

**EVALUATION REPORT // 2021** 

**Sea Bins** - Collection of voluntarily handpicked marine litter on the Danish coastline

> STRANDINGSAFFALD STRANDUNGS ABFALL • MARINE DEBRIS

> > HOLD DANMARK

### **DILIGENT HANDS**

## move mountains

You do it! I do it! And many others do it! Bending down, picking up litter to take with us,which for one reason or another has gone astray in nature. Many positive signs point in the direction that our personal environmental awareness is constantsly being strengthened and that our actions are changing.

One of the places in nature where this trend is particularly prominent is on the coasts. Again this year, diligent hands have moved almost 50% of the marine litter that the sea has washed ashore along the Danish west and Great Belt coasts, from the sand and up into a Sea Bin. This corresponds to just over 117 tonnes.

It is quite impressive how this environmental co-creation inspires both local citizens and vistiong tourists. Without any coordination or instruction, the volunteers themselves bring a bag or sack with them on trips for this purpose alone, and the Sea Bins are ready all year round to receive their collected litter.

In an intuitive and at the same time discreet way, the Sea Bins invites every beach guest to participate in this community with the municipalities for a cleaner beach environment. By their mere presence on the coasts, the Bins send a signal that there is a system that handles this issue and that everyone can easility contribute to, just whenever it suits them. The Sea Bins have now been on the coasts for 3 seasons and the success is a reality. Primarily because they motivate the voluntary effort to an extent not seen elsewhere on the scene og litter, but also because the concept is constantly gaining new supporters and contributors in one way or another. On behalf of the parties behind the concept, we at HDR can only express our joy and humility for this positive interest, which you can lean more about in this report.

To bear in mind, that with the Sea Bins concept in Denmark, we make a concrete and caluable contribution to our Nordic campaign community Nordic Coastal Cleanup, which every year, among other things, arranges the Nordic Beach Cleaner Day in early May. The purpose of the campaign is precisely to highlight the challenge of marine ltter and to motivate a voluntary effort on the coasts, and in recent years more than 200.000 volunteers across the Nordic countries have participated in the activities.

To believe in something can move mountains - but so can diligent hands! From the bottom of our hearts thank and a tribute to everyone who helped.



# on Danish coasts

Source: The University of

Århus and KIMO

Aarhus University and KIMO carry out annual surveys on six selected reference beaches in Denmark to monitor the amounts of marine litter on the Danish coasts.

Monitoring is carried out by collecting the marine litter on the beaches and subsequently classifying the waste. The median value of the number of litter items registered from monitoring Danish reference beaches in 2021 was 152 items per 100 m beach. This median value is higher than the EU threshold of 20 litter items per 100 m beach, which was adopted in 2020 (van Loon et al., 2020). There was a significant variation between the beaches located in the different sub-regions, where the median values for the North Sea / Skagerrak were 349 items per 100 m, the Kattegat 252 items per 100 m and the Baltic Sea 47 items per 100 m.

Objects consisting of plastic accounted for most of the marine litter on the beaches in 2021. An average of 81% of all registered objects (excluding paraffin) were plastic. The most common types of waste on Danish beaches were from three waste categories representing unidentifiable fragments of different plastic types: unidentifiable plastic fragments 2.5-50 cm (G79), polystyrene foam 2.5-50 cm (G82) and foam plastic (hard and soft foam (G73). These three categories were all found in the top 15 items list in all three Danish sub-regions. Disposable single use plastics (SUP) accounted for 15-25% of the total waste on Danish beaches. Specific types of waste such as candy / chip bags (G30) and plastic lids and capsules from beverages (G21) were found in the top 15 lists in all sub-regions. In addition, large plastic bags (G3), cotton swabs (G95) and food containers incl. fast food containers (G10) were among the most common types of SUP items.

Maritime activities contributed to a particularly large source of litter found on the beaches of the North Sea / Skagerrak. Fishing-related waste represented approx. 30% of the total waste, and cord (diameter <1 cm) (G50) and nets and pieces of net <50 cm were ranked no. 1 and no. 3 respectively on the top 15 list.

