionet.europa.eu/habitat-art17report/library/2007-2012-reporting/factsheets/habitats/coastal-habitats/1210-annual-vegetation-drift-lines/download/en/1/1210-annual-vegetation-of-drift-lines.pdf (access: 10.01.2020, t. 14:00).

[18] https://ec.europa.eu/environment/nature/info/pubs/docs/nat2000/2002_faq_en.pdf(access: 10.12.2020, t: 17:00)

[19] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32000L0060(access: 10.12.2020, t: 17:00)

[20] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Al28002b(access: 10.12.2020, t: 17:00)

According to the directive, aquatics ecosystems' vulnerability has to be taken into account in the water policy. As marine aquatic ecosystems are especially prone to eutrophication due to the inland water accessing the sea water, which is overly rich in nutrients – coming from agricultural, industrial sources, marine aquatic areas have to be protected by adopting a sustainable approach towards human activity. In this context, beach wrack should be used to prevent eutrophication, for example by reusing the beach-cast macroalgae/seaweed (beach wrack) as a fertiliser. In this way, nutrients will be removed from the beach, preventing their excessive amount in the marine ecosystem and at the same time, the beach will be clean and therefore attractive for tourists.

d) Environmental Impact Assessment Directive (2011/92/EU)[21]

The Directive sets forth the conditions that must be fulfilled by the member states to make a correct assessment of environmental impact by various undertakings and obligates them to assess environmental impact on soil, waters, air, climate and landscape. Another important aspect of this directive is that it assumes intensified cooperation between the states with regards to mutual information on starting a project that could have a significant transboundary environmental impact on another member state. The directive applies to both public and private projects undertaken in a given country regarding the marine environment and beach wreck also.

e) Marine Strategy Framework Directive (2008/56/EC)[22]

The Directive establishes the duty to elaborate by the EU member states their strategies referring to the marine environment, recognizing it as a precious heritage that must be protected, preserved, prevented from deterioration and, where practicable, restored in areas where they have been adversely affected. The main goal is that the European marine waters will be in a "good status" in 2020 (?) again, maintaining biodiversity, as well as making sure that oceans and seas are clean, healthy and productive. The Directive constitutes a framework for the member states for drawing their marine strategies and includes guidelines for the member states on what measures they must adopt to prepare the said strategies, which is exemplified by the following graphics:

[21] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02011L0092-20140515 (access: 10.12.2020, t: 17:00)
[22] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008L0056 (access: 10.12.2020, t: 17:00)

Figure 1 *Graphics. Indispensable measures to be taken by member states in order to develop the marine strategy*

Source:https://ec.europa.eu/environment/marine/eu-coast-and-marine policy/implementation/reports_en.htm (access: 29.11.2019 , t. 11:40).

The first step is to assess the current state of the sea, subsequently, the ideal environmental state of the sea must be defined - the objective that must attempt to reach. That would require the assessment of the beach wrack distribution and the amount needed for the healthy functioning of the sea and the beach itself. The third step is to set targets that may lead to achieve the required state based on the sea/beach assessment performed. The next stage involves examinations – monitoring of the state of waters and the beach (for example mineral composition of the sand) and once the outcomes have been achieved, the last stage shall involve identification and undertaking of actions needed to implement the marine strategy.

A new indicator for the assessment of coastal sea benthic macro vegetation biodiversity within the context of the MSFD has been proposed and is being examined in several studies - the Beach Wrack Macrovegetation Index (BMI)[23]. Again, the state of the marine environment and the state of its biodiversity preservation can be assessed in terms of the eutrophication process. In the study conducted by the Estonian Marine Institute, the University of Tartu, the taxonomic composition of beach wrack was examined in the northern Gulf of Riga (Baltic Sea). The authors concluded that the method of assessing the quality of water, biodiversity of the marine environment (near-coastal littoral benthic communities) by beach wrack sampling can

[23] https://kirj.ee/public/proceedings_pdf/2016/issue_1/proc-2916-1-78-87.pdf (access: 10.12.2020, t: 17:00)

be easy to use and cost-effective. It also is effective in the detection of anthropogenic impacts on the said environment.

f) Bathing Water Directive (2006/7/EC)[24]

The directive main objective is tackling the problem of water pollution, especially in regards to human health hazard connected to the bathing water quality. According to the document, water is a scarce natural resource, the quality of which should be protected, defended, managed and treated as such. Surface waters in particular are renewable resources with a limited capacity to recover from adverse impacts from human activities.

High amounts of macroalgae in the bathing water is treated as pollution and a health hazard. The water has to be monitored and the algae have to be removed by the municipalities if possible interference with human health is detected. While possibly toxic microalgae have to be removed anyway, it is an opportunity to process it.

In the study conducted by the Institute of Energy Systems and Environment, Riga Technical University, brown algae species called *F. vesiculous* was identified as dominant and most abundant in the Gulf of Riga.[25] During the study, the chemical composition of the said microalgae species was examined for consideration of the most appropriate end use of the material. The results have shown that this particular species can be used as fertilizer, biomass for energy and a source of pharmaceutically important matters. Heavy metals pollution has turned out to be high, that's why the authors of the study do not recommend the usage as food or food supplement (unless the heavy metals are removed). Due to its highly absorbent properties, it can also be used as a biosorbent to remove heavy metals from the environment.

[24] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02006L0007-20140101 (access: 10.12.2020, t: 17:00)
[25] https://cyberleninka.org/article/n/1471982/viewer (access: 10.12.2020, t: 17:00)

3. Review of legal regulations from selected states with regards to beach wrack

3.1 Poland

Poland is located in Central Europe and borders the Baltic Sea with a coastline of 634 km. Polish coastline presents a quite high vulnerability to erosion and flooding, as the beaches' composition is mostly sandy, unlike rocky/coastal beaches of Sweden or Norway. Inadequate management of beach wrack can present an even greater risk in the context of beach erosion[26].

However, in Poland, the notion of beach wrack is most commonly understood as annual vegetation of the drift lines. According to one definition, it is a berm formed by organic remains cast ashore by waves[27]. Polish waste management system – segregating, recycling is quite fresh and not yet fully developed. Beach wrack is treated mainly as waste and there are no initiatives that could treat it as a raw material fit for processing/reusing.

The observance shows that the practice of the beach administrators and the entities involved focuses rather on passive maintenance of the habitats for annual vegetation of the drift lines, which is the predominant variation of beach wrack in Poland. The shortage of unequivocal regulations, which would commit the entrepreneurs or ameliorate for such ones to recycle or produce the fertilizers from the annual vegetation of the drift lines. The annual vegetation of the drift lines is regarded in Poland more like a habitat that must be conserved and left alone, as it provides shelter to endangered species, "one must keep off the annual vegetation of the drift lines".

There are numerous instances in which tourists complain about decomposing beach wrack and a characteristic smell emitted. However, the authorities stress compliance with the assumptions of the Nature 2000 programme. It is worth to note again that Nature 2000 programme is only a network of protected areas, where the legislation of the Habitats and the Birds directive will be executed

[26] https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/poland_climate_change_en.pdf (access: 03.11.2020 , t. 16:00).
[27] https://krzyzowki123.pl/definicja/kidzina (access: 28.11.2019, t. 16:00).

One curious fact must be noted about Poland, there was an instance in which the annual vegetation of the drift lines was stolen from the beach in Świnoujście[28]. The Regional Directorate for Environmental Protection in Szczecin instituted the investigation because sand couch grass was one of the components of the annual vegetation of the drift lines - highly endangered species [29]. The topic of annual vegetation of the drift lines became the subject matter of a dispute between the local government of Świnoujście and the Regional Directorate of Environmental Protection in Szczecin. The dispute centred around touristic attractiveness of the beaches – the topic of high importance to the local government, and the conservation of endangered species – the issue advocated by the Directorate of Environmental Protection in Szczecin. Beach wrack processing remains a troublesome issue due to the lack of the relevant provisions determining the manner of conduct with endangered species of vegetation and which can be processed. The regulations encompass only the manners in which such one can be conserved. Under such circumstances, the administrators' hands are tied and they do not intend to be exposed to the threat of high financial penalties to be imposed and the necessity to notify the relevant EU organs on potential infringements to have occurred.

Legal regulation referring to beach wrack in Poland ought to be analysed for the beach management entities and the manner they provide beach management.

a) The level of local governments

The beaches of Gdansk agglomeration (Gdańsk-Sopot-Gdynia) have been selected to serve as an example for analysis. The entity which provides beach management in Gdynia is "Gdyńskie Centrum Sportu" [Gdynia Sports Centre], while in Gdańsk "Gdański Ośrodek Sportu" [Gdańsk Sports Centre]. Beach management entities take advantage of the private companies, specialized cleaning companies. This is the case for other beaches in Poland. Hence, the entities providing beach management are related to local governments – Gdańsk Sports Centre remains an organizational unit of Gdańsk Municipal Commune, has the status of a budget entity, while analogical Gdynia Sports Centre remains an organizational unit of the city of Gdynia i[30]. Cleaning companies are selected in line with the tender procedure according to the provisions

[28] https://www.rmf24.pl/fakty/polska/news-swinoujscie-tajemnicze-zniknie cie-kidziny-zagadke-wyjasni-mo,nId,2377172(access: 28.11.2019 , t. 16:00).
[29] https://plus.gs24.pl/swinoujscie-miasto-nie-wie-co-robic-z-plaza/ar/12052652(access: 28.11.2019 , t. 16:00).
[30] https://www.sportgdansk.pl/o-nas/(access: 28.11.2019 , t. 16:00) - Statut Gdańskiego Ośrodka Sportu;

of Act f 29th January 2004 – Public Procurement Law (i.e. Journal of Laws from the year 2019, item 1843)[31].

The exemplary analysed tender includes the detailed determination of areas that are encompassed by public procurement. One must pay attention to the fact that the beach administrator neither imposes nor differentiates which waste must be utilized and which can be recycled or composted. In the analysed example, the Contracting Authority uses a general term: disposal of waste and impurities including the carcass collected as a result of the performance of the aforementioned actions in order to store, utilise or treat them in compliance with the valid provisions. Hence, there is no division of beach wrack into waste that can be recycled. The Contractor, i.e. a cleaning company, remains committed to observe the valid provisions only, which results in ineffective use of beach wrack.

Not all beaches in Poland are managed by communal budget entities. Under such circumstances, private beach tenants (although Polish law guarantees free access to the sea and the beaches to its citizens and most of them are State-administered, it is possible to lease the beach area – especially in touristic resorts) conclude the relevant agreement with the beach administrator (communal budget entity), provisions of which assume the obligation to maintain beaches in order by the tenant. Under such cases, meeting the imposed obligation, i.e. selection of a relevant entity – specialized cleaning company, remains at the tenant's discretion.

Sources of law under such circumstances include:

- Statutes of relevant communal budget entities, the act dated 14th December 2012 on waste (i.e. Journal of Laws from the year 2019, item 701, as amended),
- The act dated 13th September 1996 on the maintenance of order and cleanness within communes (i.e. Journal of Laws from the year 2019, item. 2010, as amended),
- The act of 27th April 2001 – the Law on Environmental Protection (i.e. Journal of Laws from the year 2019, item 1396, as amended),
- The acts of local law (resolutions of the commune council or the City Council).

The authors have got an insight into an exemplary resolution of the City Council of Świnoujście, in which the annual vegetation of the drift lines was regarded as the protected habitat. The

[31] https://www.gdynia.pl/bip/wyniki-postepowan-i-umowy,1258/sprzatanie-i-utrzymanie-czystosci-gdynskich-plaz-i-przystani-jachtowej-w-2018-roku,515588(access: 28.11.2019 , t. 16:00)– przykładowe ogłoszenie w Biuletynie Informacji Publicznej.

resolution number LXIX/559/2010 of the City Council of Świnoujście dated 7th May 2010 on the local zoning plan for the city of Świnoujście, covering the Seaside District of the city refers to this issue. Paragraph 7 of the cited act directly states that the following protected habitats occur within the area of Świnoujście:

"Natural habitats specified by the enactment of the Minister of Environment dated 14th August 2001 on the determination of the types of natural habitats subject to conservation:

a) **the annual vegetation of the drift lines**
b) coastal initial dunes and coastal white dunes – highly endangered wandering dunes with specialized flora
c) coastal grey dunes - stabilized dunes made of sea sands with initiated soil-forming processes, formed as a band at the back of white dunes
d) coastal dunes with sea buckthorn scrubs,
e) forests on the coastal dunes,
f) moped forests on the coastal dunes,
g) Pomeranian oak and birch forest,
h) xerothermic sandy grasslands; (…)."

b) The Act dated 13th April 2007 on the prevention against damages in the environment and their rectification (i.e. Journal of Laws from the year 2019, item 1862).

Article 15 of the said act bears the most important for the act under discussion here and states the following:

If an entity using the environment or in the instance specified by article 12 clause 2 an entity using the environment or holding the possession over the surface of ground fails to undertake preventive measures or fails to agree upon corrective measures, an environment protection organ:

1) *summons it to submit within the deadline specified a request to agree on the terms to perform, respectively, preventive or corrective measures;*
2) *if the request has not been submitted in line with the summons, imposes, through the relevant decision, a duty to perform such measures.*

It allows the Regional Directorate for Environmental Protection to impose a duty to perform corrective measures. One of such activities includes a duty to refrain from disposing of the

annual vegetation of the drift lines, which remains, in line with the nature 2000 programme, a habitat for protected species of plants and animals. For example, the relevant decision ordering to refrain from infringement on the natural environment was passed against an entity running a campsite on 22nd November 2011[32].

c) Enactment of the Minister of Environment dated 13th April 2010 on natural habitats and species remaining the subject matter of interest from Community as well as on the criteria to select the areas qualifying for being nominated and determined as nature 2000 areas (i.e. Journal of Laws from the year 2014, item 1713).

Appendix 1 to the said enactment directly mentions the annual vegetation of the drift lines on the seashore as a type of natural habitat remaining the subject matter of interest from the Community requiring conservation in the form of being nominated the Nature 2000 area and grants it with the code 1210. The habitat does not constitute the priority in conservation. In line with the data obtained from the general Directorate for Environmental Protection, it has been established that the tables presented below contain the annual vegetation of the drift lines, being as it has been established before, a component of beach wrack[33]*:*

In combination with the aforementioned act, the enactment allows to put pressure over an entity to make it refrain from the removal of the annual vegetation of the drift lines for various reasons, including aesthetical or for further usage. The mentioned enactment has a crucial impact on how beach administrators handle the annual vegetation of the drift lines. Making it into Nature 2000 conserved area, even without granting it with the priority, brings about weightless legal consequences. As an example, it must be stated that when the annual vegetation of the drift lines occurs within the area intended for construction works, the Regional Directorate for Environmental Protection may inflict a decision to withhold the construction works and to restore the environment back to its initial state. Inflicting such a decision remains justified - in an exemplary judgment, this constitutes a prerequisite for substantive validity of the decision – vide case examined by the Supreme Administrative Court, dossier reference number II OSK 2648/14, judgment dated 4th April 2014[34].

[32] Wystąpienie pokontrolne NIK, LGD-4101-012-05/2013, https://www.nik.gov.pl/kontrole/wyniki-kontroli-nik/pobierz,lgd~p_13_141_201309191123371379582617~id4~01,typ,kj.pdf (access: 09.01.2020 , t. 17:00)
[33] http://natura2000.gdos.gov.pl/wyszukiwarka-n2k (access: 29.01.2020 , t. 13:46).
[34] Wyrok NSA z dn. 06.07.2016 , sygn. akt II OSK 2648/14 publ. LEX nr 2118242, http://orzeczenia.nsa.gov.pl/doc/73361CD01C (access: 10.01.2020 , t. 11:00),

The case in question referred to an excessive intervention from the owners of a non-established for its location campsite within the coast of the Baltic. The said owners used to bring sand and gravel to the site in order to make the beach they administered more attractive "visually" for the tourists. Additionally, they liquidated (cut down) reed and, hence, removed the annual vegetation of the drift lines. The relevant organ took action when the owners of the campsite started groundworks in order to widen the beach deciding that they had influenced the Nature 2000 conserved area too much, forbidding them to continue the works and ordering them to restore the area to its initial state. The aforementioned case remains the evidence that the environment receives sufficient protection, however, the principles of conservation and situations when the annual vegetation of the drift lines can be processed remain unclear.

d) The act dated 14th December 2012 on waste (i.e. Journal of Laws from the year 2019, item 701, as amended).

