



GÖTEBORGS UNIVERSITET
HANDELSHÖGSKOLAN

We would like to know your opinions about coastal cod in Skagerrak and Kattegat

You have been randomly selected to participate in a study on coastal cod and the possibility of increasing the coastal cod stocks in Skagerrak and Kattegat.

The study is carried out by economics researchers at the University of Gothenburg.

Why have you been selected?

You, and a large number of other individuals from western Sweden, have been randomly selected to share your opinions. Your participation is voluntary, but you cannot be replaced by somebody else. It is important that people with differing views participate, regardless of how familiar they are with the cod situation in Skagerrak and Kattegat. In order to get a complete understanding of attitudes to the fisheries policy in western Sweden, this survey is also sent out to professional fishermen, recreational anglers and public officials who work with fishing-related issues. All responses are treated with full anonymity and will only be presented at the aggregate level. If you have questions about the questionnaire, please contact Håkan Eggert or Elina Lampi.

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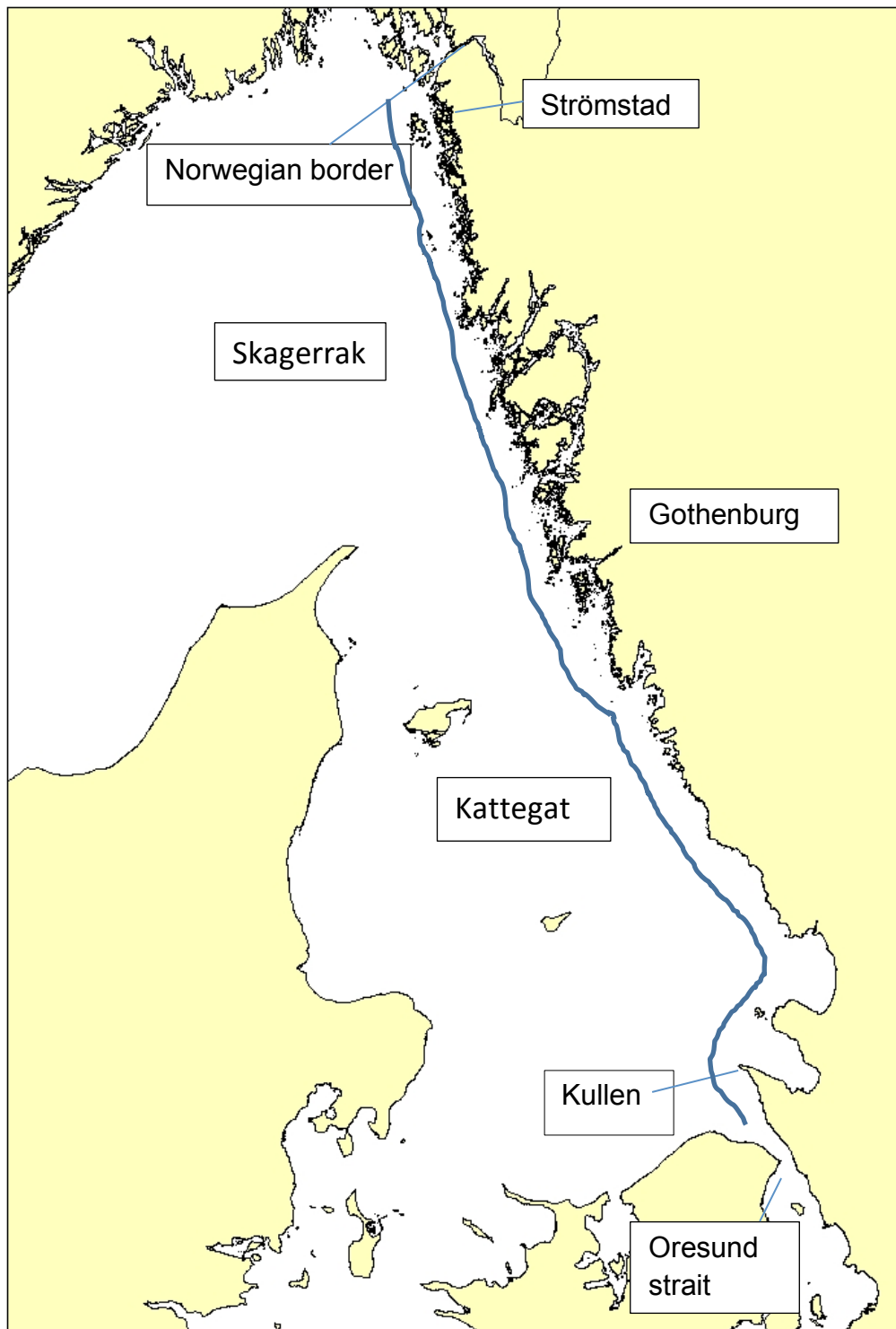
Thanks in advance! Your responses are very valuable to us!