> Udviklingen i mængderne af affald for perioden 2015-2021 viser, at der generelt er en svagt faldende tendens i antallet af affaldsgenstande på de danske referencestrande, som dog for de enkelte strande kun er signifikant (P < 0,05) for strandene ved Pomlenakke og Kofoeds Enge. På et landsdækkende niveau er tendensen også signifikant for DK som helhed (slope = - 10,0, P < 0,001).

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# A wodden box - That simply

There is a great potential for volunteering in Denmark when it comes to the green environment agenda. A lot of citizens want to help make a difference and the more concrete and local the deed is the better. But when it comes to co-creation between systems and people, the best effort is to make the elements and process as simple and intuitive as possible. If the project becomes too complicated and difficult, people will back away from participation and lose interest.

The Sea Bins on the coastlines have never been marketed. Neither the municipalities nor Hold Danmark Rent have yet made a purposefully marketed campaign to spread knowledge of the concept. And still the Sea Bins are filled daily with tons of litter!

The reason must be found in the fact that the Sea Bins are the answer to an immediate need that arises spontaneously in the individual beach guest, who intuitively follows an urge to pick up litter and subsequently dispose of it. So it's not crucial whether the Sea Bin is green or blue or whether it tells the story, what's important is it's there and easy to find.

So the fact is, that a simple Sea Bin in recycled wood can mobilize thousands of Danes and tourist to take personal part in a joint effort toward a clean and litterfree mother nature.

#### **Dimensions and Materials**

The Sea Bins are produced from recycled wood that has previously been used for freight pallets. The wood is therefor already impregnated and has a good durability and resistance to wind and weather. The dimensions of the bins are: H 90 x L 120 x W 100 cm. It has a double bottom of 2 goods pallets, which makes it easy to lift of the sand with a pallet lifter when emptied. The future design will be complemented by fine-threaded net in the bottom of the Bins that will ensure no small pieces of litter falling out. However, it is still important that the sand can pass and not accumulate in the Bin.

### Signage and communication

On the Sea Bins you will find a sign that communicates "Strandingsaffald" in Danish, German and English, in addition a pictogram and pictures of marine litter. The signs are made of weather-resistant material that takes into account water, wind, sun and sand. The signs also show the municipalities and Hold Danmark Rent's logo, as well as a QR code that leads to information about the concept.





### **Operation and Maintenance**

The Sea Bins are owned and operated by the individual municipality, and therefor responsible for ensuring that the bins are in good condition at all times and most of all are emptied. Many of the Sea Bins are located on the coasts all year, as the collection of marine litter is not seasonal.

The Sea Bins placements are very important, both in terms of flow of people but also due to wind and weather. A winter storm can easily take a Sea Bin to sea. The Sea Bins are inspected by the municipality on a weekly basis, and in the high season it is not unusual the Sea Bins has to be emptied several times a week. Some Sea Bins are emptied by hand, while others are emptied with a tractor, pallet lifter and wagon

### **Dispensation from the Coastal Directorate**

The Coastal Directorate writes the following on the website:"Denmark's beaches and coasts are unique, and many recreational interests are linked to them. In some places, the coasts contain animal and plant life that must be taken into account. The coastal areas in Denmark are protected by the regulations, concerning beach and clit protection, of the Nature Conservation and Protection Law.

With this legislation in mind, it was necessary to obtain a permit for the setting up the Sea Bins, as most of them are placed within the conservation and protection line. In 2018, Hold Danmark Rent began the coordinated application on behalf of all participating municipalities and in the autumn of 2019, a dispensation was granted which expires by the end of 2022.





2021

### The location of the Sea Bins, in Denmark

To get a good picture of how many Sea Bins the municipalities have and the collected amounts of marine waste, both through the Sea Bins, but also the total collected from the municipalities' coastline, in the period April 1 to September 30 202.

Municipality	Number of Bins	Waste in Bins (tons)	Litter in total (tons)
Slagelse	12	8,6	not calculated
Esbjerg	6	not calculated	not calculated
Varde	5	4	60
Ringkøbing Skjern	49	30,5	44,2
Holstebro	14	18,3	20,4
Lemvig	17	18	20,2
Thisted	20	19,5	30,3
Jammerbugt	15	not calculated	not calculated
Frederikshavn	22	15,6	27,1
Hjørring	3	2,5	35
Total	163	117	237,2

The Sea Bins has removed 50% of all marine litter on the beaches in 2021



An average Sea Bin collects 823 kg. marine litter in a season

Click to see the location of the Sea bins

### 2021

### Types of litter collected in the Sea Bins

The majority of the litter collected in the Sea Bins is marine litter, meaning litter that has been washed in with the sea. This type of litter is characterized by being relatively dirty and damaged and therefor a challenge to both sort and recycle. However, important and exciting developments are taking place on this subject, which now are beginning to open up new possibilities, so this type of litter can also be part of a sustainable cycle.

