Green Boating

Nordic boat owners' attitudes towards boating in the
Baltic Sea

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Preface

Coastal and archipelago areas in the Baltic Sea are popular destinations for tourists of different nationalities. The visiting numbers have increased the last decades and tourism is an important economical factor in these sensitive and valuable areas. A healthy and beautiful sea is dependent on a sustainable development of the tourism sector. And a healthy and beautiful sea in its turn is the foundation for a prosperous tourism sector.

An important group of tourists is represented by boaters, who visit the coastal areas during a relatively short summer period. At this time, the life and reproduction of numerous marine species is at its most vulnerable state and is more sensitive to different stress factors, such as pollution and disturbance.

Boat owners are sometimes pictured as having a great interest for the nature and a willingness “to do right”. Pollution from pleasure boats such as discharges of oil and fuel, leaking antifouling paints and cleaning agents have a negative impact on the coastal environment. But solutions can be found! Unfortunately these alternatives are not always identified and used. Environmentally sound products have difficulties finding their way out on the market.

One of the underlying purposes of this study was to understand how we can help boat owners change their behavior and decrease the negative impact on the marine environment. What is needed to encourage this behavioral change?

This survey among boaters was conducted in Finland, Sweden and Denmark where boating is very popular and the inhabitants regularly and with no obstacles cross each others borders. Transnational regions like Öresund and Åbo/Åland/Stockholm are marketed as attractive destinations and the countries face an expansion of tourism with all its challenges and problems.

The data presented is based on the results of a web survey ordered by the Keep Sweden Tidy Foundation (henceforth referred to as KST) together with Keep the Archipelago Tidy Association in Finland and the Danish Outdoor Council. The survey was conducted by SIFO Research International.

This presentation is based on a total of 1701 responses from boat owners in Sweden, Finland and Denmark. The original data collected comprised 1,719 responses, however 18 of these have been excluded from the analysis since these respondents answered an earlier version of the survey. The exclusion of these respondents is believed to have no effect on the remaining material. The method used for gathering data was electronic

questionnaires distributed to web panels. Distribution of questionnaires and gathering of data was performed by SIFO Research International.

The survey has been identical for all countries with the exception for a few questions. In the cases where this is relevant, this is clearly stated in the text and tables. Terms like respondents, participants and boat owners will be used interchangeable throughout this report and all refer to the individuals who participated in this study.

The results will be presented in three sections. The first section gives a general overview of all the data and in the second section the data is presented on a national basis. The presentation of the results overlap in some part with the order the questions appeared in the survey but for reasons of coherence and clarity the order has sometimes been changed.

For a few questions in the second section, statistical tests have been performed and this is also clearly stated. The reason for performing these tests on some question is that when differences between countries are judged to be important for comparisons between countries in order to understand certain differences or for future information campaigns, investigating statistical differences can aid in understanding the extent of these differences.

In the third section of this report, hypotheses relevant for the aim of this study are tested and the results presented. The report ends with a brief summary of the most important conclusions presented here.

Appendice A presents the questionnaire used in the study.

Summary

The coastal and archipelago areas in the Baltic Sea are popular destinations for a number of tourists. A healthy and beautiful sea is dependent on a sustainable development of the tourism sector. And a healthy and beautiful sea in its turn is a condition for a prosperous tourism sector. An important group of tourists is boaters, who visit the coastal areas during a short summer period.

Boat owners are sometimes pictured as having a great interest for the nature and a willingness to do right. Pollution from pleasure boats such as discharges of oil and fuel, antifouling paints and cleaning agents have a negative impact on the coastal environment. Environmentally sound alternatives exist to some extent, but are not very common. Sustainable alternatives for boaters are lacking behind.

One of the underlying purposes of this study was to understand how we can help boat owners change their behavior and decrease the negative impact on the marine environment. What is needed to encourage this behavioral change?

This survey among boaters has been conducted in Finland, Sweden and Denmark with a web based survey ordered by the Keep Sweden Tidy Foundation (henceforth referred to as KST) together with Keep the Archipelago Tidy Association in Finland and the Danish Outdoor Council. The research was performed by SIFO Research International.

In sum, some conclusions can be drawn based on the material. It would seem that the average boat owner is a middle aged man that has a motorboat, where the main reason for having a boat is to be able to make shorter trips out on the sea. He does most of the maintenance himself, but in the instances where he needs new information, this comes from other boat owners or friends.

The products he buys must be efficient, so even though environmentally safe products are important, these are not obtained to any large extent because they are seen as less efficient than others. Despite this, there is a willingness to change the way the boat is driven in order to reduce the negative impact on the marine environment – though this is believed to have a relatively small impact on the environment. A majority also claims that they buy environmentally sound products if found. If there is a toilet on board the boat, this is rarely used and instead the facilities at marinas are utilized. However, if used, almost half of the respondents dump its contents out at sea. Industry and agriculture are seen as the main sources of marine pollution, but the responsibility for decreasing the negative environmental impact falls on all of us.

Green boating – some conclusions drawn from the results:

- To get more environmentally sound boat products available on the market there is a need to encourage boat owners to always ask for this. Retailers and producers in the boating sector also have a great responsibility to offer and display these products in their stores. The Nordic Swan eco-label has developed criteria for boat care products.¹
- A majority of Danish boat owners are willing to pay up to 25% more for an environmentally sound antifouling paint.
- Restriction on using copper as an antifouling substance is supported by a majority of the Swedish respondents which shows that the legislation is firmly established, in spite of the difficulties to control that the restriction is followed.
- Restriction on discarding toilet waste in Finnish waters is followed by a majority of the Finnish respondents. The restriction can therefore be seen as having a great support.
- A majority of the boaters use toilets in marinas as their first choice. Good infrastructures of clean toilets also in natural harbours are of great importance to reduce discarded toilet waste in the sea.
- There is a great interest among boat owners to learn more about boats and eco-driving. A good idea is to include this as an obligatory part in navigation courses for boaters.
- Boat owners are not a homogenous group and information must be adapted to different kinds of boat owners. The use of different information channels is also crucial. Swedish boat owners are e.g. to a great extent members of a sea rescue organization while Finnish boat owners are in most cases not members of any organization relating to boating.

There are differences between the nations, surely partly due to differences in national cultures and legislation. It is worth noting that the state of the marine environment and the impact of pleasure boats in combination with different views on issues of responsibility might have effects for bi- or multilateral projects aimed at reducing the negative environmental impact of pleasure boats in the Baltic Sea.

¹ <http://www.svanen.nu/Default.aspx?tabName=CriteriaDetail&pgr=13&menuItemID=7050>

1. Usage, knowledge and behaviour concerning boating and the environment – a general description of a Nordic boat owner

Below follows a presentation of all responses. For most questions the number of respondents is 1,701 except for the questions that were specific for the different countries.

1.1 General information of nordic boat owners

1.1.1 Nationality

The distribution of nationality was even in this study, even if the number of participants from Finland was slightly lower than for the other two countries.

Figure 1: Nationality

1.1.2 Gender and age

There were more men that responded to the questionnaire than women, where 52% of the sample was male and 48% female.

The median age of the respondents was 48 years in Denmark, 43 years in Sweden and 42 years in Finland.

