



The ecological goods and services provided by the oceans are critical to human welfare. However, sustainable management of these resources is of concern given the complex and dynamic social-ecological systems in which they are embedded. As the effects of both natural and anthropogenic impacts are projected to intensify, it is clear that successful marine resources management will require more holistic governance approaches that consider the social and ecological dimensions in tandem. The success of holistic marine governance is underpinned by the provision of interdisciplinary science that integrates both the social and natural sciences, to decision-makers. To this end, the ClimEco6 Summer School aims to contribute to the development of the next generation of interdisciplinary marine researchers. Drawing on the expertise of lecturers from the natural, social and economic sciences, participants will develop a strong theoretical and applied understanding of each discipline, and how they can be integrated to solve some of the challenges facing the oceans. To complement this, participants will also gain practical skills in science communication and how to operate at the science-policy-society interface, so that they can more effectively influence the decision-making process relating to the marine environment.

## Lecturers

Jessica Blythe – University of Waterloo, Canada  
Laurent Bopp – LSCE, France  
Christopher Cvitanovic (Convener) – University of Tasmania, Australia  
Beth Fulton – CSIRO, Australia  
Priscila Lopes – UFRN, Brazil  
Francis Nunoo – University of Ghana, Ghana  
Riza Y Setiawan – Gadjah Mada University, Indonesia  
Dr. Suadi – Gadjah Mada University, Indonesia  
Rashid Sumaila – University of British Columbia, Canada  
Ingrid van Putten – CSIRO and University of Tasmania, Australia

## Participants

Post-graduate students (Masters and PhD) and early-career scientists with an interest in a broad range of topics such as, oceanography, marine ecology, fisheries, climate change and social and economic aspects of marine ecosystems are encouraged to apply. Those with an interest in finding out more about practical ways to deal with the challenges arising from working across social and natural science disciplines are especially encouraged to participate in the summer school. Due to the hands on nature of the summer school and to ensure good interactions and discussions, only 60 participants will be accepted.

## How to apply

Complete the [Application Form](#) and submit it with a short CV (in English, two pages max.) before **2 April 2018**. Participants will be selected on their research interests and motivation for attending the summer school.

## Topics to be covered

### *Impacts of climate change on marine ecosystems and implications for food security*

- Delineating the issues of climate change and impacts to marine ecosystems
- Oceanographic and biogeochemical processes
- Social impacts of climate and change in marine systems, including food security and links to human health
- Economic impacts of climate change in marine systems
- Ecological impacts and processes of changes

### *Modelling*

- Modelling basics
- Overview of ecological modelling types
- Economic and bio-economic modelling
- Agent based models
- Networks modelling
- Bayesian Belief Network Modelling
- Coupled models
- Climate projects and uncertainty

### *Social and economic research techniques*

- Introduction to social science
- Quantitative vs qualitative social science research techniques
- Social psychology and behavioural economics

### *Governance and managing marine resources*

- Introduction to marine governance, and different models of governance
- The role of science in marine governance, how to improve knowledge exchange between science and policy to allow adaptive decision-making processes
- Unexpected management outcomes – real examples and how they might be prevented in the future

## Workshops interspersed between lectures

- How to write a winning research grant
- Social media for researchers
- How to write scientific papers (and to know where to target them)
- How to develop a research impact plan
- How to prioritise workloads
- How to work across disciplines (collaborate well)



## Registration fees

Students: 300 €, Early Career Researchers: 350 €