



Svalbard Marine Environmental Management Survey

We would like to learn more about what you think about the natural environment around Svalbard. The results of this survey may be used by government officials to make decisions that could affect the marine environment around Svalbard. To help you answer the survey, we have included some background information throughout the questionnaire. Some of this information may be new to you, so it is important that you read all of it. We are interested in your attitudes and opinions, so there are no right or wrong answers.

This study is conducted by Norut, Northern Researcher Institute in Tromsø (which is responsible for the study) and the University of Tromsø in collaboration with universities in the UK (Plymouth Marine Laboratory, University of St. Andrews and University of Surrey)

Your participation is entirely voluntary, and you can stop the survey at any point and can withdraw your data up until a week after completing this survey. Any information you give us will be confidential and be analyzed anonymously. The information you provide will be stored securely and used for research purposes only.

If you have any questions or concerns about this research, you can contact the researchers using the following e-mail addresses:

Dr. Tenaw G. Abate (Northern Research Institute, Tromsø): tenaw@norut.no

Dr. Tobias Börger (University of St Andrews, Scotland): tb79@st-andrews.ac.uk

The questionnaire would take about 15 minutes to complete.

By continuing with this survey, you are confirming that you understand the information above and am happy to participate

Part One: Your Views about Svalbard

First, we would like to know what you think of Svalbard and hear about your experiences with it.

1. Have you ever been to Svalbard?

- (1) Yes, I visited Svalbard
- (2) Yes, I live/ have lived there
- (3) No

[If respondent answered "No" to Question 1, Skip to Q#9 below]

2. How many times have you been to Svalbard?

3. For your last visit, how many days did you stay in Svalbard?

4. Approximately how long ago was your last visit?

- (1) Within the past 6 months
- (2) 6-12 months ago
- (3) 1-5 years ago
- (4) More than 5 years ago

5. In which season did you last visit Svalbard?

- (1) Light winter (March-April)
- (2) Spring (May)
- (3) Summer (June-August)
- (4) Autumn (September-October)
- (5) Dark winter (November-February)
- (6) I don't remember

6. How did you get to Svalbard on that visit?

- (1) By plane
- (2) By boat / cruise ship
- (3) Other _____

7. What was the main purpose of your most recent visit?

- (1) Holiday
- (2) Business/Work
- (3) Other _____

8. During this last visit to Svalbard, which type of nature-based leisure activities did you do?

- (1) Land-based activities, such as hiking, dog sledging, biking, sightseeing, etc.
- (2) Water-based activities, such as whale watching
- (3) Both land and water-based activities
- (4) None

9. How informed do you feel about the natural environment around Svalbard?

- (1) Not at all informed
- (2) Somewhat informed
- (3) Moderately informed
- (4) Very informed
- (5) Extremely informed

10. To what extent do you feel a weak or a strong sense of belonging to the following areas?

	No sense				Very strong
	of				sense of
	belongin				belonging
	g				
Svalbard	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
Norway	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

No sense

Very strong

of

sense of

belongin

belonging

g

The Earth / the whole world (1) (2) (3) (4) (5)

11. In your opinion, how would you rate the overall marine environment (seas and coastline) around Svalbard in terms of its overall health?

- (1) Very Poor
- (2) Poor
- (3) Neither poor nor good
- (4) Good
- (5) Very good

12. When you are thinking about the coastline or the sea around Svalbard, please rank what you think are the THREE most important environmental matters facing this environment from the list below? (use numbers 1 to 3, where 1 is the most important)

- (1) Overfishing
- (2) Melting of sea ice
- (3) Changes in sea water temperature
- (4) Air temperature changes
- (5) Chemical pollution (e.g. oil spills)
- (6) Marine litter (e.g. plastic litter)
- (7) Erosion on the coast
- (8) Changes in the distribution of marine wildlife
- (9) Changes in frequency of extreme weather events
- (10) Nothing, this environment is not vulnerable to any environmental matters
- (11) I don't know

Part Two: Your knowledge and perception of marine plastic litter

Now we would like to ask you some questions on your views about marine plastic litter

13. How informed do you feel about the term and/or concept of "marine plastic litter"?

- (1) Not at all informed
- (2) Somewhat informed
- (3) Moderately informed
- (4) Very informed
- (5) Extremely informed

[Page break]

Marine plastic litter is any type of plastic that has entered the seas and coasts, such as plastic bags and other packaging, plastic bottles, nets, plastic ropes, buoys, and microscopic plastic particles such as plastic microbeads used in toothpaste and facial scrubs.

