

Marine litter pays no respect to geographical boundaries.

The Nordic Coastal Clean Up gathers people from all over the Nordic countries to help save our coasts from litter.











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## **FOREWORD**

The ocean connects the Nordic countries, and the Nordic Coastal Clean Up 2017 was inspired by a common Nordic responsibility to protect the environment and our oceans.

The project partners chose to join forces, because collaboration makes us stronger, and because we share a vision of a sustainable future.

We share a common responsibility to keep our lakes, waterways and oceans clean, and the key to achieving this goal is collaboration both on a Nordic level and on a global level.

By engaging volunteers across the Nordic region in clean-up actions, we contribute to increased awareness as well as making it possible to remove large amounts of litter from the marine environment.

Taking part in clean-up actions often makes a lasting impact, and picking litter is an eye-opener that very often contributes to lasting behavior change ending littering. Ultimately, this is what the project partners in the Nordic Coastal Clean Up 2017 are aiming for.

We thank the Nordic Council of Ministers for their support without which this project would not have been possible.

Lise Keilty Gulbransen Project Manager











## **BACKGROUND**

Marine litter is one of the world's largest environmental threats, and in recent years both knowledge and awareness of the problem has increased across the world as well as in the Nordic countries.

Every year large amounts of waste enter the ocean and end up along the coast on islands, beaches etc., on the surface of the ocean, in the water column and on the seafloor. Lakes and waterways are also affected. To combat this problem, the world has to focus on litter prevention as well as on clean-up actions.

Volunteers have been cleaning beaches for over 30 years, and recent research shows that picking litter along the coast is an efficient way of fighting marine litter and an important contribution to the work against marine littering.

Marine litter also affects the Nordic countries, and every year thousands of volunteers participate in clean-up actions in the Nordic countries. The Nordic Coastal Clean Up 2017 was inspired by these clean-ups and seeks to build upon the momentum created by the local volunteers by joining forces across the Nordic region.

Marine litter is high on the political agenda in all the Nordic countries, and the project was founded on the premise that we need a common Nordic effort to solve the problem of marine litter.

The Nordic Environmental Programme 2009–2012 and the Nordic Environmental Action Plan 2013–2018 create the Nordic backdrop for the project.











## **ORGANIZATION**

The Nordic Coastal Clean Up 2017 is a collaboration between Keep the Archipelago Tidy Association, Keep Denmark Tidy, the Icelandic Environment Association, Keep Norway Beautiful and Keep Sweden Tidy.

The project group was established in December 2016, and the group consisted of the members below. The environmental organization Ringras from Faroe Islands also joined the project, but they did not become members of the project group.

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# AIMS, GOALS AND OBJECTIVES

The main aim of the Nordic Coastal Clean Up 2017 was to clean up marine waste from beaches, islands etc. and from the seafloor as well as by lakes and waterways throughout the five Nordic countries.

The objective was to mobilize volunteers across the region to carry out clean-up actions.

The Nordic Coastal Clean Up 2017 had following goals:

- Contribute to a cleaner environment by removing waste from the marine environment and by preventing waste and pollution from entering into the marine environment.
- Increase our knowledge of marine littering in the Nordic countries through data collection during the clean-up actions.
- Increase awareness about the problem of marine littering amongst private citizens and businesses as well as in the public sector, and thus contribute to the prevention of marine littering in the future.
- Engage and increase knowledge and awareness amongst municipalities and in the waste management sector as well as in the media and amongst decision makers in the Nordic countries.
- Strengthen the long-term dialogue and collaboration between Nordic institutions and other relevant Nordic stakeholders fighting marine littering.

The Nordic Coastal Clean Up 2017 had the following objectives:

- Engage and mobilize 65 000 volunteers

- across the Nordic countries in clean-up actions in 2017
- Clean 2 000 km of coast in 2017
- Collect 1 000 metric tons of marine waste in 2017
- Collect data in relation to marine littering in the Nordic countries
- Identify the main sources of marine littering nationally and in the Nordic region
- Identify the most common items found along the Nordic coast and by lakes and waterways
- Produce a project report presenting the results of the project
- Increase the number of future clean-up actions carried out by volunteers in the Nordic countries

The project had the following targets groups:

- Voluntary sector
- Environmental organizations
- Municipalities with a coastline and/or public beaches
- Waste management sector
- Local businesses
- Local, national and international media
- Decision makers locally, regionally and nationally











## THE CAMPAIGN

The Nordic Coastal Clean Up 2017 took place on Saturday 6th May. The project was limited to the six participating Nordic countries and to clean-up actions in conjunction with the marine environment along the coast and by lakes and waterways.

