



Perceptions of an endangered Baltic Sea

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Introduction

- The Baltic Sea is exposed to a large number of natural processes and human stressors (see M. Reckermann, BEAR-reports, forthcoming) – see below.
- Different knowledge claims exist about the role and significance of these factors – one set of claims is based on scientific constructions (as documented in the BACC reports), another on cultural constructions mostly based perceptions, conditioned by societal values and preferences.
- These two set of knowledge claims do not need to be consistent.
- The scientific construction is mostly identical across countries, while the cultural constructions differ from country to country.
- Democratic policy-making is to large extent dependent on the cultural constructions



Factors of regional change (Marcus Reckermann)

Environmental factors

- Regional climate change
- Sea level
- Coastal processes
- Nutrient loads and eutrophication
- Hypoxia
- Acidification
- Submarine Groundwater Discharge
- Non-indigenous species
- Land use and land cover

Human induced factors

- Agriculture
- Aquaculture
- Fisheries
- River regulations and restorations
- Coastal management
- Offshore wind farms
- Shipping
- Organic contaminants
- Unexploded and dumped warfare agents
- Marine litter
- Underwater noise
- Tourism

Today at 13:40

Marcus Reckermann et al.

Multiple drivers of Earth system changes in marginal seas: the example of the Baltic Sea region.

Surveys

- Ad hoc
- No claim of representativity
- Among students and young scholars

	institution	samples
1	Hamburg U, Geology, Germany	22
2	Hamburg U, Oceanography, Germany	9
3	U Gdansk, Geography and Oceanography, Poland	69
4	IOPAN, Sopot, Poland	5
5	U Göteborg, Marine Science, Sweden	26

- In 2019
- Asking for
 - demographics
 - The climate issue
 - on dominant issues concerning the Baltic Sea
- See: von Storch, H., 2020: Surveying opinions among environmental students on climate science and Baltic Sea issues. *Extended abstract, 3rd Baltic Earth Conference, 190-191*

Please return the filled questionnaire before the seminar of Prof. von Storch on 16 October 2018. Fill out only one questionnaire.

Please print this questionnaire, fill it out and return it to

Challenges for the Baltic Sea

What is your gender? Male () Female () other ()

What is your nationality? _____

(If you hold dual citizenship please indicate both nationalities).

What is your current status?

Batchelor student (), Master student (), PhD student (), Postdoc (), Other _____

What is your current area of study? _____

How many years have you been enrolled in your current area of study?

1 2 3 4 5 6 7 8 9 10 >10 years

Today, what would you rate as the most important task facing the climate science community?

() define the climate problems and attribute cause of climate change

() determine solutions to climate change

() motivate people to act on climate change

() other _____

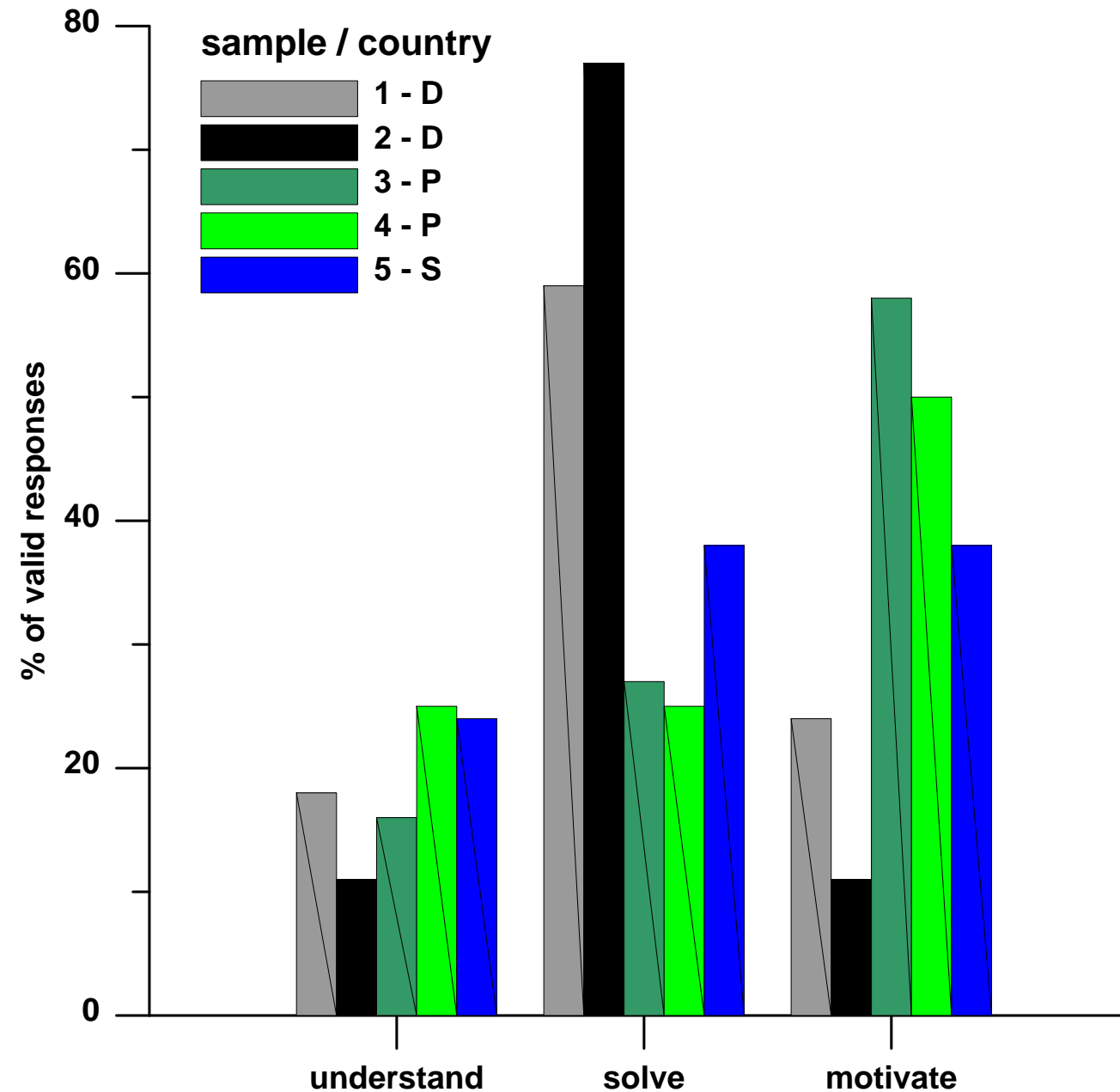
() don't know, or I do not want to answer

