

Keynote Speakers

2012

Rebuilding Collapsed Fisheries and Threatened Communities



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Robert S. Steneck
Professor of Oceanography, Marine Biology and Marine
Policy
University of Maine
School of Marine Sciences
Darling Marine Center
Walpole, Maine, USA

Bob Steneck is a marine ecologist whose laboratories are coral reefs in the Caribbean and Indopacific oceans and kelp forests in North America. There, he has studied sea urchins, fish, corals and lobsters as well as historical ecology, global climate change and the science of managing marine resources. Currently, his research focuses on how complex biological and social systems interact. Specifically, he is focusing on the ecology and management of marine ecosystems in tropical, temperate and subarctic ecosystems. He studies what drives the recruitment of marine organisms, especially the relative demographic importance of larval connectivity versus the receptivity of the habitats into which larvae recruit. He is interested in factors that affect the resilience of complex biological and social systems.

Bob has written more than 130 peer-reviewed scientific publications. He received the research award from the International Lobster Congress; he is a Fellow of the American Association for the Advancement of Science and was selected as a Pew Fellow in Marine Conservation. His research has been highlighted in Newsweek, The New York Times, The New Yorker, Atlantic Monthly and National Public Radio, and in books such as *The Secret Life of Lobsters* and *The View from Lazy Point: A Natural Year in an Unnatural World*. He earned a bachelor's degree in biology/geology at Baldwin-Wallace College, a master's degree in botany and plant pathology at the University of Maine and a Ph.D. degree in earth and planetary sciences at the Johns Hopkins University.

KEYNOTE ADDRESS TITLE: THE BOOMS, BUSTS AND CHALLENGES OF LOW DIVERSITY ECOLOGICAL AND SOCIAL SYSTEMS

Low diversity ecosystems and social systems can change suddenly and surprisingly. These systems may be highly productive and an important source of employment but often the risks associated with lucrative monocultures are under-estimated. I will illustrate this with the Maine lobster fishery. Over the past century, economic and political drivers affecting this social-ecological system have changed. The baseline biodiversity in the western North Atlantic is low and initially fishing focused on a few species of high economic value. However, as fishing capacity escalated and economic markets diversified most fish stocks underwent a landings “boom” prior to their “bust”. The American lobster an exception but its record landings offer no protection from catastrophic decline. Considering the health of the entire ecosystem including the social system that depends on it will require a new and more circumspect approach to ecosystem-based management. Meetings such as this one are a good place to compare notes on what has worked and how we avoid the “gilded trap” of lucrative monocultures.

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Ian Fleming
Professor of Biology
Memorial University of Newfoundland
Ocean Science Centre
St. John's, NL

Ian Fleming is a Professor in the Department of Ocean Sciences of Memorial University and its former Director (2004-2009). His research integrates perspectives from ecology and evolution with fishery and conservation biology. He has worked extensively on the management and conservation of wild fish populations, including the interactions between aquaculture and wild fish. Ian has published widely and has served in a number of

capacities related to fisheries research and policy, including review panels for the Royal Society of Canada, the Natural Sciences and Engineering Research Council of Canada, the US National Academies of Science, the Organisation for Economic Co-operation and Development, Fisheries and Oceans Canada, the Sustainable Ecosystems Institute, the Center for Independent Experts, NOAA Fisheries and the World Wildlife Fund. He has previously held academic/research positions at the Norwegian Institute for Nature Research (1991-2001) and Oregon State University (2001-04), and continues to hold adjunct status at both institutes.

**KEYNOTE ADDRESS TITLE: SUSTAINING THE BIOLOGICAL RESOURCES OF OUR OCEANS
IN RESPONSE TO CHALLENGES POSED BY CLIMATE CHANGE, FISHERIES AND
AQUACULTURE.**

