Bergen Summer
Research School
› Global Development Challenges

BSRS 2013: Food as a global development challenge
17th - 29th June 2013

# PhD-Research Course: SURF & TURF - Ecological perspectives on food production from marine and terrestrial systems

***Course theme:***
The "Surf & Turf" course combines the "Aquatic Food System" and "Biodiversity and Food Production" activities around the common theme of "Ecological perspectives on food production from marine and terrestrial systems". Food production has a profound impact on terrestrial and marine ecosystems, and it is a major challenge to manage systems for biodiversity and productivity. Rapid technological developments, consumer pressures, and issues of biological sustainability are important aspects of the business of producing food – and this leads to increasing demands for scientific expertise and advice for decision-makers. The most important issues apply in both terrestrial and aquatic systems: What is sustainability? What is the goal of management? Is the impact of intensive, efficient production better than the impact of extensive, low input production

***Course leaders:***
Richard Telford, Associate Professor, Department of Biology, University of Bergen
Karin Pittman, Professory, Department of Biology, University of Bergen

***Invited Keynote speakers participating in course panel discussions:***
Peter Kareiva, The Nature Conservancy, USA
Emma Marris, Columbia, Missouri, USA
Professor Serge Garcia, former Director of FAO Fisheries Management Division
Dr. Ambekar E. Eknath, Director General of NACA, Director for the Central Institute for freshwater Aquaculture, India
Professor Patrick Sorgeloos, Artemia Reference Centre, Ghent University

***Expert panels/Lecturers:***
Dag Aksnes (UiB), Åsmund Bjordal (),Amy Eycott (UiB), Øyvind Fiksen (UiB), Fishpool representative, Peter Gullestad (FiskDir), Kristin Hamre (NIFES), Mikko Heino (UiB), Jens Christian Holst (), Alyssa Joyce (UGotteborg), Lawrence Kirkendall (UiB), Heidi Larsen (UiB), Pascale Michel (UiB), Richard D.M. Nash (IMR), Kjell Nedreaas (IMR), Sandra Nogue-Bosch (UiB), Andreas Nordgreen (Nordsildmel), Patrick Sorgeloos (UGhent), Richard Telford (UiB), Simen Thorbeck (Fishpool), Kathy Willis (Oxford/UiB)

***Course description and objectives:***
"Surf & Turf" takes a broad perspective in analyzing how food reaches our dinner plates. The chains of production, forms of management, food sources and nutritional value, long-term effects of early interventions, the use and proof of concept of intervention strategies like marine protected areas, and the links with consumers are all crucial component of the food systems, and will be explored through the course activities. A central theme in the course is understanding how biodiversity supports food production through ecosystem services. Conversely, food production has negative effects on biodiversity in both terrestrial and aquatic ecosystems, both directly and through off-site pollution. Despite these common challenges, and conceptually similar management strategies to minimize damage, there are few opportunities for terrestrial and aquatic ecologists, and aquaculture and fisheries scientists to meet and discuss these linkages. With this course we want to create a meeting point for early career scientists and students to learn from each other and to better understand how food production systems affect natural populations and ecosystems: to share perspectives, solutions and methods used in different ecosystems, and to find common ground and general approaches to protect biodiversity in all systems. This course combines debates and discussions with international experts, with group activities and individual writing projects.

***Course Objectives:***
1. Assess linkages among ecosystems and their effects on productivity
2. Understand a variety of approaches to producing and managing food, such as fisheries or intensive aquaculture
3. Create an ecological perspective of food production with regard to changes in production, marketing and consumption in the global market.
4. Learn basic methods for balancing protection vs use of land and aquatic resources
5. Improve scientific writing and statistical skills
6. Work together through panel discussions and group projects, interact with invited experts.

***Targeted students, Prerequisites and ECTS:***
*Biodiversity and Food Production* is targeted at PhD students interested in the interactive effect of biodiversity and food production. The course offers the opportunity to combine insights from natural sciences and management of environmental resources with the production of a wild or cultured foodsIt is a two week course which will include plenary activities, about 10 lecture/practical sessions, in addition to workshops on students' own papers.
This course requires knowledge which is contained in a bachelor degree in biology.
Course literature must be read prior to the course, and preliminary course work started. Group work and presentations will be given during the course.
Students are required to attend all course sessions and participation in the plenary events is also mandatory. The programme will be published on the web.
Course credit options are 3 ECTS for successful participation and completion of the full programme, or 10 ECTS which will be awarded upon completion of additional student assignments approved by the course leaders.

***Reading list / Preparatory work:***
Reading list and further information is available at course homepage (miside.uib.no --- requires login)