Planning started in October 2016, and the project group was established in December 2016. The communications campaign started in April 2017, and the main kick-off event took place in Oslo on 2nd May. Data collection on reference beaches took place in May and June. The data was analysed and the project was evaluated in August during a Nordic waste workshop in Elsinore.

Mobilizing volunteers was the main activity of the project, and high visibility was essential for success. Communication was therefore a vital part of the campaign. The communications campaign concentrated on reaching the target groups and on mobilizing these groups to take action.

We produced a common graphic profile, which was used as a basis for all the campaign materials. Each participating organization tailored the materials to fit their national needs.

The kick-off on 2nd May was the main event of the joint campaign. In collaboration with the Nordic Council of Ministers, the Norwegian Ministry of Climate and Environment, the Oslo Fjord Outdoor Council, the Norwegian Maritime Service and Ragn-Sells, we hosted a kick-off at the Norwegian Maritime Museum in Oslo. Around 100 people participated. The Executive Director of UN Environment, Erik Solheim, and the Norwegian Minister of Climate and Environment, Vidar Helgesen, were amongst the speakers, and after the official opening, we travelled to three different locations in the Oslo Fjord to participate in clean-up actions.

Each participating country developed the campaign's activities based on their knowledge and experience as well as tailoring them according to national needs and local conditions. Therefore, the national campaigns vary both, in size, length, focus and content.











## REFERENCE BEACHES

One of the main goals of the Nordic Coastal Clean Up 2017 was to increase knowledge about sources of marine littering in the Nordic countries and to identify and compare common Nordic sources of litter. This part of the project was a pilot study aimed at developing a common monitoring method to be used in voluntarily clean-up activities.

To achieve this goal we developed a common Nordic monitoring method and used the method to monitor reference beaches in all the participating countries.

The purpose of collecting data is to further contribute to the work being done to identify the main sources of marine littering both locally, nationally and in the region as a whole, thus making it possible for the Nordic countries to target these sources both individually and in collaboration.

All the monitored beaches were saltwater beaches. A transect measuring 100 x 10 meters was monitored on each beach, and we registered 20 different litter types from each transect. The monitoring was

based on counting litter items. We also logged the distance from the beach to the nearest urban area, and the cardinal point of each beach.

The monitoring method also requires monitors to register any items, which originate abroad. However, none of the litter items picked up from the monitored transects, were presumed to be foreign, but this does not lead us to conclude that Nordic beaches are free from foreign litter. This is rather a result of the very small number of beaches monitored in this pilot study.

In total, the project partners collected 1 612 kg of marine litter 33 518 pieces of litter from the reference beaches.











#### 1. DENMARK

Keep Denmark Tidy only monitored beaches on the west coast, and thus, the findings are not necessarily representative for the whole of Denmark. They monitored three beaches in an urban area, a semi-urban area and a rural area.

**88** % of the marine litter collected on the Danish reference beaches was made of plastic, and the sources are as follows:

45 % from fisheries 30 % consumer waste 20 % from industry 5 % from other sources

The top five litter items found on the reference beaches in Denmark were unidentifiable pieces of plastic, polystyrene, rope, bottle caps and lumps of paraffin.

The amount of plastic found in Denmark is slightly higher than the world average, and we are unsure as to the reason. The amount of waste from fisheries is also slightly higher than the other Nordic countries, and this may be because only beaches on the Danish west coast are a part of this study.



#### 2. FINLAND

Finland boarders on to the Baltic Sea, and the findings from the Finnish reference beaches therefore differ to a large extent from the other Nordic countries. Most of the litter that enters the Baltic Sea comes from sources around and in this sea and stays in the Baltic Sea.