1.1.3 Type of boat

The most dominating type of boat the respondents owned and used the most was a motorboat intended for daytrips, followed by larger motorboats and sailboats.

Figure 2: Type of boat

1.1.4 Years of ownership

Most respondents had either owned a boat for a long time, more than 20 years, or for a shorter time, up to 5 years.

Figure 3: Years of ownership

1.1.5 Use of boat.

Most respondents use their boats for shorter trips to get out on the sea, which is consistent with the results that most have a small motorboat designed for these kinds of trips.

Figure 4: Main usage of boat

The days the boats are used range mostly between 1 to 20 days and most travel for between 10 to 30 kilometers per days out (or between 3 to 17 nautical miles).

Figure 5: Days used per season

Figure 6: Estimated length of trip per day

The days the boats are used range mostly between 1 to 20 days and most travel for between 10 to 30 kilometers per days out (or between 3 to 17 nautical miles).

1.1.6 Membership in organizations, information and maintenance

In order to gain a better understanding of where boat owners get information about their boats and how to reach boat owners with new information, questions about membership in organizations and where boat owners get information on boat care were asked.

To begin, the respondents were asked what, if any, organization they belonged to. The results indicate that membership in environmental groups is very low but membership in local boat clubs is more common. However, most boat owners are not members of any organization.

Table 1: Membership in organizations

Membership in organizations	Pro cent
Boat club	39.7
Environmental protection group	5.2
Sea rescue	13.9
National boating organization	9.8
None of the above	51.4

Most participants in this study do all of the maintenance on their boats themselves. Many also request the services by marinas or shipyards for certain tasks, whereas only a few leave their boats for full-service at marinas.

Table 2: Maintenance of boat

Maintenance of boat	Pro cent
I do all the maintenance	62.8
I do much maintenance but use marinas for help	31.3
I leave my boat with a marina for total service	5.9

About one fifth of the boat owners get new information regarding boat care products from other boat owners, followed by their friends and family. However, many of the respondents also believe that they need no more information. The Internet and magazines are also sources of information but in limited scope.

Figure 7: Sources of new knowledge

1.2 Boating and the environment

1.2.1 Environmentally safe products

The respondents also answered some questions on how important environmentally safe products were to them. The results indicate that most buy environmentally safe products when they can find them, but some respondents believe that these products are not as efficient as other boat care products.

Figure 8: Choice of environmentally safe products

In order to understand what factors are important to boat owners when it comes to choice of products, they were asked to indicate on a 5-grade scale how important price, the environment, efficiency and availability was. The results indicate that efficiency is most important and price least. It might be of interest to note that on a 5-grade scale, a mean value of 3 can be interpreted as a somewhat neutral response, indicating that a score below 3 is judged to be less important and a score about 3 is judged to be more important. In this case, all factors received mean scores above 3, suggesting that all factors are judged to be important.

Table 3: Factors of importance in boat products (means)

Factors of importance in boat products (means)	Pro cent
Efficiency	4.31
Availability	3.62
Environment	3.61
Price	3.37

The respondents were also asked if there were groups of products they believed could be made more environmentally safe. The results suggest

that the respondents believed that all products could be made more environmentally sound.

Figure 9: Respondents positive to environmentally safe products

1.2.2 Engines and fuel

The respondents were asked if they would be willing to take some measures in order to reduce the negative impact on the environment stemming from their motors. The alternative *Change to alkylate fuel* was only given to the Swedish sample, since Sweden is the only country where alkylate fuel is distributed to boat owners. Alkylate fuel is free from aromatic hydrocarbons and olefins. This means that the emissions of carcinogenic, persistent and toxic polyaromatic hydrocarbons (PAH) are up to 90% lower than with conventional fuel. Furthermore, alkylate petrol has a lower emission of nitrogen oxides and a smaller contribution to the creation of ground-level ozone. It is mainly used in lawnmowers, chainsaws etc.²

As can be seen, many respondents are willing to change their way of driving and to use biodegradable oil.

² <http://transportstyrelsen.se/sv/Sjofart/Fritidsbatar/Batlivets-miljofragor/Ny-motor-eller-alkylat/>

Figure 10: Measures to reduce emissions from boats' motor (%)

1.2.3 Toilets and toilet waste

Out of the respondents, a total of 36.5% have a toilet on board the boat. For all respondents, it is most common to use the toilet available in marinas or harbors, as 66% indicated that they did. Only 10.6% of all the boat owners use the boats' toilet and 23.2% make use of their natural surroundings. Of those that have a toilet on board, the emptying of toilet waste is almost half the time done in the sea.

Figure 11: Emptying toilet

1.2.4 Waste

A majority of the respondents, 72.5%, recycle their household waste while on the boat.

The hazardous waste is discarded by the following methods:

Figure 12: Discarding of hazardous waste

1.3 The marine environment and responsibility

One focus of the study was to gain more knowledge on how boat owners perceive different sources of pollution of the marine environment.

1.3.1 Changes in the marine environment

First, the participants were asked if they had noticed any changes in the marine environment. The results show that most respondents had not noticed any changes in the environment at all and that a few respondents had seen changes for the better.

Figure 13: Changes in the marine environment

1.3.2 Impact on the environment and responsibility.

The respondents were also asked to indicate on a 5-grade scale how large, or small, they believed the impact of seven different actors/activities had on the environment. As before, if a mean rating of 3 can be indicative of a neutral position, anything above 3 can be interpreted as stating a large impact (in this case) and a score below 3 is indicating a low impact. The results show that the respondents judged six of the seven actors/activities to have a negative impact on the marine environment but one – pleasure boats.

Figure 14: Sources for marine pollution (Means)

The respondents were also asked to indicate on a 5-grade scale what degree of responsibility they judged four different actors to have for improving the marine environment. Again, all actors received mean score above 3, indicating that all these were judged to be responsible.

Figure 15: Responsibility for improving the marine environment (Means)

In order to estimate how, or even if, boat owners perceived the negative environmental impact pleasure boats have, they were asked to indicate on a 5-grade scale how great they believed this impact to be. The results

show that the mean score was 2.89 suggesting that the respondents do not perceive this impact to be great.

The participants were also asked to indicate what level of responsibility they believed four actors to have, also on a 5-grade scale, for reducing the negative environmental impact pleasure boats have on the environment. The results show that all actors are seen as responsible for this to roughly equal degrees.

Figure 16: Responsibility for reducing impact of pleasure boats (Means)

The respondents were asked to provide suggestions on the open-ended question of what other measures could be taken in order to improve the marine environment. The majority of boat owners, 72.5%, have not suggested anything but the suggestions that have been made are presented in an un-translated form in Appendix A.

1.4 Credibility of organizations

The survey also included questions on how the Keep Sweden Tidy Foundation (KST)³ and the Finnish equivalent Keep the Archipelago Tidy Association⁴ (henceforth referred to as KAT) were perceived by the boat owners in each country.

1.4.1 Keep Sweden Tidy Foundation (KST)

The Swedish sample was asked if they knew that KST worked with environmental aspects of pleasure boating and if they believed that this organization was a credible actor in this context. The results suggest that knowledge surrounding this was adequate and that the credibility of this organization in these issues is good.

