



TBTI WORKING GROUP 5 & NORTH AMERICAN REGION WORKSHOP

Fishing Futures: Articulating Alternatives in North American Small-Scale Fisheries

Summary¹

Introduction

The Too Big to Ignore (TBTI) project² sponsored a workshop titled “*Fishing Futures: Articulating Alternatives in North American Small-Scale Fisheries*” on June 12-15, 2013 at the Fisheries Centre at the University of British Columbia, in Vancouver, British Columbia, Canada. The purpose of the workshop was to bring together scholars working in anthropology, geography, history, sociology, economics and related disciplines with a view to developing comparative approaches to the study of the key issues and challenges presently facing small-scale fisheries in North America and articulating alternatives to neoliberal policies. Dialogue was focused on questions of access to ocean spaces, fish resources, markets and livelihoods, and on the dynamics of socio-ecological change in fishing communities over time. A number of issues were discussed, including: trends in fisheries governance; tensions and commonalities between subsistence, commercial and recreational fisheries; aquaculture; ocean user conflicts and coastal planning; alternative economies; aboriginal rights; environmental movements; and the social impacts of climate change. The workshop was attended by 40 participants (see Appendix I), and incorporated meetings by Working Group (WG) 5 and the North American Region. It was followed by a WG1 workshop.

TBTI WG5 NAR Workshop

Each day of the workshop included paper presentations, discussant comments on each paper, and interactive discussion. The summary below captures key points presented and/or discussed during the four days of the workshop.

Day 1: Neoliberalism and privatization

Morning session: Following introductory remarks from organizers and participants, the day’s session began with a presentation recounting the historic development of neoliberalism and its role in transforming fisheries, with a particular focus on North America. The presenters highlighted the challenges faced (e.g. people being forced out of fisheries; blocking new entrants; the push toward increasing vertical integration in the fishing industry) and responses (e.g. opposition to the expansion of industrial aquaculture, resistance to ITQs; strategies for building alliances between like-minded groups) by small-scale fisheries (SSF) in the contemporary period.

¹ Prepared by Neil Ladell and Eric Angel, TBTI Coordinators

² Toobigtoignore.net

Afternoon session 1: The first afternoon presentation discussed the impacts of privatization and ITQs in several Alaskan fishing communities. Preliminary results showed mixed opinions and experiences with privatization. Researchers should continue to document the social impacts of privatization and neoliberalism. Next, a presentation on the environmental and economic challenges of southern coastal Alaskan communities that are commonly labeled as ‘at risk’ and ‘vulnerable’ outlined forthcoming research on the themes of resource access, alternative coastal economies, resource development debates, and scientific knowledge production. Critical to these challenges is that there are ambiguities in how alternatives in sustaining rural livelihoods (e.g., small scale production and trade of fish) can work, given the complexities of neoliberalism and state bureaucratic practices. The third presentation of the session critiqued the reliance on quantitative modeling in fisheries and the way in which it has marginalized the qualitative and descriptive knowledge of small-scale fishers. It argued that there is a need to conceptualize the organization of fisheries differently so that the knowledge of fishing people is placed above that of fisheries science and management to invert the hierarchy between the two knowledge systems. Instead of focusing on large- and small-scale fisheries, this happens when we start thinking about vernacular fisheries (those occurring mostly in the commons, involving fishing technologies require human energy) as opposed to industrial fisheries (those focused on markets and using machines; e.g., fishers on a modern trawler are more like operators than fish hunters). Rethink fish as a food culture as opposed to just a market.

Afternoon session 2: The afternoon continued with a presentation using the Rapfish method to demonstrate that neither the industrial nor the artisanal pink cusk-eel fisheries in Chile are operating sustainably. The Rapfish method measures sustainability using various ecological, economic, technological, social, ethical, and institutional dimensions of a fishery. This was followed by a presentation that argued that policies put in place in Newfoundland following the cod fishery’s collapse have had long-term institutional and social costs, including excessive government spending, loss of physical assets, and the weakening of cultural and traditional values. Some of these costs are quantifiable (e.g., loss of physical assets), while others are non-quantifiable (e.g., social and cultural values). A new policy framework that puts the small-scale inshore fishery at its core is needed.

