

Project information

Project title

The economics of ocean acidification - Part II

Year

2012/2013

Project leader

Claire Armstrong, UiT

Participants

- Claire Armstrong, UiT (leader)
- Eirik Mikkelsen, NORUT (leader)
- Silje Holen, NIVA
- Isabel Seifert, NIVA

Flagship

Ocean acidification, Theme: Socio-economics of ocean acidification

Funding Source

Fram Centre, internal

Summary of Results

- Much of the research in WP3 has been identifying ecosystem services that can be expected to be affected by ocean acidification. Depending on the data used and the economic settings, such as the discount rate, we estimate negative as well as positive effects for fisheries and aquaculture in the range of 4 billion losses to 105 billion gains in 2010-NOK.
- For carbon storage the estimated negative impacts are more than two orders of magnitude higher than for fisheries and aquaculture.
- The results of the socio-economic research clearly show that ocean acidification can have significant economic consequences, but there is an urgent need for continued multidisciplinary research to reduce the uncertainty in both impact assessment and economic analysis.
- The project is designed to run in 2012 and 2013.

Published Results/Planned Publications

1. *The Economics of Ocean Acidification – a scoping stud, Armstrong, Holen, Navrud and Seifert.* Rapport på FRAM.
2. Abstract from paper presented at conference High CO2 World, Monterey, September 2012: *Economic consequences of ocean acidification – an estimate for Norway; Seifert, Holen, Armstrong and Navrud.*

Communicated Results

1. *Presentation for the Økosystemtjenestevalg – Sosio-økonomiske effekter av havforsuring, Seifert, Spring 2012.*
2. Paper presented at conference High CO2 World, Monterey, September 2012: *Economic consequences of ocean acidification – an estimate for Norway; Seifert, Holen, Armstrong and Navrud.*
3. Presentation at Havoforskermøtet, Bergen, November 2012 "*Klimaendringer og marine økosystemtjenester - økonomiske konsekvenser av havforsuring, Holen*
4. *Socioeconomic effects of ocean acidification, Armstrong. Presentation at symposium in Gothenburg in November 2012 (still to come): Ocean Acidification – the state of the Baltic Sea and the Skagerrak-Kattegat.*

Interdisciplinary Cooperation

- WP3, which consists of a social science perspective on OA, is highly dependent on input from the natural sciences, and communication with natural scientists at FRAM and otherwise (for instance at the conference on a High CO2 world in Monterey), plays an important role.
- The interaction with natural scientists also opened for the participation of both UiT and NORUT in the EU project application ePROMS.

Budget in accordance to results

- The Fram Centre funding has allowed a number of economists who alternatively would not have been involved in issues relating to OA, to investigate and participate in the development of knowledge related to OA.
- The FRAM financing has allowed participation in e.g. the High CO2 world conference, and resulted in invitations to workshops (see one above)
- The FRAM initiative has made a number of contacts internationally possible, and lead to UiT and NORUT being invited to join in the EU project application ePROMS. Hopefully this will result in future financing possibilities.

Could results from the project be subject for any commercial utilization

No

Conclusions

- Future research should involve following up the plans set for the WP3 for the next years; involving further developing a framework for studying OA from an ecosystem service perspective, applying this to a case (cold-water coral), developing further bioeconomic modeling of links between habitat and fish.
- Furthermore the EU project application ePROMS has clarified the need for a multi-stressor approach to analyzing the threats in the marine environment, hence this broader perspective may be relevant to follow up in the future.