You will find a list below that shows what litter is commonly found in a Sea Bin. A fraction that is not shown is "Other Litter". For example, renovation litters. This represents an average numerically 2% and 14% by weight of the contents of the average Sea Bin.



By number 38% and by weight 15% of the total contents in a Sea Bin.



By number 24% and by weight 8% of the total contents in a Sea Bin.



By number 2% and by weight 6% of the total contents in a Sea Bin.



By number 1% and by weight 6% of the total contents in a Sea Bin.



By number 31% and by weight 30% of the total contents in a Sea Bin.



By number 2% and by weight 21% of the total contents of a Sea Bin.



### THE SEA BINS

## an additional gain for tourists

Denmark is a popular holiday destination, especially our coastal areas. Despite the Corona pandemic, Danish and foreign tourists made DKK 44,6 million overnight stays in Denmark in the year 2020 and even though it is just over 20% less than the year before, it is still an expression that the destination Denmark has something special to offer everyone – Corona or not.

Almost 40% of these overnight stays have been in areas, where Sea Bins are located – from Esbjerg to Skagen in the western part of the country and along the Creat Belt coast in eastern Denmark. That sums it up to that 18.1 million people have woken up to a beautiful day with holiday activities on the Danish beaches at the coasts.

Let's look at how many of them have then picked up litter from the beaches along the coasts and put it in the Sea Bins? This is a very good question, hard to give an exact answer to. The Sea Bins have neither counter nor camera that can record how many people do this more than once. But ever since the test of the first Sea Bins in 2017, we have with great joy and admiration seen the bins filled again and again, but without being able to thank anyone for their persistent effort.

September 2021, an e-mail arrived from Eva Falke in Germany and finally we had a beautiful face of one of the many holiday guests, who were inspired and who spontaneously chose to contribute to the local environmental efforts.

Here is an excerpt from the email from Eva and her family:



#### MAIL // EVA FALKE

"this summer my familiy and I spent 3 weeks of our holidays in Vorupør. We love Denmark and its beautiful nature. We appreciate the initiative "Keep Denmark tidy" and the introduction of the sea bin concept on the west coast beaches together with the local municipalities.

My ten years old daughter and me felt invited to take part in a voluntary collection of beach litter once a holiday week. It is a good opportunity to sensibilize children and well as adults for environment protection matters and to spend beautiful days on the beach with "open eyes".

We were concerned about how much plastic waste and how many long and fine fishery lines and ropes we found each time. We are worried about the animal welfare of fish, seals and sea gulls.

I do wish that your organization and the municipalities affected by sea litter could even be more supported financially, because you perform important and highly creditable environmental merits. By setting up the sea bins on the beaches, so many people are made aware of the pollution due to sea litter. And you achieved that we could get enthusiastic about this concept! If we would live at the west coast in Denmark, we would surely more often support your project and would regularly collect sea litter.





### THE SEA BINS utilized by many

The Sea Bin concept has landed at the perfect spot, right in the middle of a time where the green agenda is constantly debated, and where outside influences increase the attention to closeness and togetherness (-at a distance!)

The Sea Bins have gradually become both known and loved by many local citizens as well as visiting tourists. The local business community also supports the concept with both finances and exciting initiatives, and other active organizations in the field agree with positive statements.

Hold Danmark Rent, all the active municipalities and other partners pay tribute to the voluntary effort and honor all those who each do their part individually, but in the big picture, put together give a great result.

### READ ABOUT THEM BELOW AND ON THE NEXT TWO PAGES

The Sea Bins is an excellent initiative that Hold Danmark Rent is implementing on the coasts of Denmark. Because of the Sea Bins, the municipalities can collect more litter, with the help of volunteers.