Day 2: Small-scale fisheries issues and alternatives to neoliberal approaches

Morning session 1: The first presentation of the morning offered insights into the initial years of implementation of a licence bank for independent owner operators within British Columbia’s ITQed ground fish fishery. This small quota bank operates without regulatory support and in a corporate-dominated fishery environment that is inhospitable to its operations. This was followed by a presentation examining three case studies of fishing and processing groups in Canada’s Northern shrimp fishery that were established prior to and in the early days of neoliberal policies, when communities adjacent to fisheries were seen by key policymakers as the ones deserving priority, access, and benefits. These groups continue to operate in a neoliberal context, and demonstrate how a variety of forms of privatization and property rights, different from the neoliberal-preferred ITQ systems, can actually anchor fisheries resources into communities. The case study could be used for a comparison with licences banks and other community-based initiatives that are developing.

Morning session 2: The morning continued with a presentation that offered an example of how small-scale fishers in Alaska can re-enter the fishery and reposition themselves in the context of some of the problems that neoliberalism creates. Opportunities can be created by

providing evidence (e.g., resource use, economic potential) that the local small-scale fishery can effectively harvest the salmon within escapement that is surplus to spawning goals (“foregone harvest”). Next, a presentation explained that subsistence fisheries such as the one on the Yukon River do not fit the management definition of a ‘well ordered fishery’ because local trade is opaque to managers and it does not adhere to their sense of rationality. People in subsistence fisheries catch and produce/sell fish to meet their social obligations to others, and for the most part, it does not involve a profit-making motive.

Afternoon session 1: The afternoon began with a presentation on the Quebec eel fishery in the St. Lawrence River, which has seen the disappearance of eel populations and fishers, as well as a loss of support from the provincial government, and consequent changes in culture, ecology and pollution.

Afternoon session 2: A presentation was delivered on the issues with First Nations on the BC coast being aggregated into groups, rather than recognized as independent nations, for the purposes of regional and province-wide planning of fisheries and marine resource use. There is a need to mitigate the issues caused by these aggregations, including the appropriate scale and representation. Next, a presentation provided evidence that the Gitxaala had a system of sustainable marine resource management (including abalone, sea otters, seals, salmon, etc.) that lasted for millennia and supported a large population of people. There is a need to move back to targeted locally controlled harvesting regimes based on traditional rights and title. Higher up members of DFO do not want any devolution of power, and DFO will not engage in a process of local control.

Afternoon session 3: The afternoon continued with a presentation on small- and medium-scale fisheries advocacy work in the US. The presentation focused on the values of why it matters who is fishing and recounted the initial spread of local fish markets and community-supported fisheries. Next, a presentation proposed a method in which privatizing environmental and social costs of fishing could create more ethical and sustainable fisheries.

Day 3: Spatial planning and well-being of SSF

Morning session 1: Day 3 started with a presentation showing how using the best available information for spatial mapping of fishing effort can be used to predict bycatch risks of marine mammals and inform conservation management and actions. The presentation also demonstrated how coarse resolution spatial data could be used for management. This was followed by a presentation that builds on Ostrom’s social-ecological systems (SES) framework to look at the relative sustainability of SSF, with a focus on Monterey Bay, California. Part of the goals of this research will be to look at the applicability of the SES to SSF management.

Morning session 2: A presentation detailed the challenges of balancing a marine management organization’s demands for the development of a small number of indicators of human wellbeing in fisheries and coastal areas with the complex realities of what is considered to indicate and influence wellbeing. Critical concerns include the development of wellbeing indicators that are misused, and that indicators may not be the most appropriate tools to measure wellbeing. This was followed by a presentation that examined ecological, socio-cultural, and economic variables that play a role in the “performance” of fisheries in the Vizcaino Peninsula, Baja California, Mexico. The presentation also identified some of the variability within local fisheries that can be missed by reductionist systems of analysis in management decisions.