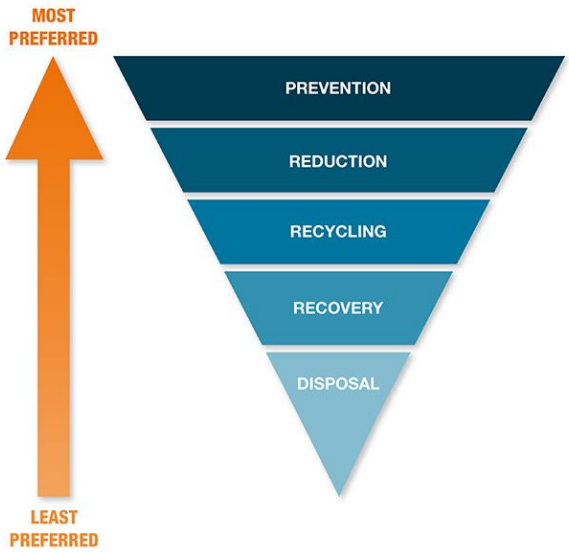
Regarding special provisions, it is indispensable to refer to the Act dated 14th December 2002 on waste (Journal of Laws from the year 2013, item 21). The legislator failed to provide a direct definition of organic waste, such as beach waste (seaweeds, algae, seagrass) which could undergo recycling processes.

The provision regulating the status of beach wrack is article 122 cause 2, stating:

"*It is prohibited to store waste in inland surface and underground waters, within Polish marine areas and in the cases set forth by separate provisions. On top of that, the landfill must not be located within the coastal belt, except for the situation when the consent for such a location has been issued by the director of the maritime authority, which has been set forth by article 126 clause 2. Determination of the location for a landfill: (...) 3) within the area of the coastal belt as well as maritime harbours and marinas shall require the consent granted by the director of the maritime authority.*"

The Act also refers to the situation of contamination of the sea with waste coming from accidents – such contamination can have a large impact not only on the sea but on the beach itself, including the beach wrack.

Figure 2 *Graphics presenting the hierarchy in the course of action to be taken while handling waste according to the Polish Act on waste*



Source: www.howden.com/en-gb/articles/general/19-waste-management-best-practices-for-a-sustainability (access: 28.11.2019, t. 16:00).

Special attention must be paid to the hierarchy which was established by the legislator with regards to waste handling: the Act of 27th April 2001 on the waste, chapter 2, determines the hierarchy for permissible waste handling, known in EE legislation (see: framework Directive 75/442/EEC) as well as in Polish provisions: *firstly, waste generation must be prevented (prevention); however, when waste has been generated already, its recovery must be secured as first (including recycling) and then, when the latter is impossible to achieve, waste must be disposed of (including storage).*

The wording of article 101 clause 1 and 2 of the Act on waste must be mentioned here as well: *clause 1. accidents, in the form of a relevant decision issued ex-officio, a perpetrator of an accident may be imposed with the duties related to managing the waste originating from accidents, including the duty to transport them to a specified waste holder and clause 2: In case of the waste originating from accidents causing sea contamination, a ship operator which contributed to waste generation shall be regarded as a perpetrator of the accident if the vessel remains known.*

e) The Act of 13th September 1996 on maintenance of order and cleanness within the communes (i.e. Journal of Laws from the year 2019, item 2010, as amended).

By means of article 3b, the legislator has imposed over communes a duty to maintain the recycling level at a properly high level – according to article 3b clause 1:

Communes are committed to achieve until 31st December 2020: 1) the level of recycling and preparation for reuse of the following fractions of household waste: paper, metals, plastics and glass, at least 50% by weight; 2) the level of recycling and preparation for reuse and recovery through other methods with regards to construction and demolition waste, other than hazardous ones, remaining the household waste, at least 70% by weight.

f) The Act of 21st March 1991 on marine areas of the Republic of Poland and maritime administration (i.e. Journal of Laws from the year 2019, item 2169, as amended).

The Baltic Sea in its part located within Polish territory, according to article 2 of the aforementioned act, shall constitute marine area – i.e. internal sea waters, territorial seas, adjacent zone and exclusive economic zone. From the point of beach wrack, article 36 remains the most interesting for us as it refers to the definition of the coastal belt:

"Coastal belt includes the inland area adjacent to the seacoast line. The coastal belt includes the following: 1) technical belt – remaining the zone of mutual impacts from sea and land; this area is intended to keep the seashore in the state compliant to the requirements of safety and environmental protection; 2) protective belt – including the area in which human actions directly impact the state of the technical belt."

Another provision includes article 37a clause 2 referring to the Enactment on water zoning plan: Zoning plans for internal sea waters, territorial sea and exclusive economic zone, hereinafter referred to as plans, shall decide on: (…) 5) the areas and conditions for: a) environmental protection and the protection of cultural heritage, b) fisheries and aquaculture, c) renewable energy acquisition, d) exploration, examination of fossil deposits as well as excavation of fossils from deposits. A water zoning plan is a useful mean of environmental protection of the sea and beaches, as the zoning decisions should be consistent with the physical capability of the marine area, ensuring the water quality for a healthy sea and beach.

Subsequently, in order to seek regulations referring to examined issue, one must move on to the aforementioned plan.

g) Draft of the enactment of the Minister of Maritime Economy and Inland Waterway Transport, the Minister of Investment and Development on the acceptance of zoning

plans for internal sea waters, territorial sea and exclusive economic zone, scale 1:200 000.

The aforementioned enactment remains in the form of a draft only, consequently to which we have to base on the act that has not been passed yet – for the time of producing the following document the draft was exposed for public scrutiny together with the Forecast for environmental impact [35].

The most interesting question is contained in Appendix 1 to the said enactment, which includes the definitions of terms, especially regarding renewable energy acquisition – *means acquisition, processing and accumulation within sea areas energy from renewable sources, especially wind, waving, sea currents, sun and sea organisms (biogas), including erection of the structures indispensable for the acquisition of energy together with accompanying infrastructure as well as structures serving for processing and accumulation of energy*[36], whereby it must be stated that water areas serving predominantly for renewable energy acquisition are marked with "E" symbol (according to paragraph 2 clause 1 5) of the plan), however, paragraph 3 of the draft contains a reservation that "*Within the entire area included into the plan, the functions of national defence and safety, as well as environmental protection, are executed".*

h) The Act dated 27th April 2001 – The Law on environmental protection (i.e. Journal of Laws from the year 2019, item 1369, as amended).

Article 293 clause 5 of the aforementioned act ought to draw our attention here as it does not directly forbid to store waste in internal sea waters or territorial sea waters but introduces an increased fee for waste storage: *In case of waste disposal into the inland surface and underground waters, internal sea waters or territorial sea waters an entity using the environment shall incur an increased fee amounting to 100 times the usual rate for placing the waste on a landfill.*

The Act does not introduce the ban from waste disposal directly (the provisions refers to any waste to sea – including beach wrack) but imposes a noticeably increase fee.

[35] https://www.umgdy.gov.pl/?cat=273(access: 28.11.2019 , t. 16:00).

[36] https://www.umgdy.gov.pl/wp-content/uploads/2018/06/POM_v1_projekt_rozporzadzenia_1_ustalenia_ogolne.pdf(access: 28.11.2019 , t. 16:00).

Due to the fact that beach wrack recycling and composting may turn out to be too expensive as there are no cheaper production alternatives, a total ban from placing the waste there ought to be *de lege ferenda* postulate in this case. It is possible though that event noticeably higher fee for waste storage still will remain beneficial enough for the entrepreneurs in comparison to waste disposal.

3.2 Germany

General country characteristics

The German Federal Republic has the biggest population of all EU states reaching over 82 million inhabitants. Its administrative division is based on counties/lands/states corresponding to historical regions, of which there are 16, including 3 cities bearing the rights of the Land: Berlin, Hamburg and Bremen (together with Bremerhaven).

Northern borders of Germany have been established within the marine areas: the North Sea (western part) and the Baltic Sea (eastern part), which are separated by Jutland Peninsula with the shortest land border with Denmark (68 km). The total length of the German Baltic Sea coastline reaches as far as 2009 km[37].

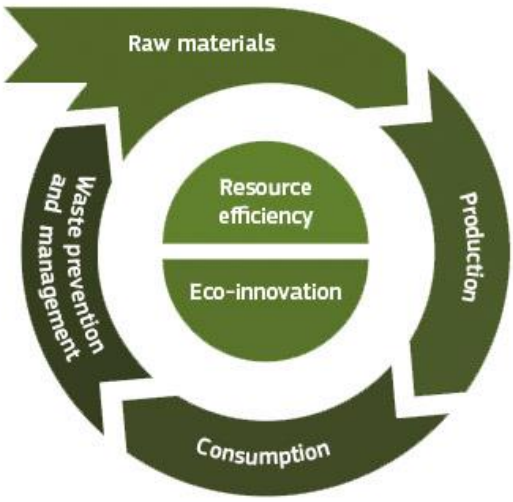
Waste management policy

Germany belongs to the pioneering countries in the field of waste recovery,[38]. The annual turnover of this market sector reaches 50 billion Euro. Germany specialises in exporting close-cycle waste processing technologies – 25% of the world's market share. In the model of an economy marked with the closed-circuit the product function as long as it is possible, owing to numerous processing (Figure 3).

The aforementioned actions receive support from the European Parliament, which in its resolution dated 2nd July 2017, summoned to introduce the policy focusing on increased product durability, limiting at the same time, excessive generation of waste and money wastage.

[37] https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/germany_climate_change_en.pdf
[38] I. Haščič, *Environmental Innovation in Germany*, OECD Environment Working Papers nr 53/2012.

Figure 3 *Closed circuit economy diagram of processing and recycling raw material*



Source: ec.europa.eu/environment/green-growth/tools-instruments/index_en.htm(access: 28.11.2019, t. 16:00).

A similar approach prevails with regards to waste related to maritime operations – both, artificial and organic ones.

Regulations and solutions regarding organic beach waste

Firstly, we have to present the list of terms in Polish and German directly related to the subject matter of the following framework document and its current part:

The law on environmental protection is commonly referred to in Germany as the Environmental Law (*Umweltrecht*). Apart from the nationwide regulations, more detailed provisions are in force within each state. The following organs have been appointed to observe such ones:

- Federal Ministry of Environment, Environmental Protection, Construction and Reactors Safety,
- Federal Authorities for Conservation,
- Federal Authorities for Environment,
- Federal Ministries of Economy and Energy.

Federal Authorities for Conservation provide advisory functions in favour of the Ministers of Environment of Germany. Additionally, they have been granted the competencies to issue permits and support the projects in the field of environmental protection and maintenance of landscapes. Furthermore, Federal Authorities for Environment remains scientific centres focusing on determination, descriptions and assessments for the state of the environment. The recommendations and opinions given by them are provided to the Federal Ministries of

Environment, which shape conservation policy within their jurisdictions. However, relating to the "executive" tasks there are differences between the two states bordering the Baltic Sea, Mecklenburg-Western Pomerania and Schleswig-Holstein. While in Schleswig-Holstein all nature conservation interests are administered and executed by the Ministry of the Environment ("LLUR"), Mecklenburg-Western Pomerania has some administrative levels in between The State Office for the Environment, Nature Conservation and Geology (LUNG), the respective state offices for various concerns such as nature conservation and waste (STALU), and the lower authorities ("Untere Fachbehörde"). The last both ones mainly execute and monitor in their competent areas.Selected German nationwide legal acts dealing with environment conservation:

a) Fundamental Law of the Federal Republic of Germany dated 23rd May 1949 – *Grundgesetz für die Bundesrepublik Deutschland*[39]

Article 20a

The State, in the feeling of responsibility for the future generations, protects within constitutional order the natural conditions of life and animals by means of the legislation and in line with acts and laws by executive power and the administration of justice.

Article 31

The federal law shall prevail over the national law.

Article 72

§ 1: *With regards to competitive legislation, the states are entitled to issue acts until and to the extent the Federation, by means of a relevant act, exercises their legislative rights.*

§ 3: *In case when the Federation has exercised its legislative rights, the states may, by means of a relevant act, accept different legal regulations including:*

[...] 2. conservation of nature and landscape care (except for the provisions referring to general principles of conservation of nature, species and maritime nature); […]

Article 89:

[39] Ustawa Zasadnicza Republiki Federalnej Niemiec z dnia 23 maja 1949 (Tłumaczenie Bogusław Banaszak i Agnieszka Malicka): http://biblioteka.sejm.gov.pl/wp-content/uploads/2016/02/Niemcy_pol_010711.pdf (access: 28.11.2019 , t. 16:00).

§ 3: *In the administration, extension and construction of new waterways the needs of the natural environment and water management ought to be protected in agreement with the states.*

b) The Act on economic circulation dated 24thFebruary 2012 - *Gesetz zur Förderung der Kreislaufwirtschaft und Sicherung der umweltverträglichen Bewirtschaftung von Abfällen (hereinafter refered to as: KrWG)*

Kreislaufwirtschaftsgesetz (KrWG) is the federal act of the German Law on waste which promotes a closed-circuit economy to protect natural resources, especially by promoting recycling. The said act assumes that environmental protection serves the general good and that there the "waste" of the coast defined by the law would also have to be recycled accordingly.

c) The act on nature conservation dated 29th July 2009 – *Gesetz über Naturschutz und Landschaftspflege (hereinafter referred to as : BNatSchG)*

Bundesnaturschutzgesetz (BNatSchG), remains the legal basis in the Federal German Republic for the means to conserve the goods, nature and landscape. Chapter 6 (paragraphs 56-58) deals with the nature conservation within the German coastal waters as well as German exclusive. Furthermore, § 30 says that the shallow water zone is protected and therefore no beach wrack is allowed to be taken from this zone. Only the actual beach line could be "managed". In addition, that means that always a significant amount of sand is included due to these differences in the collection, while this could be got directly from the water.

d) The Act on renewable energy dated 1st August 2014 - *Gesetz für den Vorrang Erneuerbarer Energien (hereinafter referred to as: EEG)*

Erneuerbare-Energien-Gesetz (EEG) remains one of the tool to combat global warming. The act assumes the reduction of greenhouse gases in Germany respectively to 35% until 2020, 50% until 2030, 65% until 2040 and 80% in 2050 and anticipates the annually decreasing guaranteed tariffs for new renewable electricity generating entities.

e) The Act on environment al impact assessment dated 24th February 2010 - *Gesetz über die Umweltverträglichkeitsprüfung (hereinafter referred to as: UVPG)*

UVPG regulates the environmental impact assessment for undertakings which, for their nature, size or location, may influence the environment noticeably, implementing the Directive 2001/42/EC of the European Parliament and the Council dated 27th June 2001 on assessment for the impact of some planes and programmes on the environment as well as the Directive

2011/92/EU, consolidated version dated 15th May 2014, of the European Parliament and the Council dated 13th December 2011 on the assessment of the impact posed by some public and private undertakings on the environment (unified text).

f) The Act on emission controls dated 13th May 2013 - Bundes-Immissionsschutzgesetz (hereinafter referred to as BImSchG)

The Act on the protection of humans, animals, plants, soil, water, atmosphere and the cultural goods against harmful environmental impact caused by emissions and nuisance: air pollution, noise, vibrations and similar processes. This regulation is crucial for the German companies producing biogas and compost. There are regulations on how high the release of certain substances (pollutants, gases, nutrients) may be.

g) The Act on water resources dated 31st July 2009 - *Wasserhaushaltsgesetz (hereinafter referred to as WHG)*

WHG contains the provisions referring to the protection and usage of surface and underground waters as well as the development of unified parts of waters and planning water economy and flood control.