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1. A few questions about the sea, fish, and fishing

We will ask a number of questions about the coastal cod stocks in Kattegat and Skagerrak. The coast in question stretches from the Kullen peninsula in Skåne in the south to the Norwegian border north of the municipality of Strömstad in the north. The map below shows the current no-trawling zone near the coast. Trawling for cod is only permitted outside this zone. A trawl is a funnel-shaped net that is dragged through the water behind a boat (a trawler).

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Question 1. How far away from Skagerrak/Kattegat do you live?

My permanent home is about _____ km from Skagerrak/Kattegat

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Question 2. Do you have access to a summer house/cabin?

No _____ Yes, about _____ km from Skagerrak/Kattegat

Question 3. On average, how many days per year do you spend by/on Skagerrak/Kattegat?

I usually spend about _____ days per year by/on Skagerrak/Kattegat

2. Information about the cod stocks in Skagerrak and Kattegat

In the box below, we describe the current status of the coastal cod stocks in Skagerrak and Kattegat. Please read the information before you continue with the questions.

Cod is both a tasty fish and an important component of the marine food web. New research from the International Council for the Exploration of the Sea (ICES) shows that the cod stock outside the no-trawling zone in Skagerrak is increasing. However, the coastal cod stocks in Skagerrak and Kattegat have decreased dramatically since the 1970s. Test trawling with research vessels shows that availability of coastal cod in Skagerrak and Kattegat corresponds to about 2 kg per test trawling hours, which equals 2–3 % of the levels recorded in the 1970s.

The reduction in coastal cod is probably caused by overfishing, partly by professional fishermen with fixed gear and recreational anglers in the no-trawling zone, but also by professional fishermen fishing with trawls outside the no-trawling zone. Many coastal fish stocks have been reduced to zero locally. Yet remnants of a few local, stationary cod stocks can be found along the coast. At times, there is also an abundance of young cod 1–3 years old along the Swedish West Coast. They originate from the North Sea and eventually return there and therefore do not lead to an increase in adult cod in Skagerrak and Kattegat. In order to achieve a sustainable increase in coastal cod, there is a need for protection measures.

In our study, we focus on the stocks of coastal cod at least 5 years of age. At that age, they are at least 60 cm long. A sustainable cod stock requires the presence of females that are at least 5 years old.

3. Interventions to increase the coastal cod stocks in Skagerrak and Kattegat

One way to increase the coastal cod stock would be to ban the fishing of cod altogether in the no-trawling zone, which means that only fishing of other species and only with hand-held gear such as fishing rods and hand reels. Another way would be to expand the no-trawling zone, resulting in improved protection of young fish. These measures limit where and what people and enterprises are allowed to fish but increases the availability of cod. It takes time to increase cod stocks. If a measure is implemented, it is implemented for the next 10 years and involves increased costs of monitoring, which will be covered by increased taxes over the same period. If a measure is implemented, it will be evaluated after 10 years and then new decisions about fishing restrictions will be made based on the outcome.

