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Thursday, 15th September 2016

Keynote Speakers

Fernanda Balata

AFFILIATION: New Economics Foundation

Blue New Deal: Good jobs for coastal communities through healthier seas

In a context of increasing environmental and economic pressures, coastal communities are in need of solutions to reconcile employment creation with environmental protection, joining up the dots between the different ways in which the sea can be a lifeline for historically declining economics.

The Blue New Deal is a UK-wide initiative working towards more good jobs and increased economic sustainability for coastal communities through a healthier coastal and marine environment. NEF is bringing together the range of voices and interests across the UK coast, including thinkers and doers from the fields of energy, tourism, fisheries, aquaculture and coastal management, to create an action plan for local and national Governments that can help hundreds of seaside towns rebuild their prosperity and identity around the precious asset that is the UK coast. To find out more and explore existing examples of innovative approaches on our coast, visit www.bluenewdeal.org

NEF is an independent think-tank working towards a more sustainable economy that can deliver greater wellbeing and a more equal society, whilst respecting the ecological limits of our planet.

BIOGRAPHY

Fernanda is Project Lead for Coastal and Marine Environment at the New Economics Foundation (NEF). Fernanda leads NEF's work on the coastal economy, helping reconcile socio-economic prosperity for coastal communities with marine conservation. She holds a degree in International Relations and has several years' experience as a researcher, global campaigns manager and external relations professional in the non-profit sector. Since joining NEF in 2013, she has conducted research on fisheries, the coastal economy and the future of cities; mapped civil society organisations in South America who are engaged in rethinking economics; and led the innovative Paint a Fish campaign, a public facing initiative during the final stages of the reform of the EU Common Fisheries Policy.

A Motley Crew: are seafarers an asset or a liability?

The maritime workforce is now recruited and deployed worldwide. Most are on short term contracts of employment and the majority come from the lower wage crewing countries. I will initially review the implications of current patterns of ownership and employment on attitudes to and approaches adopted for managing the health and wellbeing of seafarers, looking back at their historical roots and what these can tell us about the behaviour of the main interest groups in the maritime industry. I will then speculate on the extent to which these same mind-sets are relevant to other aspects of maritime employment-related practices, using examples including the flagging of cruise ships, humanitarian responses to piracy or natural disasters and human factors and ship safety.

BIOGRAPHY

Tim Carter has held several posts in maritime health. He is currently a professor at the Norwegian Centre for Maritime Medicine, University of Bergen; was until recently the Chief Medical Adviser to the UK Maritime and Coastguard Agency, and has been a special adviser to ILO and IMO, assisting with the revision of international guidelines on seafarer medical examinations.

Prior to this he worked in the UK Department for Transport on road safety and published a handbook for health professionals on assessment of fitness to drive.

Earlier in his career he trained as an occupational physician and worked first in the petrochemical industry and then as Medical Director of the UK Health and Safety Executive. He has also worked as a consultant with industry, governments and international agencies. In addition to his work on present day health problems in seafarers he is an active researcher on the history of occupational disease prevention and maritime health. His most recent publication is 'Merchant Seamen's Health 1860-1960: Medicine, Technology, Ship owners and the State in Britain'.

Alastair Fischbacher

AFFILIATION: Sustainable Shipping Initiative

The importance of innovation and clean technology in reducing shipping's impact on climate change and driving sustainability

- Reducing GHG emissions from shipping is critical for the industry to meet its responsibility in contributing to the global below 2-degrees warming target, and delivering operational and environmental efficiencies that increase profitability.
- Innovation and clean technology, in conjunction with new vessel designs and operational efficiencies will play a significant role in delivering this.
- Considerable strides in clean technologies have been made with a number of viable and proven solutions available for the market right now.
- However, in a market of little liquidity, natural skepticism in innovation, as well as uncertainty over who should reap the rewards of investment, there are a number of barriers which are stifling uptake.

BIOGRAPHY

Beginning his career at sea as a qualified Master Mariner, Fischbacher's experience spans from operational to the board-level roles. Before taking up his position at the SSI, he held the position of General Manager, Fleet Management at Rio Tinto where he supervised the specification, construction, service and on-going operation of ships ranging from 70-205,000 deadweight bulk carriers of a value of around \$1 billion. Alastair also drove the strategy and implementation for sustainable development in Rio Tinto Marine as well holding other relevant nonexecutive roles with other organizations. In 2011 Alastair joined the inaugural board of the World Ocean Council and was appointed Chairman in 2013. He was a director of Rightship Pty Limited, the dry and wet ship vetting company from 2008 and held the position of chairman from 2009 to 2013. Alastair has been a member of the Class NK, Lloyds Register and DNV British Committees and remains a member of the Lloyds Register Classing Committee.

Sarah Palmer

AFFILIATION: University of Greenwich, Greenwich Forum

The last half century has been seen as a period of exceptional transformation in maritime activity, characterised by larger and newer types of ships, altered patterns in international trade, decline in the importance of national fleets, growth in international maritime regulation, new sources of maritime labour, greater exploitation of ocean resources. But taking a longer view of the historical record calls into question the uniqueness of this so-called 'maritime revolution' and closer scrutiny of the current situation also suggests that today's maritime world in fact retains many traditional features.

BIOGRAPHY

Sarah Palmer BA (Dunelm) MA (Indiana) PhD (LSE) is Emeritus Professor of Maritime History, University of Greenwich. Her research focuses particularly on commercial shipping, port development and maritime policy from the nineteenth century to the present and she has published widely on these subjects. Sarah's contemporary and historical academic interests are reflected in other activities, including chairmanship of the Greenwich Forum, membership of the British Commission for Maritime History and serving on the judging committee for the Maritime Foundation's Mountbatten Maritime Award. A former Trustee of National Museums Liverpool, she is a Fellow of the Royal Historical Society, the Society for Nautical Research and the Royal Society of Arts.

Progress towards the conservation and sustainable use of the oceans: how are we doing? Securing the conservation and sustainable use of marine biodiversity has long been recognised as a critical global-scale challenge. Many international policy frameworks, most notably the Aichi Biodiversity Targets and the Sustainable Development Goals, feature targets focused on marine biodiversity. These include global targets for both marine protected area (MPA) coverage and the extent of the sustainable management of marine ecosystems. The concern for marine biodiversity also extends to areas beyond national jurisdiction (ABNJ), with a UN-led process currently seeking to identify a mechanism under the Law of the Sea Convention to establish procedures for marine protected area designation and environmental impact assessment in ABNJ. This presentation will discuss performance against global targets, including sharing the latest global MPA coverage figures within and beyond national jurisdiction. These global trends will be contrasted with trends towards localised growth in pressure on marine resources, the strengthening blue growth paradigm, and the increasing recognition of the role of individual citizen behaviour as marine conservation agents.

BIOGRAPHY

Dr Steve Fletcher is Head of the Marine Programme at the UNEP World Conservation Monitoring Centre in Cambridge, UK. His team undertakes interdisciplinary marine research to support national and international policy efforts to achieve the conservation and sustainable use of marine biodiversity. Steve is also Associate Professor in Marine Policy at Plymouth University and has recently been appointed to the UNEP International Resource Panel which advises intergovernmental organisations and the international community on the sustainable use of natural resources. He has personal interests in international marine policy and conservation.