The climate issue

1) There are no doubts that climate is changing, and almost all are fully convinced that this is because of human interference.
There are no answers, which doubt the reality nor the cause of climate change

2) To day, what would you rate as the most important task facing the climate science community?

- () define the climate problems and attribute cause of climate change
- () determine solutions to climate change
- () motivate people to act on climate change
- () don't know

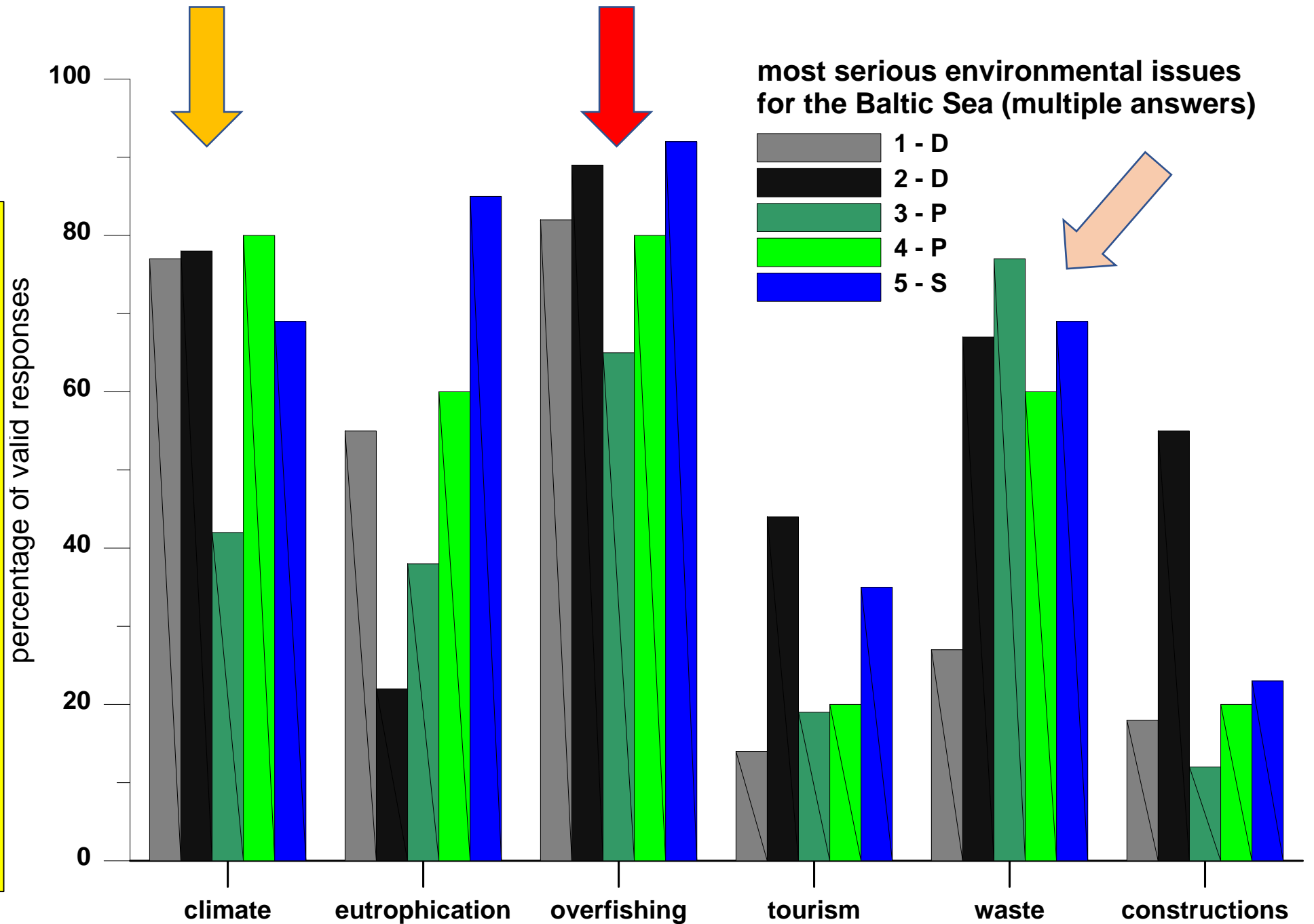


Serious issues of the Baltic Sea

The Baltic Sea is under human pressure. Which of the following issues are serious, and need political attention?

- Climate Change
- Eutrophication
- Overfishing
- Tourism
- Deposition of waste
- Constructions (pipelines, bridges)

16-17 December 2020



- Results, which describe consistent responses across all case, may be taken as evidence a prevalent view of environmental students and young scholars.
- Divergent results, in particular describing national differences, should be considered mere hypotheses.

Climate

No doubts that climate change is real and man-made.

Main task for the climate science community not to do science, but to **find solutions** (D) or the **motivate the public** (S & P).

This result is only partially consistent with other surveys among environmental scholars in Europe.

Issues

Quite some variability across the different samples.

On average, **overfishing** is considered the most serious issues followed by **climate change**, waste disposal and eutrophication, while tourism and constructions received less attention.

