



UNIVERSITY OF GOTHENBURG  
SCHOOL OF BUSINESS, ECONOMICS AND LAW

# In cod we trust Who are qualified to decide regarding fisheries management?

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# Do you trust me? Go fish! a study on trust and fisheries management

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# Trust

Trust is a major requisite for successful adaptive governance of socio-ecological systems

(Folke et al., 2005)

Mutual trust can keep rule violations low despite high profits from illegal fishing

(Young, 1979)

Mutual trust within the fisheries management decision making process reduces uncertainty and thereby management costs

(Nielsen, 2003)



# Which stakeholders are knowledgeable enough to have the right to influence policy?

Commercial fishermen

The general public

Recreational fishers

Bureaucrats at environmental and resource agencies



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## Do they trust each other?



In this study we consider beliefs of own and other peoples' knowledge as attitudes that can be identified as trust

a) self-trust, b) general-trust and c) authority-trust.

Who has sufficient knowledge to take a stance on the choices you were asked to make?

a) You?

b) People in general?

c) Desk officers at the; Swedish EPA , Unit of Water Management, and Marine Management Agency



# West coast Sweden, coastal cod, dramatic reduction since 1970s

Respondents from region adjacent to West coast of Sweden (Except Swedish EPA bureaucrats)

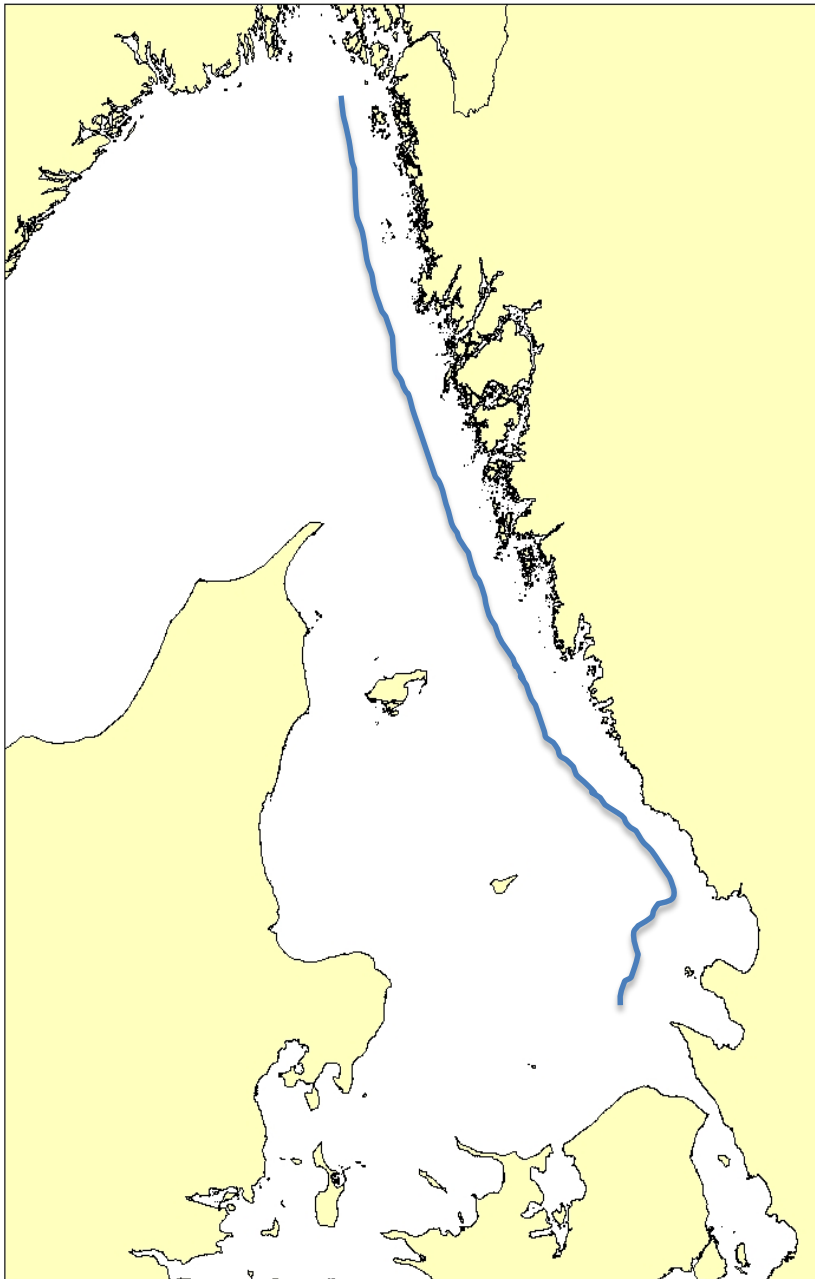
Survey:

