



## **HELCOM input to the report of the Secretary-General on ocean affairs and the law of the sea – part on "Capacity building in ocean affairs and the law of the sea, including marine science"**

Marine science has always had a crucial role in the process of formulating new HELCOM policies and law for the marine environment. But the process works to the other direction as well. Regional and international commitments for the marine environment have also pushed science in the Baltic Sea region to deliver answers to specific questions that serve the protection aims.

These two sides of the same coin indicate the need for two-way capacity building: capacity building of science to focus on policy relevant issues and capacity building of decision, and law, making process to actually use scientific input in decisions.

The resulting science-policy dialogue requires a careful balance of independence and involvement - and frank analysis on where the border line, or grey zone, between science and value decisions actually lies.

As sustainability has an ecological core, the ecosystem inherently limits the other two topic areas of sustainable development. In this way environmental science, and environmental assessment, has justifiably a fundamental role not only in developing policies and law aiming at sustainability but also in assessing their success.

The HELCOM Baltic Sea Action Plan, adopted by the environment ministers of the Baltic Sea countries and the European Commission in 2007, was developed by using best available scientific information on the Baltic regional ecosystem and target values developed for the ecosystem status as its starting point.

These targets, e.g. for water clarity measured as Secchi depth, were based on HELCOM joint monitoring and assessment work, which has a 30-year history in the region and for parameters like Secchi depth, time series over 100 years in length.

Such target figures were then used in model simulations by the Baltic Nest Institute (BNI<sup>1</sup>) resulting in estimated maximum allowable levels of nutrient (phosphorus and nitrogen) inputs to the sea that allow reaching the desired ecosystem status. The resulting reduction requirements for nutrient inputs were adopted as parts of the HELCOM Action Plan.

In the Baltic region the needed environmental assessments and other forms of scientific input are developed by a variety of means. This includes networks of scientists cooperating within the working groups of HELCOM and also carrying out regular joint coordinated monitoring in the national institutes, as well as scientists affiliated with independent regional scientific cooperation structures or independent scientists in national academic institutions.

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<sup>1</sup> <http://www.balticnest.org/>

Scientists cooperating within the HELCOM working groups have the main responsibility for e.g. the follow up of the HELCOM Baltic Sea Action Plan, including two major assessments released in 2009<sup>2</sup>, and the 2010 HELCOM holistic assessment on the overall ecosystem health state of the Baltic Sea. From a HELCOM perspective the importance of monitoring and assessment capacity within permanent regional marine convention structures is central, despite possible other sources of information.

Independent research conducted in academia and research institutions is an important source of scientific information in terms of basic as well as applied knowledge but also in relation to emerging issues. Regional initiatives for capacity building like the joint Baltic marine science funding programme BONUS<sup>3</sup> and the Baltic Sea Climate Change community initiative BALTEX<sup>4</sup> (a Baltic initiative of the World Climate Research Program) clearly strengthen the science-base needed for regional HELCOM work.

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<sup>2</sup> HELCOM integrated Thematic Assessment on eutrophication in the Baltic Sea and HELCOM integrated Thematic Assessment on biodiversity and nature conservation in the Baltic Sea. Both assessments are available at: [http://www.helcom.fi/publications/en\\_GB/publications/](http://www.helcom.fi/publications/en_GB/publications/)

<sup>3</sup> <http://www.bonusportal.org/>

<sup>4</sup> <http://www.baltex-research.eu/>