CONSERVATION, ENVIRONMENTAL CHANGE AND THE BLUE ECONOMY 1

Sarah Young

AFFILIATION: Celtic Seas Partnership / WWF

TITLE OF PAPER: The Celtic Seas Partnership

ABSTRACT: The EC LIFE+ funded Celtic Seas Partnership project's aim is to support the implementation of MSFD and delivery of Good Environmental Status in the Celtic Seas through applying an ecosystem approach. Effective stakeholder engagement is an essential, but commonly overlooked, component of the ecosystem approach. The Celtic Seas Partnership, which is led by WWF-UK, facilitates engagement between sectors and across borders to ensure the long term future of the environment, while safeguarding people's livelihoods and the communities that have a relationship with the sea. The Celtic Seas Partnership project has engaged with over 950 marine stakeholders, from 6 countries and 14 broad sectors, including policy makers, scientists, fisheries, energy, environmental NGOs, aquaculture and shipping.

Within this presentation we will review the Celtic Seas Partnership's practical experiences of operationalising an ecosystem approach in the Celtic Seas, and draw out examples of best practice that could be applied in other regional seas, areas and projects. We will focus on how the Celtic Seas Partnership empowered stakeholders to become involved in the implementation of MSFD and collaboratively developed sustainable management solutions. The Celtic Seas Partnership is unique in terms of the geographic scale it covers and we will highlight the lessons learnt in terms of what is needed to achieve effective stakeholder engagement across multiple sectors and countries, in order to consider both local topics as well as identify key transboundary issues for discussion.

BIOGRAPHY:

Sarah Young is the stakeholder engagement officer for Wales and South West England with the Celtic Seas Partnership. The longest job title in the world. She is a marine social scientist with 12 years' experience specializing in marine governance. In particular public participation in policy, and techniques for bringing the social value of marine ecosystem services into decision-making.

ABSTRACT: Regulatory loopholes created by unstable governance and conflict between Somali federal and regional governments have facilitated rampant and likely illegal trawling by foreign vessels in Somali waters, resulting in negative ecological and social impacts. Though foreign trawlers have fished in Somali waters for decades, there has been little regulation. Government instability has created gaps in fisheries governance. Here, we quantify fishing activity by foreign trawl vessels in Somali waters and discuss the complex governance systems that create the opportunity for these vessels to fish outside nominal regulations.

We identified seven foreign trawling vessels operating in Somali waters during 2010-2014 and obtained position and vessel speed data from AIS broadcasts. These vessels spend on average 229 days per year fishing in Somali waters, each trawling over 3 km squared per day. The shallow (< 75 m depth) waters off the northeast coast are most heavily impacted. Combining the AIS analysis with catch data from European Union import documents, we determined these vessels are catching 5495 mt per year, an amount equal to 9% of the total Somali domestic catch. Our results indicate that the damage trawlers are doing is extensive and frequent enough that habitat recovery in the most heavily fished areas is nearly impossible.

Trawling is explicitly banned by the federal Somali Fishing Law. These vessels persist illegally by exploiting discrepancies between regional and federal laws and enforcement mechanisms. The trawlers' high visibility close to shore combined with the perceived inability of federal or regional governments to guarantee the sovereignty of the country's waters for its own people have led to public protest and have been named as justifications for piracy. The UN Port State Measures Agreement could help block these trawlers from landing, but only if Somali federal and regional governments agree on trawler legality, licenses, and fishing regulations.

BIOGRAPHY:

Paige is a fisheries ecologist and Project Coordinator for Secure Fisheries, a non-profit based in Colorado, USA. As part of the scientific research team, she provides background literature, research, and analysis on the ecology, history, and governance of fisheries in the Indian Ocean, focusing on Somalia. For seven years prior to joining Secure Fisheries, she was a field and lab technician at the Smithsonian Environmental Research Centre in Maryland, where she focused on the ecology of fish and crabs in the Chesapeake Bay. Paige earned her Bachelor of Science in Biology and Marine Science from the University of Miami.

AFFILIATION: Marine Conservation Society

TITLE OF PAPER: Community Voice Method - a contemporary approach to engaging stakeholders in development of marine resource conservation policy.

ABSTRACT: Public consultation on marine resource management decisions is seen as a pre-requisite for marine resource managers and decision makers around the world. While such consultation is designed to collate and take account of stakeholder opinion and needs, for various social, economic and logistical reasons, many marine resource users do not participate. Thus opinions of key stakeholders are not recorded by these consultations, and decisions are made without taking their needs into account, leading to conflict, distrust, confusion and the potential for non-compliance.

The Community Voice Method (CVM) was designed to test the premise that a different kind of public participation process could yield better results. Its originators identified a need to step back from narrow, polarized policy debates and foster a conversation around the shared values that connect people to a place. Through grounding in local values and discourses, CVM seeks to foster more inclusive, informed and ongoing dialogue in communities, especially those where stakeholders may not feel comfortable participating in traditional public meetings and consultations.

Since 2001, CVM has been implemented in a range of locations involving many people in dialogue. CVM precedes public meetings with participatory research (using film), and seeks to establish effective spaces for inclusive discussion, providing participants with accessible, trustworthy information, and helping to build ongoing community capacity to address resource management issues. Though originally designed to address issues of land use change, more recent projects have successfully applied CVM to fisheries and marine protected area management.

This paper reviews three Community Voice Method projects carried out by the Marine Conservation Society and partners since 2010, including projects in the Turks and Caicos Islands; Sussex, UK; and East Anglia, UK. We compare how the method was applied, examine common and diverse themes arising from the process, and, where appropriate, the impact of CVM on the conservation issues at hand.

BIOGRAPHY:

Head of Biodiversity and Fisheries at MCS, having worked there for 15 years. Awarded a PhD from the University of Exeter in 2011 in Conservation Science and Policy, has worked on community based conservation initiatives in Sri Lanka and the Caribbean since 1993.

Catherine Tackley

AFFILIATION: University of Liverpool

TITLE OF PAPER: Jazz at Sea

ABSTRACT: Jazz-based popular music has been a common thread in musical entertainment on transatlantic voyages for nearly a century. The arrival and departure of prominent jazz musicians on ships has been noted, but there has been very little attention paid to what they did during their time on board and many more seafaring musicians remain largely anonymous.

After the Second World War the British dance band leader Geraldo (Gerald Bright) ran a booking agency which organised bands for transatlantic liners. At a time when access to American jazz was limited by the restrictions on American performers working in the UK and also the effects of the American recording ban, playing for a passage with the chance to experience the latest developments in the music in New York City on arrival was obviously an attractive prospect for British jazz musicians. Unusually for the time, this sharply juxtaposed European and American musicians, jazz and dance music, and their audiences. The 'Geraldo's Navy' phenomenon is part of a long but neglected history of music at sea, which sits, literally and metaphorically, between established geographic, conceptual and musico-stylistic boundaries. Even since the availability of transatlantic air travel, significant numbers of leisure travellers still choose to make the journey by ship, relishing the experience of the voyage itself rather than the efficiency of getting from one side of the 'pond' to the other. This paper explores how jazz has played an important role in justifying this indulgence as nostalgic, elite and entertaining.

