

Utility of coastal sea science

Many scientific proposals have to claim generating societally useful knowledge. In many if not most cases, the proposers as well as reviewers have only lay-concepts for doing so, and the activity goes rarely beyond a press release. Thus, the reference to decision making is often merely rhetorically. That the stakeholder-interaction is often not taken seriously is not surprising since many scientifically legitimate and valid questions or answers have no direct bearing for any stakeholder.

Science can hardly solve societal conflicts, such as how to decide about conflicting usages of coastal seas. However, by clarifying certain "if -then" questions and dealing with options of decision making, science can contribute valuably to understanding and management.

- Understanding of complex phenomena. For allowing these scientific understanding to gradually be accepted by the public, public mental models of the coastal sea environment need to be known.
- Routine monitoring, analysis and short-term forecast of current environmental state and the emergence of certain short-term events, such as algae blooms.
- Completing planning for changing societal preferences, such as off-shore energy generation, with geophysical conditions and ecologic conditions.
- For all kind of societal modifications knowledge is needed rare events and the associated risks, and the sensitivity to global and local change.

The discussion is illustrated with examples from the Baltic Sea.