

Press Release : Buckland Lecture 2011/12

On 16 November 2011, the Scottish Fisheries Museum, Anstruther, is proud to host:

Future Approaches to Fisheries Science

by Ian L Boyd

At the first of his lectures, this year's Buckland Professor will call for a paradigm shift in fisheries research and policy. An expert in the field, Professor Ian Boyd of the University of St Andrews will call for a radical rethink about fisheries management and will outline an approach towards finding a solution to the well-publicised problems of overfishing and sustainability.

Lecture Summary

Fisheries science is an important component of fisheries management. It supplies the basic information about the state of the exploited resource and the capacity for future exploitation. While fisheries management is a complex process that does not lend itself to simple solutions, fisheries science has failed in a number of critical ways to support successful fisheries management.

Within the broader context of environmental science, this failure has reduced public confidence in science to deliver useful outputs. The main failures of fisheries science have included (a) incapacity to deal with uncertainty in the basic information used to formulate management advice; (b) a continuing tendency to support the idea that it is possible to fine-tune the management of fish populations to maximise yield; (c) an incapacity effectively to translate strategic models of fisheries developed as research tools into effective operational tools, meaning that the basic approach to fisheries science has not changed significantly since the 1960s; and (d) a tendency to use retrospective analyses as proxies for future trends and to make value judgements about the current state of marine ecosystems.

In contrast, fisheries science has been very successful at illustrating where the problems lie within fisheries management. These failures have been compounded by a systemic, though unfounded, belief that it is actually possible to manage fish populations themselves, rather than the people who exploit them. Within the science community, there is a polarization of views leading to structural instabilities. These drive a lack of consensus between leading figures as well as selective use of data to support one view or another. Scientists end up becoming a part of the social landscape complicating issues further rather than being the source of balanced, independent advice.

A paradigm shift is required for fisheries management. Some countries have made genuine moves towards risk-based approaches to management, but even in these cases there is a tendency to fall back on old methods, such as single-species stock assessment or un-validated multi-species models, that are often flawed. Ecosystem-based fisheries

management has been offered as an alternative, but there are few tools to implement this approach.

In the lecture, I will examine one way in which it may be possible to introduce a rational way of assessing the capacity of an ecosystem to supply a harvest of seafood that uses the natural response of the whole system to set reasonable levels of fishing. Harvest rules based on predators (HARPS) remain as theoretical concepts and will require to be made operational. They suggest, in some cases, that current levels of fishing are considerably greater than is required to sustain a healthy ecosystem especially where there are mixed fisheries.

Ian L Boyd

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Notes to Editors

Scottish Fisheries Museum

The Scottish Fisheries Museum is operated by an independent charitable trust and tells the story of the Scottish fishing industry and its people from the earliest times to the present.

Lecture date: 16 November 2011, 7 pm

Entry : Free, refreshments will be served – by donation

For further information please contact Linda Fitzpatrick, Curator

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Ian L Boyd : Biography

Ian Boyd is a Professor in Biology at the University of St Andrews. He is Director of the Scottish Oceans Institute and the NERC Sea Mammal Research Unit.

He has been chairman of the Marine Alliance for Science and Technology for Scotland and was Chief Executive of SMRU Ltd. His research field is in marine ecology with a specialisation in marine mammals and he has gained awards for his research in polar science, zoology and marine science. He led a UK research programme in Antarctica for 14 years, has led several international research projects as chief scientist, and he is an adviser to the Government about issues concerning marine management.

Ian has degrees from the Universities of Aberdeen and Cambridge, is a Fellow of the Royal Society of Edinburgh and a member of the Scottish Science Advisory Council. He has also served on two inquiries in to the future of Scottish fisheries and chairs a Scientific Advisory Board on offshore decommissioning for Oil and Gas UK.

The Buckland Foundation

Frank Buckland was one of the nineteenth century's best-known naturalists. As an Inspector of Salmon Fisheries, he was able both to improve the lot of this species in rivers obstructed and polluted by the effects of the Industrial Revolution and to apply the developing science of fish culture to introducing fish of the salmon family to the southern hemisphere. Frank also played a leading part in the documentation of the sea fishing industry at a time when its effects on fish and shellfish populations were little understood.

On his death at the early age of 54 he bequeathed £5,000 in trust to pay for the appointment of a "Professor of Fish Culture", to be appointed annually to give talks on current fishery topics at various places in Great Britain and Ireland. This fund is administered by the Buckland Foundation who organise an annual series of lectures on fisheries topics. The Foundation is based at the Scottish Fisheries Museum where the remnants of Buckland's museum collection are housed.

For further information please contact John Firn, Clerk to the Buckland Foundation

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