BIOGRAPHY:

Professor Catherine Tackley is Head of the Music Department at the University of Liverpool. She has written two monographs; *The Evolution of Jazz in Britain 1880-1935* (Ash gate, 2005) and *Benny Goodman's Famous 1938 Carnegie Hall Jazz Concert* (Oxford University Press, 2012); and is co-editor of *Black British Jazz: Routes, Ownership and Performance* (2014). From 2012 to 2014 she was Principal Investigator of the AHRC Research Networking project 'Atlantic Sounds: Ships and Sailor towns'. Catherine is a co-editor of the *Jazz Research Journal*. She is currently Musical Director of Dr Jazz and the Cheshire Cats Big Band.

ABSTRACT: The pelagic trawl is a newcomer to world fisheries, a piece of technology that only become a success during the interwar period in Northern Europe. As a relatively recent piece of technological innovation, it is one that can be tracked through Europe through the individuals that helped pioneer it, from its origin in Sweden, its adaption in Denmark, to Germany and the form in which it would become commercially successful throughout Europe and the world. There are several areas of interest in this study; the first being the technological component; the second is the economic significance; the third is the role of oral history.

Technologically trawls and trawling gear appears to be of little interest. Its significance and role as a component of the 'bigger picture' of economics, politics and culture is typically the role assigned, with barely even a mention of the type of fishing gear in use. Given the many variations in fishing gear, from basic design and layout to the vagaries of skippers and the immediate environment, it seems rash not to identify these details. Their importance becomes clear when viewed from the perspective of the fishermen themselves. It is then that the habits and patterns of their daily lives, the circumstances of innovation, the role of external influences, as well the availability of new materials, can be assessed and their relationship to the 'bigger picture' fully understood. The pelagic trawl is an ideal case study, as many of these factors are engaged along its journey from the pre-war, pre-synthetic invention of a private individual to its incarnation as a post-war, developmentally funded and commercially viable product.

BIOGRAPHY: Sylvia Bates enrolled as a doctoral student with the University of Iceland's Faculty of History and Philosophy after completing a masters in Maritime Archaeology at the University of Southern Denmark. After identifying fisheries history as an intriguing topic, a topic further stimulated by the many tales told by her father of his time working as a trawler man, as well as his subsequent career and travels as a journalist and writer in the commercial fisheries industry. Currently Sylvia works as a novice net maker in Iceland, in a foolhardy attempt to both better understand her subject matter and self-fund this study.

ABSTRACT: After an early success against the Dutch in 1665-66 the English State was unable to put ships to sea in 1667. This was partly due to finances partly due to the mistaken impression that the Dutch were beaten. Sir William Batten's exclamation, quoted in the epigram, is both illumination and self-serving. As a member of the Navy Board he alongside others was charged with keeping the Navy in a fit state to defend the Kingdom. This paper will look at the English response to the raid and how such men as Batten, Pepys and the Duke of Ailbermarle, amongst others sort to rationalise what was both a national and Royal humiliation.

BIOGRAPHY:

Dr Chris Ware is a Senior Lecturer in Maritime History at the University of Greenwich. Prior to join the University he had worked for 22 year as a curator at the National Maritime Museum Greenwich.

Dirk Siebels

AFFILIATION: University of Greenwich

TITLE OF PAPER: Maritime security and the maritime economy in West Africa

ABSTRACT: My paper is concerned with the links between maritime security and the development of the maritime economy in West Africa. The 'blue economy' has been highlighted by the African Union as one of the key areas for development on the continent yet law enforcement at sea remains a problem. While pirate attacks against merchant ships and kidnappings of crew members have been the most headline-grabbing incidents in recent years, other issues have a much bigger impact on coastal countries.

Illegal, unreported and unregulated fishing, for example, causes severe economic losses for coastal communities along the West African coastline. Low numbers of available ships and a lack of other assets in combination with increasing maritime traffic have created a situation with very limited maritime situational awareness, enabling smuggling and other illicit activities at sea. At the same time, security at sea is increasingly important for large-scale investments such as port terminals, refineries or chemical plants.

Throughout the region, navies have generally been the 'poor brothers' of armies and security challenges on land continue to receive much more political attention. In recent years, however, different developments have shown that it is possible to improve maritime security without the need to invest huge sums of money. That includes cooperation with other stakeholders in the maritime environment, public-private partnerships as well as the increased use of technology which has generally become a lot more affordable than it was only a few years ago.

BIOGRAPHY:

Dirk Siebels served as an officer in the German Navy and is still an officer in the naval reserves before working as a journalist for several years. He is currently a PhD Candidate at the University of Greenwich, London, United Kingdom, specialising in maritime security issues in sub-Saharan Africa. His research includes developments in the maritime environment, for example the evolution of private maritime security companies, the role of ports and maritime trade as well as offshore oil and gas exploration and problems caused by illegal fishing.

ABSTRACT: Under increased powers introduced by Government of Wales Act 2006, the National Assembly of Wales has recently introduced a suite of potentially ground-breaking legislation designed to provide a radical restructuring of governance systems; delivering more proactive, sustainable and joined-up approaches to resource management. At a time of political change in the wake of Brexit, Welsh Government is driving significant organisational reform and a paradigm shift under this new legislation (The Well-being of Future Generations (Wales) Act 2015, The Environment (Wales) Act 2016 and the Planning Act 2015), whilst also developing the first Welsh National Marine Plan under the Marine and Coastal Access Act 2009. Based on an interrogation of secondary sources and key interviews, this presentation presents an overview of the impacts of these recent changes on marine and coastal resource management in Wales. It will focus on the estuaries of North Cardigan Bay where, like elsewhere, coastal management has been traditionally beset by overly complex and fragmented governance systems. In particular, the paper will attempt to evaluate the likely significance of the legislative reforms in delivering more coordinated, strategic and improved governance for coastal areas. Whilst strengthening and extending the duties of public bodies related to sustainable development, natural resource management and biodiversity are to be commended, questions remain as to how this new legislation will be implemented, particularly considering the extent of upheaval associated with major legislative overhaul, as well as other factors. There are also particular concerns over how this new legislation, formulated largely from a terrestrial perspective and including delivery at the local government level, will interface with the much more strategic approach of the marine plan for Wales. The lessons from this scrutiny of Wales' 21st century approach to resource management will be instructive for countries elsewhere considering more integrated and ecosystem-based policies.

BIOGRAPHY:

Dr Emma McKinley (@EmmaJMcKinley) is a Ser Cymru Research Fellow within the RESILCOAST cluster; her work focuses on governance, ecosystem services, stakeholder mapping and evaluating the policy landscape associated with salt marsh ecosystems. Emma has an interdisciplinary background; key areas of interest include the application of marine planning, ecosystem management and values, understanding public connections with our seas, coastal community sustainability and regeneration, Blue growth, and the application of marketing tools for effective communication of conservation messages. Previous partners include local and regional government bodies, UNEP-WCMC, NGOs (RSPB, MCS, WWF) as well as partners across Northern Europe.

