

BEAR Article 6: Multiple drivers of Earth system changes in the Baltic Sea region

Topics and suggested co-authorships
based on Multiple drivers Workshop in
Tallinn, November 2018



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Baltic Earth Workshop

Multiple drivers for Earth system changes in the Baltic Sea region

Tallinn, Estonia, 26 - 27 November 2018

Programme, Abstracts, Participants

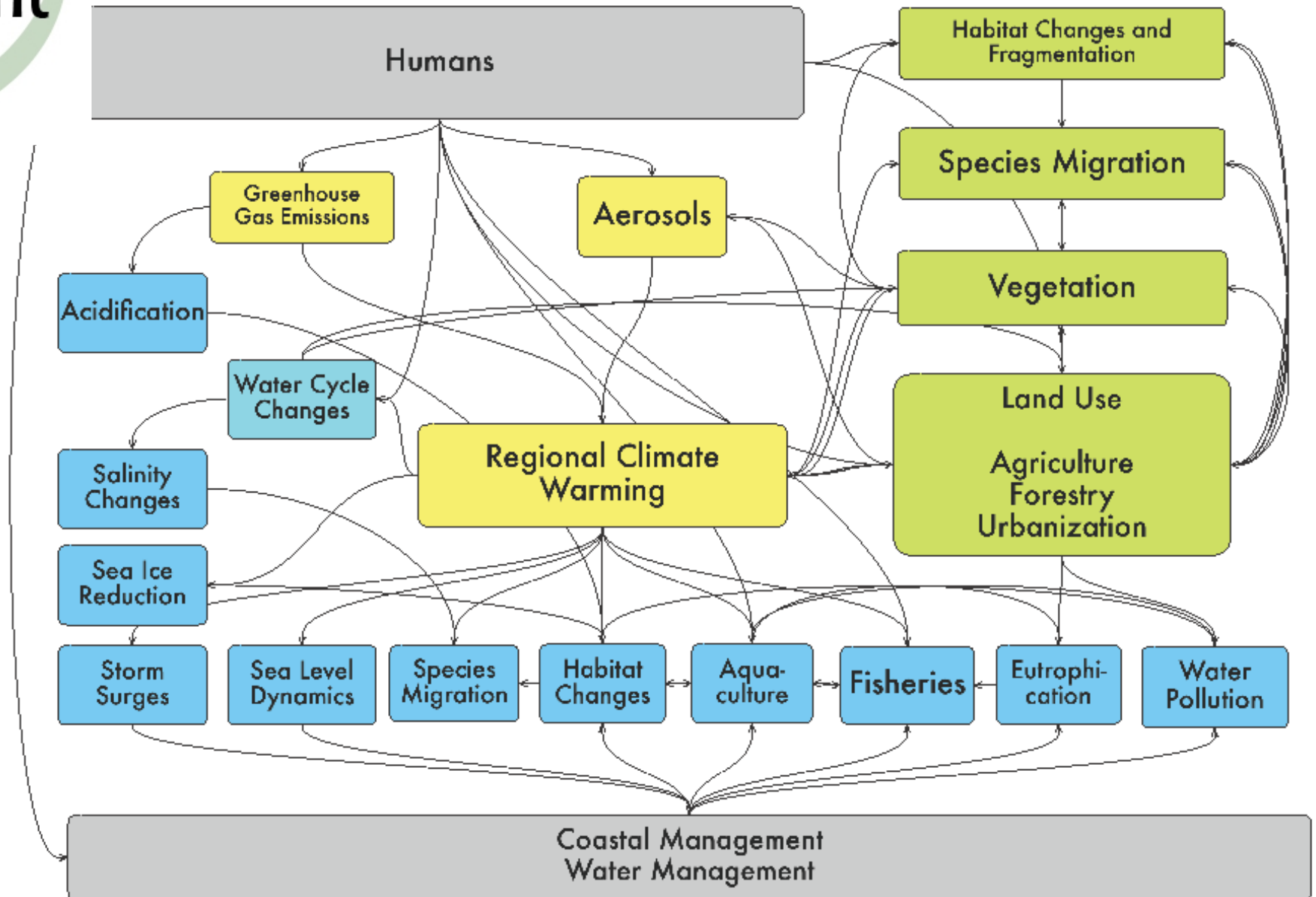


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Contributors to Multiple Driver paper, mostly from Speakers at Multiple Drivers Workshop in October 2018

Last name	First name	Topic
Beldowski	Jazek	Dumped chemical ammunition
Carstensen	Jacob	Responses in land-sea fluxes, water cycle changes, nutrients
Dähne	Michael	Impacts of underwater noise on marine mammals and other marine organisms
Eero	Margit	Impact of multiple drivers on fish stocks
Haapala	Jari	Responses in the cryosphere, sea ice and associated changes
Herlemann	Daniel	Marine microbial communities and related changes
Humborg	Christoph	Food production
Hyytiäinen	Kari	Socio-economic drivers, SSPs
Jalkanen	Jukka-Pekka	Air pollution by ship emissions
Junninen	Heikki	Atmospheric biosphere-atmosphere interactions incl. anthropogenic aspects, i.e. air pollution, land sources
Kiessling	Anders	Aquaculture
Kjellström	Erik	GHG emissions, Global and regional warming
Korpinen	Samuli	Multiple pressures on marine habitats in the Baltic Sea
Lips	Inga	Microplastics in the Baltic Sea
McCrackin	Michelle	Nutrient loads
Meier	Markus	Responses in the water cycle, eutrophication and salinity changes
Parnell	Kevin	Coastal management
Poska	Anneli	Land use and land cover changes
Omstedt	Anders	Carbon cycle, alkalinity, acidification
Sigray	Peter	Underwater noise
Soomere	Tarmo	Responses in storm surges and coastal erosion
Szymczycha	Beata	The effect of submarine groundwater discharge on the coastal environment
Undemann	Emma	Responses in marine chemistry and biochemistry (acidification, pollution, eutrophication)
Wörman	Anders	Effects of Watershed Engineering on Floods and Nutrient Export (to the Baltic Sea)
Ytreberg	Erik	Marine pollution by shipping and antifouling paints
Zorita	Eduardo	Responses in sea level
?	?	Oil spills, preliminary confirmation
Schulz-Bull	Detlef	Toxic and detrimental substances, heavy metals, POPs, etc

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Drivers from the graph	Possible authors
Aerosols	?
Air pollution	Jalkanen
Habitat changes and fragmentation (land)	Poska
Species migration (land)	?
Vegetation changes (land)	?
Land use, land use change	Poska
Agriculture (food production)	Humborg
Forestry	?
Urbanization	?
Regional warming	Kjellström/Gröger
Water cycle changes	?
Acidification	Omstedt
Salinity	Lehmann
Sea Ice	Haapala
Storm surges	Weisse
Sea level	Zorita
Species migration (sea)	?
Habitat changes (sea)	?
Fisheries	Eero
Eutrophication	McCrackin
Water pollution	Ytreberg
Coastal /water management	Parnell
Oil spills/water pollution	?

Information asked from contributors

- What is the current state of knowledge?
- What are projected future developments?
- What are possible implications for society?
- What are knowledge gaps and research needs?
- What are important linkages and feedbacks with other drivers and with climate change?
- How do the other drivers and climate change act on your driver?

Intention

Make an inventory of drivers and connections, covering the above aspects as far as possible; information on individual drivers will have to be limited and just overview character