Conference Abstracts & Biographies

2D – Conservation and Engagement II

Chair: Adriana Ford, University of Greenwich

Bridging the epistemological divide for the management of our seas and coasts

Adriana Ford, University of Greenwich, UK

Abstract:
The importance of incorporating social sciences into conservation and ecosystem-based management has been discussed for over a decade (e.g. Mascia *et al* 2003), yet despite this, there are still concerns that the opportunities are not being fully realised (Bennett *et al* 2017). Mainstreaming arts and humanities into conservation lags behind further still, yet we are seeing greater emphasis for these in funding calls. What is being done, or can we do, to build capacity and integration of social sciences, and the arts and humanities, into conservation and ecosystem-based management? This paper will provide an overview of where we are in terms of current thinking around the role of these disciplines in conservation, and examples of how they have been used in coastal and marine initiatives in particular. We draw upon experiences from projects funded by the UK Valuing Nature Programme, AHRC/GCRF, Natural England and Newton Funds. This is includes WetlandLIFE, which is using Community Voice Method (a social science film-based approach), together with art, historical, economic, and ecological methods, to better understand the values of wetlands. We also reflect on Rising from the Depths, a programme on marine cultural heritage rooted in the arts and humanities, and also what we've learnt from a collaborative workshop held in South Africa on research capacity for ecosystem-based management of estuaries and coasts – how did social sciences and the arts feature here, and what can we learn from this? We conclude by thinking about what is needed now and how to approach this issue in practice

Biography:
Adriana Ford joined the University of Greenwich in 2015 as a Research Fellow in Environmental Social Sciences. She works in the field of socio-ecological systems, biodiversity conservation, human-nature relationships and sustainability. Her research at Greenwich initially focused on relationships between responsible tourism and small-scale fishing in Europe and the Caribbean. She is now working on WetlandLIFE, a three-year research council project exploring the values of wetlands from a health and wellbeing perspective. Adriana is also Coordinator of the Greenwich Maritime Centre, and prior to her role at Greenwich, she worked as a Teaching & Research Fellow for three years at the University of York, where she also gained her PhD. She also has an MSc from Imperial College London, and a BA(Hons) from the University of Cambridge.

The impacts of changing coral reefs on the ecological benefits perceived by fishers

Anna Woodhead, Lancaster University, UK

Abstract:
Tropical coral reefs are undergoing wide-spread ecological change, but are also incredibly important for the wellbeing of millions of people. The link between ecosystem condition and human wellbeing is captured under the concept of ecosystem services. It is increasingly recognised however that the state of the ecosystem may only be loosely connected to the benefits perceived by different people. This highlights the challenge of understanding when and

how environmental change is likely to impact on coastal communities, which is further complicated by the non-linear, temporal dynamics occurring in social and ecological systems.

The aim of this work is to understand whether the benefits perceived by coral reef fishers are affected by changes in the reef ecosystem. This will be explored in the context of the Seychelles where coral reefs provide an important livelihood for trap fishers, but were severely affected by the 1998 and 2016 mass coral bleaching events. These large scale disturbances can lead to long-term shifts in reef fish and benthic communities and are likely to increase with climate change.

This project brings together diverse perspectives towards understanding the effects of environmental change including preliminary results of semi-structured interviews mapping fishers' perception of change (both in the environment and in the benefits that they perceive from it) and a time-series of historic and contemporary interview data highlighting changes in how benefits are prioritised within the fishery. These are complemented with insights from historic data on the condition of reefs and on the landed catch from the fishery. These results indicate how a plurality of approaches to mapping contemporary and historic ecological change might better inform an understanding of how it impacts on coastal communities.

Keywords: ecosystem services; small-scale fisheries; coral reefs; climate change; changes through time

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Building resilience to climate change among coral communities
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Abstract:
Coral reefs and the ecosystem services that they provide are under threat from climate change impacts as well as site-specific pressures such as fishing, tourism and pollution. Building resilience to climate change among coral reef dependent coastal communities is an on-going challenge. Resilience, however, is a largely theoretical construct with little research examining the practical application of resilience concepts.
Focusing on the Western Indian Ocean, the Coral Communities project reviewed the literature on fourteen commonly applied strategies that could be used to build resilience among coastal communities as well as the coral reefs upon which they depend. Strategies ranged from coral gardening and mangrove restoration to marine protected areas, fisheries management, integrated human health and environmental management, microfinance and faith-based approaches to resource management. Each strategy was assessed for its social and environmental impacts and the implications of which for social and ecological resilience. Two stakeholder workshops, one in Mauritius and one in the UK, were convened to gather additional evidence for each of the strategies, as well as assess how an ecosystem service framework could be used to support social and ecological resilience building.
Findings indicate a general absence of evaluation for many applications of the different strategies making an assessment of their implications for resilience challenging. In some cases, unintentional consequences were apparent, such as the building of social resilience while at

the same time eroding ecological resilience. An ecosystem service framework was considered a useful approach for identifying such trade-offs, but also as a way to better develop projects that could support resilience building. Applying an ecosystem service framework is not without its own challenges. Additional evidence is required to understand how resilience and ecosystem services concepts can be better integrated to support coastal communities to work with the changes that climate change may bring.

Keywords: Resilience strategies, ecosystem services, evaluation, social, ecological

Biography:
Dr Caroline Hattam is a senior environmental economist at Plymouth Marine Laboratory. For the last ten years, her research has explored the social, economic and well-being impacts of changes in the marine environment resulting from e.g. MPAs, offshore wind farms and ocean acidification, and strategies that can be used to manage these impacts. In addition she undertakes marine and coastal ecosystem service assessment and valuation using economic techniques, subjective well-being measures, qualitative assessments, deliberative and visual methods. She has recently lead the GCRF Coral Communities project focusing on building resilience to environmental change in the Western Indian Ocean and had overall responsibility for stakeholder engagement in an EC funded project assessing the economic benefits of marine protected areas. In addition she leads and/or participates in a number of projects including SWEEP (NERC); Advent (NERC); and NeTComFish (Newton Fund).

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