ABSTRACT:

- Illegal, Unreported and unregulated fishing (IUU) is estimated to cost the global economy around \$23 billion dollars annually and accounts for 20 percent of all marine species that are caught. The scale of IUU activity is symptomatic of limited governance of the high seas. Additionally, IUU is linked to a number of other serious crimes, including environmental crimes, human trafficking/slavery, death and narcotics, suggesting a broader security risk which should be mitigated.
- Pew is working to help combat IUU by supporting improved governance ashore and oversight at sea. Pew's strategy is dependent on the implementation of a multi-faceted approach to create a global system of enforcement that combines information sharing, sophisticated emerging technology and policy initiatives that will support national and international enforcement actions, facilitate the prosecution of wrongdoers and help curtail activities that deplete fisheries worldwide and the crimes associated with it. This system will enable fisheries enforcement official of resource-poor nations to have access to clear and up-to-date information tailored to their requirements and technical capacity.
- In parallel with capitalizing on technology to enable affordable monitoring at sea, governance structures ashore need to be in place to effectively counter IUU activities. These include policy and laws for the implementation of the Port State Measures Agreement and legal adoption of monitoring systems and IMO numbers.
- To combat the scourge of IUU, and the concomitant security risks, we need to act together. NGOs, seafood businesses and regulatory agencies have many different programs but, without coordination, we risk duplicating efforts and missing the largest return for our investment of resources. Nations need to communicate better, more openly and with greater transparency to help pursue these criminals. Then, when identified, make examples of the bad actors to ensure their actions are no longer profitable and don't take place in the shadows.

BIOGRAPHY:

After an earlier career as an Executive Officer in the Royal Navy Peter Horn joined Pew's Ending Illegal Fishing Project in November 2015. His role is in a team looking at how technology can be exploited to enable enforcement action by relevant authorities. His previous experience in the Royal Navy encompassed Fishery Enforcement, strategy, intelligence and planning roles equipping him well to support this exciting project.

HEALTH AND WELLBEING 1

Birgit Pauksztat

AFFILIATION: University of Greenwich

TITLE OF PAPER: "The devil's journey": Cargo ships' schedules, social relations and coping strategies

ABSTRACT: Affecting workload, daily routines and tasks, a ship's schedule shapes life and work on board. Characteristics of ships' schedule have also been associated with fatigue. Fatigue comes not only with high personal costs for seafarers with regard to health and well-being. It also contributes to errors and accidents at sea, with substantial financial implications for the shipping industry.

The purpose of this study is to examine seafarers' perceptions of the consequences of ships' schedules, and their ways of coping with demanding schedules. Particular attention will be given to effects on fatigue, and the role of social relations. Data come from interviews and informal conversations with officers and crew on cargo ships engaged in short sea shipping, mainly in northern Europe and the Mediterranean.

Whereas previous research has mostly focused on assessing the effects of selected stressors, the interviews provided a more nuanced understanding of how ships' schedules and social interactions on board affected fatigue, and revealed the complex interrelations between ships' schedules, institutional and organizational context, social interactions on board, and coping strategies. Further, the interviews suggested the importance of considering not only stressors, but also potential mitigating factors and resources for coping. Initial findings suggested that the ship's schedule was not only an important stressor, but could also undermine the resources available for coping.

BIOGRAPHY:

Dr Birgit Pauksztat is a senior lecturer in organizational behaviour and a member of the Centre for Business Network Analysis at the University of Greenwich. She holds a PhD in sociology from the University of Groningen, Netherlands (2010). Her research interests include interpersonal social networks, organizational behaviour and research methods. In her current research, she examines the dynamics between interpersonal relations at work and (1) how employees deal with problems at work, and (2) employees' experiences of work stress and their coping strategies.

Abstract

Coastal and marine environments have been evidenced through the literature to be particularly conducive for human well-being as they provide increased opportunities for relaxation, recreation, inspiration and spiritual fulfilment. Natural and human stressors on the environment can however, severely disrupt these benefits. Stressors such as rising sea temperatures and ocean acidification for example, can result in conditions favourable to harmful algal blooms (HABs). Globally, these have been shown to be increasing in frequency, magnitude and location over the last two decades which could have wide ranging impacts on human well-being.

This paper will present the findings from a small pilot qualitative study in Cornwall, south-west England which highlights the various ways in which well-being can be impacted by HABs and why closer attention should be paid to these human dimensions in future HAB research.

Dr Cheryl Willis – University of Exeter

Cheryl is a social scientist and her research interests include human-nature relationships and meanings and motivations in tourism experiences, particularly in coastal and marine environments and within the context of human well-being. Cheryl was awarded her PhD from the University of Exeter in 2014 and her research was about understanding the 'intangible' benefits of nature and specifically the ways in which a coastal landscape served to enhance human well-being (thesis entitled '*Exploring Nature's Benefits through Tourism and Eudaimonic Well-being: A Case Study of the Jurassic Coast, Dorset*'). Cheryl has just completed a NERC funded project with scientists at Plymouth Marine Laboratory to determine the impacts of harmful algal blooms on how people use, perceive and value coastal and marine areas and how they affect human well-being.

ABSTRACT: This presentation aims to examine Chinese women's participation in seafaring in today's commercial shipping and to identify the key issues concerning the maritime education and training (MET) as well as the employment opportunities, or lack of them, for female cadets in the country. What is presented here is part of an international research project which intends to examine gender issues on board of today's commercial vessels where multinational crew has become a norm. The 'China part' of the research project takes a cases study approach with most of the primary data gathered in Shanghai Maritime University, the only MET institution open to women for selected maritime courses (Navigation). Both qualitative and quantitative methods were employed in data gathering. IN total, 122 cadets (women and men) were covered for the survey and 25 semi-structured interviews were conducted with cadets, other women seafarers and other key stakeholders such as shipping companies and government agencies. Major findings indicate that female cadets demonstrate excellent performance in maritime education and training; many of them are passionate with seafaring; few are able to find ships to sail after the intensive, long and expensive training. The findings of the study will be used by a range of stakeholders in the maritime industry to promote for social, cultural and institutional change which in turn will promote gender equality in shipping and support women's participation in seafaring.

BIOGRAPHY:

Minghua is Professor in Maritime Social and Employment Studies, Southampton Solent University (SSU) and she is also Director, China Centre (Maritime), a new research centre at School of Maritime Science and Engineering, at SSU. Her employment history includes: Director of Greenwich Maritime Institute (GMI), University of Greenwich, 2004-2015; Deputy Director, Seafarers International Research Centre (SIRC), Cardiff University, 1998-2004. Her research covers seafarers' labour market, their welfare and work and living conditions, employment policy and practice for women seafarers in commercial shipping, women's participation in fisheries in European and Chinese coastal communities.

CONSERVATION, ENVIRONMENTAL CHANGE AND THE BLUE ECONOMY 2

Alice Miller

AFFILIATION: International Pole and Line Foundation

TITLE OF PAPER: Exploring the social value of small-scale tuna fisheries

ABSTRACT: Pole-and-line and hand-line tuna fisheries, hereafter referred to as one-by-one fisheries are believed to provide large social benefits to fishing communities. Unlike industrial high seas fishing, large numbers of fishing vessels are involved - thus engaging many people from coastal communities. In the unique case of the Maldives, where fishing communities are small and geographically dispersed, the overall social benefits to the fishing communities are believed to be substantial; including contributing to livelihoods, wellbeing, sense of identity and local economies.

To date however, there has been minimal research focused on the social impacts of the one-by-one tuna sector. This field of social analysis of fisheries is relatively young compared to that for fisheries economics and biology/ecology. Even when supply chain and governmental actors collect some social data it often remains in silos and is not synthesised or communicated.