Our oceans are vital biological, geochemical and physical entities that support human health and societal well-being. Reductions in the biological diversity of our oceans are likely to impair their capacity to provide a plethora of ecosystem services that contribute to the resilience of marine ecosystems and to the well-being of humankind (e.g. food, oxygen, recreation, carbon sequestration, culture). Here, Dr. Fleming reports on the recently released findings of the Royal Society of Canada Expert Panel (2012) that explored significant challenges faced in efforts to sustain the biological resources of our oceans in light of climate change, fisheries and aquaculture. The panel was tasked with assessing the state of Canadian marine biodiversity and looking for ways to sustain it, as well as assessing Canada's effectiveness in providing healthy, safe and prosperous oceans for the benefit of Canadians today and in the future. What was found was a threatened marine environment, where our biological resources are at risk. Among the three factors examined, human-induced climate change represents the greatest challenge primarily because its effects on marine biodiversity will not be readily reversed. The simplest and best strategy to deal with climate change is to protect existing diversity and to rebuild depleted populations and species to restore natural diversity. The panel found, across all three subjects it focused upon, not a lack of knowledge or lack of sound policy, but a consistent, disheartening lack of action on well-established knowledge and best-practice and policies, some of which have been around for years.

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Patty Williams
Associate Professor and Canada
Research Chair in Food
Security and Policy Change
Department of Applied Human
Nutrition and Director, Participatory
Action Research and Training Center
on Food Security

Patty Williams is a Canada Research Chair in Food Security and Policy Change and the founding director of the newly established Participatory Action Research and Training Centre on Food Security at Mount Saint Vincent University in Halifax, Nova Scotia. She is a founding member of the Nova Scotia Food Security Network. Her research focuses on the use of participatory research processes to engage multiple inter-sectoral partners in the issue of food security, and capacity building processes for social and policy change.

KEYNOTE ADDRESS TITLE: FOOD SECURITY

Over a decade of participatory action research on food security in the province of Nova Scotia, supported by strong partnerships across the country, has served to facilitate meaningful engagement of partners from diverse backgrounds to critically consider and address determinants of community food security. Partnerships and tools and processes for research, knowledge mobilization and policy development on food security have contributed to a strong food movement in the province. Drawing upon the experience in Nova Scotia and national work, this keynote will highlight some current opportunities, challenges and tensions in efforts to build community food security at multiple levels within and across key sectors including the fisheries sector.



Ratana Chuenpagdee
Canada Research Chair in Natural
Resource Sustainability and
Community Development
Department of Geography
Memorial University of Newfoundland
St. John's, NL

Ratana Chuenpagdee is Canada Research Chair in Natural Resource Sustainability and Community Development and Associate Professor at Memorial University of Newfoundland, St. John's, Canada. She conducts interdisciplinary research on topics related to small-scale fisheries, coastal and ocean governance, resource sustainability, community development, integrated coastal management, decision-support tools, and communicating sciences to

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policy makers and general public. Ratana is currently leading a major global research partnership initiative, *Too Big to Ignore*, which aims at elevating the profile of small-scale fisheries and rectifying their marginalization in national and international policies through the development of global information system, comparative case studies, and building of transdisciplinary research and governance capacity at all levels.

KEYNOTE ADDRESS TITLE: GOOD GOVERNANCE MAKES US HAPPY? REFLECTIONS FROM FISHERIES

According to the recent United Nations World Happiness Report, ‘good governance’ is one of the criteria determining how countries rank on a happiness scale. Such emphasis is an invitation to examine what constitutes good governance and what it transpires, when concerning contested societal issues like fisheries. For many coastal communities, fishing is indeed a happy life. Fisheries policies and decisions, however, do not always result in happy outcomes. Examples of these are found in Newfoundland where traditional fishing livelihoods have been uprooted with the cod moratorium in 1990s, the long struggles in rebuilding, and the general disagreement about next steps. Drawing from research on fisheries governance in Newfoundland and elsewhere, the paper highlights key features and factors that contribute to making governance good for fisheries and making fishing a happy way to live.



Bonnie McCay
Professor
Department of Human Ecology
Rutgers University
New Brunswick, NJ

Bonnie McCay is Board of Governors Distinguished Service Professor at Rutgers University, New Brunswick, New Jersey, in the Department of Human Ecology of the School of Environmental and Biological Sciences. Her graduate training was in environmental anthropology at Columbia University (PhD 1976), and her research and teaching have focused on challenges and policies for managing common pool resources, particularly fisheries, with particular attention to intersections of ecology, community, and social institutions of science, law and property, with increased attention to climate change. She has done field research in Newfoundland and Nova Scotia, Canada, in the Middle Atlantic region of the U.S., and in Baja California, Mexico, with funding from the U.S. National Science Foundation, the Sea Grant College Program, and the New Jersey Agricultural Experiment Station. Her books include “The Question of the Commons,” “Oyster Wars and the Public Trust,” “Enclosing the Commons,” and “Against the Grain.” She was recently elected member of the National Academy of Sciences, is a fellow of the American Association for the Advancement of Science and other professional groups, and serves on the Scientific and Statistical Committee for the Mid-Atlantic Fisheries Management Council as well as numerous editorial boards and scientific advisory groups.