³ <http://www.hsr.se>

⁴ <http://www.hallskargardenren.fi>

Table 25: Knows of KST work with the marine environment (%)

Knows of KST work with the marine environment	Per cent
Yes	42.6
No	47.2
Not familiar with KST	10.2

Table 26: Believes KST is credible in this work (%)

Believes KST is credible in this work	Per cent
Yes	67.8
No	11.6
Not familiar with KST	20.6

1.4.2 Keep the Archipelago Tidy Association (KAT)

66.8% among the Finnish group knows about the organization.

However, only 14.5% of the Finnish sample is members, even though 88.1% of these are satisfied with their membership. A total of 37.3% of the Finnish respondents indicated that they would consider becoming members of the organization. The table below gives some indication as to why the Finnish sample did not want to become members in the KAT Association.

Table 27: Reasons for not joining KAT (%)

Buy the sticker myself each year	Do not use Sälle service	No Sälle service available at my location	Do not find the work valuable
13.4	18.0	25.1	0.7

The Finnish sample was also asked to indicate on a 5-grade scale which activities they believe is important for KAT to work with. Note again that no mean score is below 3, indicating that all listed areas are judged to be important.

Table 28: Valuable activities for KAT (%)

Valuable activities for KAT	Percent
Waste management for boaters	4.83
Development of pump-out network for boat toilets	4.6
Increase waste recycling by Sop-Sälle	4.31
Environmental education of marine staff	4.19
Cooperation with authorities on environmental issues	4.1
Environmental education for boaters	4.07
Information on water protection issues	4.02
Collection of metal waste	3.76
Organize educational campaigns	3.24

1.4.3 Blue Flag

Respondents were asked if they were more positive towards marinas with the symbol “Blue Flag”. Blue Flag is an international environmental award for marinas and beaches.⁵

Most respondents were positive to this, although many respondents were not familiar with this symbol:

⁵ <http://www.blueflag.org>

Figure 17: Positive attitude towards Blue Flag

2. Boat owners in Sweden, Finland and Denmark – differences and similarities

2.1 General information

The different countries differed in many respects relating to how type of boat, years of owning and what the boat is used for. In Finland it is more common to have a motor boat than in the other two countries. Finnish boaters also use the boat as a mean of transportation or fishing to a greater extent. The results are presented in tables 1–5. The (%) indicates the total percentage within the countries. In this way comparisons between countries can be facilitated.

Table 4: Type of boat (%)

	Sweden	Finland	Denmark
Motorboat, day trips	49.8	65.4	34.9
Sailboat, day trips	3.0	2.5	17.0
Motorboat, overnight	25.6	24.7	16.9
Sailboat, overnight	21.5	7.4	31.3

Table 5: Years of owning boat (%)

	Sweden	Finland	Denmark
0–5 years	23.8	29.3	38.8
6–10 years	18.6	20.7	17.3
11–15 years	9.8	13.6	10.5
16–20 years	10.4	11.1	10.1
20 years or longer	37.5	25.3	23.2

Table 6: Areas of usage (%)

	Sweden	Finland	Denmark
Racing	0.8	0.5	3.9
Fishing	13.0	26.3	18.3
Transport	11.3	24.4	2.1
Shorter outings on the sea	63.0	36.6	61.4
Long sailing	12.0	12.2	14.2

Table 7: Days per season (%)

	Sweden	Finland	Denmark
1–10 days	21,8	34,3	32,4
11–20 days	31,4	28,3	28,0
21–30 days	21,3	18,9	17,5
More than 30 days	25,5	18,4	22,1

Table 8: Length of trip/day (%)

	Sweden	Finland	Denmark
Up to 5 km (2,8 nautical mile)	21.0	21.4	14.7
6–10 km (3–6 nautical miles)	31.9	29.7	30.8
11–20 km (7–11 nautical miles)	24.4	27.4	26.5
21–30 km (12–17 nautical miles)	13.3	13.1	16.5
More than 30 km (over 17 nautical miles)	9.5	8.3	11.5

Regarding organizational membership, there are also differences between the countries. The Swedish and Danish respondents are members of organizations to a greater extent than the Finnish respondents. Also, when it comes to finding out more information regarding boat care, the Finnish respondents use the Internet to a greater extent than the other two.

Table 9: Membership in organizations (%)

	Sweden	Finland	Denmark
Boat club	45.1	20	48
Environmental protection group	4.1	3.9	7.4
Sea rescue	31.9	3.7	2.0
National boating organization	11.4	7.4	9.8
None of the above	40.5	72.8	47.8

Table 10: Maintenance of boat (%)

	Sweden	Finland	Denmark
I do all the maintenance	68.8	52.3	62.8
I do much maintenance but use marinas for help	26.8	36.9	31.3
I leave my boat with a marina for total service	4.4	10.8	5.9

Table 11: Information on boat care (%)

	Sweden	Finland	Denmark
Magazines	9.6	8.8	12.8
Sales people and staff at marinas	15.2	12.7	11.0
Other boat owners	22.6	17.1	27.2
Friends and relatives	21.6	21.2	11.1
I do not need more information	18.1	15.4	19.6
Internet	9.0	21.7	13.7
Other sources	3.8	3.2	4.6

2.2 Boating and the environment.

2.2.1 Antifouling.

Almost 80% of the Swedish sample use antifouling paint on the hull of their boats and 20% do not paint at all.

Figure 18: Use of antifouling paint (only Swedish respondents)

In Sweden there are different regulations on the eastern and western coasts on what type of antifouling paint that can be used. On the east coast (Baltic Sea coast) it is prohibited to use antifouling paint that contains copper, while this restriction does not apply on the west coast.⁶ The Swedish boat owners were asked to answer some questions regarding the regulations surrounding this limited use of antifouling paint. The results show that most respondents agreed with the regulation restricting this use, but some respondents were not sure what applied to their boats.

⁶ http://www.kemikalieinspektionen.se/templates/Page___3085.aspx

Table 12: Legitimate rules for antifouling use (only Swedish respondents)

Legitimate rules for antifouling use	Per cent
Yes	67.7
No	15.9
Do not know what applies to my boat	16.5

The Danish and Finnish respondents were asked the question how satisfied they were with their antifouling paint, on a 5-grade scale, where 1 was “not satisfied at all” and 5 was “very satisfied”. The results show that the Finnish respondents mean score was 3.54 and the Danish score was 3.52, suggesting that they were satisfied with their choice of antifouling paint.

The Danish respondents were also asked how much more they would be willing to pay for an antifouling paint that was environmentally safe. The results show that three quarters of the respondents would pay up to 25% more for a safe paint.

Table 13: Willingness to pay (only Danish respondents)

Willingness to pay	Per cent
10% More	36.2
25% More	39.0
50% More	17.5
100% More	7.4

The respondents were also asked if they knew about the alternative of washing their boats instead of using antifouling paint and if they thought that it could be a sufficient alternative. The results suggest that the Finnish group had tried this alternative to the greatest extent, and that the Danish group had a more negative attitude than the others.