The boxes are visible and the purpose cannot be misunderstood. Local seasoned enthusiasts, Danish beach guests and tourists diligently use them. The Sea Bins have also become a natural partner with KIMO'S Coastal Lottery, as a delivery point for garbage bags filled with smaller pieces of washed up litter.

### Ryan Metcalfe, Coordinator, KIMO Danmark



OMHU: Hvide Sande is an environmentally and socially conscious project, where we want to contribute to increased awareness of the beaches on the Danish West Coast, and the importance of clean beaches for the environ, the economy and our welfare. The idea is to recycle litter into new and valuable products for the individual consumers, but also for the local areas along the West Coast. The Sea Bins make a huge difference to keep the beaches clean.

> Katrine Kock Frandsen leder af OMHU:



"The Nayy's Marine Environment Guard Campaign is very pleased with the Sea Bins from Hold Danmark Rent, which until now have been set up in various places on beaches along the West Coast. The Sea Bins are diligently used by many Marine Environment Guardians, who throw their filled litter bags in the bins and they harmonize really well with the dispensers for litter, set up on or by the beaches, from the Marine Environment Guardian campaign. The design and material of the Sea Bins blend in perfectly with the coastal nature; let's hope that more will come." Birgitte Vangholm, Naval Command, Project Manager, Marine





### Westwind – a store Cain with special Focus on Clean and Litterfree Beaches

In 2019, the store Cain WestWind caught sight of the Sea Bin concept, and they wanted to support the initiative on the coasts with the revenue from bag sales in their 26 stores along the West Coast. The collaboration became a reality and the WestWind became the first commercial partner that HDR and the active municipalities could welcome.

It has been, and continues to be an exciting collaboration, which also includes special WW event days at various locations along Jutland's East coast. Here, both employees and customers participate side by side walking up and down the coasts with green litter bags

One of the stores that hosted a WW event in 2021 was the store Henne in Varde Municipality. At the event we had the chance to speak with store manager Lars Ove Greschewski about the value of the collaboration regarding the Sea Bins:

"We are Team Henne Strand, which in addition to me consists of 3 employees. I have been a part of WestWind since 2008, but for the last 7 years I have been in charge of the shop in Henne. The store was founded in 1991 and has over the years grown bigger and is now approx.400 m2. Our store is located on the North Sea and it requires high quality clothes, shoes and equipment, which we typically sell to all family members, who enjoy an active everyday life and leisure out in nature. This year we have had visits from approx. 17.300 customers, but due to Corona we were closed down the first 2 months of the year, which has made the number of visitors a little lower than otherwise.

I find the Sea Bin concept to be a really good project. It is important to me, that WestWind shows responsibility regarding the climate situation and not close their eyes to the problem. Both my employees and I are really happy and proud to be part of this concept, both with the bags we sell, which are made of 80% recycled plastic, but also in relation to the events that are held with Hold Danmark Rent. This is an attitude we all support, and when it comes to our customers, we find that most of them praise the good initiative, which inspires them to buy one of our bags.

When I enjoy a day on the beach with good friends, we often bring bags to collect litter and we have been very surprised at how many hygiene items we find – especially in the dunes.

Actually, one should think that cleaning up after one self would come naturally, after a day on the beach. It might be a good reminder to put up signs at the entrance to the beaches or at the parking lots, encouraging people to clean up after themselves and at the same time refer to the Sea Bins. At the same time, this would be good advertising for Hold Danmark Rent and the important work that you and the municipalities do with this concept.

To learn more about WestWind Henne Beach go to Instagram@westwind.hennestrand





Well-functioning solutions to the problem of litter, sorting litter and a high level of cleanliness characterize Blue Flag beaches, just as nature and environmental dissemination activities are an important aspect of the Blue Flag Program. Being a beach guest intuitively make you want to clean up the beaches and put the litter in the Sea Bins. In addition to being a practical solution, the Sea Bin also provides knowledge about litter on the beach, just as it entails a change in the behavior of the beach guests. It's brillant.

### Bjarke Lembrecht Frandsen, Project Manager Vores Natur, the Outdoor Council

"Without the Sea Bins, we would not be able to remove such large amounts of litter from the beaches. The Sea Bins make it possible to get rid of litter easily. At the same time, the Sea Bins make people aware of the problem of marine litter and help us focus on what to do jointly. "A simple, but highly effective system, that simply works."