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Bernadette Dwyer
Masters in Management of Co-operatives and Credit Unions.
Fisheries Leader,
Tilting, Fogo Island.

Bernadette Dwyer grew up in the central Newfoundland town of Gambo. She began her working career with the Government of Canada in its Unemployment Insurance Commission office in Gander, NL where she worked for five years. In 1976 she married Gerard Dwyer of Tilting, Fogo Island and moved there with him in 1979. Gerard returned to fishing and in 1981 she began working with the Fogo Island Co-operative in its groundfish operation as costing clerk. Later she became Production Costing

Manager for the co-op's three plants, as well as Special Projects Manager. Over the years she filled several roles including serving on the Board of Directors for five years, one as secretary and four as president. In 1996, after 25 years of service at the Co-op, she took an extended leave of absence. However, she continued her studies at St. Mary's University (including going to Mondragon, Spain) and graduated in 1997 with a Masters in Management of Co-operatives and Credit Unions (MMCCU). During her career, Bernadette has served on several community, regional, provincial, and federal boards and committees. She attended the High Seas Fisheries Conferences at the United Nations in the early 1990's where she had the opportunity to present to the General Assembly on the impact of high seas fishing on coastal communities. She also attended the Earth Summit's Global Forum in Rio De Janeiro in 1992 and participated in the first Oceans Day sponsored by Canada. Bernadette chaired the panel on the fishery in Newfoundland and Labrador, sponsored by the federal Round Table on the Environment and Economy. Most recently she helped spear-head an effort to create a field study program in Tilting and led "An Island of Vision," an island-wide effort to document the past two decades of the fisheries and fishing-dependent communities of Fogo Island. This last initiative concluded with a week-long community radio broadcast in August, 2012.

TITLE: REBUILDING THE FISHERIES: THE FOGO ISLAND EXPERIENCE

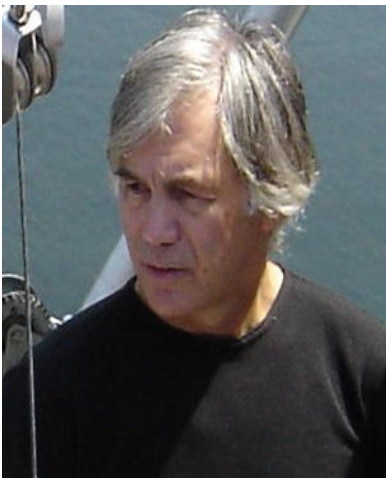
Fogo Island is the largest of Newfoundland's offshore islands and is located on its northeast coast, in the heart of Canadian fishing zone 2J3KL, the central location of northern cod. The eight communities of Fogo Island were among those struck hard by the collapse of the northern cod fishery in 1992. Overnight, in the middle of the fishing season, the fishery was shut down and fishers were ordered to remove their gear from the water. Fishers immediately lost their main source of income; the local fishery co-operative lost 50% of its raw material and 40% of its revenue; and there were major reductions in plant worker employment, significant disruptions to the local economy and an overall feeling of disbelief and despair. Gradually as responses to the fishery collapse and the northern cod closure began to coalesce, the people of Fogo Island and its fishery co-operative began to regroup and carve out a new way forward.

The past twenty years have brought with them many changes – to the fishery, the community, the island economy and its island culture -- not least of which is a 20%

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decline in population and the continual loss of its youth. It experienced a 35% reduction in the number of fishers as well as a comparable reduction in the number of plant workers. Nonetheless, Fogo Island still remains an active and viable fishing community, but like other fishing communities, is struggling to keep abreast of and adapt to the ever changing conditions in the fishing industry and its resource while continuing to use its vision and strength to continue to diversify its economy and remain viable. The uniqueness of Fogo Island and the strength and character of its people have not gone unnoticed, and in recent years tourism has become a welcomed part of the island economy. But the fisheries remain the principal source of income for those who stayed and remain the economic and cultural core of the island.