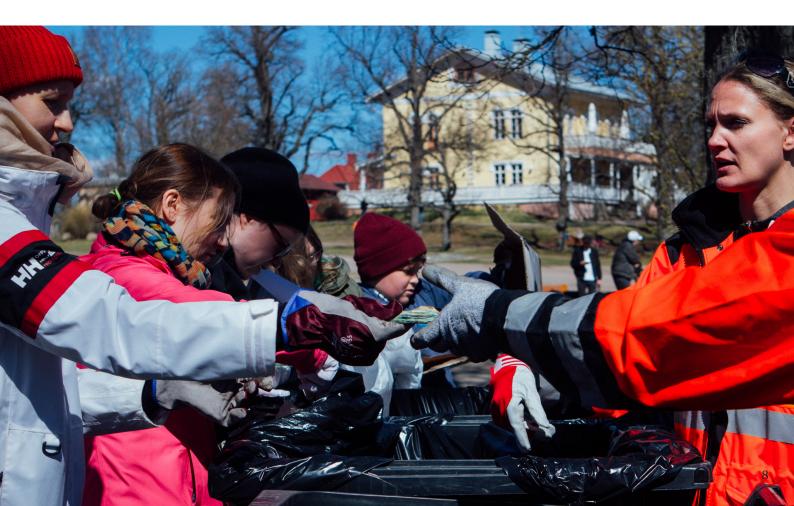
Keep the Archipelago Tidy Association monitored beaches in urban and semiurban areas.

**76** % of the marine litter collected on the Finnish reference beaches was made of plastic, and the sources are as follows:

90 % consumer waste 5 % from fisheries 5 % from industry The top five litter items found on the reference beaches in Finland were cigarette butts, glass/ceramics, plastic bags, unidentifiable pieces of plastic and food packaging.

The amount of glass found on the Finnish reference beaches was very high. The glass found in this beach is undoubtedly very old, due to the popular and central location of the reference beach. This beach is located in a summer resort and has been a popular destination for picnics etc. for over a hundred years. This may well have been the first proper clean-up in this exact location.

The findings from the Finnish study support previous findings and conclusions with regards to litter monitoring in Finland.



#### 3. ICELAND

In Iceland the reference beaches were all in rural areas on the west coast of Iceland.

**87** % of the marine litter collected on the Icelandic reference beaches was made of plastic, and the sources are as follows:

36 % consumer waste

35 % from fisheries

24 % from industry

1 % sanitary waste

4 % from other sources

The top five litter items found on the reference beaches in Iceland were unidentifiable pieces of plastic, rope, drift

wood, polystyrene and fishing nets.

The findings in the Icelandic study can only partially be used to generalize as the monitoring was limited to one geographic area and only rural beaches were monitored. The numbers tell us something about littering in Iceland, but it is highly likely these numbers would be different if we had included beaches near the capital Reykjavik or further south on the island.

The very high percentage of drift wood is unusual in a Nordic context, and it is particularly interesting as Iceland has no trees. We can with a high degree of certainty conclude that this drift wood originates from sources outside Iceland.

#### 4. NORWAY

Keep Norway Beautiful monitored beaches in urban and semi-urban areas on the eastern, western and northern coast of Norway.

90 % of the marine litter collected on the Norwegian reference beaches was made of plastic, and the sources are as follows:

38 % consumer waste

37 % from fisheries

18 % from industry

5 % sanitary waste

2 % from other sources

The top five litter items found on the reference beaches in Norway were polystyrene, rope, unidentifiable pieces of plastic, rope, food packaging and sanitary waste.

The findings from the Norwegian study support previous findings and conclusions with regards to litter monitoring in Norway. However, the amount of plastic registered in this study is higher than the world average as well as the Norwegian average. This may be due to the choice of monitoring locations, which did not include a rural area.













## 5. SWEDEN

Keep Sweden Tidy included one reference beach on the west coast in their study. However, Sweden has considerable experience from beach litter monitoring on behalf of the Swedish Agency for Marine And Water Management. Keep Sweden Tidy is also responsible for the maintenance of the national database of beach litter in Sweden.

96,5 % of the marine litter collected on the Swedish reference beach was made of plastic, and the sources are as follows:

40 % consumer waste 40 % from fisheries 11 % from industry 9 % from other sources

The top five litter items found on the reference beach in Sweden were unidentifiable pieces of plastic, fishing nets, rope, bottle caps, and food packaging.