Afternoon session 1: The afternoon began with a presentation that provided an overview of the positive (e.g., employment) and negative (e.g., angler induced evolution) social, economic, and ecological impacts of recreational fisheries in developing countries. The presenter is working to identify some of the knowledge gaps and management needs of recreational fisheries in developing countries. Next, a presentation contrasted the differing perspectives of the commercial fishers and marine resource energy industry about how and how much of coastal ocean space is used along the west coast of the US. Power differentials can play a significant role in marginalizing fishers, and their knowledge and values in the planning process of ocean space use.

Day 3 & 4: North America Region and WG5 Wrap-Up and Publication Discussion

This session focused on group discussion on how to move forward in examining the challenges that SSF are facing in North America. Table 1 summarizes the key points from this discussion.

Task	Solutions/responses
<p>What do you see as key issues?</p> <p>What do you see as gaps?</p>	<p>Identify best practices/ Case studies need to include:</p> <ul style="list-style-type: none"> - <i>Positive or negative relationships between resource users and the marine environment</i> - <i>Effects of policies on community wellbeing</i> - <i>Big boat/small boat definitions/issues</i> - <i>Power relationships in the fishery—whose values are important? Who decides?</i> <p>What are the drivers of influence and how can they be applied?</p> <p>Understand SSF space</p> <p>Look at fisheries managers, how are decisions being made? (listen to retired fisheries managers)</p> <p>What are we risking if SSF are lost?</p> <ul style="list-style-type: none"> - <i>Struggle to stay in place</i> - <i>Costs to society and costs to people</i> - <i>Generational memory</i> <p>How do regulations on market standards impede the sale of local fish (e.g., refrigeration and storage requirements)?</p> <p>How do community-supported fisheries work out? Are they sustainable?</p> <p>Look at SSF from a regional economics perspective instead of production economics</p> <p>Longitudinal study of traditions in fisheries</p> <p>Gender perspective</p> <p>What will SSF fishers of the future look like?</p> <ul style="list-style-type: none"> - <i>Entrance of young fishers</i> - <i>Case studies of alternatives available for young people in fisheries (e.g. Iceland re-doing ITQs)</i> <p>Learn from alternative agriculture (e.g. CSAs):</p> <ul style="list-style-type: none"> - <i>younger involvement</i> - <i>how do they buy land as small-scale farmers?</i> <p>Demonstrate the value of first feeding local people, then export surplus</p> <p>North America specific concerns/issues:</p> <p>Where are the gaps that haven't been addressed during this workshop?</p> <ul style="list-style-type: none"> - <i>Regions that are under-represented (e.g. Southern US)</i> - <i>Environmental history</i> - <i>North America specific legislative implications for SSF</i> <p>Competition between SSF in North America – how they interact and influence</p>