In this keynote address, we use aggregate data to recount the general paths taken by fishers who were heavily dependent on cod and who chose to stay in the fisheries by diversifying and innovating, with a major shift into crab and shrimp, as occurred elsewhere in the region. We then turn to the specific experiences of two fishing operations to illustrate different “rebuilding” strategies: staying small-scale and coastal- and mid-shore, and shifting into the large-scale, near- and offshore fishery. We also recount the general paths that the cooperative took to diversifying its processing capability and seek out markets to meet its production needs, while trying to address the needs of its member/owners – its fishers and plant workers. The result is a highly diverse fishery yjsy has proved resilient to changes in resources, regulations, and markets. Resilience --- the capacity to respond adaptively to challenges in the environment --- has been enhanced by island culture, which, even in the Walmart, internet, and credit card era, values frugal living and community action. However, even frugal living may not be enough for small-boat fishers, threatening the diversity of the fleet. We discuss this problem, but also the role of the island-wide fisheries cooperative in these and other matters that threaten the future of the island’s communities. The cooperative is one of several island-wide --- but island specific --- institutions, such as the school system and the recently amalgamated Town of Fogo Island. Having such a local, community-oriented institution for the fisheries, in a setting otherwise dominated by union/buyers/government, is critical to the maintenance of a diverse fishery and hence the future of the island.



George Rose
Professor of Biology
Director of the Centre for Fisheries
Ecosystems Research
Marine Institute
Memorial University of Newfoundland
St. John’s, NL

George Rose is Director of the Centre for Fisheries Ecosystems Research (CFER) at the Marine Institute of Memorial University. He holds a PhD (McGill) and MSc (Laurentian) in biology and a BSc (Agr.) in fisheries and wildlife management from Guelph. Prior to the creation of CFER, Dr. Rose held the NSERC industrial research

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chair in fisheries conservation at Memorial for 10 years, and has worked for DFO, the U.S. and New Zealand governments, the Ontario Ministry of Natural Resources and CIDA-CUSO in Africa. He has published over 100 scientific papers and books, most on the North Atlantic fisheries, and is the Editor-in-Chief of the international journal Fisheries Research.



Zita Cobb
President
Shorefast Foundation

Zita Cobb, President, Shorefast Foundation, grew up on Fogo Island and went on to a career as a senior finance professional in the high technology industry. She was the chief financial officer of JDS Fitel and senior vice president of strategy for fiber optics manufacturer JDS Uniphase. In 2001, Cobb left the industry to pursue her personal goals and to dedicate her energies to philanthropic work. She founded the Shorefast Foundation, moved home to Fogo Island (while

maintaining a residence in Ottawa), and is now actively involved in projects to contribute to a resilient and vibrant future for Fogo Island and Change Islands.

KEYNOTE ADDRESS TITLE: A HOLISTIC APPROACH TO REBUILDING FISHERIES

Many fisheries around the world produce less than they did historically as a consequence of reduced stocks and ecosystem changes. Such reductions seriously impact fisheries production and fishing community sustainability. Attempts to rebuild fish stocks and fishing communities are fraught with both ecological and human-centred problems. Ecosystems change over time, both from anthropogenic and natural causes, making historical norms problematic targets. Single species management targets are often meaningless without consideration of allied ecosystem changes. The example of cod rebuilding in the absence of capelin and an abundance of seals will be highlighted. Moreover, human values change, influencing markets for seafood and economic returns. In addition, human population expansion has increased competition for limited resources in many fisheries. The necessity of conserving fisheries and fishing communities in many regions of the world, and the desirability of doing so in others, will be emphasized. We will argue, however, that fisheries alone cannot support expanding human coastal communities; that limits in fish harvest and community expansion have been reached or surpassed. We advocate a more holistic approach, wherein conservation not only of fish but of fishing communities and cultures can lead to additional industries via tourism that enhance socio-economic benefits and assist conservation. Examples from Newfoundland and East Africa will be used.

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Nicole Power
Associate Professor
Department of Sociology
Memorial University of Newfoundland.