14. Have you participated in a beach cleaning event in the past (either in Svalbard or in another location)?

- (1) No
- (2) Yes, but not in the last year
- (3) Yes, once or twice in the last year
- (5) Yes, more than twice in the last year

15. In your opinion, how much plastic litter do you believe is found on the shores and in the waters around Svalbard?

- (1) Very clean (no litter present at all)
- (2) Clean (no litter present over a large area)
- (3) Moderate (a few pieces of litter can be detected)
- (4) Dirty (a lot of litter on the shores and waters)
- (5) Very dirty (most of the shorelines and waters are covered with litter)

16. How much marine plastic litter do you think there is in each of the following locations?



	None	A little	Somewhat	Quite a lot	A large amount
Arctic ocean	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
Southern ocean	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
Atlantic ocean	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
Pacific ocean	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
Indian Ocean	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

17. To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. Marine plastic litter dramatically affects what the beach looks like	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
2. I am VERY concerned about the impacts of marine plastic litter	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
3. Animals often get caught up in marine plastic litter	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
4. Others are more concerned about marine litter than I am					
5. It is personally VERY important to me to see a reduction of plastic litter in the marine	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

environment

6. I know what I can do to help avoid plastic (1) (2) (3) (4) (5)

ending up in the marine environment

7. There are other issues that are more (1) (2) (3) (4) (5)

important than marine plastic litter

8. Most people in my local community do NOT (1) (2) (3) (4) (5)

care about marine plastic litter

9. It is common for seabirds to eat and be (1) (2) (3) (4) (5)

harmed by marine plastic litter

10. My decisions and behavior can help reduce (1) (2) (3) (4) (5)

marine plastic litter

11. Most of my family and/or friends think marine (1) (2) (3) (4) (5)

plastic litter is an important issue

12. The whole marine food chain contains small (1) (2) (3) (4) (5)

bits of marine plastic litter (e.g. from big animals

eating smaller animals that have eaten plastic)

13. My personal actions do NOT play a (1) (2) (3) (4) (5)

significant role in the health of the marine

environment

14. Most people close to me are taking steps to (1) (2) (3) (4) (5)

reduce marine plastic litter

Part Three: An initiative to reduce the impacts of marine plastic litter around Svalbard

Marine litter, in particular marine plastic litter, has become an environmental concern in the Arctic. Studies show that there has been an increase in marine litter during the last three decades. Plastic litter is found on many of the beaches around Svalbard. In 2016, an expedition organized by the Governor of Svalbard collected 93 cubic meters (equivalent of 585 barrels) of litter around the islands. Different maritime activities (such as fisheries) and household items contributed to the heaps of litter collected along the shores of Svalbard.

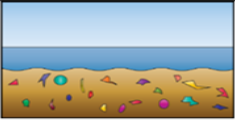


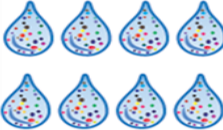
Marine plastic litter (big and small in size) has caused a number of impacts around Svalbard.

- Recent studies show that beaches and shorelines around Svalbard are not clean i.e. on average 100 grams of plastics are found per meter square of beach.
- Mammals, such as seals, reindeer or porpoises, get entangled in nets and ropes. It is estimated that on average 60 mammals per year are entangled around Svalbard and could suffer or die as a result.
- Smaller plastic pieces can be ingested by seabirds and fill up their stomachs. Studies show that 90% of the seabirds Northern Fulmars around Svalbard have pieces of plastics in their stomachs. The birds could suffer or die as a result.
- Very small pieces of plastic less than 5mm in size are called microplastics. Microplastics can be ingested by small marine organisms and passed on to animals that eat them, including fish, mammals, birds and possibly even humans. A study indicated that 90% of water samples tested in the area contain one or more pieces of microplastics. Studies on the consequences of microplastics are lacking.

The impacts of marine plastic litter around Svalbard could be reduced through a Norwegian Government initiative. This initiative may include both preventive and corrective measures, for example:

- A marine plastic litter awareness campaign
- Improved regulation and management of plastic use by maritime activities and the general public
- Improved water treatment facilities to reduce the entry of microplastics to the oceans
- Implementing a national ban on cosmetics containing microbeads
- Regular clean-ups of beaches and shorelines

Based on experiences in other countries, it is expected that the implementation of this initiative will reduce marine plastic litter. The table below summarizes the current situation and the expected improvements due to the initiative.

Impacts of marine plastic litter around Svalbard	Current situation	With the initiative
Impact on beaches		
	100 grams of plastics per meter square of beach	10 grams of plastics per meter square of beach
Impact on mammals		
	60 seals, reindeer, or porpoises get entangled in nets and ropes	10 seals, reindeer, or porpoises get entangled in nets and ropes
Impact on birds		
	90% of seabirds have pieces of plastic in the stomachs	10% of seabirds have pieces of plastic in the stomachs
Impact on microplastics		
	90% of water samples contain microplastics	10% of water samples contain microplastics

Since marine plastic litter comes from many sources, including other countries, this initiative will be able to reduce, but not eliminate all the impacts of marine plastic litter.

The implementation of such an initiative is costly and cannot be financed out of existing public funds. The costs will have to be covered through a new, annual tax to be collected from all households in Norway including Svalbard. The money in this fund will be used exclusively for tackling the impacts of marine plastic litter around Svalbard. The initiative will last for a period of ten years, after which the initiative will end.

The initiative can be implemented only if the total amount of money people are willing to contribute covers the necessary costs.