The findings in the Swedish study support data from previous beach monitoring on the west coast of Sweden.



## **SUMMARY**

According to our analysis 90 % of the litter found on the reference beaches was plastic, and unidentifiable pieces of plastic are at the top of the list of most common litter types. Rope, polystyrene, fishing nets and food packaging make up the rest of the top five list.

In this study 43 % of the litter collected on the reference beaches comes from personal consumption, 37 % comes from fisheries and aquaculture, 15 % comes from industry and one percent is sanitary waste. The remaining four percent is not categorized.

Our findings support findings from both national monitoring projects as well as international projects such as OSPAR. The composition of marine litter in the Nordic countries is in general fairly similar across the region, and compared to international data, fisheries are a larger source of litter in the Nordic region than elsewhere in the world.

To achieve more accurate data and more information about the sources of marine litter in Nordic waters, the protocol needs some adjustments. There is a need to look more closely at whether or not the litter collected is historic or new litter, and we also need to determine whether the litter comes from land based or sea based sources. Furthermore, it is vital to identify whether or not the litter found on Nordic beaches comes from sources in the Nordic region or from sources outside the region.

If we are able to fund a 2018 project, we also aim to broaden the scope of the monitoring by including reference beaches by lakes and rivers.













## **CAMPAIGN RESULTS**

The Nordic Coastal Clean Up 2017 strengthened the base for long-term working relationships between the participating organizations. In addition, the project has created a solid base for continued annual coastal clean-ups in each of the Nordic countries.

The knowledge and experience gained by the participating organizations has also created a basis for a better understanding of the problem of marine littering in the Nordic countries, and thus, paves the way for a more dedicated and efficient fight against marine littering in the region on all levels.

The Nordic Coastal Clean Up 2017 has benefitted the Nordic region in the following ways:

- Cleaner coastline and oceans in the Nordic countries
- Raised awareness and engagement amongst target groups
- Prevent and reduce littering through awareness raising
- Transfer of knowledge, experience and ideas between the Nordic countries
- Expanded and strengthened networks across the Nordic region
- The Nordic fight against marine littering will achieve increased visibility internationally

Expected outcome of the project was as follows:

- Topic of marine littering and beach clean-ups raised to a Nordic level
- Increased general public awareness with regards to the consequences of littering
- Knowledge, experience and ideas shared between the participating institutions
- Increased knowledge about sources of marine littering in the Nordic countries
- Identify and compare common Nordic sources of litter
- Existing knowledge with regards to marine littering transferred between the Nordic countries
- Increased knowledge, awareness and motivation amongst target groups
- Municipalities and waste management sector ready to facilitate future volunteer beach clean-ups
- Nordic networks strengthened and expanded
- Photos and other relevant materials collected and shared for future use
- Project report as a basis for reference and future action

All of the above outcomes were achieved with the exception of including lakes and waterways in the project.











#### 1. DENMARK

Keep Denmark Tidy has considerable experience from litter monitoring and other litter related matters, bit they are new to beach cleaning. Denmark's marine litter problem is mainly on the west coast, and the Danish municipalities along the west coast clean their beaches once a week.

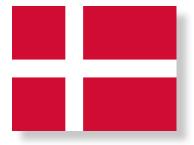
Six municipalities from west coast took part in the campaign. Keep Denmark Tidy placed containers on the main beaches, and beach flags were placed along the beaches to mark the litter drop off points.

A survey carried out among the volunteers revealed that 60 % of the

volunteers were locals, and 40 % of the volunteers came specifically for the event. Everyone interviewed knew about the problem of marine littering, but few were aware that the problem is local. Half of the volunteers were new to beach cleanups, but thought that they are important

The Danish municipalities used contests on Facebook to mobilize volunteers. Approximately 400 people attended the beach clean-ups and 314 bags of marine litter and nine cubic meters of large waste was collected.

Through working with this campaign, Keep Denmark Tidy has established contact a number of potential future partners such as fisheries.













#### 2. FINLAND

Keep the Archipelago Tidy
Association has considerable
experience from beach cleaning,
and in Finland, the Nordic Coastal
Clean Up was the kick-off for the
Finnish National Beach Clean
Campaign, which takes place all
summer long with participators
from kindergartens to members of
Finnish parliament.

