



Winter School

Modelling the marine ecosystem from the ocean to the fish

24 June to 5 July 2013
University of Cape Town

Summary

Under continuing increase of the global human population, climate change and fisheries play an increasing role in driving changes in marine biodiversity, with strong implications for ecosystem services such as fish production and carbon export. In order to achieve a sustainable way of life which not only addresses current environmental challenges but also ensures a secure society well into the future, much progress has been made towards sustainable development of fisheries, emphasizing the need for implementing the Ecosystem Approach to Fisheries (EAF) worldwide.

Ecosystem modelling plays a prominent role in the EAF by allowing a better understanding of the complex ecosystem effects of key drivers such as fishing and climate, by allowing re-analyses of past dynamics of marine ecosystems, and simulating the effects of specific management measures or how the future may unfold in the long term under various "what if?" scenarios.

Consisting of a suite of lectures and hands-on sessions, this course aims at providing an overview of how marine ecosystems are represented in models, from the physics and the biogeochemistry of the oceans to the fish. Emphasis will be put on how the different components of the ecosystems interact and respond to fishing and climate forcing.

Course contents

- Introduction to numerical ocean modelling (ROMS) – *Issufo Halo (UCT), Steven Herbette (UBO)*
- Coupled physical/biogeochemical modelling - *Eric Machu (IRD)*
- Modelling fish spatial dynamics - *Olivier Maury (IRD)*
- Modelling fish bioenergetics (DEB) - *Olivier Maury (IRD)*
- Modelling trophic interactions - *Yunne Shin (IRD), Philippe Verley (IRD)*
- Modelling fish larval survival - *Philippe Verley (IRD)*

Target audience

Open to students (Honours, Masters, PhDs, post-docs) and researchers willing to acquire knowledge on recent trends in marine ecosystem modelling.

Venue

University of Cape Town, Upper Campus, Computer Science Building.

Registration & Course Fees

There are a limited number of spaces available on the course, so participants with adequate background and motivation will be accepted. Registrations will be considered until **17 May 2013**.

Fees: R1500 for researchers, R 750 for all non-UCT students

No course fees for UCT-DEA-DAFF students and staff.

Contact details

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Teaching Programme:

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