<p>How should we define our research agenda going forward? How should we best disseminate, publish our findings?</p>	<p>each other (draw attention to the networks and map them)</p> <p>Use examples/models from successful local well-managed fisheries (e.g., license bank, co-management, etc.)</p> <p>How can we make our work relevant and influence policymaking? Even when information is made available, how can we make sure that it is used?</p> <p>Develop SSF certification, use a certification scheme to look at threats to SSF, explore what would be needed in a certification scheme to address threats to SSF (e.g., social justice issues) or what criteria is missing from certification process in assessing fisheries</p> <p>Use narrative and storytelling:</p> <ul style="list-style-type: none"> - <i>stories of purposeful living for individuals and communities</i> <p>Celebrate the multiple dimensions of SSF and what they do well, but also need to address solutions to SSF being lost</p> <p>Re-define the ways and angles through which SSF are analyzed</p> <p>Scale: Can North American fisheries be characterized or should it be at a smaller geographical scale?</p> <p>Clearing house - mobilization to:</p> <ul style="list-style-type: none"> - <i>Link people</i> - <i>Have a platform to inform/give people a place to turn to</i> - <i>Outreach arm for systematic engagement</i> - <i>Communicate results from case studies to the benefit of SSF communities</i> - <i>How can case studies be used well to communicate and empower SSF communities?</i> <p>Importance of knowledge dissemination not only to public but more to politicians, publications to address needs of politicians (how?)</p> <p>Seek foundation money</p> <p>Publication Ideas:</p> <p>Special issue on neoliberalism and its effects on SSFs.</p> <p>Special issue on by-catch issues.</p> <p>Special issue on parallels between SSFs and small-scale farmers.</p> <p>Can be anything that's relevant, not just what you presented at the workshop</p> <p>Special issue journals:</p> <ul style="list-style-type: none"> - <i>Ocean and Coastal Management</i> - <i>Marine Policy</i> - <i>Society and Natural Resources, North American Journal of Fisheries Management, a distillation in Science</i> <p>Focus on at least one of these components: SSF, barriers, challenges and what people are doing to overcome them,</p> <p>Who is the target audience?</p> <ul style="list-style-type: none"> - <i>Communities, small-scale fisheries, managers?</i> - <i>Publish and translate (re-publish) to reach target audiences</i> - <i>Try to reach as many audiences as possible</i> <p>Discuss Open Source</p> <p>Serve as a pre-peer review network for one another</p>
<p>Which groups/projects are working on similar themes and how can we best support each</p>	<p>Think about materials that are accessible to community members</p> <p>Coffee table books (online)</p> <p>Possible publications in a form of a dialogue</p> <p>Newsletter or newspaper translating academic papers into more digestible formats</p> <p>Themes (including possible publication ideas):</p> <p>Licence banks and similar examples brought together</p>

<p>other's work?</p>	<p>“Windows of opportunity” Connection between SSF and small farm movements Agriculture and food security/ SSF, food security and food sovereignty Scale and mismatch between government and SSF Cost of losing SSF Market networks and consumers, local markets Discourse, food over exchange values – vision, representing alternatives Framework for multi-disciplinary assessment of bycatch issues Ecological issues (e.g. bycatch, introduction of invasive species) confronting SSF</p>
<p>Timeline</p>	<p>Publications: <i>-Within short-term confirm who will participate in a special issue journal</i> <i>-Within 3 months extended abstracts need to be submitted to Evelyn, Reade, or Ellen</i></p> <p>Possible NAR group meeting in the San Francisco Bay area General plan on research focus for WG5 before Fall 2014 TBTI workshop in Merida, Mexico</p> <p>Brett Tolley and Madeleine Hall-Arbor are going to put on a session in New England similar to this one because they thought this one was very successful.</p>

Acknowledgments

The meeting was organized with funding from SSHRC to TBTI. We also thank the UBC Fisheries Centre, who provided us with meeting facilities and technical assistance. Final thanks go to all speakers, participants and note-takers for their contribution.

APPENDIX I



TBTI WORKING GROUP 5 & NORTH AMERICAN REGION WORKSHOP

Fishing Futures: Articulating Alternatives in North American Small-Scale Fisheries

June 12-15, 2013,

Fisheries Centre, room AERL 107, University of British Columbia, Vancouver, Canada

Organizers: Reade Davis (Memorial University), Evelyn Pinkerton (Simon Fraser University),

and Ellen Hines (San Francisco State University)

**SSHRC Partnership Grant Project: Too Big to Ignore: Global Partnership for Small-Scale Fisheries Research
(toobigtoignore.net)**

WORKSHOP PROGRAM

This 4 day TBTI-sponsored workshop brings together concerned scholars working in anthropology, geography, history, sociology, and related disciplines with a view to developing comparative approaches to the study of the key issues and challenges presently facing small-scale fisheries in the North American context and articulating alternatives to neoliberal policies. Dialogue will focus on questions of access to ocean spaces, fish resources, markets and livelihoods, and on the dynamics of socio-ecological change in fishing communities over time. We plan to discuss a range of issues, including: trends in fisheries governance; tensions and commonalities between subsistence, commercial and recreational fisheries; aquaculture; ocean user conflicts and coastal planning; alternative economies; aboriginal rights; environmental movements; and the social impacts of climate change.