Additionally, the Federal Draft of Natural Environment Code ***(Umweltgesetzbuch (UGB)***, dated 4th December 2008 was attempted to be passed which was supposed to unify the provisions referring to environmental protection taking into consideration opinion contained in the so-called "Professors' drafts" from the 90-is, however towards the end of January 2009 German Minister of Environment, Sigmar Gabriel, declared that the initiative to pass the said act failed.

3.3 Denmark

State general characteristics

The Kingdom of Denmark (*Kongreriget Danmark*) is inhabited by approximately 5.5 million people. The state is divided into 5 regions, within which 98 communes have been established. Denmark has a very special position as a state with regards to the legislation promoting recycling, including beach wrack processing, and as an EU Member State, similarly to

Germany, which used to base its economy on coal, has one though a giant transformation process with regards to waste management[40].

Statistics regarding the waste

Historically, in relative terms, the Danish would generate one of the highest quantities of waste in the EU and used to incinerate until 80% of them. However, the strategies adopted by the rulers assume the shift from incineration through the limitations of waste impossible to manage until the total elimination of such ones from the circulation. Such assumptions are becoming more and more feasible when you take a closer look at the mechanism for promoting and implementation of recycling, composting and energy recovery although the number of incineration plants within the country remains an obstacle to achieve the said objective.

The Danish legislator implemented a recycling act as the first authority in the world as early as 1978. This provision contained a restrictive and very courageous decision to recycle at least 50% of paper labels and packages left after beverages. It was as early as 1989 when the Danish act on waste was passed.

Denmark, therefore, fits into a commonly known approach of the Scandinavian countries to ecology as well as to raw material recovery and segregation from waste. The legal solution prevailing therein set a good example to others afterwards and are reflected in the legislation of other states as well. Danish local governments play a very serious role with regards to waste segregation. As in Sweden local governments function based on the law passed at a central level, their Danish counterparts were given the freedom of choice for the regulations to be adopted. This contributed to a healthy competition between them with regards to the best provisions referring to environmental protection[41].

Regulations and solutions on recycling

A survey of selected environmental law sources in Danish legislation:

a) **Act on environmental protection dated 13th May 2019 - *Bekendtgørelseaflov om miljøbeskyttelse***

[40] https://zerowasteeurope.eu/2014/01/the-story-of-denmarks-transition-from-incineration-to-zero-waste/ (access: 28.11.2019, t. 16:00).
[41] https://foresightdk.com/bornholm-test-new-energy-technologies/ (access: 28.11.2019, t. 16:00).

The Minister of Environment and Food remains an entity responsible for environmental protection. The Act imposes precise duties over the Ministry, especially paragraph 50e must be cited here: *The Minister of Environment and Food develops a 12-year nationwide plan to counteract waste generation. The plan shall be verified at least every six years.*

According to the Act, each enterprise in Denmark which generates waste must implement the policy of waste handling. The legislator formulates the general duties, e.g. the enterprises are committed to create recyclable packages and certain substances which cannot be recycled or are extremely harmful may be forbidden for usage by the Minister within the state territory. Paragraph 54 of the aforementioned act is devoted entirely to the question of state subventions to implement innovative products supporting the recycling process as well as waste life cycle analysis which allow to anticipate, at least at a rough estimate, what the time and costs of waste recovery will be and whether such waste can be transformed into valuable raw material.
All Marine areas in Denmark have been marked by the relevant act as "special areas" (*særligeområder*), with regards to which quite strict protection provisions are applicable.

b) The act on marine environment protection dated 4th September 2017 - *Bekendtgørelseaflov om beskyttelseafhavmiljøet*

The said act implements the provisions of MARPOL (The International Convention for the Prevention of Pollution from Ships) convention and the Helsinki Convention on marine environment protection within the Baltic into the domestic legislation.
The Act imposes a series of bans, including discharging of waste, oils, fluid substances in bulk or sewage into the sea and imposes commitments to limit the sulphur content in vessel fuel as well as sets forth the principles with regards to oil rigs.
The aforementioned legal act, to a great extent, remains a framework document granting numerous authorities to the Minister of Environment with regards to lay down regulations on contaminations originating from vessels.
The document determines the controlling competencies for the relevant organs with regards to environmental protection, e.t. for the Danish Environmental Protection Agency, responsible for environmental conditions at sea, evaluation of biological conditions and administration of the act, and The Operational Command of the Navy (*Søværnets Operative Kommando* - SOK) to combat contaminations as well as to monitor and prosecute the contaminating entities.

c) **The Environmental Objectives Act, Order No 1756 of 22 December 2006 on environmental objectives, etc. for bodies of water and international nature conservation areas, as amended, which implements executory order on the requirements for the environmental quality of unified parts of waters as well as the requirements regarding the discharge of impurities to watercourses, lakes or sea dated 12th December 2017 - *Bekendtgørelse om miljøkvalitetskrav for vandområderogkravtiludledningafforurenendestoffertilvandløb, søerellerhavet.***

The EU Member States are committed to limit the contamination of the water environment and hence they must determine the requirements regarding the environmental quality for the substances discharged or supplied to unified parts of waters. Such requirements have been included within the objectives of the framework water directive and have been determined therein.

Communes and regional centres for environmental protection are held accountable in Denmark for the limitation of contamination emissions to the water environment in order to meet the environmental quality requirements.

3.4 Sweden

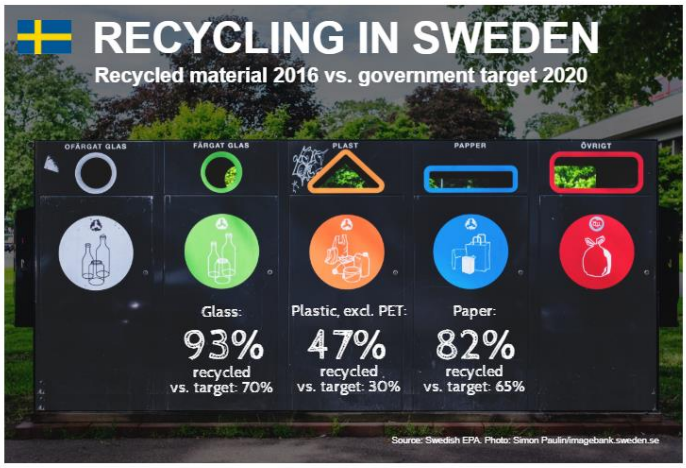
State general characteristics

The Kingdom of Sweden is inhabited by 10.3 million people, which makes it the biggest population of all Scandinavian countries. The state is divided into 21 territorial regions (län) and 290 communes (*kommuner / kommun*). Sweden has the access to the Baltic Sea, which is - most important - by the authors. Consequently, the legislator is committed to protect the seashore line and provide a high level of beach wrack processing. The Parliament, Riksdag, remains the legislator in Sweden and this organ formulates the domestic legislation.

The Kingdom of Sweden has regained worldwide recognition for its modern approach to recycling (Figure 5). As early as in the 80-is, the legislator discovered the potential for sorting out plastic bottles and packages and, hence, the first sorting machines were introduced. A special term, pant, appeared, which means a fee that is obtained when a plastic bottle or package

is recycled. The verb *panta* was introduced into the Swedish language, meaning giving something to somebody and getting money for it in return[42].

Figure 4 *Swedish objectives with regards to recycling*



Source: https://sweden.se/nature/the-swedish-recycling-revolution/ (access: 28.11.2019, t. 16:00).

The Swedish legislator has taken great care to secure a high level of nature. As the state is rich in precious herbs and plants, Sweden has a noticeable number of environments protected within the Nature 2000 programme. Especially, house owners must be careful not to infringe on Nature 2000 area. They cannot remove reed (seagrass) with stems and each necessity of removal must be consulted with the local authorities [43]. They are recommended to refrain from such activities between May and June, i.e. within the nesting period for birds.

Legal acts within the Kingdom of Sweden referring to the notion of beach wrack:

- domestic legislation (local):

- the act on environmental protection *(Miljöbalk 1998:808) from the year 1999,*

- Enactment (2001:512) on waste storing *(Förordning (2001:512) om deponeringavavfall),*

- Enactment (2012:989) with instructions from the Swedish Agency for Environmental Protection *(Förordning (2012:989) med instruktionför Naturvårdsverket),*

[42] https://skandynawiainfo.pl/pant-szwedzki-sposob-na-recykling-plastikowych-butelek/ (access: 28.11.2019, t. 16:00).
[43] https://www.skelleftea.se/boende/natur-parker-och-lekplatser/sjoar-och-vattendrag/vassklippning(access: 28.11.2019, t. 16:00).

-Enactment on the environmental impact assessment (2013: 251) *(Miljöprövningsförordning (2013:251)),*

- Enactment on the Marine environment *(Havsmiljöförordning (2010:1341),*

The Swedish Agency for Environmental protections, Swedish Association of Waste Management *(avfall Sverige)* based in Malmö operate in Sweden.

Type of contamination and beach waste formulated by Swedish legislation:

a) Contaminations on beaches and the shoreline protection rules

The shoreline protection rules are regulated by Chapter 7, Section 13-18, of the Act on environmental protection.[44] The protection here refers to water reservoirs, seas, lakes and rivers. For the purposes of the following document, we are interested in the protection of the seashore line. The Swedish legislator has introduced the so-called buffer zone, extending the protected area at the distance of 100 m from the seashore line. Local authorities, having assumed that the special prerequisites are applicable, may extend the said line until 300 meters. Such prerequisites include situations in which natural protection of the seashore line is insufficient. They also are applicable with regards to the Nature 2000 programme including nature conservation areas within the EU.

b) Milestones in the Swedish legislation aiming to propagate beach waste processing

The simplest division of beach wrack is the division into organic waste and such ones originating from human actions. The Swedish legislator has assumed precise objectives and determined time frameworks with regards to waste processing[45].

As far as beach wrack is concerned, the most important are the bans from storing flammable waste (without their previous processing involving recycling leading to recovery or composting) passed in 2002 and organic waste passed in 2005. The sources of law include predominantly the order on waste storage (*Förordning (2001:512) om deponeringavavfall*). The general ban has been set forth by Section 14 of the following rule:

[44] https://www.government.se/49b73c/contentassets/be5e4d4ebdb4499f8d6365720ae68724/the-swedish-environmental-code-ds-200061

[45] https://smartcitysweden.com/focus-areas/climate-energy-environment/waste-management/ (access: 28.11.2019, t. 16:00).

Only processed waste can be stored. Processing is understood as the application of physical, thermal, chemical or biological methods, including sorting, which changes the waste properties to decrease their quantities or diminish the danger, which ameliorate processing or to make recycling preferable.

The processing requirement does not apply to indifferent waste processing of which is not technically feasible, or to another waste processing of which does not bring about the decrease in an adverse impact on human health or the environment.

The ban does not include the storage of waste whose TOC value remains below 10% of the contents of the waste stored. Consequently to a rigid ban, only composting or recycling of such waste is permissible. Exceptions to the ban, set forth by Section 4 of the said Rule, include as well:

- volatile ashes and sediments originating from such ones if they constitute below 18% of waste
- sludge if has been subject to composting,
- sludge formed while making stationery products
- animals carcass if they can be buried in line with the special provisions

It is also possible to apply for permission to store the waste conditionally unless their processing is possible. Such permission is granted by local authorities of a given area for a period of one year. The permission is to be granted in advance.

c) Rule on the marine environment (Havsmiljöförordning (2010:1341))

According to Paragraph 6 of the aforementioned document, Swedish sea areas are divided into the North Sea and the Baltic Sea. In Paragraph 8, the legislator specified that Authority for the marine and water environment shall remain the organ relevant for the marine environment. It is responsible for the issues set forth by Paragraph 13 – providing a comprehensive picture of the marine environment state, determination of costs related to the deterioration of the marine environment. According to Paragraph 21, the aforementioned authority is committed to develop and implement an internal Baltic Sea environment monitoring programme.

d) Environmental Code (The Act on environmental protection) (Miljöbalk 1998:808)

The Swedish legislator in article 5 and 6 of the said act determined that firstly waste processing ought to include recycling and using the received energy. The Swedish legislator states that

anybody running a business activity in Sweden related to waste ought to seek to decrease the quantities of waste, limit the quantities of harmful substances, decrease the negative consequences of waste and its recycling and while selecting the place of operations, an entrepreneur ought to consider environmental issues.

According to article 8, Chapter 2, such an enterprise is held accountable for any harm caused to the environment. Article 10 Chapter 2 introduces a necessity to accept the Marine Plan for Sweden[46], which contains the guidelines for Swedish local authorities with regards to, e.g. the Gulf of Bothnia, the Baltic Sea and the North Sea.

The Marine Plan determines the manner to handle the applications on commencement of operations within such territories and on providing sustainable development therein. The Baltic Sea (southern water area of the Baltic) is determined by article 13 clause 4 Chapter 4 of the aforementioned act as the so-called "water district". Anyone setting up business activity that could have an impact on the environment must report to the local authorities to be assessed.

According to article 26 Chapter 6 of the said act, having completed an investigation a legislative body of the local authorities gives a decision in which it states whether an undertaking has a noticeable impact on the environment.

Swedish act on environmental protection distinguishes, above all, protection of beaches and sets forth what purposes such protection must be based on. According to the provision of article 15: Protection of beaches is intended, in a long-term perspective, to 1) provide conditions for public access to beaches and 2) maintain good living conditions for animals and vegetation on land and in water

The protection of Swedish beaches has been included in the legal system unconditionally, i.e. regardless of the fact whether a given area is protected by Nature 2000 programme. Beach protection includes all beaches at the seaside, at the lakes or streams, regardless of their sizes, within municipal and poorly populated areas, regardless of the fact whether or not there are many lakes and streams, independently of the types of habitats and species, within the distance of 100 m from the shore, on land and in water, including the environment underwater within the protected zone the following bans prevail:

- From the erection of new buildings

[46] Sweden (ioc-unesco.org) (access: 28.11.2019, t. 14:00).

- From changing the configuration of existing buildings or devices which hamper the mobility for beach users,
- From excavations or preparation for such a construction
- From the implementation of other undertakings posing a threat to animals and vegetation.

Examples of constructions that must be erected within the beaches include bridges, piers, fencing or parking spaces[47]. Such bans do not apply under circumstances when a commune has granted an individual permit in a given case, which must be applied for by a person wishing to obtain such a permit.

Article 16 Chapter 6 contains the exclusions referring predominantly to: 1. buildings, constructions and means which are not intended to satisfy housing demand and which are needed for agriculture, fishery, forestry or reindeer husbandry and in order to provide such functions must be located or started within the beach protection zone. According to Paragraph 18, local authorities may also decide that within the beach areas of lesser importance the beach protection does not apply.

Bearing in mind the following elaboration, Chapter 15 remains crucial as well for it refers to waste processing. According to Paragraph 1 waste are defined as all substances or items which are got rid of by their owners, will be got rid of or the owners are committed to dispose of. Additionally, an item or a substance remaining waste and which has been subject to recycling is not waste anymore within the meaning of the Act. Article 20 of the following Chapter assumes the responsibility of a commune (*kommuner / kommun)* for maintaining a proper level of recycling and disposal of household waste

3.5 Estonia

State general characteristics

Approximately 1.3 million people inhabit The Estonian Republic. A single-chamber Parliament (*Riigikogu*) remains the legislator in Estonia. The country is divided into 15 counties (*maakond*), subdivided into 79 municipalities (*omavalitsusüksus*) – 15 of them being cities

[47] http://www.naturvardsverket.se/Var-natur/Skyddad-natur/Strandskydd/(access: 28.11.2019, t. 16:00).