Nicole Power researches mainly in the areas of gender, work, health and safety, fisheries, and youth. Much of her research has been affiliated with large, multidisciplinary, mixed methods SSHRC or CIHR funded projects and has engaged the wider community through research partnerships. She is the lead on the Rural Youth and Recovery component of the CURRA project, and with her colleagues developed a mixed methods research design to investigate young people's experiences and understandings of work and recreation in rural communities, as well as their connections to place and intentions to stay, leave or return. This work builds on an earlier pilot project examining the occupational health and safety of employed youth in rural NL, funded by Memorial University's SafetyNet Centre for Occupational Health and Safety Research, and the Atlantic Rural Centre at Dalhousie University. Currently, she is researching the employment-related geographical mobility of young apprentices and high school students in NL.

KEYNOTE ADDRESS TITLE: REFLECTIONS ON SUSTAINABLE FISHERIES COMMUNITIES - - A YOUTH LENS

Since the early 1990s, fisheries dependent communities along the coast of Newfoundland have experienced a number of challenges including collapsed fisheries and moratoria, outmigration and an aging population and labour force. Drawing on the CURRA Rural Youth and Recovery research, this presentation focuses on the lives of young people in fisheries communities, in particular young people's relationship to fisheries, youth employment, and young people's decisions to stay or leave. Young people described ambivalent connections to their fisheries communities. On the one hand, participants described their communities as in decline, and lacking opportunities for meaningful employment. At the same time, many of the participants drew nostalgically on collective stories about the fishery of the past and expressed strong emotional connections to their fishery heritage and its aesthetics. Young people's conflicted and ambivalent connections to place and their experiences living in fisheries communities provide insight into the long-term and generational impacts of prolonged moratoria and industry downsizing, and suggest possibilities for rebuilding sustainable communities.

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Robert L. Stephenson
Research Scientist
Department of Fisheries and Oceans
Professor
St. Andrews Biological Station
University of New Brunswick

Robert L. Stephenson has been a research scientist with the Canadian Department of Fisheries and Oceans (DFO) St. Andrews Biological Station since 1981, and is currently Visiting Research Professor at the University of New Brunswick. He is Principal Investigator of the Canadian Fisheries Research Network – an NSERC-funded network that is linking academics, industry and government in collaborative fisheries research across Canada.

Stephenson has worked extensively on the ecology, assessment, and management of Atlantic herring, and more broadly on issues related to fisheries resource evaluation and Fisheries Management Science. Current research interests include fisheries ecology and management, development of integrated coastal zone management, implementation of the ecosystem approach (particularly in fisheries and aquaculture), and development of policies and strategies for sustainability of marine activities.

Dr. Stephenson holds a B.Sc. from Trent University (Peterborough, Ont.), and a Ph.D. from the University of Canterbury (Christchurch, N.Z.). From 2005-2009 he was Director of the St. Andrews Biological Station (St. Andrews, New Brunswick). Dr. Stephenson has been an active contributor to fisheries science internationally, including roles as chair of Resource Management and Pelagic Fish Committees of the International Council for Exploration of the Sea (ICES). He has been an Honorary Research Associate of the Dept of Oceanography, Dalhousie University, and in 1999-2000 was visiting Research Professor and the Finnish Game and Fisheries Research Institute (Helsinki, Finland).

KEYNOTE ADDRESS TITLE: RESEARCH FOR REBUILDING

Rebuilding fisheries and communities requires new and different information, tools and approaches. This presentation examines key research needs based on the experience to date of the NSERC Canadian Fisheries Research Network and the discussions of the CURRA Rebuilding Symposium. The NSERC Canadian Fisheries Research Network is a unique collaboration among Canada's academic researchers, fishing industry and government. The vision of this network is to undertake collaborative research around strategic questions of management that will contribute to a sustainable fishing industry. Through this collaboration the Network is reshaping fisheries research in Canada and is training much of the next generation of fisheries researchers and managers in collaborative approaches. While the lessons of the Network are still emerging, there are a number of clear issues and apparent trends. The management landscape is changing toward a more holistic, participatory system with a greater spectrum of objectives reflecting a broader international perspective of sustainability. Increasingly, the

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considerations of management require information on ecological, economic, social and institutional aspects of the system and there is the need for interdisciplinary approaches. These are reflected in more complex domestic management plans, increasing pressure to obtain and maintain 'social license' (through market certification, for example) and evaluation of cumulative impacts through regional 'ecosystem' evaluations. The broader perspective requires new and different information, much of which must come from the fishing industry and from associated communities. Canada currently has a shortfall in research capacity, and it is clear that there is ongoing need for increased collaboration and capacity-building so that all participants can contribute effectively.