Table 14: Perception of washing as an alternative to paint (%)

	Sweden	Finland	Denmark
Yes, I have tried	15.2	30.6	13.6
Yes, but I have not tried	46.3	39.9	19.0
Yes, but do not think it's a good option	18.6	8.1	23.9
No	19.8	21.4	43.5

The Danish respondents were asked how much more time and money they were willing to spend on washing the boat, compared to painting it. Results show that the Danish sample would be willing to spend and pay up to 25% more on this alternative. This might seem to contradict the findings from the previous question (where a large part had a negative attitude towards this). Conflicting results like this are often found in survey studies and are difficult to explain.

Table 15: Willingness to spend more time and money (only Danish respondents)

Willingness to spend more time and money		Per cent
10%	more time and money	42.9
25%	more time and money	37.1
50%	more time and money	14.2
100%	more time and money	5.8

2.2.2 Engines and fuel.

Regarding the measures the respondents are willing to take in order to limit the negative impact motorboats have on the environment, the results suggest that Swedish and Finnish respondents are more willing to indicate that they would consider making these changes, as compared to the Danish sample. Note that it was only in the Swedish sample that the alternative “Change to alkylate fuel” was given.

Table 16: Measures to decrease environmental impact (%)

	Sweden	Finland	Denmark
Change to alkylate fuel	19.7		
Change fuel	22.1	16.8	13.9
Change motor	23.5	19.4	12.9
Drive more fuel efficiently	44.1	56.2	23.2
Use biodegradable motor oil	35.2	30.6	32.2
I do not have a motor	3.0	1.8	7.4
I can not do anything	14.5	15.4	27.7

In an open-ended question, the respondents stated that measures they had already taken to reduce the negative environmental impact of motorboats had been to change motor from a two stroke motor to a four stroke engine. Others had already begun driving more fuel efficiently and had changed their oil to the biodegradable kind. Some of the more radical suggestions made were to introduce driving licenses’ for boats or to place a ban on all motor boats.

2.2.3 Toilet and toilet waste

The respondents have a similar pattern when it comes to using facilities when on the boat. Even though the Swedish participants tend to use nature to a greater extent and the Finnish rely more on the guest facilities in marinas.

Table 17: Using facilities (%)

	Sweden	Finland	Denmark
Use toilet in harbor or marina	59.9	78.1	64
Use the boats toilet as first choice	9.8	6	15.4
In the water or on land	30.3	15.9	20.6

As having a toilet on board the boat or not varies greatly with what type of boat you have, no separate analysis for this is done for the countries. It has been noted earlier that small motor boats are most common in general and it can be expected that these boats do not have a toilet on board. However, an analysis was performed on those that stated that they did have a toilet on board as it was of interest to see how these boat owners empty their toilets. The results show that the Finnish population emptied their toilets by pump-outs in the marinas more often than the other groups. It is worth noting that it is not allowed to empty toilet waste along the Finnish coast. This regulation was introduced 2005, followed by information campaigns and increased availability of pump-out stations.⁷

Table 18: Emptying toilet (%)

	Sweden	Finland	Denmark
Empty in the sea	65.1	10.4	44.1
Empty on land	24.1	30.2	31.4
Use pump-outs in marinas	10.8	59.4	24.4

2.2.4 Waste.

When it comes to recycling household waste, the results show that the Finnish group recycles less than the other groups. The percentage in brackets (table 19) after the country indicates how many of the respondents sort their household waste while on the boat. Table 19 also illustrates where the respondents leave their hazardous waste. The groups differ slightly as to where they dispose of their hazardous waste.

Table 19: Recycling and disposal of hazardous waste (%)

	Sweden (71.5%)	Finland (68.2%)	Denmark (76.8%)
Leave in harbors recycling bins	39.2	42.4	56.6
Leave in other recycling bins on land	59.0	56.7	40.4
Do not know where to leave	1.8	0.9	2.9

2.2.5 Environmentally safe products.

Regarding the purchase of environmentally safe products, the differences between countries appears to be small, even though the Finnish group seems more positive towards environmentally safe boat care products.

⁷ <http://www.miljo.fi/default.asp?node=4744&lan=sv>

Table 20: Choice of environmentally safe products (%)

	Sweden	Finland	Denmark
Only buy environmentally safe products	13.4	19.4	12.6
Buy them when I can find them	47.0	43.0	44.8
Would like to buy but they are not as good	23.5	17.3	18.3
Did not know they existed	7.0	12.0	14.6
Environmentally safe products not important to me	9.1	8.3	9.7

An analysis of the responses given for buying environmentally safe products yield such small differences that they are not presented here (see Table 3 in the above presentation for all results).

2.3 The marine environment and responsibility

2.3.1 Changes in the marine environment

The results show that there are differences between the countries with regard to observing changes in the marine environment, where the Finnish participants expressed to a greater extent that they had witnessed a worsening of the marine environment.

Table 21: Changes in the marine environment (%)

	Sweden	Finland	Denmark
Yes, it has deteriorated	40.1	53.7	35.3
Yes, it has improved	9	8.8	13.1
I have not noticed any difference	50.9	37.6	51.6

The results show that there are differences between the countries with regard to observing changes in the marine environment, where the Finnish participants expressed to a greater extent that they had witnessed a worsening of the marine environment.

2.3.2 Impact on the environment and responsibility

The sources responsible for causing environmental degradation differed somewhat between the countries. A ranking of the different sources is listed below, based on the mean ratings of each source. All Swedish means were scored above 3 (if 3 can be said to represent a more neutral position and any score under or over is less or more likely), however, the Finnish and Danish mean score for pleasure boats were both under 3.

Table 22: Ranking of sources responsible for causing environmental degradation

Sweden	Finland	Denmark
Industry	Industry	Industry
Agriculture	Agriculture	Agriculture
Commercial fleet	Commercial fleet	Commercial fleet
General environmental degradation	General environmental degradation	General environmental degradation
Climate change	Harbors	Climate change
Harbors	Climate change	Harbors
Pleasure boats	Pleasure boats	Pleasure boats

A closer analysis of these results (by ANOVA) revealed that the means for the Danish group differed significantly from the means of the other two groups. Briefly, the mean scores for all Danish results are significantly lower than the other two. This suggests that Danish boat owners, as they also perceive less negative changes in the marine environment, might not experience that the marine environment in their part of the Baltic is deteriorating.

All respondents were asked to indicate what responsibility they believed different actors to have for improving the marine environment. There are some national variations, but all mean scores are again over 3, indicating that all actors are seen as responsible.

Table 23: Responsibility for the marine environment (Means)

Sweden	M	Finland	M	Denmark	M
Authorities	4.53	Coastal agriculture and industry	4.52	Authorities	4.2
Coastal agriculture and industry	4.46	Commercial fleet	4.39	Coastal agriculture and industry	4.16
Commercial fleet	4.28	Authorities	4.06	Individuals	3.97
Individuals	4.11	Individuals	3.85	Commercial fleet	3.91

Also for the question of who is responsible for reducing the negative environmental impact of pleasure boats, no mean score was under 3.