(*linn*) and 64 parishes (*vald*). Estonian marine area is circa 36500 km2, with a length of the coastline of ca 4015 km.

Competent authorities responsible for marine and coastal environment

Estonian Ministry of Environment responsibilities include organising of:

- national environmental and nature protection;
- the use, protection, re-production and accounting for natural resources,
- environmental supervision incl. nature and marine research, geological, cartographic and geodetic operations,
- the use of external tools for environmental protection, as well as compiling strategic documents and draft legislation.

The Environmental Board is an administrative unit under the Ministry of Environment that coordinates and executes supervision regarding the use of natural resources and the protection of the environment by applying the state´s coercive measures on the basis and to the extent specified by law. It deals with environmental licensing, environmental violations and also carries out investigations in criminal cases.

The Estonian Environment Agency is an administrative unit under the Ministry of Environment responsible for the management and implementation of the national environmental monitoring program, environmental data collection and data management, as well as international reporting obligations.

Environmental policy relevant to the issue of beach wrack

There are several laws that are primarily concerned with the protection of the environment. However, none of these is directly applicable to beach wrack.

a) Nature Conservation Act (Looduskaitseseadus)

This act establishes the general principles, aims and objectives of nature conservation, the use of natural resources and pollution control. The task of the legislation is to provide the basis for the minimisation of pollution of the natural environment and the use of natural resources in amounts that maintain a natural balance.

b) Environmental Protection Code (Keskkonnaseadustiku üldosa seadus)

The act contains general regulations regarding environmental protection with the main objectives of:

- *diminished environmental interferences to the widest extent possible in order to protect the environment, human health, prosperity and assets as well as cultural heritage;*
- *promotion of sustainable development in order to provide the environment suitable for the health and well-being of the present and future generations;*
- *Maintenance and protection of biological diversity;*
- *Good state of the environment;*
- *Prevention against damage to the environment and remedy for damage caused to the environment;*

c) Water Act (Veeseadus)

For the document at hand, the most important are the provisions of Division 6 – Status of Marine area. According to Paragraph 72, **the marine strategy (merestrateegia)** is drawn up for the entire Estonian marine area to protect the marine area itself as well as to achieve and maintain the good environmental status of the Estonian marine area. The Ministry of Environment is held accountable for the implementation of the marine strategy.

The Marine strategy sets out eleven qualitative descriptors which describe what the environment will look like when GES has been achieved. It also includes the main pressures and impacts of human activities on the sea, and their implications for marine biodiversity, their habitats, and the ecosystems they sustain. The marine strategy potentially provides an adequate framework to deal with beach wrack, however it does not specifically target beach wrack at the moment.

d) Fishing act (Kalapüügiseadus)

The purpose of this Act is to:

1) ensure conservation and economic use of fish and aquatic plant resources based on internationally recognized principles of responsible fisheries;

2) ensure reproduction capacity of fish and aquatic plant resources and productivity of bodies of water;

3) avoid undesirable changes in the ecosystem of bodies of water.

The act regulates aquatic plant collection from the sea. However it also specifically mentions plants washed ashore. According to paragraph 4 (3) Agar-agar in the sea is in the ownership of the state. Agar-agar washedashoreis in the ownership of the owner of the immovable property located on the shore. E.g. Rules of protection of the Prangli Landscape conservation area

(Prangli maastikukaitseala kaitse-eeskiri) permit to gathered and bladderwrack in the conservation zone of the area.

e) Act on environmental fees (Keskkonnatasude seadus) dated 01.01.2006

According to the act, the Estonian legislator in Paragraph 3 (1) has defined "the fee for using the environment". Using the environment means, in line with (2))6), emission of pollution to the air, bodies of waters, groundwaters and the soil; 7) disposal of waste by storage on the landfills or other actions leading to the emission of waste into the environment (hereinafter referred to as waste disposal). The fees are divided into payments for using the mineral resources and payments for contamination. Paragraph 20 of the aforementioned act determines the rates for payments with regards to contamination emissions to water bodies, groundwaters and soil.

Estonian legislator has imposed a duty over the entities which wish to recycle waste including a necessity to apply to the Environmental Council of Estonia for being granted with an integrated environmental permit or with permission for waste recovery or for being certified as a waste handling entity[48]. According to the generally available data, in 2018 itself, as many as 338 certificates for registration of waste handling companies were issued, which, bearing in mind the size of Estonia, remains an impressive result[49]. Any entity which has been certified in this manner is exempted from the obligation to receive the waste recovery permit.

f) Waste act (Jäätmeseadus)

By paragraph 22^1 of the Act on waste the Estonian legislator has determined the following hierarchy to handle waste and segregated the priorities in the following manner:

1) prevention against waste generation;
2) preparation for reusing;
3) recycling;
4) other forms of recovery, similar to energy recovery;
5) removal.

[48] https://www.keskkonnaamet.ee/et/eesmargid-tegevused/jaatmed/korduma-kippuvad-kusimused/jaatmete-taaskasutamine(access: 28.11.2019, t. 16:00).

[49] https://www.keskkonnaamet.ee/et/eesmargid-tegevused/jaatmed/jaatmekaitleja-registreerimistoend(access: 28.11.2019, t. 16:00).

Steps of processing beach wrack, including preparation for reusing (without recycling it – it's the direct transformation of waste into the preparational material) is extensive, however, paragraph 30 contains a reservation that *waste shall be recovered if it is feasible technologically and is not too expensive compared to other forms of waste management*.

According to § 5. "Biodegradable waste" means any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food waste, paper and paperboard. The act further specifies in § 5.1. "Bio-waste" means the following biodegradable waste:

1) garden and park waste;

2) food and kitchen waste from households, retail premises and caterers;

3) waste from food processing plants the composition and nature of which is similar to the waste specified in clause 2) of this section.

So although the framework exists, beach wrack is not specifically targeted in this act.

Table on region-specific regulations

Table 3 *Table on region-specific regulations*

Country	Description
GERMANY	Implementation information from the Ministry of Economics, Labour and Health MV: [Implementation information on the "direct utilisation" of beach wrack as waste on agricultural land in Mecklenburg-Western Pomerania] for the State Offices for Agriculture and Environment MV (StÄLU) and the State Office for Environment, Nature Conservation and Geology MV (LUNG). Published on: 26.04.2018. Reference number: V 583-20000-2013/001-02
POLAND	Statutes of relevant communal budget entities, the act dated 14th December 2012 on waste (i.e. Journal of Laws from the year 2019, item 701, as amended), The act dated 13th September 1996 on the maintenance of order and cleanness within communes (i.e. Journal of Laws from the year 2019, item. 2010, as amended),

	The act of 27th April 2001 – the Law on Environmental Protection (i.e. Journal of Laws from the year 2019, item 1396, as amended), The acts of local law (resolutions of the commune council or the City Council).
SWEDEN	Avfallsförordningen 2011, Förordning om deponeringavavfall 2001, Föreskrifterochallmännaråd om omhanteringavbrännbartavfallochorganisktavfall, 2004
DENMARK	Sludge Directive' (Slambekendtgørelsen), The Blue Flag certification terms, UNESCO project terms, environmental protection law,

3.6 The Russian Federation (The Kaliningrad Oblast)

a) Legal acts commonly binding in the Russian Federation concerning environmental protection.

The Constitution of the Russian Federation of 4th July 2020 remains a basic legal act referring to the regulations on environmental protection. Article 42, underlines the right of every citizen "to live in the favourable natural environment, to be provided with credible information on its state and to receive remuneration for any damage sustained by their health and property by any infringement of ecological law"[50]. Article 72 point 1e of the Russian Constitution of 4th July 2020 states that the environmental protection issues are in the joint legal management of the Russian Federation and the subject of the Russian Federation, which is the Kaliningrad Oblast. Granting the entire Russian society with the right to live in a favourable natural environment corresponds well to the commonly prevailing standards, however, subsequent legal regulations differ significantly from structure applied in European legislation in this aspect[51]. Considering the currently binding legal acts, the Russian Federation does not possess one, complex collection of legal regulations to organize information on environmental protection. All environmental principles and norms, which exist in pan-European legislation, are included in Russian regulation, but they are not collected in one or

[50] Konstytucja Federacji Rosyjskiej z 12 grudnia 1993 , http://biurose.sejm.gov.pl/uzup/mid-112.pdf (access: 28.11.2019, t. 16:00).

[51] K. Zawada *Access do Informacji o środowisku w procedurze rosyjskiej ekspertyzy ekologicznej* w *Prawne Problemy Górnictwa i Ochrony Środowiska,* Katowice 2/2016 , s. 119-128.

few collective documents, they are included in many regulative documents already existed since many years or being developed along the appearance of new ones.

Presentation of the legal regime in Russia, hence in the Kaliningrad District, in this aspect shall require getting acquainted with commonly binding regulations on the one hand, but shall force us to have a look at specific legislation, especially at regional and local regulations, on the other[52].

b) Influence of international agreements on the regulation of the Russian Federation

Russia remains a party in approximately seventy international agreements and treaties, including such ones dealing with environmental protection. As far as beach management is concerned, only conventions regarding the law on the sea shall be mentioned, in which the regulations on using natural resources within coastal areas can be found. The Russian Federation has ratified the following international agreements:

1) Convention on the prevention against contamination sea with oils signed in London on 12th May 1954 (OILPOL), ratified by USSR in 1969,
2) Convention on the prevention of sea contamination by dumping waste and other substances to the sea signed in London, Mexico, Moscow and Washington on 29th December 1972, entered into force in USSR in March 1976,
3) The Helsinki Convention on the protection of the environment of the marine area in the Baltic Sea of 22nd March 1974, ratified by the USSR in 1976 (Convention amended in 1992),
4) Convention on the prevention of sea contamination by ships signed in London on 2nd November 1973 (MARPOL).

c) Detailed legislation referring to environmental protection in the Russian Federation.

The Russian Federation has very few regulations on managing beach waste. Access to the Baltic Sea -includes its westernmost district, the Kaliningrad District neighbours two EU countries: Poland and Lithuania. The district owns a section of the coast extending along 147 km. While moving directly to the subject of legal regulations on the beach, wracks management as well as the management of other beach waste, we cannot neglect the detailed legislation[53].

[52] M. Micińska-Bojarek *Umowy międzynarodowe Federacji Rosyjskiej w dziedzinie ochrony środowiska,* Bydgoszcz 2016.
[53]Ustawa federalna „O odpadach produkcyjnych i konsumpcyjnych" z dnia 24 czerwca 1998 N 89-ФЗ (najnowsza wersja).

Examination of legal regulations of the Russian Federation starts from the Federal Act of 24th June 1998 N89-03 (as amended on 26th July 2019) "On production and consumption waste". It determines the legal framework for managing production and consumption waste to prevent the harmful consequences of production and consumption waste on human health and the environment as well as for the share of such waste in the business circulation as additional sources of raw materials. Basic principles and priority directions for the state policy on waste management, set forth by article 3 of the aforementioned act, do not differ much from European conditions. The act specifies among others: the protection of human health, maintenance or restoration of favourable environment and the maintenance of biological diversity. Determined directions for the state policy include maximum usage of raw materials and supplies, prevention of waste generation, limitation of waste generation and decreasing waste hazard class at the sources of its generation, disposal and removal of waste. The aforementioned act defines production and consumption waste as substances or items generated in the course of production, execution of work, provision of services in the consumption process which are removed, are intended for disposal or are disposed in line with the following federal law.

- **Interpretation of terms used in the act**

Afterwards, there comes the interpretation of the term: waste management, as an action related to waste collecting, accumulation, transportation, processing, utilisation or disposal. With regards to beach waste, the issue which requires attention while interpreting the said act is a group of waste containing materials classified as metal scraps and non-ferrous metal waste and/or ferrous metals, products made of non-ferrous and/or ferrous metals and their alloys, which have become useless or have lost their consumption properties, waste generated during the production of products from non-ferrous and/or ferrous metals and their alloys, as well as inappropriate combination resulting from the manufacturing of such products.

d) Classification of waste depending on the degree of their negative impact on the environment

Waste, depending on the degree of its negative impact on the environment, is divided into five classes of threat in line with the criteria set forth by the federal executive organ, which implements the law of federal district in environmental protection. In order:

1. Class I – extremely hazardous waste;
2. Class II – highly hazardous waste;
3. Class III – waste with medium hazard;

4. Class IV – slightly hazardous waste;
5. Class V – waste practically devoid of any hazard.

e) Further detailed legislation

The document anticipates sequentially the authorizations of given executive organs to grant permits for collecting, transportation, processing of waste from classes I to IV. According to article 5.1 authorizations of federal executive organs to grant permits for collecting, transportation, processing, disposal of waste from class I to IV may be transferred to executive authorities of the entities remaining parts of the Russian Federation in line with the Federal Act of 6th October 1999 N184-ФЗ „ On general principles of organization of entities within the Russian Federation". Article 9 of the said act determines the provisions to grant licenses for the actions regarding the collection, transportation, processing and disposal of waste from classes I to IV. In line with the wording of Article 9, an individual entrepreneur or a legal person is not entitled to perform the actions related to collecting, transportation, processing and disposal of waste from classes I to IV if their plant has already been performing actions to dispose of waste from such classes by any other individual entrepreneur or legal person that has been licensed for such operations. As for the authorizations for local governments with regards to solid household waste management, they include the following activities: creation and maintenance of places to collect solid household waste, except for the instances specified by the legislation of the Russian Federation when such a duty is imposed over other persons, determination of the system for places to collect solid household waste and to make the register for such places. Regulations and requirements referring to waste management within communes remain compliant with the federal law.

- **Interpretation of the definition for beach waste**

When moving on to the detailed conditions, the federal act - fails to define in a straightforward manner what can be understood as beach waste. Unfortunately, it refers to legal identification of beach waste to a very limited extent and does not determine its legal status.

f) The proposal of amendments of the acts in order to introduce the approaches promoting ecology

Amendment of the act by introducing the provisions - and -actions aiming to protect the environment appear to be very promising as the territory of the Russian Federation taking up

15% of land in the world is extremely valuable[54]. Hence, improvement of the state of the environment remains a giant challenge for the federal authorities as the scale of the problems exceeds the noticeable financial and organizational capabilities of individual regions. Not only are the relevant legal act needed but also plans, programmes and institutions let alone political will to finance ecological undertakings. However, in the instance of such an enormous country, even single amendments directed towards the promotion of ecology are of motivating and open up an opportunity for further development in this aspect.

4. Comparison of legal regulations between EU and the Russian Federation

a) Comparison of legal regulations with regards to the conservation of waters

In line with the series of EU directives, the comparison of EU regulations and the regulations of the Russian Federation will be compared at this point. The first of the Directives is the Water Framework Directive 2000/60/EC referring to water quality in Europe. According to this act, the Member States ought to protect all waters, both internal and external ones, take measures to restore ecosystems in such waters, contribute to diminished contamination levels and pay attention to sustainable use of water by physical persons and the enterprises alike. The legislation of the Russian Federation regulates also the usage range and protection of water reservoirs and treats an opportunity to provide the right to use clean water to its citizens as well as to maintain the optimum management conditions for water resources as priorities. Such provisions are contained in the federal act no 167-FZ referring to the conservation of waters. The said regulation is of a general nature and determines the general course of actions only, failing to determine the time framework within which the authorities are committed to adopt the provisions[55].

b) Comparison of the regulations on the protection of natural habitats

The Directive of the Council 92/43/EEC of 21st May 1992 on the protection of natural habitats and wild flora and fauna remains another document specified in the document. This directive is commonly referred to as the "habitat directive". It determines the species which are subject to the power of the directive as well as specially protected areas. The Russian Federation

[54] http://geopolityka.org/analizy/magdalena-micinska-bojarek-stan-srodowiska-naturalnego-w-federacji-rosyjskiej-zastane-problemy-i-nowe-wyzwania (access: 28.11.2019, t. 16:00).
[55] https://russia.trade.gov.pl/pl/f/download/fobject_id:369585 (access: 31.01.2020, g: 16:54).

possesses a collective legal regulation on the matter only, determining the legal basis for the state policy on environmental protection. Any precise reference to each individual species of natural habitat can be found in the laws of the federal level, where the only basic principles are declared, all details are written in numerous sectorial and local regulation acts.

c) Comparison of the regulations on the assessment of the consequences

The EU regulation presented as the fourth one is the Directive on the Environmental Impact Assessment (Directive of the European Parliament and of the Council 2011/92/EU of 13th December 2011 on the assessment of impact made by some public and private undertakings on the environment). The said regulation determines the conditions that must be fulfilled by a state in order to draw up the environmental impact assessment in a proper manner. The Russian Federation possesses a complex information service on the evaluation of the impact made by the Russian legislation on environmental protection. This is an electronic service, free of charge, which is accessible to all citizens. Its range encompasses information on the process of acts implementation and their consequences for the environment.

