UNIVERSITY OF CAMBRIDGE

Institute of Continuing Education

Climate change and coral reefs - a threat to coastal communities

Start date	29th October 2018	**End date**	29th October 2018
Venue	Madingley Hall Madingley Cambridge		
Tutor	Andrew Price	**Course code**	1718NDX048

Director of Programmes	Emma Jennings
For further information on this course, please contact	Public Programme Coordinator, Clare Kerr clare.kerr@ice.cam.ac.uk or 01223 746237
To book	See: www.ice.cam.ac.uk or telephone 01223 746262

Tutor biography

Professor Andrew Price is a marine biologist, environmental consultant and writer. He has specialist knowledge of the Gulf, Middle East and wider Indian Ocean. His recent research has focused on biodiversity, robustness/resilience, environmental disturbance and compensation. For his evaluation of coastal damage from the 1991 Gulf War, Andrew received the *British Consultant of Year Award* ~ a prize open to entries from industry and academia. He is currently an emeritus professor at Warwick University and honorary professor at York University. In 2003, Professor Price was elected Fellow of the Linnean Society. He has written or co-authored over 100 scientific publications, including 3 books on the Gulf/Middle East, several book chapters and many journal articles. His most recent book is *Slow-Tech: Manifesto For An Overwound World* (Atlantic Books, 2009). This shows how robustness helps ensure smooth-running in nature, in what we do and in the things we create. Professor Price teaches on BSc and MSc courses at the Universities of Warwick, York and London.

Course programme

09:30	Terrace bar open for pre-course tea/coffee
10:00 – 11:15	**Coral reefs and their free goods and services**
11:15	Coffee
11:45 – 13:00	**Climate change and oceans**
13:00	Lunch
14:00 – 15:15	**The world's reefs - one foot in the grave?**
15:15	Tea
15:30 – 16:45	**Should Chagossians be allowed to return to their Indian Ocean homeland?**
16:45	Day-school ends

Course syllabus

This day-course will introduce students to coral reefs, highlighting their benefits to society and the threats they now face. It will introduce climate change science and the consequences of global warming on coral reefs – all accentuated by background environmental disturbances. Using a Tutor-provided case study the students will explore the feasibility of a community returning to their Indian Ocean homeland, from which they were expelled last century. No prior knowledge of coral reef and climate change science will be assumed, but a basic familiarity with ecological and environmental concepts may be helpful in getting the most from the material covered.

Aims:

This one day course will:
- Highlight the ecological, social and commercial values of coral reefs.
- Introduce students to climate change science and highlight how global change is altering reefs and impacting coastal communities.
- Use a case study to discuss how national and international interests, civil rights, and climate change affect the fate of coastal communities.

Content:

The course will begin with a general introduction to coral reefs – an ecosystem more remarkable than human-engineered structures – and highlight how they contribute to human development. Session 1 will focus on the composition of coral reefs and outline their importance for fisheries, biodiversity and coastal defence.

In the second session, we will examine the science of climate change. Students will learn how ocean acidification, El Niño–Southern Oscillations and sea level rise increasingly threaten coral reefs – and what this means for coastal communities.

In the afternoon, we will look at additional disturbances, focusing on pollution, construction and heavy fishing. Students will also learn about some measures used to help reduce these threats and restore reef health.

The final session will explore issues determining the feasibility of Chagossians returning to the Chagos Archipelago (British Indian Ocean Territory). Besides environmental factors, discussion will cover strategic, socio-economic and other considerations.

Presentation of the course:

The course will consist of a mixture of Tutor led PowerPoint-illustrated lectures, whole group discussions, and small group discussion and debate.

As a result of the course, within the constraints of the time available, students should be able to:

- Demonstrate understanding of the nature of coral reefs and their ecological and commercial roles.
- Appreciate and summarise the drivers of climate change and how climatic and other impacts alter the environment and affect coastal communities.
- Explain and summarise how both environmental and socioeconomic factors influence the fate of a coastal population.

Reading and resources list

Listed below are a number of texts that might be of interest for future reference, but do not need to be bought (or consulted) for the course.

Author	Title	Publisher and date
Mark Maslin	Climate Change: A Very Short Introduction	OUP 2014
Alex Rogers (editor)	The Global State of the Ocean	Elsevier: Marine Pollution Bulletin Special Issue, Vol. 74, Issue 2 2013
Charles Sheppard, Simon Davy, Graham M Pilling	The Biology Of Coral Reefs	OUP 2010
Charlie Veron	A Life Underwater	Penguin Random House 2017

Website addresses

Feasibility study for the resettlement of the British Indian Ocean Territory, Vol 1. (Vol. 2 – Annexes)
file:///Users/andrewprice/Downloads/Feasibility%20study%20for%20the%20resettlement%20of%20the%20British%20Indian%20Ocean%20Territory%20Volume%201.pdf

Reef Encounter
http://coralreefs.org/publications/reef-encounters/

Additional information

Venue

Details of how to find Madingley Hall can be found on our website:
http://www.ice.cam.ac.uk/who-we-are/how-to-find-the-institute

Refreshments

Tea and coffee and lunch will be provided. If you have any specific dietary requirements or allergies and have not already advised us, please inform our Admissions Team on ice.admissions@ice.cam.ac.uk or +44 (0)1223 746262.

Note Students of the Institute of Continuing Education are entitled to 20% discount on books published by Cambridge University Press (CUP) which are purchased at the Press bookshop, 1 Trinity Street, Cambridge (Mon-Sat 9am – 5:30pm, Sun 11am – 5pm). A letter or email confirming acceptance on to a current Institute course should be taken as evidence of enrolment.

Information correct as of: 08 September 2017