Table 24: Responsibility for reducing environmental impact from pleasure boats (Means)

Sweden	M	Finland	M	Denmark	M
Producers of boats and boat care products	4.33	Boat owners	4.15	Boat owners	4.08
Boat owners	4.21	Harbors/marinas/shipyards	4.14	Authorities	3.83
Authorities	4.2	Authorities	3.96	Producers of boats and boat care products	3.76
Harbors/marinas/shipyards	4.01	Producers of boats and boat care products	3.94	Harbors/marinas/shipyards	3.56

When the respondents were asked to indicate whether or not they believed that pleasure boats were a problem for the marine environment, the total score was 2.89. When looking at the individual countries, it can be seen that the Swedish respondents believe to a greater degree that pleasure boats have a negative effect on the marine environment. This difference is also statistical significant.

Table 25: Environmental impact of pleasure boats (Means)

Sweden	Finland	Denmark
3.03	2.85	2.55

2.4 Summary.

There are differences between the nations, perhaps due to differences in national cultures and legislation. It might be worth noting that the state of the marine environment, the impact of pleasure boats in combination with different views on issues of responsibility might have effects for bi- or multilateral projects aimed at reducing the negative environmental impact of pleasure boats in the Baltic Sea.

3. Hypothesis driven questions

In this third and last section, different hypothesis will be tested. In order to gain a deeper understanding of how boat owners perceive the impact on the marine environment by their activities, some further analysis were done. Briefly, it is hypothesized that factors such as respondents' age, gender, type of boat and specific attitude towards environmental labeling, such as Blue Flag, will affect the respondents overall attitude towards the marine environment. There is one additional analysis performed that is directly related to what type of boat the respondents owned.

In this section, the respondents will be divided into three groups depending on:

- Age, three groups – young (17–40), middle aged (41–55) and older (56–81). As these groups in part corresponds to type of boat the respondents owned and years of ownership, the category of age will also implicitly refer to these two categories. If the respondents are older, they most probably will have owned a boat for a longer time and will also, because of more resources, have larger boats. These respondents also spend more days out at sea.
- Gender, two groups. This is closely linked to whether or not the respondents had observed a change in the marine environment. Women reported seeing more changes for the worse, whereas men had observed more changes for the better or had not noticed changes at all. Also, women are more positive towards the environmental labeling Blue Flag, suggesting that women have a more positive attitude towards environmental labeling in this context.
- Whether the respondents have noticed changes in the marine environment in their area or not is examined in relation to how these respondents view issues of impact of activities on the environment and responsibility for addressing environmental issues. The respondents were divided into three groups: those who had seen a change for the worse in the marine environment; those who had seen changes for the better in their marine environment and those who had not witnessed any changes in the marine environment in their area (the groups are presented in figure 13).

Eight questions will be investigated more deeply here in order to make it more clear how these different groups differ. The eight questions are:

- Maintenance of boat
- Sources of information regarding boat care

- Buying environmentally safe products
- Important factors when buying products
- Recycling waste
- Impact of different activities on the marine environment (seven activities/actors)
- Responsibility for the marine environment (four actors)
- Responsibility for decreasing the impact of pleasure boats on the marine environment (four actors)

3.1 Age

The differences between the three age groups (and corresponding years of ownership and type of boat) were investigated and they are presented below.

First, there were no differences regarding maintenance of the boat. Regarding information however, the analysis showed that the younger group relies more on information from friends and family as well as the Internet as compared to the older group. The oldest group, compared to the other two groups, turns to magazines for this information to a larger extent and also reports that they do not need more information.

Also, the younger group felt that price was important when buying boat care products, whereas the older group cared more about the environment.

The younger group also recycles less than the others and this can in part be explained by the type of boat this group has. Shorter trips on smaller boats, generating and disposing of waste might not be applicable in these cases as compared to longer sailing trips.

Second, the relation between age and perception of actors responsible for environmental pollution was investigated. The results show that the older respondents (56 and up) feel more compared to the other groups, that industry, pleasure boats, climate change and general environmental degradation are less likely sources of marine pollution. Also, the youngest group rated the environmental impact by agriculture to be less than compared to the other age groups.

Third, age also seems to be a factor when it comes to ascribing responsibility to different actors for improving the marine environment surrounding the Baltic Sea. The older group sees authorities as more responsible for improving the environment compared to how the youngest and middle aged groups see this, whereas the youngest group sees that the commercial fleet has more responsibility than how the other two groups perceive this.

Fourth, when it comes to responsibility for addressing the environmental impact stemming from pleasure boats, the younger group of respondents judged the producers of boats and boat care products to have less responsibility than the other two groups did.

3.2 Gender

Differences between men and women were present in many of the eight questions investigated.

First, men maintain their boats themselves to a greater extent than women do. When it comes to information on news about boat care, women are more likely to seek information from magazines, staff at marinas, friends and family. Men on the other hand are more likely to ask other boat owners and express that they do not need any additional information to a greater extent. For women, the environment and availability are more important factors when buying boat care products. Women are more likely to buy only environmentally safe products or to buy them when they are available, whereas men do not buy environmental products because they believe these products are less efficient or environmental issues are not important for them in this context. Women are also more likely to recycle their waste.

There was only one activity, agriculture, which men found to have a larger impact on the environment as compared to women. Women tend to rate all other actors (industry, pleasure boats, harbors, commercial fleet, climate change and general environmental degradation) as greater contributors to the marine environment than men did.

Women also rated the responsibility of the individual as higher than men did, when it comes to reducing the negative impact on the marine environment on the whole. Women also rated all actors (producers, authorities, boat owners and marinas) as having a greater responsibility towards reducing the negative impact caused by pleasure boats on the marine environment, than did men.

Last, women indicated that they believed the problem of pleasure boats to be larger than men did. Again it might be interesting to note that the response was given on a 5-grade scale (where 3 can be seen as a more natural stance) where the mean score for men was below 3 and where as for women the mean score was above 3.

3.3 Type of boat, information preference and impact of pleasure boats

In this study, the respondents could be divided into four different categories depending on what type of boat they had: small and large motorboats, and small or large sailboats. When it comes to where the boat owners look for information regarding boat care, the following differences emerged:

Table 26: Differences in sources of information depending on boat type

Source	Boat type
Magazines	Small motorboats use less than others
Sales people and staff at marinas	Large motorboats more than others
Other boat owners	Small motor- and sailboats less than others
Friends and relatives	Small motorboats more than others
I do not need more information	Small and large motorboats more than others
Internet	Large motorboats less than others
Other sources	Large motorboats less than others

It was also interesting to examine if type of boat had an impact on how the respondents perceived the negative effects of pleasure boating on the environment. The analysis show that owners of smaller boats, small motor- and sailboats, perceived to a greater extent that pleasure boats had a negative impact on the environment than did the owners of larger boats. Also, the group that owned small motorboats has a significantly more positive attitude towards Blue Flag than the other groups.

3.4 Perceived changes, impact and addressing environmental issues

The analysis show that there are significant differences between the groups that had seen negative changes in the marine environment, when compared to those who had not, when it comes to estimated impact of different activities on the marine environment, and who is responsible for addressing environmental problems in the marine environment.

Table 27 presents the mean scores for two of the three groups; those who had seen negative changes and those who had not. The third group, those who has seen a positive change, is excluded from this table. The reason for this is that there were no unique differences between this group and the other two, i.e. those who had seen an improvement in the marine environment did not perceive any actors as more or less responsible or that any actor has any more or less impact in the marine environment. So, the results presented here are the mean ratings for two groups.