Contact details of key organizations and people dealing with environmental protection in the Russian Federation can be found there as well.

d) Summary

To sum up, tightened cooperation between the EU and Russia can lead to more efficient environment protection in the Baltic sea region. Unification of legislation regarding the environment across the Baltic sea region shall result in its successful implementation and execution.

The study of the international agreements and conventions, as well as the framework legal acts of the federal level in Russia, are not allowed to compare carefully the systems of the environmental legislation which exist in EU and Russia. A more detailed study of all Russian sectorial and local legal and regulative acts and documents are needed. The environmental legislation norms were included in many existed before documents as long as the Russian legal regulation turned from the resource-oriented focus to environmental oriented policy starting from 70th.

Questionnaire – survey results in the Appendix

In the course of the research, participants and partners have been provided by a survey. Its content has been made available on an online platform. The results of the survey presented in a graphic form can be found in appendix no. 2.

The main objective of the questionnaire was to learn how the problem of beach wrack is dealt with by i.e. beach managers in the region. The questionnaire is aimed at entities that are directly responsible for beach management – especially waste management on the beaches. By gathering the data, CONTRA project participants will be able to analyse the obtained data and identify problems in the management of beach wrack, including positive and negative aspects, especially including problems in the legal framework regarding beach wrack. Following collecting and analysing data is a step to open a dialogue with entrepreneurs that are interested in investing in beach wrack.

The following conclusions can be drawn:

1) there is a need to establish a legal definition of beach wrack, as the understanding of beach wrack varies. Apart from eelgrass, seaweed, macroalgae, microalgae - snails, mussels, plastic bottles and other waste, crabs, wood, mineral fraction, sand – all of the listed above are perceived by the respondents as beach wrack, meaning that they classify both organic and non-organic components as beach wrack collectively.
2) In Germany, beach wrack is treated as waste, but research has been carried out since 2019 on the use of BW as a soil fertilizer. It was found that apart from the basic nutrients for plant production, which are nitrogen, phosphorus and potassium, significant amounts of macronutrients, magnesium and calcium were also found. The concentration of heavy metals and the salinity of the beach material were also tested. Although the concentrations of heavy metals in most of the samples remained below the threshold limits laid down in the German fertilizer and bio-waste legislation, two samples had cadmium concentrations above the threshold values. The arsenic content was also close to the upper limit. The information obtained in the expert interviews shows that since the salinity of the beach sediment is not expected to be unfavourable for soil and plants, it can be used in agriculture and can also be beneficial. Further analysis is still needed

to assess the material and its effects on crops and soil[56]

3) There are legal barriers to using the beach wrack as e.g. fertilizer: no regulations to collect beach wrack, no possibility of beach wrack storage, agricultural and fertilizer regulations in different countries do not include the beach wrack usage as a fertilizer;

3) legal regulations should enable and enable universal commercialisation of the beach wrack, especially its transport (including storage facilities) and selling, granting it a status of a natural resource and initiating financial support programs for entities engaged in the promotion of beach wrack reprocessing,
4) a limit of the amount of beach wrack has to be set that has to be left untouched in order to protect the natural environment (marine habitat),
5) disposal methods of beach wrack have to be clearly defined (e.g. delivery/return to the sea),
6) the co-operation of the municipalities, involving also cross-border co-operation, should be tightened and intensified.

5. Conclusions

It has been found that some countries within the Baltic Sea area are seeking or already finding uses for beach wrack other than treating it as waste. In some countries, beach wrack treated as waste is only regulated within beach clean-up mandates. In addition, in the case of Poland and Denmark, there is a legal regulation requiring the removal of beach wrack as waste from the beach when it undergoes decay processes and is deemed hazardous. For one country (Sweden), this is a discretionary decision depending on the circumstances.

The fundamental difference in the approach to legal regulations is an important problem:

1) in Poland, it is still very detailed and requires recycling of waste and then processing,
2) in Germany, the approach is more liberal and only prohibits interference with bio-materials (e.g. collecting) in protected areas - and therefore in the remaining areas there is freedom in this matter,
3) in Sweden, beach wrack is not seen as a problem.

Thus, the main conclusion is a noticeable common approach to regulation:

[56] Sterr, Ahrendt&Enderwitz (eds.): *Seegras und Treibsel –altbekannte Strandressource neu entdeckt Coastline Reports* 26 (2019), ISSN 0928-2734, ISBN 978 -3-939206-21-7S. 45-52),

1) exempting protected areas from regulation (e.g. Natura 2000 or other), so the endangered habitats remain safe,
2) introducing freedom in the management of beach wrack in other areas than those under strict environmental protection with the limitation that beach wrack may be a hazardous material.

All actors recognized that there is a need for a common beach wrack policy and detailed designs and guidelines for the effective management of beach wrack as existing policies address it only as beach pollution. Therefore, special attention should be paid to increasing awareness of the use of beach wrack as raw material and not waste and to enable its rotation.

The analysis of legal regulations in the EU and the Russian Federation as well as the local and regional regulations based on the case studies within the CONTRA project, undoubtedly indicate that the states have been taking active measures to implement effectively the protection of beaches and coasts.

The legal instrument ensuring the cohesion of implementing the regulations that are identical for all Baltic Sea region states – EU and non-EU states is the signing of the international contract between the European Commission and non-EU states. The only transboundary efforts of EU- and non-EU-states are the HELCOM and the Baltic Sea action plan - but these are only recommendations and not legally binding. For the sake of guaranteeing the unity of the actions undertaken, the above legal instrument is the only one recommended for implementation, which will ensure the cohesion of actions of the Baltic Sea states.

Measures taken by Member States and EU bodies aiming at unifying legal regulations on water resources, including Beach Wrack, and related actions, increase the transparency and effectiveness of these acts. At the same time, this translates into a better understanding of structured regulations and the process of their updating and changes compared to countries outside the EU. The constant striving to harmonize the laws of the Member States remains an unquestionable factor that binds national and regional activities related to more effective enforcement of legal provisions relating to the procedure with BW. Moreover, the establishment of specialized EU bodies and units dealing exclusively with environmental issues improves and accelerates the implementation and enforcement of common directives.

Firstly, the influence from EU legislation has had an immense impact on the shape of legal conditions within European countries. Hence, the majority of the aforementioned countries

(Poland, Germany, Denmark, Sweden, Estonia) have implemented legislation on beach waste management. So far only individual aspects to the beach wreck were treated legally in the respective countries - like bio-waste processing, fertilization, emissions etc. However, a holistic view including a cross-border concept only to the beach wreck does not exist and there is a lack of the united system or strategy within the EU countries like e.g. no monitoring on the composition and quantities. It seems that the only way to provide a solution on a common level is working around like the HELCOM or the MSFD – as in the case of a descriptor for marine litter as an example. The solution for this could be, that the states need to incorporate EU law into their legal system. That means, if a change is to be made concerning the whole region, it should be done at the EU level as first, not merely at a regional level (state level), as all the states will have to implement new measures directly into their internal legislation. Implementation of EU directives occurs in line with the same principles. Slight differences may be noticed, however, each EU Member State implements provisions in the manner corresponding to its commercial and economic capabilities.

As far as the Russian Federation is concerned, beach waste management remains a less clear issue. In order to examine the legal regulations binding in this country, one can rely on the commonly binding acts only which refer to the beach wrack issue in a very general manner, but on sectorial and local regulative acts.

6. Recommendations

Having got acquainted with the assumptions and the idea of the CONTRA project, objectives include changing the manner of management for the areas subject to environmental protection. Shaping the awareness of the entities responsible for beach wrack management and to further recycling methods is also the goal, so the following recommendations can be made. The authors - regard the CONTRA project as a valuable initiative that creates an innovative technology with regards to waste management. Another advantage is to include into the initiative all countries located in the Baltic Sea area, also those which are not EU member states. Numerous actions intended to promote the said idea by the dissemination of information on the project and collecting feedback from the society on the subject matter of the project need to be highlighted as well. The authors - approve of detailed and conscientious monitoring of the project implementation outcomes by the project's creators. This demonstrates their willingness to constantly improve the solutions remaining the basis for the project.

The guidelines in question shall be divided into two categories. The first one shall refer to internal measures within the EU (with special impact put on recommendations for Poland, a legal system of which remains best-known to the authors), which would secure more effective implementation of the project provisions. The second group of recommendations shall include the development of guidelines referring to the collaboration between the EU and the Russian Federation.

Including the category of annual vegetation of the drift lines into the enactment, and, hence, establishing a total ban from intervention, remains senseless as it evades the problem only and fails to address it at all by providing any constructive solution. Current provisions hamper noticeably activities to be performed by potential entrepreneurs who would like to process beach wrack as annual vegetation of the drift lines ought to be left intact on the seashore.

Our first proposal for the EU presented by the following elaboration is an idea to cover the costs of beach waste recovery as recyclable raw materials by EU organs. Beach waste recycling remains a chance to get rid of increasing quantities of litter. However, the decision to introduce pro-ecological activities is related to excessive financial expenditures from the budgets of local authorities which frequently cannot afford them. Bearing this reason in mind, we must recommend for EU organs to spend a bigger part of their subventions on ecological objectives, with special emphasis put on supporting small and middle-sized communes in implementing more eco-friendly solutions, which can result in higher expenditures, especially in the early implementation stage of ecological activities. Municipalities should be encouraged to adopt them and refunding the increased expenditures could effectively encourage them to do so.

Additionally, the said financial means would contribute to the development of infrastructure in the vicinity of the beaches as well as would provide the support in keeping order within a given area by covering employment costs for cleaning services specializing in handling organic materials cast ashore. Such a subvention would equal a chance to purchase the equipment allowing to monitor the cleanness of the beaches and would constitute a perspective to use innovative technologies in the future. With additional funding, the communes may run social activities in order to enhance the awareness among local communities on the ecology of the coastal areas. By organizing educational meetings, the inhabitants will have a better chance to get acquainted with the phenomenon of beach wrack and the regional policy on this issue. Apart from the proposal referring to additional financing for pro-ecological initiatives to be provided by the EU, we recommend to develop a possible maximum number of the projects on the

ecology of the beach. It should involve the scientific institutions in the member states in the process of monitoring and maintaining healthy sea and beach environments and waste management and include the countries from outside of the EU to implement them. Special care should also be put on educative projects as the importance of the beach wrack e.g. coastal protection should be stressed to the public so that the beach wrack disposition will not meet such great social controversies as it does now. Educational projects should be conducted both on the EU level and on the Member State level of the Baltic rim. A better understanding of what beach wrack is and how essential it is to the whole ecosystem will result in the public desire to protect it and beach monetization urge will not be the most important.

The second part of the recommendations shall refer to the relations between the EU and the Russian Federation. The authors of this document recommend closer cooperation between EU member states and the Russian Federation and attempt to open up the discussion on the unification of provisions on beach wrack within the Baltic Sea. We especially recommend increasing the cooperation in - ecological policy, especially in the aspect of financial and scientific support for the Russian partner, to the same extent as for the EU member states cooperation. Commencement of such a dialogue would have a positive impact on EU international image and would allow the development of a consistent environmental policy in a more effective manner. For that reasons, the authors' have drafted a document, which is an international agreement, between the EU represented by the European Commission as representative body according to article 2018 of TFEU[57] and the Russian Federation, which can be found in appendix no. 3 on the environmental protection and processing of beach wrack.

The authors of this Legal Framework Document have drawn the following final conclusions:

- Legislation gaps on the regional/national/EU level are mainly a lack of regulations.
- Legal regulations require cohesion and the introduction of beach wrack definition in line with the CONTRA[58] project recommendations as well as the use of the annual vegetation of the drift lines definition in compliance with the Habitats directive![59]. Furthermore, it should be defined whether it is permissible to collect beach wrack only cast ashore and/or also in form of algae/biomass still floating in the water.

[57] EUR-Lex - 12008E218 - EN - EUR-Lex (europa.eu) (access: 10.12.2020, t. 17:00)
[58] https://projects.interreg-baltic.eu/projects/contra-179.html (access: 02.02.2020, t. 21:00).
[59] https://natura2000.gdos.gov.pl/files/artykuly/52912/1210_Kidzina_na_brzegu_morskim.pdf (access: 29.01.2020, t. 16:00)

- Co-operation with local scientific institutions should be initiated., The amount and spatial distribution of the beach wrack - of each state - should be investigated and monitored seasonally, it is done only sparse so far. As a result, this enables the very important description of a "good health" of both the sea and the beach regarding the Marine Strategy Framework Directive and Water Framework Directive. .Therefore, the whole Baltic Sea region should be examined for several years in future, so that the optimum data amount and distribution is set for analyses and future trends. That will enable further implementation of measures for the protection and best maintenance, controlling and re-assessment, if needed, when these values are controlled. Moreover, the time at which beach wrack can be collected has to be specified, as after it starts to decompose, its collection can lead to beach erosion by collecting the beach sand with it as well.
- The possibility of throwing beach wrack which cannot be processed for any reasons, back to the sea has to be clearly stated in the legislation. Currently, this is prohibited by the e.g. EU waste legislation - since beach wrack is considered waste as soon as it is touched and removed by the municipality, it would also enter the sea as waste. This is simply forbidden (although it is practised).
- The possibility of collection of beach wrack by individuals (e.g. "one bag policy" –a person can collect as much as one bag of beach wrack free of charge) after the authorities' permission for non-commercial reasons (for example gardening) should be clearly stated in the legislation.
- Examination of pollution level of the beach wrack has to be introduced, as well as the quality classes and official certification of the beach wrack depending on its chemical composition – especially heavy metals concentrations, degradation status, sand content. Different quality classes of beach wrack should be used in concretely specified ways – each quality class should be connected to the list of possible commercial usage. Especially human health hazard should be taken into account. Certification should include TRACES Phyto[60].
- Environmental protection of marine areas, as well as the sea itself, should be more comprehensive, as the pollution of the sea (water) itself results in the pollution of the

[60] Certificates, documents and features | Food Safety (europa.eu) (access: 10.12.2020, t: 17:00)

beach wrack (as it is a part of the marine ecosystem and pollution does not spare it), which at the end will worsen its quality and therefore, its market potential.

- Clear legislation regarding the possibility and ways of collection (e.g. when beach wrack can be collected not only from the beach but also from the water, kinds of storing and transport of beach wrack) has to be implemented.
- Beach wrack in practices regarded by beach management entities rather as a problem than as a collection of raw material marked with processing potential, that's why regulations promoting recycling and reprocessing of the beach wrack should be introduced.
- International cooperation between the EU and the Russian Federation is needed in the introduction of the same legal regulations guarding the protection of the beach wrack for the whole Baltic Sea region.
- Educational and research projects should be conducted in a greater number and extent, as redefining beach wrack as an asset is essential for the public to accept that it is important to protect it.
- Local authorities should be encouraged to introduce more eco-friendly measures, which will require external financing, especially in the early stages of the implementation.