This paper introduces an innovative research programme in the Maldives that the International Pole & Line Foundation (IPNLF) has embarked upon, in consultation with relevant stakeholders from the government, fishing industry and supply-chain. It will explain how the research will be used to answer the following research questions:

- What are the social contributions of one-by-one fishing to the community?
- What would the social impacts be if one-by-one fishing were to (in) decrease?
- What could be done to improve the social and economic contributions of the fishery?
- What learning can be shared to other geographies?

BIOGRAPHY:

Alice is the International Pole and Line Foundation's Social Research and Programme Director. She has 15 years' experience working on ocean-related sustainability issues. Her "tuna journey" started in 2009 with a PhD at the University of Wageningen, which looked at "Governance Innovations for Sustainable Tuna Fisheries". Having completed her PhD, Alice took up a position as the European Tuna Coordinator with the World Wide Fund for Nature's (WWF) Smart Fishing Initiative. Alice also continues to work as a writer and editor with the International Institute of Sustainable Development's Earth Negotiations Bulletin, reporting on multilateral environmental meetings.

AFFILIATION: University of Liverpool

TITLE OF PAPER: Exploring the socio-cultural contexts of fishers and fishing: developing the concept of the 'good fisher'

ABSTRACT: Recent debates in fisheries social science have argued we need to understand social and cultural aspects of fisheries better in order to manage inshore fisheries more sustainably (Urquhart et al. 2011). In seeking to contribute to the emerging research on the social and cultural aspects of fishing, this paper considers what we might learn from the parallel literature on the 'good farmer'. Drawing on Bourdieu's ideas of habitus, field and capital the good farmer offers potentially useful insights into how we move the framing of fishers beyond that of "myopic and short-run profit maximizes" (Sønvisen 2014, p.194). First, the differences between the fishing and farming fields will be discussed. Most noticeable, the space of the sea have implications for how fishers demonstrate skill, which underpins the ways in which fishers can accumulate and demonstrate their symbolic capital and good fishing abilities.

Second, the paper will address an additional way in which good fisher ideals can be achieved, that is through complying with the 'rules of the game'. These unwritten rules are identified as belong to four themes: i) managing territories, ii) respecting fishing gear, iii) safety at sea, iv) importance of keeping secrets. The paper will move on to consider how the extent to which – in light of the research findings – contemporary fishing and marine-related policies might be seen as 'culturally unsustainable'. The findings draw on a qualitative analysis of life history interviews as well as participant observations in a fishing community in North Wales. It will be concluded that the 'good fisher' is a useful conceptual framing in understanding the fisher individual in a broader social context as it allows for the understanding that fishers not only work towards achieving economic ends, but also to improve their social position within the field.

BIOGRAPHY:

Before undertaking a PhD in human geography at University of Liverpool, Madeleine was studying for an MSc in Marine tropical biology. The master's thesis was look at local people's participation in planning and implementation of a marine conservation zone in Zanzibar, Tanzania. The current PhD project is looking at a small-scale fishery in north Wales, UK trying to understand social and cultural aspects of fisheries sustainability.

ABSTRACT: For many fisheries-dependent communities, fishing is important not just for economic livelihoods, but plays an important social and cultural role in terms of local identity, heritage, wellbeing and social cohesion. Capturing the multiple ways that SSF are important is a complex task. To date much emphasis has been on biological and economic dimensions while neglecting socio-cultural factors. Drawing on existing work carried out as part of a European Interreg 4a 2 Seas project called GIFS (Geography of Inshore Fishing and Sustainability) this paper reports on approaches that can be used to understand the importance of SSF through the lens of CES. A mixed method approach is advocated that draws on quantitative questionnaires alongside more deliberative techniques like photo-elicitation, interviews and focus groups. In addition to work already completed a research agenda will be discussed that includes the importance of developing new methods that can be applied in diverse geographical settings. An important element of the emerging work is that using multiple methods to identify CES can simultaneously result in the creation of services as people become aware of multiple relational associations connecting nature and society.

BIOGRAPHY:

Dr. Tim Acott is a Reader in Human Geography at the University of Greenwich in the Department of History, Politics and Social Science. He graduated with a BSc Hons in Environmental Science from the University of Plymouth in 1989 and subsequently completed a PhD at the University of Stirling. Tim is the Director of the Greenwich Maritime Centre and has recently been made Chair (elect) of the Royal Geographic Society Coastal and Marine Research Group. Tim has led work on three major EU funded fisheries projects, CHARM, GIFS and TourFish, and is a lead author on the recently published toolkit for inshore fisheries called '21st Century Catch'. In addition to EU funded projects, Tim is currently the PI on a NERC / AHRC / ESRC funded project called WetlandLIFE. Tim is currently working on new ways to understand inshore fisheries through cultural ecosystem services and sense of place from a co-constructionist perspective.

HISTORY, HERITAGE AND THE ARTS 2

Cathryn Pearce

AFFILIATION: University of Greenwich

TITLE OF PAPER: Shipwreck! It's Place within Heritage, Tourism, and Coastal Communities in England

ABSTRACT: As coastal communities attempt to regenerate, heritage and tourism will play an increasingly important role. Communities will need to determine what makes them unique enough to draw tourists, but they will also need to decide how their own populations can be involved and benefit, which is a goal of responsible tourism. Some communities have drawn on their shipwreck history, such as at the Shipwreck Museum in Charlestown, Cornwall (future uncertain); the Shipwreck Museum at Hastings, East Sussex; and the RNLI Grace Darling Museum in Bamburgh. The RNLI also runs small, local museums for fund-raising in many coastal locations. Shipwreck and lifesaving narratives are also represented in lighthouse museums and popular books sold at tourist destinations. What stories are being told? Whose stories are being told, and how? Some museums highlight 'dark' tourism and the tragedy of shipwreck, some use shipwreck archaeology as a means to study the past, while others highlight heroic individualism or heroic teamwork.

This paper will examine how museums and coastal communities represent and disseminate their shipwreck history. It will then discuss the historical role coastal communities had in responding to shipwrecks on their shores in the eighteenth and nineteenth centuries. Finally, it will suggest that the inclusion of this dimension offers rich story-telling opportunities, ways to connect community, and the means to highlight the relationship of coastal communities to their environment.

BIOGRAPHY:

Cathryn Pearce began her career in tourism in Alaska before moving to academia. She holds a Ph.D. from the University of Greenwich and she is on the committee of the Greenwich Maritime Centre. She is also a committee member of the Society for Nautical Research, Secretary for the SNR's Publication Committee, and is a Trustee of the British Commission for Maritime History. She is currently researching lifesaving and coastal communities, with special emphasis on the Shipwrecked Fishermen and Mariners' Royal Benevolent Society.

AFFILIATION: Liverpool John Moores University

TITLE OF PAPER: Is the only thing to look forward to the past?' Reinventing seaside heritage in Weston-super-Mare

ABSTRACT: John Walton and others have noted the cultural significance of the decline in recent decades of the traditional UK-based seaside holiday and the implications of this for British seaside resorts, who are under pressure to reinvent themselves: where possible, drawing on the residual cultural capital of their heritage in doing so. This paper would examine efforts to address this in Weston-super-Mare, notably by its Grand Pier, destroyed by fire in 2008 and rebuilt as an attraction in its own previous image but specifically incorporating references to the pier's own history, including its destruction, as well as to the nearby coast and surrounding seaside environment. I have argued in earlier work that the Grand Pier embodies some traits of postmodern leisure and consumption, and this paper would examine the representation of the Grand Pier's past from that perspective. It would conclude with an examination of a more recent Weston-super-Mare-based postmodern project, Banksy's installation Dismaland (2015), as a work both ironising and, arguably, reviving the attractions of the seaside.