Their main Nordic Coastal Clean Up event was organized in collaboration with Finland's biggest music festival, Ruisrock. Approximately 60 volunteers took part in this event together with staff from the festival and Keep the Archipelago Tidy Association.

Finland uses a digital tool to register and track clean-up actions, and in addition to the main event, another 13 clean-up actions took place during the Nordic Coastal Clean Up Day. A number of additional actions were observed on via Facebook, but these were not registered in the map.

Voluntary instructors were trained to help with litter reporting and to guide volunteers taking part in clean-ups during bird nesting. The reference beaches chosen were in the nature reserve Ruissalo. The reserve lies on the outskirts of the city of Turku and is close to the main route of visiting cruise ships.

In total 1 300 volunteers took part. And over 36 000 litter items were registered by the volunteers.

Keep the Archipelago Tidy Association placed considerable emphasis on communications, and their campaign included the following activities and results:

- Infographics about marine litter shown on buses and reaches nearly 30 000 people
- Event promoted on big screen during the campaign period in the main market square in Turku reaching thousands of people
- Live stream aired from the clean-up actions with nearly 2 000 views
- 64 press clippings

A survey amongst volunteers revealed that most of volunteers heard about the event through the Nordic Coastal Clean Up's Facebook event rather than through Keep the Archipelago Tidy Association's own channels, which underlines the success of a common communications campaign.













#### 3. ICELAND

The Icelandic Environment
Association launched their
campaign Hreinsum Ísland (Keep
Iceland Tidy) on the Icelandic Day
of the Environment, 25th April,
and the campaign ran through to
6th May. The Nordic Coastal Clean
Up activities took place on the
Snæfellsnes peninsula in Western
Iceland. Three rural sites on
Snæfellsnes peninsula were used
for reference beaches in Iceland;
two on private land and one on the
Snæfellsjökull National Park.

The campaign Hreinsum Ísland focused on mobilizing local volunteers all around Iceland for clean-up actions, and focused specially on plastics in the ocean. The Nordic Coastal Clean-up Day was organized by an Icelandic team, which consisted of the Icelandic Environment Association, Svæðisgarðurinn Snæfellsnes, Earth Check Snæfellsnes, Lions and The Blue Army.

In addition to mobilizing local volunteers in the Snæfellsnes peninsula, emphasis was also placed on mobilizing members of the associations that were part of the Icelandic team. All the Nordic embassies were specially invited, and most of them attended. The Minister for the

Environment also joined in with her family. The team organized transport from Reykjavik to Snæfellsnes.

Around 200 volunteers took part in the Nordic Coastal Clean-up actions in Snæfellsnes. The litter was sorted for recycling before being moved to containers to prevent it from ending up in a landfill.

In addition to the Nordic Coastal Clean Up events on Snæfellsnes peninsula, around 21 other beach clean-up actions on Icelandic shores were registered through the campaign and carried through by the general public.

The Icelandic Environment Association placed a lot of emphasis on the communications campaign, which included:

- A web site for the event with essential information and facts related to organizing beach clean-ups
- Videos and educational materials for schools
- Short promotional videos with public figures and the general public focusing on marine litter and its effects on nature.

The Nordic Coastal Clean-up Day 2017 received a lot of attention in Iceland, both in the national media and in social media. The Icelandic Environment Association considers the campaign a great success.













#### 4. NORWAY

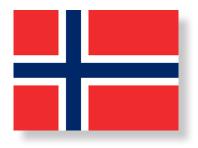
Keep Norway Beautiful has hosted an annual Norwegian Coastal Clean-up Day since 2011, and the Nordic Coastal Clean Up 2017 was an integrated part of the 2017 campaign.

In January 2017, a beached whale on the west coast of Norway was found to have 30 plastic bags in its stomach, and the subject of marine litter and plastic in our oceans has received an enormous amount of attention in Norway ever since. This made it easy to achieve media attention and to mobilize volunteers to take part in clean-up actions.

In Norway, over 25 000 volunteers participated in over 1 000 clean-up actions in connection with the Nordic Coastal Clean Up. Approximately 300 metric tons of litter was collected.

Keep Norway Beautiful hosts clean-up map used by volunteers to register the location of their clean-up actions as well as the number of volunteers taking part and the amount of marine litter they collect.