You might not want the initiative to be carried out, for various reasons. For example:

- You might feel that reducing the impacts of marine plastic litter is not worth the tax you would have to pay
- You might think the government should not spend money on any new initiatives now

Even if you would like the initiative to be carried out, you might vote against it for various reasons. For example:

- You might prefer to spend the money on something else instead
- The initiative might cost more money than you can spend for it

Please take a moment to think about the effects listed above, the amount of money you would pay for the initiative, how much you can afford, and the other things you could spend the money on instead.

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18. Considering the anticipated results of the initiative outlined before, would you vote for this initiative if the initiative would cost your household an annual tax of NOK 500/1500/2700/4400/7000 for the next ten years?

- (1) Yes, I would vote for the initiative if it costs my household NOK XXX per year.
- (2) No, I would not vote for the initiative if it costs my household NOK XXX per year.

19. If the initiative is not implemented, do you think the impacts of marine plastic litter in 10 years' time will be:

- (1) The same as they are now
- (2) Worse than they are now
- (3) Better than they are now

20. How effective do you think the initiative will be at reducing the impacts of marine plastic litter?

- (1) Extremely Effective
- (2) Very Effective
- (3) Moderately Effective
- (4) Slightly Effective
- (5) Not Effective at all

21. Please rank the following in order of importance from 1 to 4 where 1 is most important and 4 is least important to you concerning Svalbard?

- Making beaches and shorelines cleaner _____
- Preventing animals to get entangled in marine plastic litter _____
- Reducing the impact of marine plastic litter on seabirds _____
- Reducing the entry of microplastics into the waters _____

22. We would like to know how much you agree or disagree with the following statements

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I think it is really important to take measures to reduce marine plastic litter whatever the cost	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
2. I already pay enough in taxes	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
3. I have the right to have well preserved marine environments and I should not have to pay extra for it	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
4. The current situation on Svalbard with respect to marine litter is better than described in this survey	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
5. I don't think the taxes collected for this initiative will be spent on reducing marine litter around Svalbard	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
6. My responses to the questions about the proposed initiative will have an influence on the amount of tax actually charged for this initiative	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
7. I do not think the taxes collected as part of this initiative will be sufficient to reach the goals described	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
8. I don't think that measures in Norway alone will do much about marine plastic litter in Svalbard	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
9. The current situation in Svalbard with respect to marine litter is worse than described in this survey	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
10. The proposed improvements are not important to me	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
11. If the government carries out this initiative, I believe that I will be charged the tax of NOK 500/1500/2700/4400/7000	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

12. My responses to this survey will have an influence (1) (2) (3) (4) (5)
on whether this initiative is implemented or not

Part Four: Your everyday behaviors

Thank you for your help so far. Now we'd like to ask about your everyday routines and behaviors.

Please answer the question below as honestly as possible.

23. In the next 12 months, how often do you think you will do the following?

	Never	Rarely	Sometimes	Quite a lot	All of the time
1. Participate in community clean-up efforts (e.g. cleaning beaches of litter)	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
2. Pick up litter found on the street	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
3. Encourage friends to participate in community cleanup efforts	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
4. Buy products with plastic packaging	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
5. Support environmental policies with petitions and my political vote	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>
6. Persuade friends to lead a more sustainable lifestyles	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>

Part Five: Socio-Demographic Information

1. Are you

- (1) Male
- (2) Female

2. Your age?

3. Which county do you live in?

Akershus	Møre og Romsdal	Telemark
Aust-Agder	Nordland	Troms
Buskerud	Oppland	Trøndelag
Finnmark	Oslo	Vest-Agder
Hedmark	Rogaland	Vestfold
Hordaland	Sogn og Fjordane	Østfold

24. How would you describe the city or town where you live?

- (1) Rural (less than 10,000 people)
- (2) Urban (more than 10,000 people)

25. The city or town that you live in is

- (1) Coastal (up to 15 km from the coast)
- (2) Inland (more than 15 km from the coast)

26. How many children do you have?

27. Including yourself, how many people in each of the following age groups are currently living in your household?

Under 18 years _____

18-64 years _____

65 and over _____

28. Which is your highest level of education?

- (1) Primary school
- (2) Vocational / technical school
- (3) Secondary / high school
- (4) University/college degree up to 4 years
- (5) University/college degree more than 4 years

29. What is your main occupation?

- (1) Self-employed
- (2) Employed in a private company
- (3) Government employee/State enterprise
- (4) Unemployed
- (5) Homemaker
- (6) Student
- (7) Retired
- (8) Other

30. Are you a member of any environmental organization such as Greenpeace or World Wide Fund (WWF)?

- (1) Yes
- (2) No

31. Please state the gross monthly income of your household altogether on this list?

- (1) Less than 200,000 NOK
- (2) 201,000 – 400,000 NOK
- (3) 401,000 – 600,000 NOK
- (4) 601,000 – 800,000 NOK
- (5) 801,000 – 1 million NOK
- (6) 1 million – 1.2 million NOK
- (7) 1.2 million – 1.5 million NOK
- (8) Greater than 1.5 million NOK

32. If you have anything to add, about your answers, about the survey itself or anything else related to it, you can write it here

Thank you for your participation!

Click "**Finish**" down below to complete the survey.