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Concepts, data and perspectives – the utility of coastal, marine and climate science

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If the purpose of science is generating societally useful results or if science legitimized as a cultural achievement – this is a question which society has to answer. But it is clear that scientific results from our fields of coastal, marine and climate research find interest and even utility among stakeholders and the public at large. The question is – which? And: under which circumstances?

I will first sketch different types of useful knowledge, namely concepts, data and perspectives. *Concepts* allows the public a better understanding of complex phenomena, allows making sense of otherwise incomprehensible developments and events. Recent examples are the interpretations of recent storms such as “Haiyan” and “Christian”. *Data*, in particular on the present state and short term forecasts, are needed for stakeholder in deciding about, for instance, off-shore operations related to wind parks, or shipping. *Perspectives* are needed for stakeholders for weighing different options for economic and political decisions, such as planning for future fortification of coastal defense.

For making scientific results useful, a *dialog* must be built between scientific actors and stakeholders, so that the societal questions are understood in the scientific community, and that scientific answers can be comprehended by stakeholders, among them media and public. An understanding of the often *post-normal situation*, within which the dialog is formed, is required – the stakes of decisions are high and urgent, societal values are involved, and the issues are marred with unreducible uncertainties. The process is also influenced by the presence of *multiple knowledge claims*, many of which are interest led. Scientific knowledge appears as just one participant in this knowledge competition (Deutungshoheit), which is not necessarily dominant, and is suffering from an unbalanced narrowness and deepness (Fachidiotentum). Also, alternative knowledge claims may mend with scientific explanations, and interfere with the science-stakeholder dialog through “stealth advocates”, who pursue political or economic interests, while framing them as scientific necessities.