Below, we ask you to respond to five different choice situations, where the available alternatives have different effects on the environment and on the disposable income that you and other people in your area earn. Each choice situation consists of three different alternatives that you will be asked to choose between. The first alternative describes the current situation and thus does not imply any changes. The other two alternatives imply changes in the four different aspects described in the table below. Each choice situation is independent of the others.

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Aspects	Explanation
<i>Amount of cod at least 5 years of age per trawling hour</i>	Indicates the size of the fish stock in Skagerrak/Kattegat. We express it as the amount of cod that is at least 60 cm long and that is caught during one hour of test trawling with a research vessel.
<i>Fishing restriction that affects where and what people and enterprises are allowed to fish:</i>	<p>1. <i>The no-trawling zone is expanded by 3.7 km (2 nautical miles).</i> Today, the trawling zone reaches 6–7 km outside the archipelago, or coastline where there is no archipelago (see map p.2). Trawling is prohibited in the no-trawling zone. An expansion of the zone implies that professional fishermen with fixed gear such as nets and cages get a larger area to fish in, while those who use trawls need to fish farther away from the coast. The restriction applies to the entire coast from the Kullen peninsula in the south to the Norwegian border north of the municipality of Strömstad in the north.</p> <p>2. <i>A year-round fishing ban for cod in the current no-trawling zone.</i> At present, fishing with nets and fish traps is permitted April–December. A fishing ban means that only species other than cod may be caught, and only with hand-held gear such as rods and hand reels. Fishing using shellfish cages is also permitted. This restriction applies year-round and for both professional fishermen and recreational anglers. It is implemented for the entire coast from the Kullen peninsula in the south to the Norwegian border north of the municipality of Strömstad in the north.</p>
<i>Way of allocating the cost of the intervention</i>	How the monthly cost of the cod intervention is allocated among taxpayers in western Sweden: Allocation model 1. Everybody with a taxable income pays the same amount. Allocation model 2. Everybody with a taxable income pays the same percentage of their income. The amount increases with the income up to an income of SEK 50 000 per month.
<i>Your tax increase per month (the annual amount is stated in parentheses) for the next 10 years</i>	If Allocation model 1 applies, everybody is taxed the stated amount. If Allocation model 2 applies, everybody with the same income as you pays the stated amount. The tax increase covers the costs of the increase in coastal cod. The main share of the cost is for increased monitoring.

When you make your choices, you can view the table above by clicking “Explanations.”

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Let us show you an example of a choice situation.

Example of choice situation:

	Alternative 1 (the present situation)	Alternative 2	Alternative 3
Amount of cod at least 5 years of age per trawling hour	About 2 kg	About 50 kg	About 25 kg
Fishing restrictions affecting where and what people and enterprises are allowed to fish	As today	Year-round fishing ban in the present no-trawling zone.	Expansion of no-trawling zone by 3.7 km.
Your tax increase per month (year) for the next 10 years	SEK 0	SEK 200 (SEK 2,400)	SEK 100 (SEK 1,200)
Way of allocating the cost of the intervention		Everybody pays <i>the same amount</i> regardless of income.	Everybody pays <i>the same percentage</i> of their income and the amount increases with the income.
Please mark your preferred alternative (X)			X

In the example above, let’s assume that you choose Alternative 3, as it is the alternative that is most in line with your opinion. Somebody else may choose Alternative 1 or Alternative 2.

Alternative 3 implies:

That the availability of coastal cod increases from today’s 2 kg to 25 kg of cod per trawling hour with a research vessel. The no-trawling zone is expanded by 3.7 km. A tax increase of SEK 100 per month (SEK 1,200 per year) for 10 years for these changes and that everybody is taxed the same percentage of their incomes, which means that a higher income will imply a higher tax liability.

Remember that there are no right or wrong answers; we are interested in knowing what you would choose.

To make the study as accurate and useful as possible, it is important that you respond as if your choices would really affect Swedish fisheries policies and people’s incomes in western Sweden. In previous survey studies, it has been found that many respondents claim to be willing to accept a higher cost than what they really end up being when it is time to actually pay.