7. The list of legal acts

EU Directives:

a) *Directive 2000/60/EC of the European Parliament of 23rd October 2000, which establishes the framework for Community action in the field of water policy,*

b) *Directive of the European Parliament of the Council 2009/147/WE of 30th November 2009 on the conservation of wild birds,*

c) *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora,*

d) *Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive).*

Poland:

a) *The Act dated 13th April 2007 on the prevention against damages in the environment and their rectification (i.e. Journal of Laws from the year 2019, item 1862),*
b) *Enactment of the Minister of Environment dated 13th April 2010 on natural habitats and species remaining the subject matter of interest from Community as well as on the criteria to select the areas qualifying for being nominated and determined as nature 2000 areas (i.e. Journal of Laws from the year 2014, item 1713),*
c) *the Act dated 14th December 2012 on waste,*
d) *The Act dated 13th September 1996 on the maintenance of order and cleanness within communes,*
e) *The Act of 21st March 1991 on marine areas of the Republic of Poland and maritime administration,*
f) *Draft of the Enactment of the Minister of Maritime Economy and Inland Waterway Transport, the Minister of Investment and Development on the acceptance of zoning plans for internal sea waters, territorial sea and exclusive economic zone, scale 1:200 000,*
g) *The Act dated 27th April 2001 – The Law on environmental protection.*

Germany:

a) *The Act dated 24thFebruary 2010 - Gesetz über die Umweltverträglichkeitsprüfung (UVPG),*
b) *The Act on emission controls dated 13th May 2013 - Bundes-Immissionsschutzgesetz (BImSchG),*
c) *The Act on water resources dated 31st July 2009- Wasserhaushaltsgesetz (WHG),*
d) *Draft of Natural Environment Code dated 4th December 2008 - Umweltgesetzbuch (UGB).*

Denmark:

a) *The Act on environmental protection dated 13th May 2019 - Bekendtgørelseaflov om miljøbeskyttelse,*
b) *The Act on marine environment protection dated 4th September 2017- Bekendtgørelseaflov om beskyttelseafhavmiljøet,*
c) *Executory order number 573 dated 18th June 2008 on reporting compliant to the Act on protection of marine environment- Bekendtgørelse nr 573 af 18. juni 2008 om indberetningihenholdtillov om beskyttelseafhavmiljøet,*

d) *Executory order on the requirements for the environmental quality of unified parts of waters as well as the requirements regarding the discharge of impurities to watercourses, lakes or sea dated 12th December 2017 - Bekendtgørelse om miljøkvalitetskrav for vandområderogkravtiludledningafforurenendestoffertilvandløb, søerellerhavet,*

e) *Executory order on the quality requirements for seafood dated 29th June 2016 - Bekendtgørelse om kvalitetskrav for skaldyrvande.*

Sweden:

a) The Act on environmental protection (Miljöbalk 1998:808) from the year 1999,

b) Enactment (2001:512) on waste storing (Förordning (2001:512) om deponeringavavfall),

c) Enactment (2012:989) with instructions from the Swedish Agency for Environmental Protection (Förordning (2012:989) med instruktionförNaturvårdsverket),

d) Enactment on the environmental impact assessment (2013: 251) (Miljöprövningsförordning (2013:251)),

e) Enactment on the Marine environment (Havsmiljöförordning (2010:1341),

Estonia:

a) Environmental Protection Code (Keskkonnaseadustikuüldosaseadus (lühend - KeÜS) of 01.08.2014,

b) Water Act (Veeseadus (lühend - VeeS) of 13.02.2019,

c) Act on environmental fees (Keskkonnatasudeseadus) of 01.01.2006,

d) Act on waste (Jäätmeseadus) of 01.05.2004.

The Russian Federation (the Kaliningrad District):

a) The Constitution of the Russian Federation of 12th December 1993,

b) The Federal Act on production and consumption waste of 24th June 1998 N 89-ФЗ (latest version).

Other international sources used in general background research:

a) Nairobi International Convention on the Removal of Wracks – WRC of 19th May 2007

Introduction:

a) https://projects.interreg-baltic.eu/projects/contra-179.html,

b) https://www.dezeen.com/2013/07/10/the-modern-seaweed-house-by-vandkunsten-and-realdania/,
c) https://www.smithsonianmat.com/science-nature/underwater-meadows-seagrass-could-be-ideal-carbon-sinks-180970686/,
d) www.ekologia.pl/wiedza/slowniki/leksykon-ekologii-i-ochrony-srodowiska/odpady
e) www.theoutershores.com/2013/09/26/eelgrass-in-the-wrack/,
f) https://www.urbanclimateadaptation.net/ezine3-2018/,
g) https://www.dezeen.com/2013/07/10/the-modern-seaweed-house-by-vandkunsten-and-realdania/,
h) https://www.environment.sa.gov.au/topics/coasts/explore-and-learn/seagrass-restoration-in-sa,
i) www.coastal.ca.gov/,
j) http://www.beachapedia.org/Wrack,
k) https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=124910&org=NSF,
l) http://stateofthebalticsea.helcom.fi/pressures-and-their-status/marine-litter/,
m) https://www.environment.sa.gov.au/files/sharedassets/public/coasts/beach-wrack-factsheet-mar2017.pdf,
n) http://www.iopan.gda.pl/projects/plazowa.pdf,
o) https://krzyzowki123.pl/definicja/kidzina,
p) http://e-czytelnia.abrys.pl/recykling/2014-7-773/edukacja-ekologiczna-8975/od-baltyku-po-tatry-18321.

Legal regulations within EU:

a) https://natura2000.gdos.gov.pl/files/artykuly/52912/1210_Kidzina_na_brzegu_morskim.pdf,
b) https://forum.eionet.europa.eu/habitat-art17report/library/2007-2012-reporting/factsheets/habitats/coastal-habitats/1210-annual-vegetation-drift-lines/download/en/1/1210-annual-vegetation-of-drift-lines.pdf,
c) https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=LEGISSUM%3Al28002b,
d) https://24kuriepl/aktualnosci/wiadomosci/kidzina-na-plazy-ruszyc-nie-wolno/,
e) https://www.swinoujskie.info/2017/05/28/smierdzacej-kidziny-ruszyc-nie-mozna-ale-drzewa-wycinaja-na-potege/,
f) http://szczecin.rdos.gov.pl/regionalna-komisja-do-spraw-ocen-oddzialywania-na-srodowisko,
g) https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/reports_en.htm.

European Union / comparison of EU and the Russian Federation:

a) https://natura2000.gdos.gov.pl/files/artykuly/52912/1210_Kidzina_na_brzegu_morskim.pdf,

b) https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=LEGISSUM%3Al28002b,
c) https://24kuriepl/aktualnosci/wiadomosci/kidzina-na-plazy-ruszyc-nie-wolno/, https://www.swinoujskie.info/2017/05/28/smierdzacej-kidziny-ruszyc-nie-mozna-ale-drzewa-wycinaja-na-potege/,
d) http://szczecin.rdos.gov.pl/regionalna-komisja-do-spraw-ocen-oddzialywania-na-srodowisko,
e) https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/reports_en.htm.

Poland:

a) https://www.rmf24.pl/fakty/polska/news-swinoujscie-tajemnicze-zniknicie-kidziny-zagadke-wyjasni-mo,nId,2377172,
b) https://plus.gs24.pl/swinoujscie-miasto-nie-wie-co-robic-z-plaza/ar/12052652,
c) https://www.sportgdansk.pl/o-nas/,
d) https://www.gdynia.pl/bip/wyniki-postepowan-i-umowy,1258/sprzatanie-i-utrzymanie-czystosci-gdynskich-plaz-i-przystani-jachtowej-w-2018-roku,515588,
e) https://www.nik.gov.pl/kontrole/wyniki-kontroli-nik/pobierz,lgd~p_13_141_20130919112337137958261 7~id4~01,typ,kj.pdf,
f) http://natura2000.gdos.gov.pl/wyszukiwarka-n2k,
g) http://orzeczenia.nsa.gov.pl/doc/73361CD01C,
h) https://www.umgdy.gov.pl/?cat=273,
i) https://www.umgdy.gov.pl/wp-content/uploads/2018/06/POM_v1_projekt_rozporzadzenia_1_ustalenia_ogolne.pdf.

Germany:

a) https://www.europarl.europa.eu/news/pl/headlines/society/20180328STO00751/zarzadzanie-odpadami-w-ue-fakty-i-liczby-infografika,
b) https://www.europarl.europa.eu/news/pl/headlines/economy/20170629STO78621/poslowie-chca-by-produkty-byly-trwalsze-i-wyzszej-jakosci-wideo,
c) http://biblioteka.sejm.gov.pl/wp-content/uploads/2016/02/Niemcy_pol_010711.pdf,
d) http://www.helcom.fi/helcom-at-work/press-room/helcom-bulletin/new-era-for-tackling-marine-litter-in-the-baltic,
e) https://www.urbanclimateadaptation.net/ezine3-2018/,
f) http://www.jpi-climate.eu/ERA4CS.publications/10897320/INNOVA-3rd-Ezine-Urban-Climate-Adaptation,
g) https://www.eucc-d.de/home.html,
h) https://strand-manufaktude/.

Denmark:

a) https://www.umweltdaten.landsh.de/nuis/wafis/fliess/flyer_seegras.pdf,

b) https://zerowasteeurope.eu/2014/01/the-story-of-denmarks-transition-from-incineration-to-zero-waste/,

c) https://ent.mst.dk/nature-water/aquatic-environment/the-sea/,

d) https://www.urbanclimateadaptation.net/ezine3-2018/,

e) https://www.sgi-network.org/2018/Denmark/Environmental_Policies,

f) https://foresightdk.com/bornholm-test-new-energy-technologies/,

g) https://mst.dk/natur-vand/vandmiljoe/havet/havmiljoe/,

h) https://www.nationalgeographic.com/environment/2019/04/bornholm-island-denmark-goes-trash-free-by-recycling/,

i) https://www.submariner-network.eu/32-projects/baltic-blue-biotechnology-alliance/alliancecases/360-biofisk-beach-cast-and-residual-biomass-for-new-fish-feed.

Sweden:

a) https://sweden.se/nature/the-swedish-recycling-revolution/,

b) https://skandynawiainfo.pl/pant-szwedzki-sposob-na-recykling-plastikowych-butelek/,

c) https://www.skelleftea.se/boende/natur-parker-och-lekplatser/sjoar-och-vattendrag/vassklippning,

d) https://smartcitysweden.com/focus-areas/climate-energy-environment/waste-management/,

e) http://www.naturvardsverket.se/Var-natur/Skyddad-natur/Strandskydd/.

Estonia:

a) https://www.keskkonnaagentuuee/en/waste,

b) https://www.enviee/et/jaatmete-sortimine,

c) https://www.enviee/et/eesmargid-tegevused/merekeskkonna-kaitse/merestrateegia,

d) https://www.enviee/sites/default/files/d10_mereprugi_parandatud.pdf,

e) http://hsr-beach.herokuapp.com/,

f) https://www.keskkonnaamet.ee/et/eesmargid-tegevused/jaatmed/korduma-kippuvad-kusimused/jaatmete-taaskasutamine,

g) https://www.keskkonnaamet.ee/et/eesmargid-tegevused/jaatmed/jaatmekaitleja-registreerimistoend,

h) http://www.klab.ee/merestrateegia/en/.

The Russian Federation (The Kaliningrad Oblast):

a) https://www.ceeol.com/search/viewpdf?id=521271,

b) https://apcz.umk.pl/czasopisma/index.php/SIT/article/viewFile/12645/11480,

c) http://geopolityka.org/analizy/magdalena-micinska-bojarek-stan-srodowiska-naturalnego-w-federacji-rosyjskiej-zastane-problemy-i-nowe-wyzwania,

d) https://www.sciencedirect.com/science/article/abs/pii/S0025326X16308177?via%3Dihub#f0030,

e) https://www.sciencedirect.com/science/article/abs/pii/S0025326X99002349,

f) https://www.keep.eu/project/22680/baltic-beach-wrack-conversion-of-a-nuisance-to-a-resource-and-asset.

8. List of tables and figures

9. Appendix no 1. Report on telephone and email contact with partners

In the course of work on the following document, attempts were made to contact the project partners as well as the private entities in order to obtain information.

On 26th November 2019, an attempt was made to obtain information by e-mail on beach wrack within the territory of Russia and Lithuania. Messages were sent to two research units in Lithuania and two research centres in Russia. Emails were sent in the following sequence:

1) Institute of Oceanography named after P.P. Shirshov, Russian Academy of Sciences based in Moscow, the Russian Federation,
2) Institute of Oceanography named after P.P. Shirshov, Russian Academy of Sciences based in Kaliningrad, the Russian Federation,
3) Institute for Marine Examinations of the University in Klaipeda, Lithuania,
4) The National Ground service within the Ministry of Agriculture in Vilnius, Lithuania.

In the end, only one entity provided feedback. The reply e-mail is presented below.

Thank you for your interest in the subject. In regards to your questions, I am sorry but we do not have ready information as we have just started an examination of this problem. Maybe in half a year, having prepared the report in our project CONTRA, we will be able to help you. On 29th November 2019, we called the companies which clean the beaches within the Tricity (note from the authors: Tricity is a city complex of Gdynia, Gdansk and Sopot) area. In the course of the interview, only one company provided us with credible information on the subject. Based on the telephone conversation with the representative of DIF s.c cleaning company based in Gdynia, the following information was received:

- the enterprise DIF s.c. based in Gdynia serves as a subcontractor for Delta Sp. z o.o. based in Gdynia,

- an order for clearing and keeping the beaches of Gdynia and the yacht marina in order was commissioned to Delta Sp. z o.o. the company by the Gdynia Sports Centre in the tender number 624151-N-2019 dated 2019-11-19 [61]*,*

- the relevant notification determines that order shall be granted to sheltered workshops only or contractors which operations or the operations of their separated units within the

[61] https://www.gdynia.pl/bip/module/Files/controller/Default/action/downloadFile/hash/bec474c33daa7f5c96e19abe838afa64 – access: 09.01.2020, t. 16:00.

organizations encompass social and vocational integration of persons remaining the members of the groups affected by social exclusion,

- the company DIF s.c., as a sub-contractor, was commissioned to manage the beach located in Gdynia-Orłowo,

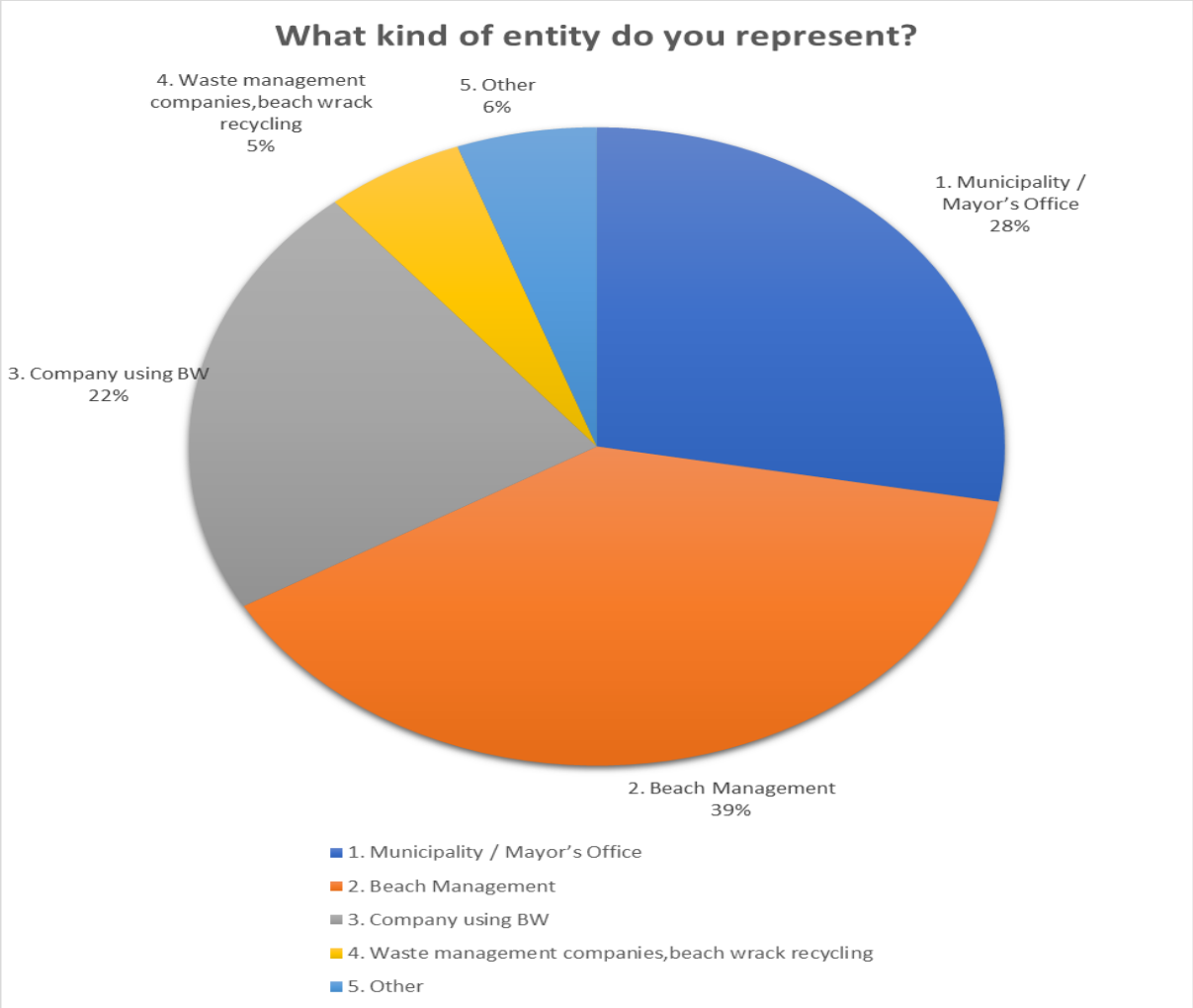
- the berm appears very infrequently on the beach in Orłowo,

- the berm is removed from the beach, similarly to other biodegradable waste, subsequently it is transported to the landfill.