Recreational Anglers,	791 responses (32%)
The General Public	2141 resp. (51%)
Bureaucrats at Env&Res Agen.	88 responses (36%)
Commercial fishermen	74 responses (11%)

# Example of a choice set

	Today	Alternative 2	Alternative 3
<b>&gt;=5 year cod/trawl hour</b>	About 2 kg	About 50 kg	About 25 kg
<b>Restrictions of when and where to fish</b>	Like today	No fishing at all inside the existing trawl boundary	The trawl boundary +2 naut. miles
<b>+tax/month (year) the next 10 years</b>	€ 0	€ 20 (€ 240) SEK10 ≈ €1	€ 10 (€ 120) SEK10 ≈ €1
<b>Distribution of tax</b>		the same amount, irrespective of income level.	the same % of income
<b>Mark preferred (X)</b>			





Existing trawl boundary

Restriction 1:

Moved further 2 nautical miles out from the coast

Restriction 2:

No fishing at all for cod inside existing boundary



Far more than 50 percent think they belong to the upper half in a distribution of peers regarding positive traits like driving ability, future income and longevity.

Experiments show that overconfidence leads to excessive business entry

Overplacement, Illusionary superiority

We hypothesize that respondents tend to trust their own judgment more than that of others

Superior trust:  $\text{self-trust} - \text{general (authority) trust} > 0$

Inferior trust:  $\text{self-trust} - \text{general (authority) trust} < 0$



## Mean Trust, measured on a scale 1-5 (Standard deviation in parenthesis)

	General public	Environmental bureaucrats	Recreational anglers	Commercial fishermen
Self-trust	2.52 (1.09) Moderate	2.86 (1.24) Moderate	3.51 (1.14) Moderate	4.55 (0.72) High



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General-trust	2.00 (0.86) Low	1.98 (0.88) Low	2.08 (0.91) Moderate	1.65 (1.03) Low
Authority-trust	3.81 (0.93) Moderate	3.56 (0.97) Moderate	3.75 (1.05) Moderate	1.92 (0.96) Low
Males, share	0.55	0.46	0.97	0.99
Age	54 (14)	46 (10)	56 (14)	55 (14)
University 3 yrs education	0.49	0.96	0.27	0.03
Observations	2248	164	816	74



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## Testing for relative trust (Wilcoxon signed-rank test, two sided)

	General public	Environm. bureaucrats	Recreational anglers	Commercial fishermen
Self-trust - General trust	0.52*** Superior Trust (ST)	0.88*** (ST)	1.44*** (ST)	2.91*** (ST)
Self-trust - Authority-trust	-1.29*** Inferior trust (IT)	-0.70*** (IT)	-0.24*** (IT)	2.64*** (ST)
Observations	2248	164	816	74



## Seemingly Unrelated Regression (SUR)

$y_1 = \text{Self-trust} - \text{General-trust}$

$y_2 = \text{Self-trust} - \text{Authority-trust}$

### Full sample (not controlling for gender)

$y_1$ : -age, + education

$y_2$ : age, education

### General public and Bureaucrats

$y_1$ : +male, age, + education

$y_2$ : +male, +age, education



# Conclusion

Level of trust in ability to take a stance regarding fisheries management issues

- All four distrust the general public
- Except for commercial fishermen, trust in environmental authority
- Environmental bureaucrats tend to have more trust in their colleagues than in themselves

Socio-economic variables

- Males show higher self-trust compared to women
- Self-trust seem to decline with age
- University education implies superior trust vs general public





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# Thank you!