Table 27: Perceived changes in marine environment and actors' responsible (Means)

	Have seen changes	Have not seen changes
Agriculture	4.34	4.02
Industry	4.39	4.16
Pleasure boats	3.07	2.77
Harbors	3.79	3.42
Professional fleet	4.19	3.55
Climate changes	3.79	3.15
General environmental degradation	3.99	3.63

All differences significant at 0.05 levels

Table 28: Perceived changes and responsibility for overall marine environment (Means)

	Have seen changes	Have not seen changes
Authorities	4.4	4.22
Coastal agriculture and industry	4.53	4.26
Professional fleet	4.33	4.07

All differences significant at 0.05 levels

The observant reader might notice that the responsibility of the individual is not included here. This is because there were no significant differences in how the groups perceived this actor (see Figure 15 and Table 22 for more details).

Table 32: Perceived changes and responsibility for decreasing pleasure boat impact

	Have seen changes	Have not seen changes
Producers of boats and boat care products	4.15	3.96
Authorities	4.15	3.92
Harbors/marinas/shipyards	4.05	3.78

All differences are significant on 0.05 levels

Again, readers might notice that the individual boat owner as an actor responsible for reducing the impact of pleasure boats on the environment is missing. This is because there were no significant differences between the groups here either (see Figure 16 and Table 23 for more detailed information).

4. Conclusions

One of the underlying purposes of this study is to be able to better answer the question how to get boat owners to change their behavior when it comes to decreasing the negative impact on the marine environment caused by pleasure boats, and by which means to encourage this behavioral change.

Before this question can be, at least in part, answered, it might be useful to once again look at the group of boat owners in the Nordic countries and what implications this might have for distributing information aimed at affecting behavior.

4.1 Difficult (but not impossible) to reach a typical boat owner with new information

Most pleasure boats that occupy the Baltic Sea are smaller motorboats that are used for a relatively short period of time every season. Most trips are short and serve as a way to get out to sea for the purpose of recreation. Most of the maintenance is done by the individual boat owner. This boat owner is usually not a member of any organization, be it an environmental organization or a boating organization. The need for new information is limited, but to the extent that this is sought it comes from other boat owners or through magazines. This means that reaching this individual with new information poses a challenge as the information channels are strictly limited. However, the ripple effect should not be underestimated. As boat owners have a high focus on the *efficiency* of their boat care products, perhaps trying these products and finding out from a practical point-of-view, or hearing from other people, how they work can prove to have a higher impact on behavior than just providing the boat owner with information. This is of course, if the environmentally safe products are perceived as being as efficient as the other products used. By specifically addressing the *expectations* of the used products, this can perhaps influence the boat owners' willingness to try another product. Also, if boat owners are more willing to gather their information from other people, chances are that they might be more willing to try alternatives, as compared to those who go about it in a "business-as-usual" manner.

The boat owners in this study show a great potential for making changes to their own behavior in order to reduce the impact of pleasure boats on the marine environment. By adjusting the way they drive, chang-

ing motors and type of motor oil, there seems to be a willingness to address the problem – even if they do not see that their activities pose a problem. Even though the respondents here judge the impact of their own contribution as boat owners to be relatively small when compared to other sources of marine pollution, there is an understanding of the rules, a willingness to pay and a positive attitude towards environmental labeling of boat products and services.

The Keep Sweden Tidy Foundation and the Keep the Archipelago Tidy Association are seen as credible in the work with environmental boating. It seems reasonable that these two organizations should continue to and expand these efforts to include new and alternative methods for achieving behavioral change.

For specific national differences, the overall results suggest that the Danish sample have a somewhat different view of pleasure boats as source of marine pollution. The Finnish population seems to have a more developed sense of alternative measures (such as using a boat washer) and making good use of the facilities and services provided at the marinas (such as emptying toilets and recycling waste). The Swedish population seems to perceive to a greater extent that pleasure boats do contribute to a negative impact on the marine environment, as compared to the other two. This can be explained in part by two observations: The Danish population has not witnessed negative changes in the marine environment and might not see the marine environment as fraught with problems at all. Also, the Finnish population has already started to take steps towards reducing the negative impact of pleasure boats and may therefore see more positive changes.

4.2 Two kinds of boatowners

The results can be interpreted, in a rough manner, to present two different kinds of boat owners, regardless of nationality.

4.2.1 Younger woman with a smaller motorboat or older man with a sailing boat.

First, there is the older male boat owner, who has a large boat, and is out at sea more than one month every season. He does much of the maintenance himself, focuses on the efficiency of the products he buys and is not overly concerned with the environment since he does not believe that his boat poses a problem, even though he is willing to be held responsible for contributing to the improvement of the environment, perhaps by primarily changing his way of driving the boat to make it more fuel efficient.

The second type of boat owner is a younger person or a woman (for clarity this person will be illustrated as a woman). She has a smaller mo-

torboat that she uses for 10 to 20 days a season for taking shorter trips out to sea. The environment is important to her and this attitude influences her choice of boat care products, if these products are available to her. She sees pleasure boats as a source of pollution to the marine environment and feels that her responsibility for the marine environment is as great as any other actor on the scene.

4.2.2 Reaching both groups with same information is difficult

As can be seen, these two personas are motivated by different factors and will respond to information designed to alter their behavior in different ways. Exactly how behavioral changes are to be achieved is outside the scope of this report to answer, but one question that is relevant to consider is which group is targeted with the information. Reaching both groups with the same information is difficult, not only because the information is likely to address issues that are seen as irrelevant by one group, but also because they use different channels for collecting new information. For example, information relating to the negative environmental impact of a certain boat care product with an explicit encouragement to use an alternative product published in a boating magazine, is not likely to be acknowledged by the first type of boat owner. First, this boat owner does not believe that the impact of boat care products is something to worry about since there are other sources of pollution that are much larger. Second, this boat owner will perhaps think of the lack of efficiency and the extra work this will cause him, when it is time for him to maintain his boat. Last, this alternative product (or indeed perhaps any alternative product) might have been used by a friend who was not happy with the results, making this boat owner discard the information and stick with his usual one.

However, the reverse scenario is also true. For example, if information on the practical implications of using alternative methods is presented in a similar magazine (such as substituting one antifouling paint for another) and focus is on the efficiency of this product, and is aimed at the second type of boat owner, there are other issues that need to be considered. First, this information might not be read at all since it is not where this group usually gets information from. Second, since there is no mention of the environment, there is little incentive to switch because it addresses concerns this person might not have, since she does not do much of the maintenance herself but rather rely on the local marina to do that. Also, if the information does not state exactly where this alternative is available or how much it costs, chances are this message will not be as efficient as it could be.

It is also important to focus on what type of boat is the target for an information campaign. Most respondents in this survey have small motor-

boats, making it important to consider what specific measures will be most effective for these boats, rather than addressing all boat owners.