FISHING FUTURES WORKSHOP
June 12-15, 2013

Fisheries Centre, Room AERL 107, University of British Columbia, Vancouver, Canada
AGENDA

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Wednesday June 12, 2013

Day 1: Neoliberalism and privatization

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| 08:30 – 09:00 | Registration |
| 09:00 – 09:20 | Welcome and TBTI overview presentation by Rashid Sumaila and Ratana Chuenpagdee |
| 09:20 – 09:40 | Workshop objectives and Introduction to Day 1 session by Evelyn Pinkerton, Reade Davis and Ellen Hines |
| 09:40 – 10:20 | Introduction of participants |
| 10:20 – 10:50 | Refreshment break |
| 10:50 – 11:30 | Neoliberalism and the future of small-scale fisheries on Canada's east and west coasts, Evelyn Pinkerton and Reade Davis |
| 11:30 – 12:00 | Questions and discussion |
| 12:00 – 13:10 | Lunch |
| 13:10 – 13:30 | Fisheries privatization, sociocultural transitions, and well-being in Kodiak, Alaska by Courtney Carothers |
| 13:30 – 13:50 | Confronting fisheries challenges and rethinking neoliberalism: a view from southwest and southeast Alaska by Karen Hebert |
| 13:50 – 14:10 | Managed annihilations and alternatives in North American fisheries: scientific constructs, industry and the vernacular by Dean Bavington |
| 14:10 – 15:10 | Interactive discussion |
| 15:10 – 15:50 | Refreshment break |
| 15:50 – 16:10 | Ode to the Congrio fishery by Nicolas Talloni Alvarez, Mimi E. Lam and Tony J. Pitcher |

- 16:10 – 16:30 True cost of closing the ground fish fishery in Newfoundland by Gabriela Sabau and Michael Van Zyll De Jong
- 16:30 – 17:10 Interactive discussion
- 17:10 – 19:00 Dinner on your own

Thursday June 13, 2013

Day 2: Small-scale fisheries issues and alternatives to neoliberal approaches

- 09:00 – 09:20 A British Columbia groundfish licence bank: supporting sustainable small boats in the face of corporate concentration and market failure by Danielle Edwards
- 09:20 – 09:40 A political ecology of fishing alternatives: varieties of access, property rights, and development paths in Canadian shrimp fisheries by Paul Foley
- 09:40 – 10:20 Interactive discussion
- 10:20 – 10:40 Refreshment break
- 10:40 – 11:00 Foregone harvests: opportunities for local, community-based fisheries to improve economic conditions and provide culturally appropriate employment in southern Alaskan villages by Steve Langdon
- 11:00 – 11:20 Customary trade: non-market fishing economies on the Yukon River, Alaska by David Jenkins
- 11:20 – 12:00 Interactive discussion
- 12:00 – 13:10 Lunch
- 13:10 – 13:30 Fishing down the river: exploring the changing realities of artisanal fisheries in the St-Lawrence River by Sabrina Doyon
- 13:30 – 13:50 Sturgeon aquaculture and rural livelihoods: an ethnographic study of conservation-as-development in Canada by Jaime Yard
- 13:50 – 14:30 Interactive discussion
- 14:30 – 14:50 Refreshment Break
- 14:50 – 15:10 Lumpers vs splitters: aggregate pressures on First Nations fishing rights by Caroline Butler and Bruce Watkinson
- 15:10 – 15:30 When seals are fish: Gitxaala Contemporary seal fishery by Charles Menzies