> Jens Wilhelm Jørgensen, Co-Owner, Strandet I/S



"Since all the food Holy Fish offers are fish, we take a lot from the ocean. Therefore, we want to do something in return and thought about donating money to a company that cleans the ocean. We will sell the Stjerneskud on our birthday week which is from 22nd to 28th of November 2021." Holy Fish donated DKK. 5.746, - for the project Sea Bins in 2021

### Lili Gardos, Project employee, Holy Fish





"In the future, we will put people and the environment in focus, in the way we operate and develop Esmark. We do this because it is the right thing to do, and we will make a strong contribution to securing the future of our beautiful nature with beaches and dunes, as well as helping to ensure the preservation of our nature for the benefit of locals, as well as guests and holiday home owners

In 2021, we have given our guests the opportunity to join beach cleaning trips in partnership with OMHU, for free: On these trips, guests gain knowledge about the consequences of plastic litter in the Sea and they are given the opportunity to help clean up the beaches. The Sea Bins have already been and will be a very important tool to continue further development of the beach cleaning experience. Hopefully we engage even more people in our common task of keeping the beaches clean as it should be easy for guests to get rid of what they collect, but also easy for the locals who have their daily lives here.

Thomas Christiansen, Sales and Marketing director, Esmark



"The Sea Bin project is an innovative concept and an example to follow. Hold Danmark Rent has succeeded in developing an initiative that engages volunteers, creates attitudes and is a source when it comes to knowledge about marine litter."

Lise Keilty Gulbransen, Manager Hold Norge Rent & CEO, Clean Europe Network



### **SEA BINS**

# a contribution to the Nordic community

Since 2017, Hold Danmark Rent has represented Denmark in the joint Nordic project Nodic Coastal Cleanup, which through a mobilization of volunteers aims to create a greater awareness of waste in our Nordic seas. All Nordic countries and islands are represented The Nordic Community and contribute with what they can and do best. A group of project managers meet several times a year, to share knowledge - something that is particularly important for the regions, as they have little funds to use in the fight of Marine litter. We in Denmark have a lot to thank the Nordic Community for, as they constantly enrich us with new inspiring development projects and initiatives.

Over the years, NCC has received financial support from several parties, such as the Nordic Council of Ministers and the Trade Environment Foundation (Norway). The money is, among spend on establish a common reference beach survey and a common website. The financial contribution has also been used on meeting activities and workshops, which have promoted a strong and close unity within the group.

Over the next 3 years, NCC will receive another subsidy from the Nordic Council of Ministers, which will be used on maintaining the network. Furthermore, to secure the future development to increase local activities to mobilize voluntary clean up on the beaches, and finally we must create better knowledge about sources and causes of Marine Litter in the Nordic Seas. In the years ahead, the managers responsible for the different project in each country and region will try to create a further collaboration with both authorities and other local actors in the field. to increase the constructive work and lasting result.

In Denmark, we contribute to the Nordic Community with the Sea Bin concept. No other country in the Nordic region has this concept, and we are pleased to be pioneers able to inspire with the fine results that this concept brings year after year. Going forward, we will especially sharpen our communication effort, so that even more people - both at home and abroad, learn about the Sea Bins on the coasts. We will also join several important alliances with other players in this field aiming to establishing more Sea Bins on the east-facing coasts.

The Sea Bins are here to stay and we look forward to constantly further developing the concept for the great joy and benefit of nature, the environment, society and thus you and me.





Hold Danmark Rent (HDR) is a non-profit organization that works to reduce the amount of dumped litter anywhere in Denmark

Hold Danmark rent is a practically oriented knowledge center, and a network organization that works innovatively and developing together with municipalities, volunteers and companies for a cleaner Denmark without litter in Mother Nature.

With special focus on opportunities for interdisciplinary collaboration and citizens, involvement always strives for the best solution for everyone through a good and constructive personal relationship.

HDR does not believe in pointing fingers. Only with a positive approach can we make the problem of litter dumped in Mother Nature a shared responsibility and with a joint effort achieve better results

Learn more about HDR on our website www.holddanmarkrent.dk

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