4.3 Green boating – some conclusions drawn from the results

- To get more environmentally sound boat products available on the market there is a need to encourage boat owners to always ask for this. Retailers and producers in the boating sector also have a great responsibility to offer and display these products in their stores. The Nordic Swan eco-label has developed criteria for boat care products.
- A majority of Danish boat owners are willing to pay up to 25% more for an environmentally sound antifouling paint.
- Restriction on using copper as an antifouling substance is supported by a majority of the Swedish respondents which shows that the legislation is firmly established, in spite of the difficulties to control that the restriction is followed.
- Restriction on discarding toilet waste in Finnish waters is followed by a majority of the Finnish respondents. The restriction can therefore be seen as having a great support.
- A majority of the boaters use toilets in marinas as their first choice. Good infrastructures of clean toilets also in natural harbours are of great importance to reduce discarded toilet waste in the sea.
- There is a great interest among boat owners to learn more about boats and eco-driving. A good idea is to include this as an obligatory part in navigation courses for boaters.
- Boat owners are not a homogenous group and information must be adapted to different kinds of boat owners. The use of different information channels is also crucial. Swedish boat owners are e.g. to a great extent members of a sea rescue organization while Finnish boat owners are in most cases not members of any organization relating to boating.

To conclude, the material presented here gives rise to a cautiously optimistic interpretation of the willingness and ability of pleasure boat owners' involvement in addressing the negative impact their boats have on the marine environment. This material provides a better picture of how to develop campaigns and educational incentives and how to go about this.

There are differences between the nations, surely partly due to differences in national cultures and legislation. It is worth noting that the state of the marine environment and the impact of pleasure boats in combination with different views on issues of responsibility might have effects for bi- or multilateral projects aimed at reducing the negative environmental impact of pleasure boats in the Baltic Sea.

References

<http://www.svanen.nu>
<http://transportstyrelsen.se>
<http://www.hsr.se>
<http://www.hallskargardenren.fi>

<http://www.blueflag.org>
<http://kemikalieinspektionen.se>
<http://www.miljo.fi>

5. Sammanfattning.

Kust och skärgårdsområden i Östersjön är populära turistmål. Ett friskt hav och levande kust och skärgård är beroende av en hållbar utveckling av turismen. Turismen är i sin tur beroende av en vacker kust och ett välmående hav. En stor grupp av turister är båtägare, som besöker kustområdena under några korta, men intensiva sommarmånader.

Båtägare kan tänkas ha ett stort intresse för miljöanpassade alternativ och en vilja att ”göra rätt” eftersom båtlivet för många är ett sätt att uppleva och komma närmare naturen. Föreningar från fritidsbåtar som oljespill, avgaser, båtottenfärger och rengöringskemikalier har dock en negativ påverkan på den marina miljön. Miljöanpassade alternativ för båtlivet finns i liten utsträckning och de alternativ som finns används sparsamt.

Syftet med denna studie var att få en bättre förståelse för vilka förutsättningar som finns för ett miljöanpassat båtlliv och vad som behövs för att förändra båtägarnas beteende för att minska den negativa påverkan på miljön.

Denna studie har genomförts bland båtägare i Finland, Sverige och Danmark med hjälp av webbaserade enkäter på uppdrag av Stiftelsen Håll Sverige Rent, Håll Skärgården Ren i Finland samt Friluftsrådet i Danmark. Undersökningen genomfördes av SIFO Research International.

Baserat på det insamlade materialet kan en typisk båtägare beskrivas som en medelålders man med motorbåt, där båten främst används till kortare utflykter. Det mesta av båtskötseln gör han själv och om han behöver råd tillfrågas i första hand andra båtägare och vänner.

Produkterna han använder måste först och främst vara effektiva, så även om miljöanpassade alternativ är viktiga så används de inte i någon större utsträckning eftersom de anses mindre effektiva. Det finns dock en vilja att minska miljöbelastningen, till exempel genom att köra bränslesnålt, även om han anser att fritidsbåtar har en relativt liten påverkan på miljön. En majoritet av de tillfrågade båtägarna svarar också att de köper miljöanpassade produkter om de finns tillgängliga. Om båten har en toalett ombord, så används den inte särskilt ofta, utan toaletter i land används i första hand. I de fall toaletten används, så svarar hälften av respondenterna att avfallet släpps ut direkt i havet. Industrin och jordbruket anses vara de aktörer som bidrar mest till marina föreningar, men vi har alla ett ansvar att minska den negativa belastningen på den marina miljön.

Några slutsatser för ett grönare båtlliv:

- För att öka utbudet av miljömärkta båtårdsprodukter finns det ett behov av att påverka båtägare att i större utsträckning efterfråga

dessa alternativ. Återförsäljare och producenter har också ett ansvar att erbjuda dessa produkter. Den nordiska miljömärkningen Svanen har utvecklat kriterier för båtvårdsprodukter.

- En majoritet av de danska båtägarna kan tänka sig att betala upp till 25 % mer för miljöanpassade båtbottnfärger.
- Förbudet att använda kopparbaserade båtbottnfärger på den svenska ostkusten stöds av en majoritet av de svenska respondenterna, vilket visar att regleringen är förankrad, trots svårigheterna att kontrollera att förbudet följs.
- Förbudet att tömma toalettavfall i finska vatten följs av en majoritet av de finska respondenterna. Förbudet kan därmed anses ha ett stort stöd.
- Det finns ett stort intresse bland båtägarna att lära sig mer om hur man kör båten bränslesnålt. En god idé är därför att införa utbildningar i "eco-driving" som en obligatorisk del i navigations-klasser och förarbevisutbildningar.
- Båtägare är inte en homogen grupp och informationsinsatser måste anpassas till olika typer av båtägare, liksom användningen av olika informationskanaler. Svenska båtägare är exempelvis ofta medlemmar i någon sjöräddningsorganisation, medan finska båtägare i de flesta fall inte är medlemmar i någon organisation som rör båtlivet.

De olika nationaliteterna skiljer sig åt inom flera områden, som troligen beror på skillnader både i lagstiftning och kultur. Det är värt att notera att havets miljötillstånd och de negativa effekterna från fritidsbåtar i kombination med olika syn på ansvarsfrågor är viktiga faktorer att ta hänsyn till i projekt som syftar till att minska marina föroreningar i Östersjön från fritidsbåtar.

6. Appendice A.

Swedish questionnaire

SIFO
RESEARCH INTERNATIONAL

Enkätfrågor

Denna undersökning är riktad till fritidsbåtagare gällande beteende, attityd och kunskap gällande båtliv och miljö. Undersökningen genomförs i Sverige, Danmark och Finland på uppdrag av Stiftelsen Håll Sverige Rent.

Har du eller din familj båt?

Typ av båtagare

1) Är du

- a) Kvinna
- b) Man

2) Vilken typ av båt har du? Om du har fler båtar, svara för den du använder mest

- a) Liten båt (kanot, roddbåt)
- b) Dagtursbåt, motorbåt
- c) Dagtursbåt, segelbåt
- d) Ruffad motorbåt/övernattningsbar motorbåt
- e) Ruffad segelbåt/övernattningsbar segelbåt

3) Hur länge har du haft båt?

- a) 0–5 år
- b) 6–10 år

- c) 11–15 år
- d) 16–20 år
- e) 20 år eller längre

4) Vilken eller vilka av nedanstående är du medlem i?
(flera svar möjliga)

- a) Båtklubb
- b) Miljöskyddsförening
- c) Sjöräddningssällskap
- d) Nationell båtororganisation
- e) Ingen av ovanstående

5) Hur många dagar använder du båten en typisk säsong?

