

## IOW press release – June 3, 2022

### “Research at the highest level” – The Björn Carlson Baltic Sea Prize has been awarded to IOW researcher Maren Voß

*The Björn Carlson Baltic Sea Prize of the Björn Carlson Baltic Sea Foundation was awarded to Maren Voß from the Leibniz Institute for Baltic Sea Research Warnemünde (IOW) in Stockholm today. The prize is endowed with 3 million Swedish kronor (the equivalent of about 300,000 euros). The foundation honoured the scientist's groundbreaking research on marine nitrogen cycles in the Baltic Sea. Using innovative methods, she identified the different sources and transformation processes nitrogen and thus contributed to the increased focus on this nutrient in the fight against eutrophication in the Baltic Sea.*

The award was presented in the morning by the Swedish Crown Princess Victoria at the Baltic Sea Science Center of the Stockholm Open Air Museum Skansen. In the subsequent lecture for the audience invited to the ceremony, Maren Voß illustrated and highlighted key steps and findings from more than two and a half decades of her research. The Björn Carlson Baltic Sea Foundation's nomination committee had received about 40 proposals in the run-up to this first-ever Björn Carlson Baltic Sea Prize. Of the three people who had been shortlisted, the foundation board chose Maren Voß as the award winner. “I was very surprised and also somewhat overwhelmed when I received the news of this great honour. I am very pleased that the prize has brought the Baltic Sea's nitrogen issue into the public focus it deserves,” said Maren Voß on the occasion of the award ceremony.

The scientist already has some ideas about how she wants to use the prize money: “Firstly, I want to expand my research on the filter function of the Baltic Sea coasts to learn more about how well nutrients originating from the land are retained or removed here and how exactly these processes work. In doing so, I would like to collaborate with colleagues from Sweden and Finland,” explains the award winner. “Secondly, I would like to bring young researchers from all over the world together with experienced scientists in a workshop that deals with matter fluxes in coastal areas. After all, many of the Baltic Sea's problems are actually of global relevance; and so work is being done all over the world on how to better protect the coasts and use them sustainably. I think that such an exchange can bring many new impulses for all involved,” Voß continues.

Maren Voß has been working on the nitrogen cycle in the Baltic Sea for over 25 years. She came to Warnemünde in 1992 from the National Park Authority in Tönning to join the Institute for Baltic Sea Research, which was newly founded in the same year. There she was key in significantly expanding the field of biological oceanography through the establishment of specialised laboratories and innovative analytics. In the Baltic Sea region, Maren Voß was the first to apply stable isotope analysis in water and organic matter to unravel the processes within marine nutrient cycles. Measuring microbial metabolic rates and extrapolating them to create budgets, as well as important method developments (e.g. measuring nitrogen fixation), are central elements of her work. She was the first to describe for the Baltic Sea that eutrophication by rivers leaves a clearly detectable signal in the organisms and sediments. She also showed that in addition to

ivers, precipitation and nitrogen-fixing microorganisms are important sources of nutrients for the Baltic Sea.

Based on this research, Maren Voß was appointed by the Swedish Environmental Protection Agency as one of five experts to contribute her expertise to the report on “Eutrophication of the Waters on Sweden’s West Coast”. The report for the first time highlighted the essential role of nitrogen for eutrophication in this marine area, thereby modifying the previous focus on phosphorus. She also contributed her expertise to a European study on nitrogen problems in the environment, which stressed the need for its regulation, both in the Baltic Sea region and for Europe as a whole.

**Cited from the foundation board’s statement on awarding this year’s Björn Carlson Baltic Sea Prize:** “[Maren Voß] laboratory is still a leader in the application of [stable isotope analysis] to identify sources of eutrophication and to understand critical processes of the nitrogen cycle. [...] Her continued work at the highest scientific level has led to a better perception of the problems of the Baltic Sea also in the international context. She has pointed out in various media interviews and publications that a lower meat consumption is an effective means of reducing nitrogen inputs to the Baltic Sea.[...]

[Maren Voß] work has become a cornerstone in our understanding of Baltic Sea eutrophication and how to combat it. Her continued cooperation with Baltic Sea colleagues in many EU projects has produced recommendations for EU and HELCOM that have influenced Baltic Sea eutrophication management. [...] A further contribution [...] is her important work educating students on the complexity of the nutrient cycling and the potential of stable isotopes for the quantification of nutrient inputs. [...]With her focus on teaching next generation scientists on the ecology of the Baltic Sea, she has laid the knowledge foundations for tackling future environmental problems of the Baltic Sea.”

The **Björn Carlson Baltic Sea Foundation** is a private foundation established in 2005 with the aim of promoting improvement of the Baltic Sea environment. Initially, the foundation awarded grants for research and applied projects. In 2021, it redirected its focus and established the annual Björn Carlson Baltic Sea Prize, which has been awarded in 2022 for the first time. The prize honours research and initiatives that make a valuable contribution to improving the environment of the Baltic Sea. Further information: [bcop.se](http://bcop.se)

**Scientific contact:**

Prof. Dr. Maren Voß | Tel.: +49 (0)381 – 5197 209 | [maren.voss@io-warnemuende.de](mailto:maren.voss@io-warnemuende.de)  
Leibniz Institute for Baltic Sea Research Warnemünde (IOW), Germany

**Contact to the IOW press officers:**

Dr. Kristin Beck | phone: +49 381 – 5197 135 | [kristin.beck@io-warnemuende.de](mailto:kristin.beck@io-warnemuende.de)  
Dr. Barbara Hentzsch | phone: +49 381 – 5197 102 | [barbara.hentzsch@io-warnemuende.de](mailto:barbara.hentzsch@io-warnemuende.de)

*The IOW is a member of the Leibniz Association that connects 97 independent research institutions ranging in focus from the natural, engineering and environmental sciences to economics, spatial and social sciences and the humanities. The institutes are jointly financed by Germany’s central and regional governments. The Leibniz Institutes employ a total of 20,500 people, of whom 11,500 are scientists. The total budget of the institutes is 2 billion Euros. [www.leibniz-association.eu](http://www.leibniz-association.eu)*