BIOGRAPHY:

Joanne Knowles is a senior lecturer in Media, Culture, Communication at Liverpool John Moores University. She has research interests in cultural studies, narrative, popular culture, consumption and leisure and has previously published on travel writing as well as a range of topics from the 19th century to the present day.

ABSTRACT: It is common to hear of the disappearance or death of the sea, terms being used to describe a widespread lack of knowledge or interest in the role of the sea and shipping in the contemporary world. This paper will consider a sea loss which may be less obvious than the readily observable changes in the maritime world—the fate of shipwreck metaphor. Most people are blind to the importance of the sea until shipwreck or some other form of maritime disaster strikes. Shipwreck was a major theme in literature and art in the past, but waning interest in the sea, and reduced occurrence of shipwreck means that it now holds a different place in public sentiment. Response to disaster has shifted from horror at the human catastrophe to concerns over environmental damage. Shipwreck metaphor is a branch of sea metaphor, with a history from antiquity to the present. While sea metaphor proposes many possible actualities of life-as-sea-voyage, shipwreck metaphor applies to the vicissitudes experienced by individuals and societies during that voyage.

Until recent times the metaphor has existed in a maritime setting where vessels and voyagers were at the mercy of natural forces, and disastrous events could be interpreted through religious faith and belief systems. This setting has been lost with the changes that occurred in the nature of ships and shipwreck events since the advent of steam power at sea and subsequent global economic and technological changes in shipping, and faith in a divine power ordering earthly events has been replaced by faith in scientific and technological skills-based disaster prevention and solutions to problems. Within the context of this contemporary situation, and from the perspective of a visual arts based research project, the paper will consider how these changes affect an understanding of shipwreck metaphor and its relevance today.

BIOGRAPHY:

Elizabeth Gray is currently completing a visual arts studio-based PhD research project at Griffith University's Queensland College of Art in Brisbane, Australia. The title of the thesis is *Sea Pictures: Contemporary visualisations of the sea*. Previous qualifications include a Bachelor of Arts (University of Queensland) and Bachelor of Fine Art with Honours (Griffith University) she is a practising artist who has exhibited widely in Australia, and Japan.

Friday, 16th SEPTEMBER

HISTORY, HERITAGE AND THE ARTS 3

Antony Firth

AFFILIATION: Fjordr Ltd

TITLE OF PAPER: Coastal and Marine Archaeology: the human dimension of the history of the marine environment

ABSTRACT: The coastal and marine environment that we know today is a product not only of natural processes but of human interventions over centuries, if not millennia. In many cases around the UK, the coast is itself a human artefact; and the constructed character of the marine environment extends underwater. If we hope to manage the marine environment more sustainably in future, then we need to understand the degree to which its history has been shaped by this human dimension. The reasons are twofold: first, our diagnosis – and proposed cures – may be inappropriate if they do not recognise the historical, human dimension of the marine environment; second, people need to recognise more of themselves, their pasts and their identities in the sea, in order to start identifying with the actions necessary to enable more sustainable use in future.

Regarding the role of humans in the marine environment as recent and destructive is unlikely to provide a basis for effective management in future. In seeking changes to practices and behaviours it is necessary to engage and include, not exclude and alienate. This has been repeatedly demonstrated in the management of marine archaeology in recent years, but there is perhaps a wider lesson also. Exploring the time depth of the human dimension of the marine environment, its diversity and changing character, provides multiple points of entry across the wide range of people who interact with our coasts and seas today, from the general public to workers in hard-pressed economic sectors. There are numerous commonalities and linkages to draw out: community; family; locality; trade and so on. Coastal and marine archaeology is not only a way to learn about the past, it is a means to shape the future of the marine environment.

BIOGRAPHY:

Antony Firth is the Director of Fjordr Limited, a small consultancy specialising in the marine and historic environment. Antony studied International Relations (Sussex) and Sea-use Law, Economics and Policy-making (LSE) before writing his doctoral thesis on the management of archaeology underwater (Southampton). In parallel, Antony became heavily involved in the practice of marine archaeology across a range of UK projects. He subsequently led the development of a large coastal and marine team at Wessex Archaeology, providing professional services to both the public and private sector. He set up Fjordr Limited in 2012 to deliver strategic research, recently completing projects on the marine historic environment and Marine Spatial Planning, commercial fishing, and social and economic benefits, among others.

ABSTRACT: This paper considers how coastal communities in Britain have responded to – and contributed to – risk and coastal change in the past, and how far this history continues to shape responses to shoreline policies today, from 'holding the line' to 'managed retreat'. Rising sea levels and global warming have focused popular and official attention on the dangers of coastal change, but storm damage and erosion have long been with us. What can a long-term survey and case study approach to these processes tell us about localised responses to current national and EU policies? The paper considers how people living and working on the coast have understood risk and how this has shaped their daily lives, tactics for adaptation and 'resilience', and expectations for the future. In the light of a growing literature on risk (Douglas and Wildavsky 1982; Giddens 2009; Lübken and Mauch 2011; Bank off 2013) and place attachment (Relph 1976; Tuan 1977; Altman and Low 1992; Acott and Urquhart 2014), it asks how coastal storms and flooding have affected localised risk assessments, responses to official shoreline policies, and expectations for the longevity or sustainability of communities over this period. Alongside current policy documents, the paper draws on late eighteenth- and nineteenth-century texts relating to storm events and coastal change. It explores in particular one storm in November 1897 which affected much of the British Isles, using archival records for Sea Breach Commissioners and local authorities, and contemporary press reports.

BIOGRAPHY:

Dr Vanessa Taylor is a Research Fellow and Lecturer in Environmental History in the Department of History, Politics and Social Sciences at the University of Greenwich, joining the University in 2009. Her most recent research on the Material Cultures of Energy project has explored how energy use changed everyday life in the twentieth century (AHRC: PI: Frank Trentmann). Before this she worked with Prof Sarah Palmer on a two-year historical research project at the Greenwich Maritime Institute: 'Running the River Thames: London, Stakeholders and the Environmental Governance of the River Thames, 1960–2010' (ESRC).

ABSTRACT: The Florida Keys are a string of tropical islands stretching about 120 miles off the southern-eastern tip of the United States, between the Atlantic Ocean and Gulf of Mexico, and along one of the world's most active shipping lanes. It is also home to the third largest coral barrier reef system on earth which lies a few miles seaward of the island chain. Owing to the shallow reef, coupled with dangerous tropical weather patterns, the waters of the Florida Straits are regarded as some of the most treacherous in the world. During the golden age of sail, over one hundred ships passed the Florida Keys each week and, on average, at least one ship per week would wreck somewhere along the Florida Reef. These shipwrecks benefited the islands' residents, both politically and economically, causing the region to become the epicenter of wrecking pursuits in the United States.