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Below are five choice situations where we ask you to choose the alternative that is most in line with your opinion.

Choice 1. Which of the three alternatives would you choose?

	Alternative 1 (The present situation)	Alternative 2	Alternative 3
Amount of cod at least 5 years of age per trawling hour	About 2 kg	About 25 kg	About 50 kg
Fishing restrictions affecting where and what people and enterprises are allowed to fish	As today	Year-round fishing ban in the present no-trawling zone.	Expansion of no-trawling zone by 3.7 km.
Your tax increase per month (year) for the next 10 years	SEK 0	SEK 200 (SEK 2,400)	SEK 500 (SEK 6,000)
Way of allocating the cost of the intervention		Everybody pays <i>the same amount</i> regardless of income.	Everybody pays <i>the same percentage</i> of their income and the amount increases with the income.
Please mark your preferred alternative (X)			

Choice 2. Which of the three alternatives would you choose?

	Alternative 1 (The present situation)	Alternative 2	Alternative 3
Amount of cod at least 5 years of age per trawling hour	About 2 kg	About 100 kg	About 25 kg
Fishing restrictions affecting where and what people and enterprises are allowed to fish	As today	Expansion of no-trawling zone by 3.7 km.	Year-round fishing ban in the present no-trawling zone.
Your tax increase per month (year) for the next 10 years	SEK 0	SEK 500 (SEK 6,000)	SEK 50 (SEK 600)
Way of allocating the cost of the intervention		Everybody pays <i>the same amount</i> regardless of income.	Everybody pays <i>the same percentage</i> of their income and the amount increases with the income.
Please mark your preferred alternative (X)			

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Choice 3. Which of the three alternatives would you choose?

	Alternative 1 (The present situation)	Alternative 2	Alternative 3
Amount of cod at least 5 years of age per trawling hour	About 2 kg	About 100 kg	About 25 kg
Fishing restrictions affecting where and what people and enterprises are allowed to fish	As today	Year-round fishing ban in the present no-trawling zone.	Expansion of no-trawling zone by 3.7 km.
Your tax increase per month (year) for the next 10 years	SEK 0	SEK 100 (SEK 1,200)	SEK 200 (SEK 2,400)
Way of allocating the cost of the intervention		Everybody pays <i>the same amount</i> regardless of income.	Everybody pays <i>the same percentage</i> of their income and the amount increases with the income.
Please mark your preferred alternative (X)			

Choice 4. Which of the three alternatives would you choose?

	Alternative 1 (The present situation)	Alternative 2	Alternative 3
Amount of cod at least 5 years of age per trawling hour	About 2 kg	About 50 kg	About 100 kg
Fishing restrictions affecting where and what people and enterprises are allowed to fish	As today	Expansion of no-trawling zone by 3.7 km.	Year-round fishing ban in the present no-trawling zone.
Your tax increase per month (year) for the next 10 years	SEK 0	SEK 200 (SEK 2,400)	SEK 500 (SEK 6,000)
Way of allocating the cost of the intervention		Everybody pays <i>the same amount</i> regardless of income.	Everybody pays <i>the same percentage</i> of their income and the amount increases with the income.
Please mark your preferred alternative (X)			

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Choice 5. Which of the three alternatives would you choose?

	Alternative 1 (The present situation)	Alternative 2	Alternative 3
Amount of cod at least 5 years of age per trawling hour	About 2 kg	About 25 kg	About 50 kg
Fishing restrictions affecting where and what people and enterprises are allowed to fish	As today	Expansion of no-trawling zone by 3.7 km.	Year-round fishing ban in the present no-trawling zone.
Your tax increase per month (year) for the next 10 years	SEK 0	SEK 50 (SEK 600)	SEK 100 (SEK 1,200)
Way of allocating the cost of the intervention		Everybody pays <i>the same percentage</i> of their income and the amount increases with the income.	Everybody pays <i>the same amount</i> regardless of income.
Please mark your preferred alternative (X)			

Your decisions in this survey may affect both the environment and the disposable income that you and other people in your area earn. Below, we want you to consider three statements regarding the choices you have made. Please state your response to each question on a scale from 1 to 5, where 1 means “Not true at all” and 5 means “Very true.”

