

Project information

Keywords

Incentive

Project title

Interdisciplinary workshops on policy relevant science for ecosystem research at the FRAM Center.

Year

2014/2015

Project leader

Vera Hausner

Participants

### Project participants:

**Per Fauchald**, Norwegian Institute for Nature Research, Fram Centre, Tromsø.

**Camilla Brattland**, Norwegian Institute for Cultural Heritage Research, Fram Centre, Tromsø.

**Kari Amick** and **Lorena Muñoz**, Northern Populations and Ecosystems, Department of Arctic and Marine Ecology, Arctic University of Norway (University of Tromsø)

Flagship

MIKON

Funding Source

Incentive funding from FRAM. There was no possibilities to select tvers funding

Effects of climate change on terrestrial ecosystems, landscapes, society and indigenous peoples.

Effects of climate change on sea and coastal ecology in the north.

Miljøkonsekvenser av næringsvirksomhet i nord (MIKON)

UiT

Summary of Results

We identified the following topics important for ecosystem-based management and arranged 6 workshops in BIO-3004 (10 ECTS) including students, participants in the FRAM Centre and international experts (See Appendix):

1. Workshop1: Global environmental change and policy relevant research
2. Workshop 2: Protected area management and surrounding landscapes/seascapes
3. Workshop 3: Biodiversity and the ecosystem services approach
4. Workshop 4: Adaptive monitoring and management

Workshop 5: Community-based management, Co-management and Adaptive Governance

Workshop 6: Socio-ecological Systems in the Arctic

For each workshop we also developed a protocol available for the FRAM centre and the students in BIO-3004.

### **Workshops to strengthen education on interdisciplinary ecosystem research**

6 workshops were conducted from March to May where experts from different disciplines interacted with students. Workshops were combined with 5 hours of seminars where students presented relevant papers to the other students in the class. Selected papers included research studies and syntheses, and were selected

due to their novelty and importance on the topic of each workshop. Policy relevant questions were identified by students and course organizers during seminars, and were then answered during the workshops.

A total of 16 experts were invited to the workshops, including experts from different disciplines and countries. This variety provided many different examples, which helped students to understand how theoretical concepts are applied in management related issues. Students evaluated workshops very positively, claiming that workshops gave the chance to learn in a different way than the traditional education methods.

### *Workshops to facilitate cooperation between natural and social sciences in ecosystem research*

Experts from a variety of disciplines were invited to participate in workshops, such as ecologists, social scientists and economists. Concepts were discussed from different perspectives exploring a broad perspective of ecosystem management. Concepts and approaches to ecosystem management have different meaning in different disciplines, and the workshops also enhanced learning among FRAM centre participants.

### *Report based on protocols from each workshop*

A compendium has been written by course organizers where policy relevant questions have been elucidated. These questions were discussed by experts and students in the workshops, and have been collected in a compendium with additional bibliography to provide a broad perspective for ecosystem research. The compendium covers questions for interdisciplinary and policy relevant research, and provides insights for future research.

The compendium has been revised by invited experts and project leaders and will

be used in the course BIO-3004 Ecosystem-based management as a support material for students.

#### For the Management

The course and the workshops are all about management. The protocols produced from each workshop could be relevant for managers who want a quick overview of the research front. Workshops could also make researchers at the FRAM centre more aware about policy relevant research questions. Finally, BIO-3004 is relevant for future management through education.

#### Published Results/Planned Publications

Compendium BIO-3004 Ecosystem-based management. 2014. Arctic University of Norway (used for teaching in 2015)

#### Communicated Results

A preliminary summary of each workshop was delivered to students before the final exam. There is no planned dissemination for the workshops other than the compendium for future students

#### Interdisciplinary Cooperation

Workshops benefited from the participation of invited experts from different disciplines. Ecosystem management is an interdisciplinary concept, and therefore workshops needed to have a variety of disciplines involved. This includes ecologists, social scientists and economists. Furthermore, workshops have benefited from the participation of experts from different countries, as there are different science traditions in different regions. Therefore, experts in Scandinavia, Russia, Greenland, North America, Alaska and Canada have added to theory their knowledge and experience in these countries.

University of Tromsø: Tourism in protected areas, Protected area management in Norway, adaptive management, adaptive monitoring, co-management, ecosystem service valuation.

NINA: Ecosystem service modeling, adaptive management, resilience.

NORUT: Co-management in reindeer husbandry.

Utah University: Protected area management in the US and adaptive monitoring of recreational use.

University of Alaska: Socio-ecological systems in Alaska.

University of Saskatchewan: Socio-ecological systems in Canada.

University of St. Petersburg: Socio-ecological systems in Russia.

University of Copenhagen: Socio-ecological systems in Greenland.

Budget in accordance to results

The project has proved the importance of bringing together international experts, people at the FRAM Centre and students to discuss the research front in the rapidly emerging research field associated with sustainability science and ecosystem research. The competence is scattered around at different departments in the FRAM Centre and the arena created through the workshops was important for establishing future collaboration and to teach students the theories and tools needed to answer policy relevant questions.

Could results from the project be subject for any commercial utilization

No

If Yes

Yes

Conclusions

The workshops were too much targeted towards a workshop for FRAM centre participants, and were at a too high level for students. We will bring in fewer experts next year and spend more time to teach students baseline concepts. Participants at the FRAM centre also appear to have a different understanding of the topics and concepts presented at the workshop.

Workshops have been very successful for students to understand the complexity of ecosystem management. Due to its success, this teaching format will be repeated in the course BIO-3004 in spring 2015.

The compendium will be updated and improved next year with new discussions and knowledge gained in the workshops during spring 2015. In the future, this compendium may be used as a toolbox for participants at the FRAM centre who would like to be updated in the field.