This paper explores the economic and social impact of the wrecking industry in the Florida Keys, an industry that propelled Key West to become one of the richest cities in the United States. By the 1830s, Key West, designated an official U.S. Port of Entry, accounted for 60 to 90 per cent of imports and exports for the southeast section of the country. The majority of trade was spurred by the wreckers and local maritime infrastructure. So significant was the port of Key West that the U.S. Navy also chose it as its base of operations to suppress piracy in the West Indies. In considering these and other components of the wrecking industry in the Florida Keys, a connection between the sea and its direct influence on the local community will be established.

BIOGRAPHY:

Dr Cori Convertito is Curator at the Key West Art & Historical Society in Key West, Florida and an Adjunct Instructor at Florida Keys Community College. She holds a PhD from the University of Exeter, entitled "The Health of British Seamen in the West Indies, 1770-1806", for which she was awarded the Boydell & Brewer Prize for the best doctoral thesis in maritime history, 2011-12.

Rachel Turner

AFFILIATION: Environment and Sustainability Institute, University of Exeter

TITLE OF PAPER: Health, wellbeing and hidden vulnerabilities in fishing communities

ABSTRACT: Many fishing-dependent communities are at the forefront of socio-ecological change, experiencing a combination of gradual changes, such as increasing costs of fishing, and abrupt changes, such as extreme weather events. This combination of factors, mediated by personal circumstances, community context and the predictability of change, can impact wellbeing, yet these social costs have not been well-studied. Health may be an important component of wellbeing in fishing communities, as fishers tend to display risk-taking behaviour and are subject to high stress, but anecdotal evidence suggests they may be less likely to access health services. We explored how cumulative changes at multiple levels impact the health and wellbeing of fishers, fishing families and fishing communities. Repeat, semi-structured interviews were conducted with commercial inshore fishermen from Porthleven, Cornwall, to identify changes experienced and their perceived impacts. We found that environmental change, socio-economic shifts and an unstable policy environment have had implications for health (mental and physical) and wellbeing at both individual and collective levels. In particular, the policy environment was perceived to compound the intrinsic uncertainty of fishing, with negative repercussions on health and wellbeing. We present the outcomes of a policy workshop focused on this research, and outline directions for future research.

BIOGRAPHY:

I am an environmental social scientist based at the Environment and Sustainability Institute (ESI) at the University of Exeter. My research focuses on marine resource governance, small-scale fisheries and coastal communities, using social science methods to understand how socio-economic and environmental contexts drive resource-use behaviour and responses to change. The aim of my research is to inform management and governance systems, and help address challenges of sustainable natural resource management in both temperate and tropical contexts.

Mathew P White

AFFILIATION: University of Exeter Medical School

TITLE OF PAPER: Capturing the direct benefits to health and well-being from the marine environment: Methodological advances and remaining challenges

ABSTRACT: Recent years have seen rapid advancements in the measurement of potential health and well-being benefits from marine ecosystems. This talk will discuss four broad methodologies used to capture these benefits including: a) Quantitative Spatial Mapping, b) Preference Based Utility Estimates, c) Experiential Elicitation and d) Experimental Investigation. Continued challenges of using the data generated from each method for policy purposes will be discussed. It is argued that until we can 'translate' these findings into a language understood by policy makers, integrating information about the potential effects on health of policies affecting the marine environment will remain elusive. The talk will also describe a new Horizons 2020 project, 'Blue Health' which aims to pool evidence of the link between marine and other aquatic environments and human health, across Europe.

BIOGRAPHY:

I am an environmental psychologist with a particular interest in natural environments, health and well-being. Since 2011 I have coordinated the UK's 'Blue Gym' project exploring the potential health and well-being benefits of aquatic environments. Since Jan 2016 I have been Work Package 2 Lead ('Pan-European Evidence') on the €6 million Horizons 2020 funded Project 'Blue Health'.

ABSTRACT: For hundreds of years the sea has been a place of sanctuary and retreat for humans needing escape, rejuvenation and renewal. This paper examines some of the context of the coast from a therapeutic landscape perspective. Narratives of the 'sea as healer' will be explored in the context of the everyday and the visitor/tourist. A multi-dimensional case study of Brighton will be examined as policy-practice-experience examples of a coastal-wellbeing location. Pilot research findings from work undertaken auditing outdoor/nature based green-wellbeing work in Brighton will be presented, along with an examination of how children learn and engage with the sea for their overall wellbeing. Brighton is uniquely, a UNESCO designated Biosphere, the first in the UK to include countryside, a city and the coast – presenting opportunities for living coastal wellbeing to be incorporated into wider policy sustainability and wellness narratives.

BIOGRAPHY:

Dr. Catherine Kelly is a senior lecturer at the University of Greenwich. Her research interests are broad, lying across the fields of geography, heritage studies, tourism and wellbeing. She has managed the suite of MA programmes at Greenwich in Heritage Management and Cultural Tourism and lectured in a wide range of undergraduate and postgraduate modules there. She also has taught at Sussex University and the University of Brighton, where she lives. Catherine is a Board member of the UNESCO biosphere of the Brighton and Lewes Downs, and chairs the Sustainable Development committee of that organisation. In addition, she works as a practitioner delivering consultancy and training in both Wellbeing in schools and the education sector more widely, and also in running 'WildBeachSchool Brighton' – taking her love of the sea to children, through outdoor nature based learning and activities at the coast.

GOVERNANCE, LAW AND SECURITY 2

M. Bob Kao

AFFILIATION: Queen Mary University of London

TITLE OF PAPER: Exploring the Shipowner's Role in Cyber Security Through the Implied Warranty of Seaworthiness

ABSTRACT: Cyber risks are a growing concern in the shipping industry. However, the risk is difficult to quantify due to the lack of reliable data on system vulnerabilities and actual attacks and the possibility that victims may not want to report their losses to prevent reputational damage or increases in insurance premiums. Although it is important for firms to develop holistic strategies to address cyber security and not solely rely on insurance for loss mitigation, insurance nevertheless still plays a vital role in the overall plan. This paper analyses one particular concept in marine insurance law – the implied warranty of seaworthiness – and explores the issues that may arise in the face of cyber attacks with the hope that these insights will lead to greater attention to cyber security by the shipping and marine insurance industries.

Seaworthiness is the concept that ships need to be 'reasonably fit in all respects to encounter the ordinary perils of the sea of the adventure insured' per Marine Insurance Act 1906. Seaworthiness in the context of cyber attacks has not been considered by the courts; however, this paper discusses potential cyber attack scenarios and how the implied warranty of seaworthiness – including adequate training of the master and crew, documentation, and fitness of the equipment – would be analysed in these situations so as to introduce some predictability for both insurers and the shipping industry. Greater certainty in this regard will clarify the responsibilities of shipowners to secure their vessels against cyber attacks and lead to stronger and more effective cyber security measures.

BIOGRAPHY:

M. Bob Kao is a PhD candidate at the Centre for Commercial Law Studies, Queen Mary University of London. His research is on the shipping industry's response to maritime piracy. A California lawyer, Bob has taught American law to postgraduate students in China and judges in Taiwan. Bob has a JD from the University of California, Berkeley and an LLM in International Commercial Law from University College London.