- a) You have sufficient knowledge to have an opinion as regards the choices you have made.

Not true at all

Very true

1

2

3

4

5

- b) People in general have sufficient knowledge to have an opinion as regards the choices you have made.

Not true at all

Very true

1

2

3

4

5

- c) Officials at the Swedish Environmental Protection Agency, the County Administrative Board of Västra Götaland Unit of Water Management, and the Swedish Agency for Marine and Water Management have sufficient knowledge to have an opinion as regards the choices you have made.

Not true at all

Very true

Land Economics 94:3, August 2018

“Who Can Be Trusted to Manage the Fish? A Study Comparing Trust between Stakeholders,”

by Håkan Eggert, Mitesh Kataria, and Elina Lampi

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1

2

3

4

5

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Part 3. Questions about your background

The questions below are necessary in order to find out whether the responses differ between different groups of people. We therefore want to ask you a few questions about you and your household.

Question 1. Are you a man or a woman?

- Woman Man

Question 2. In what year were you born? 19.....

Question 3. Where do you live?

- In Gothenburg
 In a larger city (more than 50,000 people)
 In a medium-sized city (population 20,000–50,000 people)
 In a small town or in a rural area (less than 20,000 people)

Question 4. What is your highest *completed* level of education?

- Less than 9 years of schooling
 9 years of compulsory schooling
 High school or folk high school
 Higher education (less than three years)
 Higher education (three years or more)

Question 5. Which of the following alternatives describes you best right now?

- Employed Self-employed
 Unemployed Student
 Retired On parental leave
 On sick leave/disability

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Other:

Question 6. Are you a member of an environmental organization?

Yes

No

Question 7. What is your *personal* monthly gross (before-tax) income including any transfer payments? Please respond even if you are not completely sure.¹

SEK 0–3,999

SEK 19,000–22,999

SEK 45,000–54,999

SEK 4,000–8,999

SEK 23,000–25,999

SEK 55,000–64,999

SEK 9,000–12,999

SEK 26,000–29,999

SEK 65,000–

SEK 13,000–15,999

SEK 30,000–36,999

SEK 16,000–18,999

SEK 37,000–44,999

Don't know/don't want to answer

Question 8. What is your *household's* total gross (before-tax) monthly income including any transfer payments? Please respond even if you are not completely sure.

SEK 0–3,999

SEK 19,000–22,999

SEK 45,000–54,999

SEK 4,000–8,999

SEK 23,000–25,999

SEK 55,000–64,999

SEK 9,000–12,999

SEK 26,000–29,999

SEK 65,000–74,999

SEK 13,000–15,999

SEK 30,000–36,999

SEK 75,000–84,999

SEK 16,000–18,999

SEK 37,000–44,999

SEK 85,000–94,999

SEK 95,000–104,999

SEK 105,000–

Don't know/don't want to answer

Question 9. How many members are in your household (including you)?

..... members

¹ USD 1 about SEK 6.70 in May 2013

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Question 10. How old are the members of your household? Please write the number of members in each age group. Include any children who reside with you only part time. Don't forget to include yourself.

0–10 years,.....persons

11–17 years,..... persons

18 years and older,..... persons

Question 11. Which political party do you think **best** corresponds to your current opinions? Please mark only one alternative.

- | | |
|--|---|
| <input type="checkbox"/> The Centre Party | <input type="checkbox"/> The Liberals |
| <input type="checkbox"/> The Christian Democrats | <input type="checkbox"/> The Green Party |
| <input type="checkbox"/> The Moderate Party | <input type="checkbox"/> The Social Democrats |
| <input type="checkbox"/> The Sweden Democrats | <input type="checkbox"/> The Left Party |
| <input type="checkbox"/> Other party: | |

If you have any comments you would like to share, please write them below:

Land Economics 94:3, August 2018

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Thanks for answering the questions!