10. Appendix no 2. Questionnaire – survey results

Responders–the type of entity

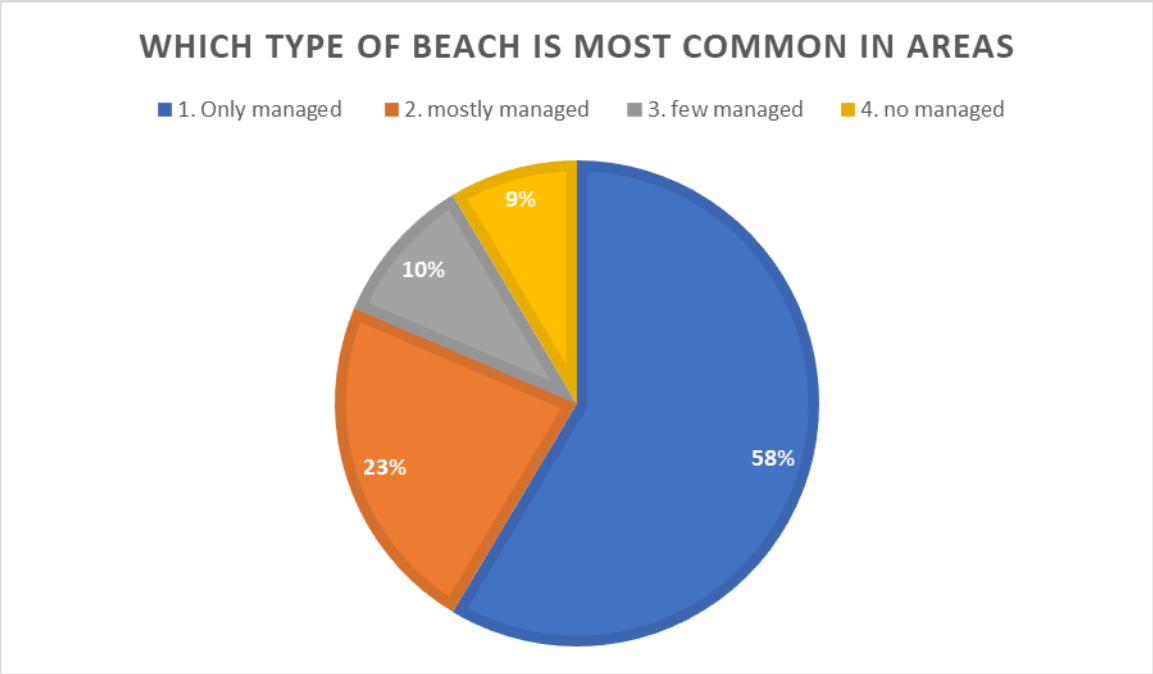
1. municipality,
2. mayor's office,
3. Cleaning companies,
4. Beach management,
5. Waste management companies/beach wrack recycling,
6. Others (e.g. project partners).



Where do the responders operate?

KøgeMunicpality, Greve Municipality, Ærø Municipality, Ishøj Municipality, Hvidovre Municipality, Vallensbæk Municipality, Brøndby Municipality, StevnsMunicpality, Guldborgsund Municipality (the company Læsø Zostera collects eelgrass here), Tolmicko (Poland), Borgholm (Sweden), Sandhagen (Germany).

The status of the beaches with beach wrack



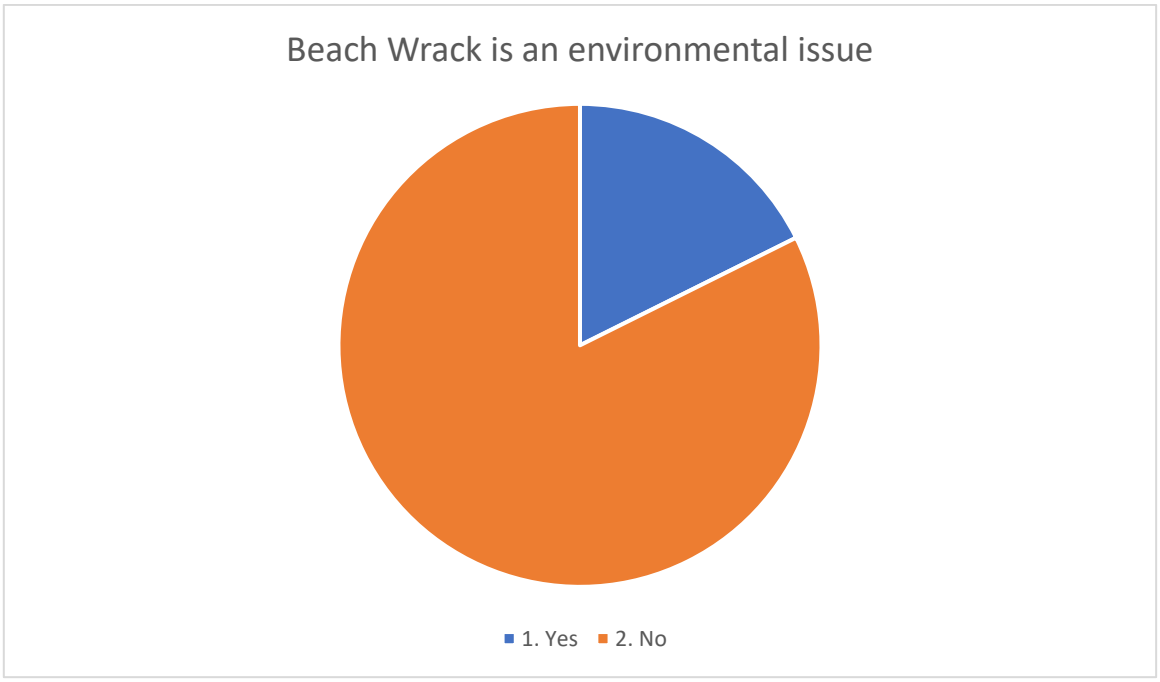
Project participants' views on the definition of beach wrack

- *Different definitions, both only organic material and also broader to include everything that washes up on the beach. Beach wrack can also be shipwrecks, and that is not a useful definition. It is too unspecific.*
- *Beach wrack is everything that washes up on the coast, also snails, mussels, plastic bottles, everything that washes up. Not a useful definition, and not the right definition to use about seaweed and eelgrass which washes up on the beach. Most people call everything that is green or brown 'tang' (seaweed). Even if it is eelgrass.*
- *We are specifically interested in eelgrass and not seaweed or only the organic material or beach wrack in general. In other terms, it is more useful for us to talk about eelgrass. We want to differentiate between eelgrass and seaweed.*
- *We use the term beach wrack for the organic material that washes up. Important to differentiate between beach wrack and 'tang' (seaweed), because you can also grow seaweed. Seaweed is only the species and not what washes up.*

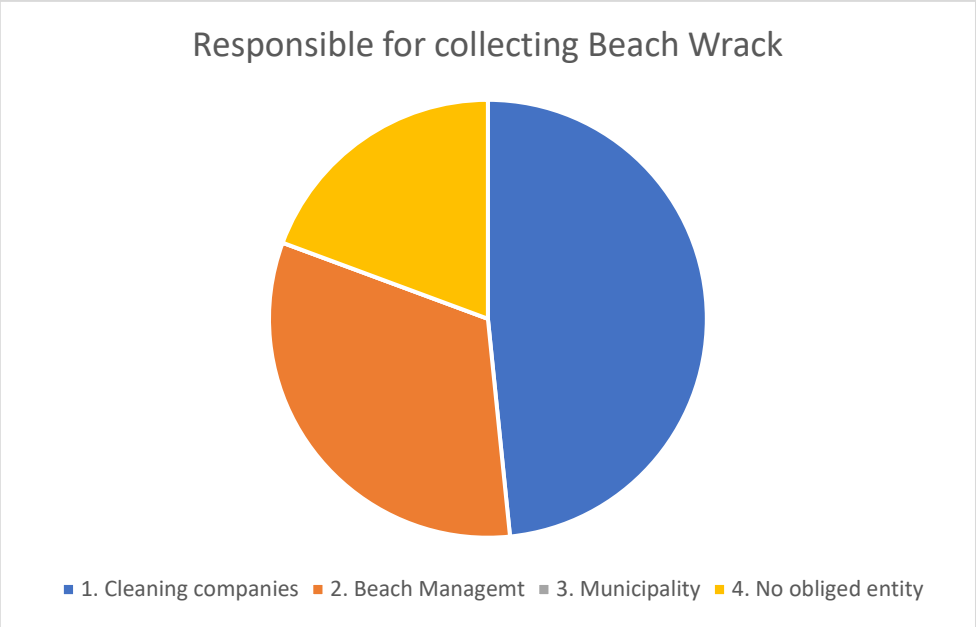
- *Algae (annual and perennial), that are washed up on the shore by storms and waves build walls on land or sludge in the sea. Usually spreads a bad smell when decomposing.*
- *Kidzina on the seashore - Physis code: 16.1222A - halophilic and nitrophilic communities of annual plants of beach caves created from organic material.*

- *The mixture of organic material (micro-and macroalgae, seaweed, mussels, crabs, wood), mineral fraction, e.g. mussel shells, sand and waste.*

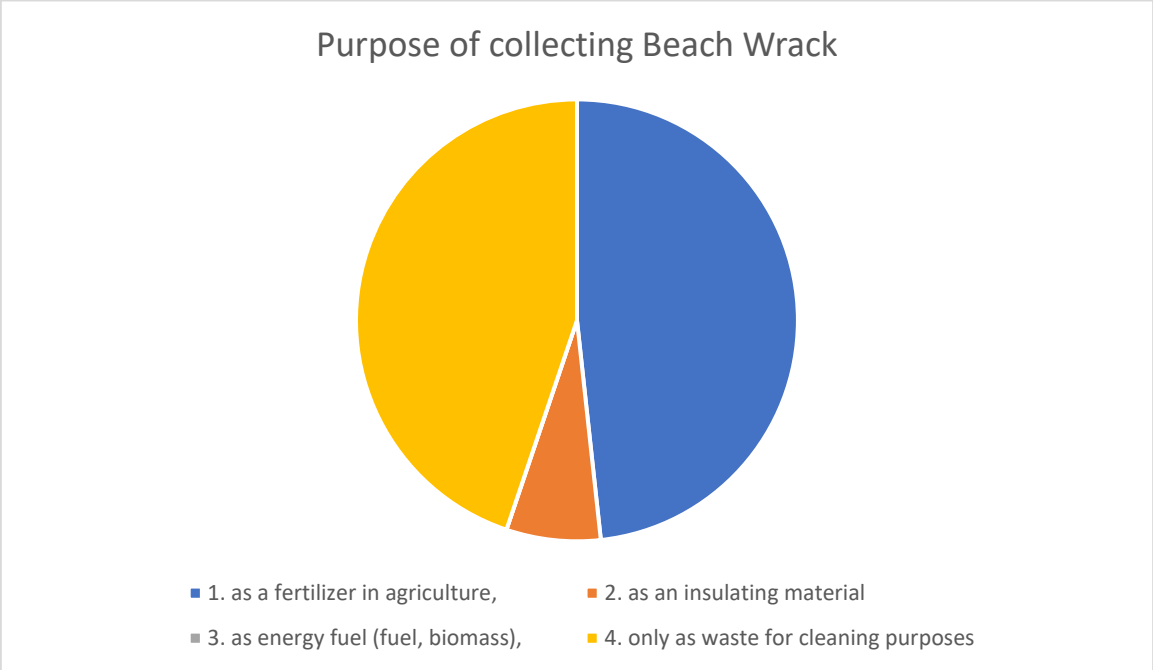
Is beach wrack an environmental issue? (again we will need for statistical reasons the total number of responses)



Who is responsible for collecting beach wrack from the beach (shore)?



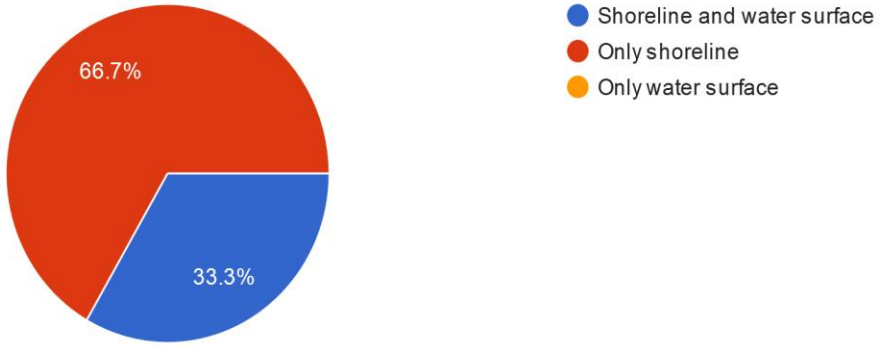
Why is beach wrack being collected?



Storing, collecting and processing beach wrack.

From which areas of the beach are you allowed to collect beach wrack?

3 responses



Who is responsible for collecting beach wrack from the beach?