ABSTRACT: Maritime Suspicion and Distrust: The Global and Regional Implications of the South China Sea Arbitration. The International Permanent Court of Arbitration delivered its long-awaited ruling in respect of the claims made by The Republic of the Philippines against The People's Republic of China on the 12 July 2016. In a unanimous ruling, the Tribunal ruled in favour of the Philippines in respect of most (although not all) of the disputed claims made with regard to certain maritime areas of the South China Sea. It should be noted at the outset that the Tribunal was careful to emphasize that its arbitral award did not deal with any sovereignty claims to certain disputed islands in the region, nor did it deal with any question of boundary delimitation. Instead, the ruling focused on resolving (as far as possible, within the terms of the Tribunal's jurisdictional competence) the following issues:

- The respective rights and obligations of the Philippines and China under the UN Convention on the Law of the Sea 1982 (UNCLOS 1982), in respect of China's claim to 'historic rights' to exploit the maritime areas in dispute and whether such historic rights continue to have legal efficacy (both States are parties to and are bound by the Convention).
- The legal status of a number of maritime features (islands, uninhabited rocks, high- and low-tide elevations and submerged banks) and whether these features are independently capable of generating maritime zones, in particular a territorial sea and / or exclusive economic zone.
- Whether the actions of China had degraded the marine environment and thus violated its obligations under UNCLOS 1982, through its extensive fishing and construction activities.
- Whether China, in breach of the principles of international law, had unlawfully aggravated and extended the dispute through its large-scale land reclamation and construction of artificial islands that had occurred even after the arbitration had commenced in 2013.

This paper will provide a historical, geographic and political background to this dispute and an analysis of the decision, taking into account a number of factors including the protection of the marine environment and the implications for maritime security and freedom of navigation in a maritime area which has both regional and global significance. This is especially crucial with regard to China's refusal to recognise the arbitral award, the on-going interplay of 'big power' politics in the region and the implications of the ruling with regard to China's relationship with the other States in the region.

BIOGRAPHY:

Edward Phillips is a Principal Lecturer in the Law School, University of Greenwich. His courses include Public Shipping Law and International Law at both undergraduate and postgraduate level (including PhD supervision in relation to the Law of the Sea. A recent publication was on the issue of seaworthiness under the Maritime Labour Convention 2006.

John Milledge

AFFILIATION: University of Greenwich

TITLE OF PAPER: Sargassum – Golden Menace or Golden Opportunity

ABSTRACT: The brown seaweed *Sargassum muticum* is an invasive species to the coasts of the British Isles, mainland Europe and North America. Attempts at its eradication and control have generally not been successful, although time-consuming and costly. The environmental and economic costs of biological invasions of non-native species in the early part of the last decade were estimated to be worth ~ US\$ 1.4 trillion per year, globally, equivalent to 5 % of the world economy). For comparison, the costs of non-native species to the economy of Great Britain alone for 2010 was £ 1.7 billion per year with the specific cost of invasive marine species to shipping and aquaculture estimated to be in excess of £ 40 million per year. The number of inundations of beaches by seaweed has also increased dramatically over recent years with ‘seaweed tides’ causing economic disruption to tourism, aquaculture and traditional fisheries. The golden-tides of related pelagic species of *Sargassum* are particularly problematic in the Caribbean where tourism was worth US\$ 29.2 billion in on-shore spending in 2014. One of the key recommendations of the Caribbean Sea Commission in 2015 for addressing the threat of the *Sargassum* is to support research on commercial uses of *Sargassum*. Commercial exploration of this biomass for food, fuel and pharmaceutical products could encourage its harvesting and control. *Sargassum* has a naturally high content of antioxidants, carotenoids and phenols, including the well-known anti-cancer compound fucoxanthin, making this species a potential source of a range of pharmaceutically relevant materials. Macroalgae may also be a potential source of fuel. This paper discusses the use of *Sargassum* for both fuel and high value products together with the processes required to exploit it, especially on handling the discontinuity of supply.

BIOGRAPHY:

John Milledge is a Research Fellow at the University of Greenwich and part of the Algae Biotechnology Group, researching the commercialisation of algae for the production of biofuel and high value products.

John has worked for Pure Energy Fuels, G & M, Unilever Research, Sainsbury Spillers, Padleys, Palethorpes, Crosse & Blackwell and Unilever. He completed a PhD at the University of Southampton and a BSc and MPhil at Reading University. John has produced a number of conference presentations and papers on the potential uses of both macro and microalgae together with work on the hygienic design of food plant.

ABSTRACT: Overfishing and degradation of marine resources have many contributing factors including the industrialization of fishing practice and reducing fisheries to an economic calculus with little or no consideration given to broader social values. There is clearly a need to move towards a paradigm whereby fishing practice, social values and marine conservation are intrinsically linked. This is particularly pertinent given the contribution of small-scale fishing (SSF) to culture, way of life and local economies in addition to food security, nutrition and employment. SSF has considerable potential to complement the conservation objectives of Marine Protected Areas as well enhance the wellbeing of coastal communities. This paper explores the potential and challenges of Responsible Fisheries Tourism (RFT) as a way of working towards sustainable fisheries and multifunctional coastal management. RFT aims to create linkages between responsible tourism and SSF in a way which benefits fishers either directly or indirectly, whilst also striving towards environmental, social and economic sustainability, and with local ownership and participation at its core. We developed a RFT conceptual model, based on experiences from the UK and other European countries, which draws upon ideas of livelihood diversification, sense of place and cultural ecosystem services, and creating and capturing value through sustainable local seafood. We then applied the model through a scoping study in 2015 to the Turks and Caicos Islands (TCI), a UK Overseas Territory. This paper explores the data gathered from the TCI, as well as RFT from a conceptual perspective and its potential to be a part of fisheries and coastal management in both the UK and other coastal regions.

BIOGRAPHY:

Dr Adriana Ford is a research fellow at the University of Greenwich with diverse expertise in socio-ecological systems. She is currently working on a new Valuing Nature project to improve understanding and management of wetlands in the context of human wellbeing and mosquitoes (WetlandLIFE). She has also worked on projects on responsible tourism and small-scale fisheries, and previously, at the University of York, linkages between ecosystem health and human health, ecosystem services interactions, biodiversity indicators, and invasive species management in Australia. Adriana completed her PhD at the University of York in 2012, and has an MSc from Imperial College London, and a BSc in Natural Sciences from the University of Cambridge.

Michaela Kennard

AFFILIATION: University of Greenwich

TITLE OF PAPER: Identity, tourism and inshore fishing in the English Channel and southern North Sea.

ABSTRACT: There has often been a lack of consideration of social and cultural objectives in European fisheries policy. Increasing understanding of the role of inshore fishing in the creation of place and community identity and its links to tourism is vital in promoting the importance of inshore fisheries for the development of sustainable coastal communities.

The aim of this PhD is to explore the socio-cultural values and inter-relationships of inshore fishing, community identity and tourism through an interdisciplinary approach drawing on ideas such as Sense of Place and Cultural Ecosystems Services. The study is underpinned by a range of non-dualistic conceptual perspectives, which aims to better understand the profound, sometimes spiritual, relationships which people can develop with the sea and coastal areas and why many tourists are drawn to areas where small scale fishing activities take place.

A mixed-method approach has been adopted, utilising qualitative and quantitative methodologies including Photo-Elicitation Interviews and one-to-one questionnaires. The research focuses on case studies within England, France and Belgium; being part of the Geography of Inshore Fishing and Sustainability (GIFS) project, an element of the Interreg 4a 2Seas programme.

BIOGRAPHY:

Michaela is currently a PhD student at the University of Greenwich.