- a) 1–10 dagar
- b) 10–20 dagar
- c) 20–30 dagar
- d) Mer än 30 dagar

6) Till vad använder du huvudsakligen båten?

- a) Kappsegling
- b) Fritidsfiske
- c) Främst som transportmedel från en plats till en annan
- d) Kortare utflykter för att komma ut på sjön
- e) Långseglingar

7) Hur långt uppskattar du att du åker en vanlig båttag?

- a) 5 km (2 distansminuter)
- b) 5–10 km (2–5 distansminuter)
- c) 10–20 km (distansminuter)
- d) 20–30 km (10–15 distansminuter)
- e) Mer än 30 km (15 distansminuter)

8) När det gäller skötseln av din båt, vilket alternativ passar bäst in på dig?

- a) Jag sköter allt underhåll på båten själv
- b) Jag sköter mycket på min båt, men tar hjälp av en marina eller varv för vissa tjänster
- c) Jag lämnar in min båt för totalservice på marina eller varv

9) Var skaffar du främst kunskap och information om båtskötsel?

- a) Från branschtidningar
- b) Från återförsäljare samt personal på varv och marinor
- c) Från andra båtägare
- d) Från släkt och familj
- e) Jag behöver inte mer information
- f) Internet
- g) Annat

Här följer några frågor om miljö i relation till båtlivet uppdelat inom tre områden; båtbottnfärger, båtvårdsprodukter och drivmedel.

10) Har du märkt några förändringar i havsmiljön i ditt område?

- a) Ja, det har blivit sämre
- b) Ja, det har blivit bättre
- c) Nej, jag inte märkt någon skillnad

11) Om du målar din båtbottn, vilken typ av båtbottnfärg använder du?

- a) Jag använder kopparfärg, eller sk västkustfärg
- b) Jag använder polerande eller sk blödande ostkustfärg, som är tillåten i Östersjön
- c) Östersjön
- d) Jag använder hård färg, som är tillåten i Östersjön
- e) Jag vet inte vilken typ jag använder
- f) Jag målar inte min båtbottn

12) Tycker du att reglerna för användning av olika båtbottnfärger är berättigade?

- a) Ja
- b) Nej
- c) Vet inte riktigt vad som gäller för min båt

13) Känner du till att man kan tvätta båten under säsong som alternativ till båtbottnfärg?

(tex genom borsttvätt i vatten, för hand eller genom att ta upp båten på land och spola av den)

- a) Ja, jag har provat
- b) Ja, men jag har inte haft möjlighet att prova
- c) Ja, men jag tror inte att det är ett bra alternativ
- d) Nej, det visste jag inte

14) När det gäller båtårsprodukter som vax, polish, rubbing och rengöringsmedel, vilket påstående stämmer bäst överrens med det du köper?

- a) Jag köper endast miljöanpassade produkter till min båt
- b) Jag köper miljöanpassade produkter när jag hittar dem
- c) Jag vill gärna köpa miljöanpassade produkter, men de fungerar sämre än andra
- d) Jag visste inte att det fanns miljöanpassade produkter
- e) Miljöanpassade produkter är inte viktigt för mig

15) Vad är viktigast för dig vid inköp av båtårsprodukter och bottenfärg?

Rangordna ditt svar mellan 1 och 5, där 1 är inte viktigt och 5 är mycket viktigt

- a) Pris
- b) Miljö
- c) Effektivitet
- e) Tillgänglighet (dvs att produkten är lätt att få tag på)

16) Finns det några grupper av båtprodukter som du anser skulle kunna göras mer miljövänliga?

- a) Ja, alla produkter för båtar borde miljöanpassas
- b) Drivmedel
- c) Båtbottenfärg
- d) Båtårsprodukter
- e) Nej

17) När det gäller utsläpp från din motor, vilka åtgärder kan du tänka dig att göra för att minska utsläppen?

- a) Byta drivmedel
- b) Byta till alkylatbensin
- c) Byta motor
- d) Köra mer bränsleeffektivt
- e) Använda biologiskt nedbrytbar motorolja
- f) Jag har ingen motor
- g) Jag kan inte tänka mig något

18) Har du redan vidtagit några av dessa åtgärder? I så fall vilket/vilka?

19) Hur görs vanligtvis toalettbesöken när du är ute med båten?

- a) I första hand använder jag toaletter i gästhamnar och naturhamnar

- b) Båtens toalett
- c) I vattnet eller på land

20) Om båten har toalett ombord, vad gör du vanligtvis av avfallet?

- a) Tömmer i havet
- b) Tömmer på land (har en bärbar toalettank, sk portapotti)
- c) Använder sugtömningsstation
- d) Har ingen toalett

21) Sorterar du dina sopor ute på sjön?

- a) Ja
- b) Nej
- c) Om nej, varför inte:

22) Vad gör du vanligtvis med ditt farliga avfall?

- a) Lämnar avfallet i hamnarnas miljöstationer
- b) Lämnar i andra miljöstationer på land
- c) Vet inte var jag kan lämna

23) Är du mer positiv till en hamn som har miljöutmärkelsen Blå Flagg?

- a) Ja
- b) Nej
- c) Vet inte vad Blå Flagg är för något

Slutligen kommer några frågor om havsmiljön generellt och vad du tycker bör göras för att förbättra miljön.

24) Hur stor påverkan på havsmiljön tror du följande aktiviteter har:

Rangordna ditt svar mellan 1 och 5, där 1 är ingen påverkan och 5 är mycket stor påverkan

- a) Jordbruk
- b) Industrier
- c) Fritidsbåtar
- d) Hamnar
- e) Fartygstrafik
- f) Klimatförändringar
- g) Allmän miljöförstöring

25) Vem anser du har störst respektive minst ansvar för att havets miljö ska förbättras?

Rangordna ditt svar mellan 1 och 5, där 1 är inget ansvar och 5 är mycket stort ansvar.

- a) Myndigheter
- b) Kustnära företag och jordbruk
- c) Den enskilde individen
- e) Yrkesflottan

26) Vem anser du har störst respektive minst ansvar för att minska miljöpåverkan från fritidsbåtar?

Rangordna ditt svar mellan 1 och 5, där 1 är inget ansvar och 5 är mycket stort ansvar.

- a) Tillverkare av båtar och båtprodukter
- b) Myndigheter
- c) Båtagarna
- d) Gästhamnar/varv/marinor

27) Hur stor påverkan tror du att fritidsbåtar har på miljön?

Rangordna ditt svar mellan 1 och 5, där 1 är ingen påverkan och 5 är mycket stor påverkan

28) Har du några förslag på hur båtlivet skulle kunna göras mer miljöanpassat?

29) Känner du till att Stiftelsen Håll Sverige Rent arbetar med båtlivets miljöfrågor?

- a) Ja
- b) Nej
- c) Nej, känner inte till Stiftelsen Håll Sverige Rent

30) Tycker du att Stiftelsen Håll Sverige Rent är en trovärdig avsändare gällande båtlivets miljöfrågor?

- a) Ja
- b) Nej
- c) Känner inte till Stiftelsen Håll Sverige Rent