The communications campaign resulted in considerable activity on social media as well as 719 press clippings in traditional media.













#### 5. SWEDEN

In Sweden, the Nordic Coastal Clean Up 2017 was the end of Keep Sweden Tidy's Coastal Rescuers Campaign, which aims to inform people about marine litter and its effects on nature. An animated film on social media about the problem with plastic in the sea and solutions, was shown almost 400 000 times during the campaign period.

In the Coastal Rescuers Campaign Keep Sweden Tidy encouraged volunteers to organize their own clean-up actions through social media and more than 35 500 volunteers took part. 15 events on the Swedish west coast gathered about 500 volunteers to pick litter together during the Nordic Coastal Clean-up Day. It was estimated that around 2 000 kg of litter was taken care of. Keep Sweden Tidy arranged a clean-up action at Nord Långö in Strömstad together with the municipality and Kosterhavets National Park during this day.

In Sweden, the communications campaign focused on both traditional media and social media, and one of their main activities was a very successful Signed by me campaign encouraging the general public to send letters to the Swedish Minster of the Environment, Isabella Löven, in conjunction with the UN Ocean Conference in June. The campaign was shared over 15 000 times on Facebook, and Keep Sweden Tidy handed over 817 letters asking Isabella Lövin, the Swedish Deputy Prime Ministerto save our oceans.

In Bohuslän, volunteers that pick beach litter can use a clean-up map to organize the clean-up actions. Volunteers register the marine litter they collect, and afterwards the municipalities can access this information in order to pick up the litter at a later point in time.













### 6. THE FAROE ISLANDS

Ringras joined the Nordic Coastal Clean Up 2017 in March 2017, and volunteers on the Faroe Islands have done an impressive amount of work. They collected 1 415 kg and picked 27 357.

However, the data from the Faroe Islands is not included in the analysis of the reference beaches, because the beaches on the Faroe Islands were not monitored according to the common Nordic monitoring method.

76 % of the marine litter collected on the Faroe Islands was made of plastic, and the sources are as follows: **54** % consumer waste

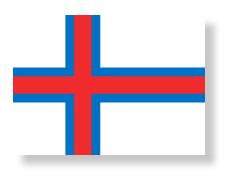
23 % from fisheries

19 % from industry

4 % from other sources

According to the data collected by Ringras, unidentifiable pieces of plastic, polystyrene, rope, glass/ceramics and food packaging are the top five litter items on the Faroe Islands.

Because of the large amounts of data registered by Ringras, we can conclude with a large amount of certainty, that our findings with regards to littering on the Faroe Islands are most likely representative of the litter situation on these islands.













## **CONCLUSIONS**

The Nordic Coastal Clean Up 2017 was a success, and all the project partners wish to continue the project in 2018.

Collaboration across the Nordic region is essential if we are to overcome the problem of marine littering, and this project made it possible to gain more experience and knowledge both on a national and on a Nordic level. By coming together in a common campaign, we were able to support each other and strengthen our individual efforts.

The project was ambitious, and we faced a number of risk factors:

- Lack of public funding
- Failure to bring in a main sponsor
- Failure to reach out through the media
- Failure to mobilize the target groups
- Lack of motivation amongst volunteers
- Deficient data collection

Unfortunately, the project did not receive enough funding, and we did not manage to bring in a main sponsor. However, by both scaling down the project and adjusting the activities to fit the reduced budget, we managed to minimize the potential damage of the risk factors. The project was a great media success, and we successfully managed to mobilize the target groups as well as volunteers all across the Nordic region.

Lack of resources did reduce our capacity for training, supervision and quality control when collecting data on the reference beaches. Data quality increases with experience, and to ensure data quality, monitoring needs to be supervised when the litter is being registered. Recognizing beach litter and its sources is often difficult for inexperienced beach cleaners. To collect more data and achieve more reliable results from all the participating countries, we therefore hope to continue our work in 2018.

The ultimate goal of the Nordic Coastal Clean Up is to remove as much marine litter from the environment as possible, while at the same time identifying the sources of this litter so as to be able to prevent new litter from entering the environment in the future.











## NORDIC COASTAL CLEAN UP 2017 REPORT