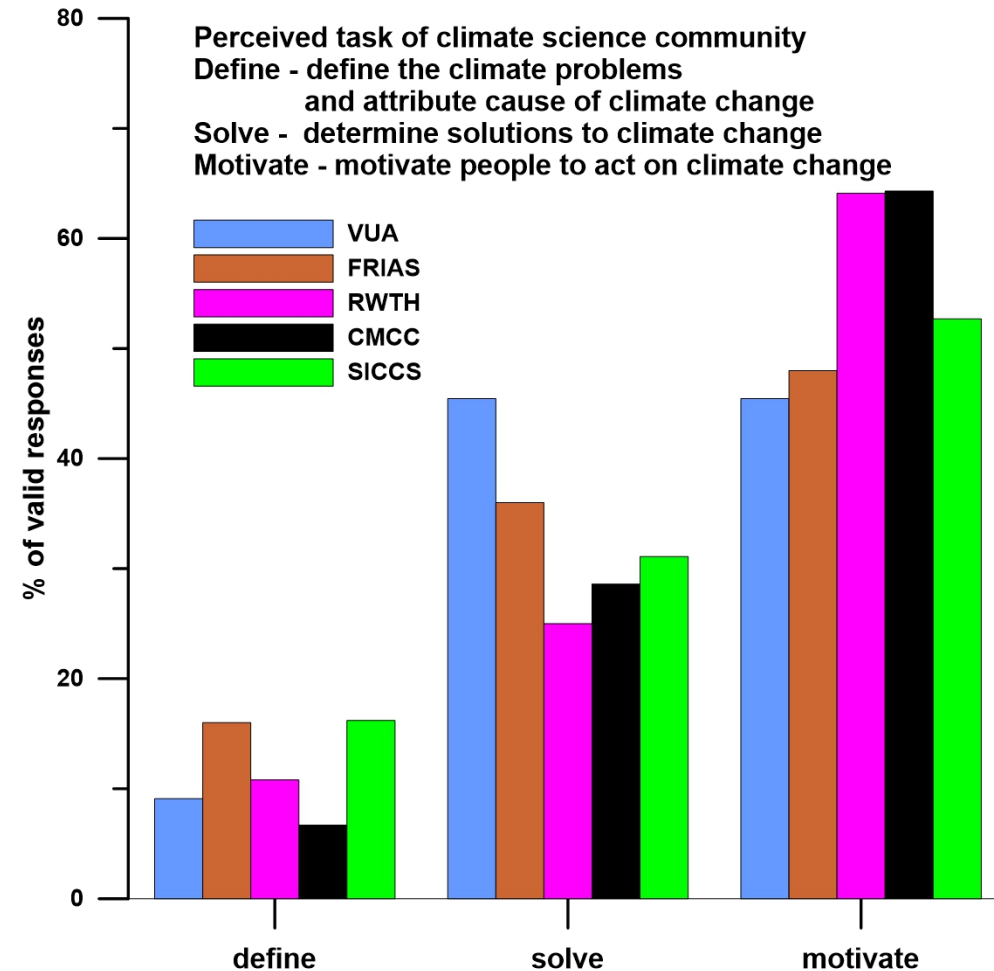
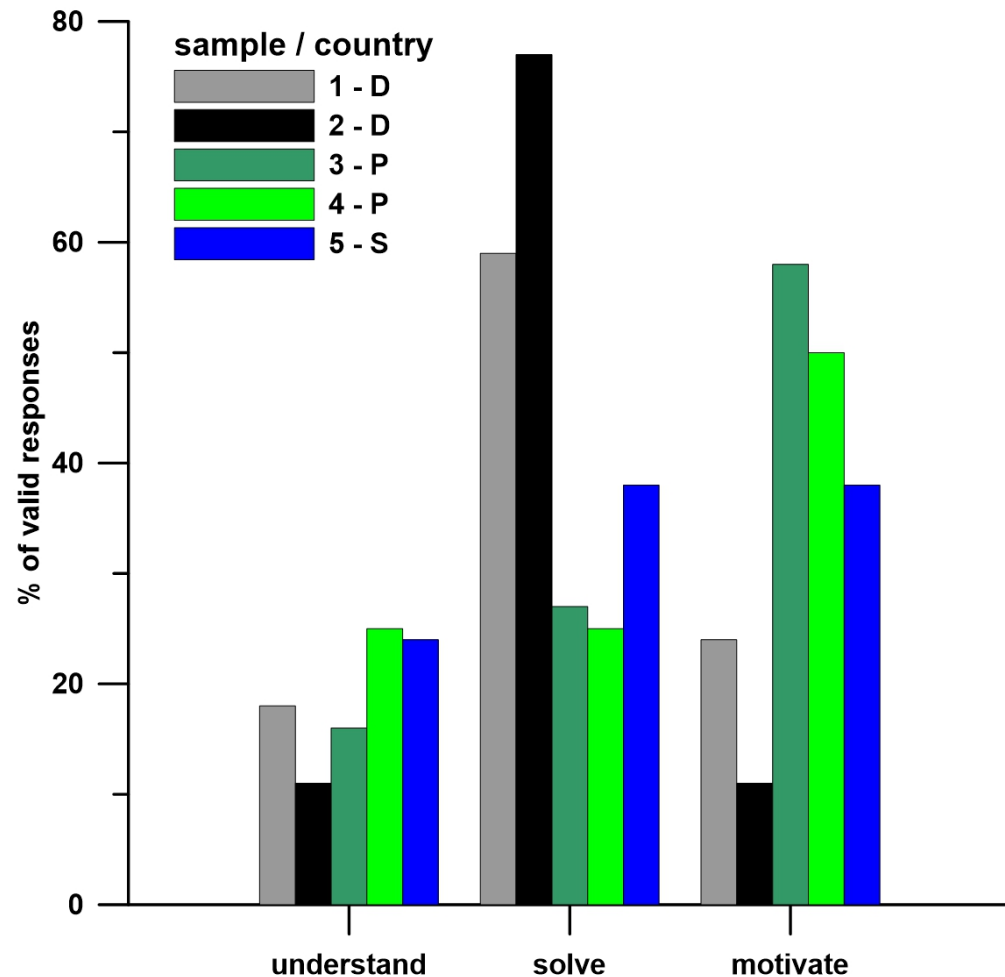
This may reflect specifics of the samples.

Responsibility

Almost all respondents assigned the task of improving the environmental conditions of the Baltic Sea to the **European Union**. A few to national governments, and very few to (such as “humankind”)

The results on the main task of climate science among students and young scholars in the Ballic Sea region in 2019/2020 deviates from responses among European scholars in earlier years – why?

- Sample variations (some samples are rather small)?
- Different cultures / disciplines ?
- Different age cohorts?
- Different timing of survey?



Thanks for your attention

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Sample	1	2	3	4	5	mean
climate change	77	78	42	80	69	69
eutrophication	55	22	38	60	85	52
overfishing	82	89	65	80	92	82
tourism	14	44	19	20	35	26
waste	27	67	77	60	69	60
constructions	18	55	12	20	23	26

	define & attribute		determine solutions		motivate people	
1	3	18%	10	59%	4	24%
2	1	11%	7	77%	1	11%
3	10	16%	17	27%	37	58%
4	1	25%	1	25%	2	50%
5	5	24%	8	38%	8	38%