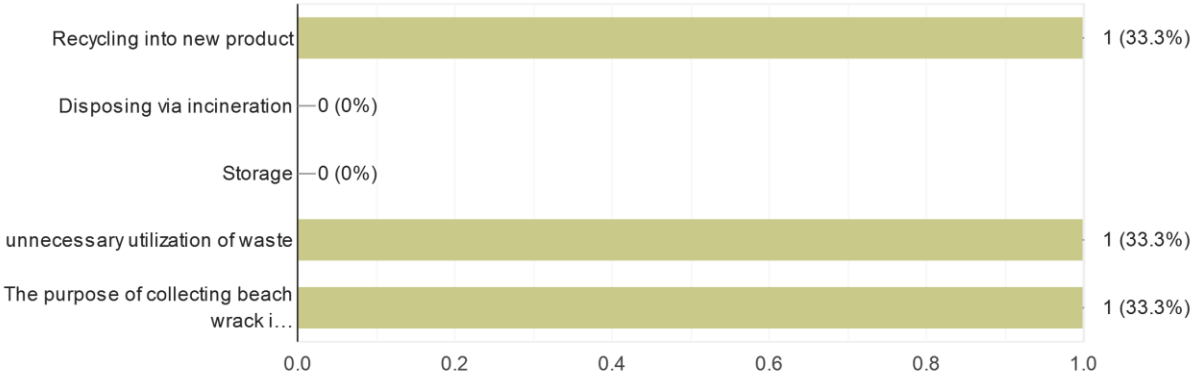
3 responses

Is it possible to transport and store beach wrack outside of beach?

3 responses

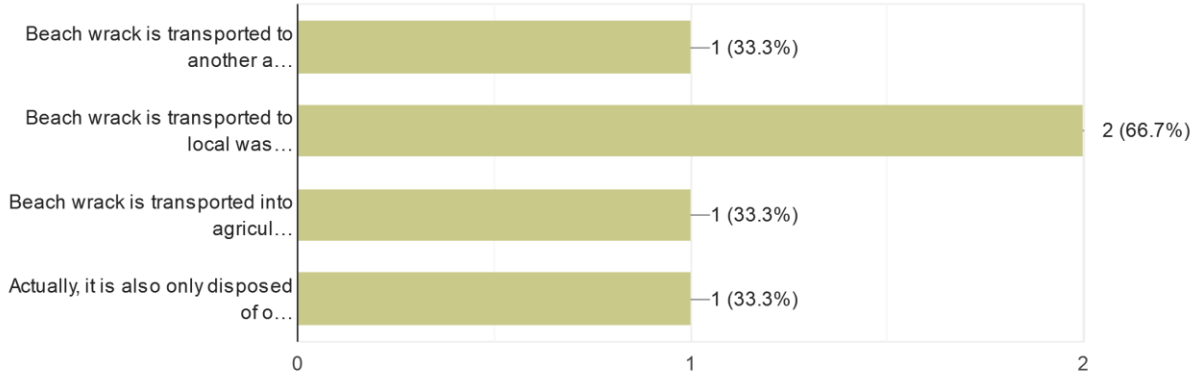
In what purpose does your local community collect beach wrack?

3 responses



What do you do with beach wrack after collecting it?

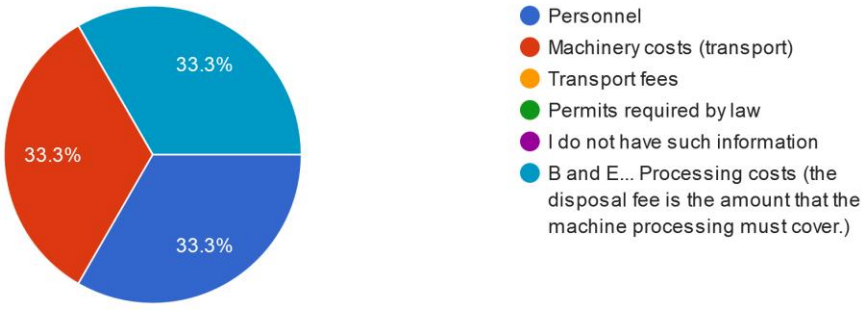
3 responses

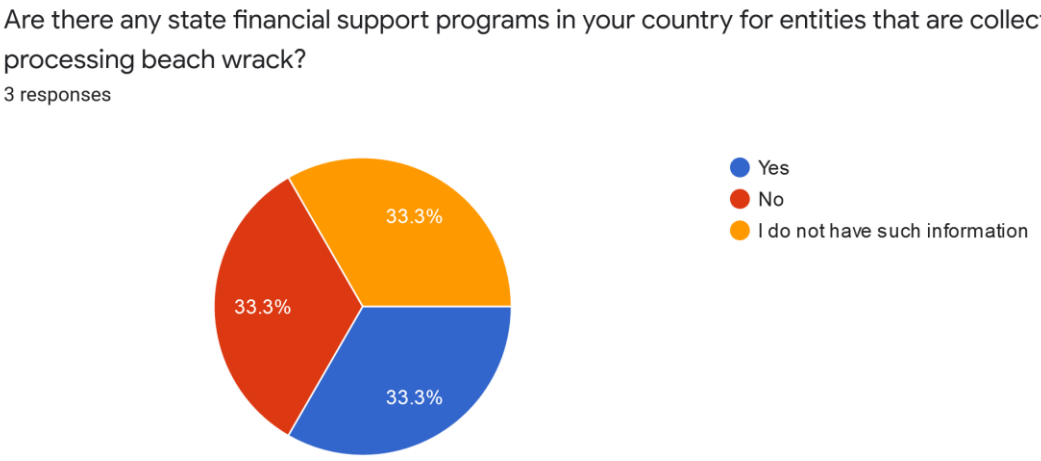


Budget for processing beach wrack.

Which part of processing beach wrack is considered most expensive?

3 responses





11. Appendix no 3. Draft of an agreement between EU and Russian Federation regarding the Baltic Sea Cooperation

Agreement

between the European Union and the government of the Russian Federation regarding the cooperation in the exploitation of some of the sea resources of the Baltic Sea.

EUROPEAN UNION,

and

THE GOVERNMENT OF THE RUSSIAN FEDERATION,

hereinafter referred to as the **"Parties",**

ACKNOWLEDGING, that the legal provisions currently in force do not constitute the unified definitions with regards to the natural, organic sea resources that introduce the limitations and possibilities for reprocessing of such ones as well as in providing environmental protection,

ACCEPTING, that the natural, organic sea resources remain the legally protected matter as an element of the natural environment, being a valuable raw material at the same time,

EXPRESSING their joint desire to provide the protection and the long-term sustainable management of the organic resources in the Baltic Sea area and the sustainable use of such ones,

IN CONSIDERATION OF the currently valid legal provisions on the protection of the natural environment,

GUIDED BY the quest to allow effective management of the organic resources,

ACCEPTING, that some organic sea resources of the Baltic Sea constitute shared resources migrating between exclusive economic zones of the Parties, as well as that effective protection and sustainable use of such ones may be provided exclusively by means of the cross-border

cooperation held between the Parties with regards to the management of the natural, organic resources accompanied by the control over and the enforcement of the relevant provisions,

CONSIDERING, that the Parties have hereby undertaken steps to develop the ecosystem-based approach to the management of natural resources based on the best scientific opinions available as well as of observing the duty imposed over any coastal state to provide adequate means for protection and management in order to maintain live resources within its exclusive economic zone according to the UN Convention on the Law of the Seal dated 10th December 1982,

EXPRESSING A DESIRE to continue the cooperation within the relevant international organizations across the sector including the management of the organic resources of the Baltic Sea aiming at joint protection and sustainable use of all important resources of the Baltic Sea agreed upon by other international agreements,

HAVE AGREED AS FOLLOWS:

Article 1 [The terms applied]

For the purposes of the following Agreement:

a) "exclusive economic zone of the Parties" refers to, respectively, the exclusive economic zone of the Russian Federation as well as the exclusive economic zones of the EU member states;

b) "territorial Walters (sea) of the Parties" refers to, respectively, the territorial waters (sea) of the Russian Federation and the territorial waters (sea) of the EU Member States;

c) "natural organic sea resources" refer to available seaborne organic materials washed ashore, e.g. torn off seagrass or algae (brown, red, green species), jointly referred to as "seaweed";

d) "sustainable exploitation" refers to the exploitation of natural, organic sea resources in the manner that does not bring about any adverse impact on environmental protection, especially does not pose a threat to the existence of the sea resources species or animals;

e) "cautious approach to the exploitation of natural, organic sea resources" means that the lack of the relevant scientific information should not justify the fact of procrastination or the failure to take steps aiming to manage the protection of seaweed or should influence the existence of sea resources species or animals

Article 2 [Agreement territory]

The geographical area within which the following Agreement shall remain a force hereinafter referred to as "the Baltic Sea", means all waters of the Baltic Sea and the Straits of Belt, except for the internal waters, limited from the west by the line going from Cape Hasenore to Gnibe, from Korshage to Spodsbierg and from Cape Gilbierg to Kullen.

Article 3 [Territorial range of application]

The following Agreement shall be applicable, on the one hand, to the territories where the Treaty establishing the European Community is applied and in line with the terms and conditions set forth therein as well as to the territory of the Russian Federation on the other.

Article 4 [Objectives]

1. The objective of the following Agreement is to provide close cooperation between the Parties based on the principle of equality and mutual benefits, with an intention of protection and sustainable use of all straddling, accompanying and dependent natural, organic resources of the Baltic Sea as well as of managing such ones in a sustainable manner.

2. The Agreement hereby determines the principles and procedures regarding the close cooperation between the Parties in order to provide the aforementioned use of straddling, accompanying and dependent natural resources of the Baltic Sea, all of which formulate sustainable economic, environmental as well as social conditions.

3. The Parties shall base their cooperation on the best scientific opinions available and also on any other crucial data, shall apply a cautious approach and agree to develop an eco-system based approach to the management of natural, organic resources of the Baltic Sea, with special emphasis put over seaweed.

Article 5 [Measures regarding joint management]

1. Each of the Parties, based on the mutual benefit principle and according to its legislation, may authorise the exploitation of organic resources of the Baltic Sea, especially seaweed, in accordance with the relevant provisions on the protection of the natural environment.

2. The Parties may exchange organic resources according to the principle of reciprocity.

3. For the objectives of the following Agreement to be achieved, the Parties shall determine the measures to regulate the use of natural, organic resources of the Baltic Sea, whereby having regard to accompanying and dependent species. The said measures may include:

   a) total permissible quantitative use of the resources,

   b) long-term plans regarding the management of straddling resources exploitation

   c) limitations of the investment and technical measures.

4. The Group established within the Committee Se forth by Article 10 of the following Agreement shall implement the provisions of clause 1,2,3 of the following Article.

Article 6 [Autonomous management measures to be taken up by the Parties]

1. Each Party shall determine the total, permissible quantitative use of the resources as well as the long-term management plans for such ones while securing the protection of the natural environment.

2. If within the Group established as part of the Committee set forth by Article 10 of the following Agreement, reaching an agreement regarding the relevant management measures that ought to be commissioned to the organs of the respective Parties has been impossible, the Parties shall establish autonomous measures in order to meet the objectives determined by article 4 of the following Agreement and regarding the use and protection of living sea resources of the Baltic Sea while considering the protection of the natural environment of the Baltic.

3. The measures taken according to clause 2 above shall be based on the objective scientific criteria and shall not constitute any legal or real discrimination of the other Party.

4. In addition to the guidelines on the said measures adopted by the Group, each Party may establish such protection and management measures as, at its discretion, may consider necessary to reach the objectives determined by Article 4 of the following Agreement.

5. The measures to regulate the use of organic, natural resources within the Party's exclusive economic zone and within its territorial sea taken up by the Party are based on objective and scientific criteria and shall include, at the same time, the protection of the environment. They must not constitute any legal or real discrimination of the other Party.

Article 7 Compliance with the protection and management measures as well as with other provisions on environmental protection.

1. According to its statutory, executive and administrative provisions, each Party shall take any steps necessary to secure the observation of the provisions on environmental protection within its jurisdiction/

2. Each Party may, with regards to its exclusive economic zone in the Baltic Sea and line with the valid domestic legislation and international law, take such measures that may be deemed necessary to secure the observation of the provisions of the following Agreement within its territory.

3. Each party shall notify the other one in advance and a proper manner about the provisions and the measures regulating the use of organic, natural resources and about any amendments to such ones.

4. Each Party shall take up the measures that may be necessary to secure the observation of the provisions of the following Agreement within its exclusive economic zone and within its territorial sea.

Article 8 [Scientific cooperation]

The Parties shall encourage cooperation between the scientists and experts with regards to the questions related to the use of organic, natural resources remaining the subject manner of mutual interest.

Article 9 [Protection of the resources]

1. To protect the organic, natural sea resources, the Parties shall cooperate to support the protection, restoration and reinforcement of such ones in the Baltic Sea and to support their rational management.

2. Regardless of the geographic area within which the following Agreement shall remain in force and specified by article 2 of the following Agreement, the Parties may grant their consent to extend the cooperation regarding the management of organic, natural resources of the sea resources.

Article 10 [Joint Committee for the Fishery in the Baltic Sea]

1. In order to reach the objectives set forth by the following Agreement, the Parties shall appoint the following body as part of the Joint Committee for the Fishery in the Baltic Sea, hereinafter refer to as the "Committee": Working Group to use the organic sea resources (hereinafter referred to as the Group).

2. Each Party shall appoint a representative and a deputy to a representative to the Group and shall inform the other Party about this fact through official channel s

3. The Group shall deal with all the questions included in the range and the application of the following Agreement and shall provide the parties with the recommendations.
4. The Group in particular:
   a) shall examine the development and the dynamics of organic, natural resources in the Baltic Sea,
   b) shall supervise the implementation, interpretation and effective functioning of the Agreement, in particular the provisions regarding the control, enforcement of the provisions and inspections,
   c) shall serve as the forum to amicably settle any potential disputes regarding the interpretation and application of the following Agreement.
5. The Group shall meet at least once a year as agreed upon by the Parties, in turn within the territory of each Party, in order to disseminate the recommendations for the relevant organs regarding the use of organic, natural resources in the Baltic Sea, in line with Article 5 of the following Agreement. When applied to do so by any of the Parties, the Group shall meet to hold an extraordinary session.
6. During the first session, the Committee shall adopt the internal regulation compliant with the regulations of the Commission.

Article 11 [Consultations between the Parties]

The Parties shall consult each other about the questions referring to the application and effective enforcement of the following Agreement or in case of a dispute regarding its interpretation or application.

Article 12 [International cooperation]

The Parties shall hold the cooperation within the relevant international organisations about the questions on the management and protection that remain within the joint interests of the Parties and which such organizations deal with.

Article 13 [Stipulation clause]

1. The contents of the following Agreement does not influence whatsoever the positions or opinions presented by any of the Parties with regards to its rights and obligations arising from international agreements or its positions or opinions regarding the questions related to the Law of the Sea nor infringes in such ones.
2. The following Agreement does not transgress the borders of the exclusive economic zones of the Parties.

Article 14 [Coming into force]

The following Agreement shall be applied temporarily when signed; it shall come into force when the last written notification has been received that all internal procedures required for it to come into force have been implemented by the Parties.

Article 15 [The term of the Agreement]

The following Agreement shall remain valid, initially, for the period of six years since coming into force. In case when the Agreement has not been terminated by any of the Parties with prior

notice of at least nine months, it will remain in force for a consecutive three years unless it is terminated with at least nine-month prior notice.

Article 16 [Language of the Agreement]

1. The Agreement has been produced in two copies in the following languages: English, Bulgarian, Czech, Danish, Estonian, Finnish, French, Greek, Spanish, Lithuanian, Latvian, Dutch, German, Polish, Portuguese, Romanian, Slovakian, Slovenian, Swedish, Hungarian, Italian and Russian, whereby the texts in the said languages remain equally authentic.
2. In case of any dispute, the texts of the following Agreement produced in English and Russian shall prevail.

(here the signatories sign the document) Readout and signed in /place/ on /date/

CONTRA
BALTIC BEACH WRACK
CONVERSION OF A NUISANCE TO A RESOURCE AND ASSET

Interreg
Baltic Sea Region

EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND

Euroregion Baltyk

ADVISER ARMKNECHT & PARTNERS
Attorneys-at-Law • est. 1989

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BALTIC BEACH WRACK

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