15:30 – 16:10	Interactive discussion
16:10 – 16:20	Refreshment break
16:20 – 16:40	Who Fishes Matters: The Social, Ecological, Economic, and Food System Significance of Matching Scale of Fishing to Scale of the Marine Ecosystem. by Brett Tolley
16:40 – 17:00	Privatizing the environmental and social costs of fisheries by Mimi Lam
17:00 – 17:40	Interactive discussion
17:40 - 19:00	Dinner on your own
19:00 – 22:00	Social gathering and song exchange at home of Evelyn Pinkerton, 3140 Camosun St. @ West 15 th Avenue (#25 bus from UBC stops on 16 th Ave within sight of this address). Musical instruments welcome.

Friday June 14, 2013

Day 3: Spatial planning and well-being of SSF

09:00 – 09:20	Spatial modeling to assess the risk of bycatch of marine mega-fauna in small-scale fisheries by Ellen Hines (RC North America) and Rebecca Lewison
09:20 – 09:40	Social-ecological resilience in small-scale fisheries in Monterey Bay, California by Stacy Aguilera, Kenny Broad University of Miami, John N. Kittinger, Rebecca Martone, Elodie Le Cornu Center for Ocean Solutions, Stanford University, Stanford
09:40 – 10:20	Interactive discussion
10:20 – 10:40	Refreshment break
10:40 – 11:00	Developing indicators of wellbeing for small-scale fishing communities by Sarah Breslow
11:00 – 11:20	Variations in fisheries performance: an integrated social, economic, and ecological perspective from Baja California, Mexico by Rebecca G. Martone, Bonnie McCay, Laura Gonzalez, Sergio Guzman del Proo, Salvador Lluch-Cota, German Ponce-Diaz, Mario Ramade Villanueva, Elisa Serviere-Zaragoza, Geoff Shester, Saudiel Ramirez, Courtney Abshire, Chris Costello, Alison Haupt, Wendy Weisman, Jim Wilson
11:20 – 12:00	Interactive discussion
12:00 – 13:10	Lunch

13:10 – 13:30	Recreational fisheries in developing countries: identification of knowledge gaps and management priorities by Shannon Bower, Steven J. Cook, Øystein Aas, Robert Arlinghaus, Douglas Bearde, Ian G. Cowx, Andy Danylchuk, Katia Freire, Warren Pottsi Stephen Sutton
13:30 – 13:50	Power and perspective: marine renewable energy development and small-scale fisheries by Carrie Pomeroy, Madeleine Hall-Arber and Flaxen Conway
13:50 – 14:30	Interactive discussion
14:30 – 15:30	North American region & WG5 wrap-up and publication discussion
15:30 – 16:00	Refreshment break
16:00 – 17:30	North American region & WG5 wrap-up and publication discussion

Saturday June 15, 2013

Day 4: Synergy, integration and moving forward

09:00 – 09:10	Introduction to Day 4 by Ratana Chuenpagdee
09:10 – 10:15	Are small-scale fisheries really important? How can we tell? Presentation and discussion on the Information System for Small-Scale Fisheries (ISSF) by Rodolphe Devillers and Randal Greene
10:15 – 10:30	Refreshment break
10:30 – 11:00	Continued discussion
11:00 – 12:00	Are small-scale fisheries economically viable? How can we tell? Presentation and discussion on “Framework to assess economic viability” by Rashid Sumaila and Anna Schuhbauer
12:00 – 13:00	Lunch
13:00 – 14:00	What else matters in the world of small-scale fisheries and how to capture them in the ISSF? Presentation and discussion by Ratana Chuenpagdee
14:00 – 14:20	Summary discussion, next steps & collaborations
14:20 – 14:40	Refreshment break
14:40 – 16:00	Summary discussion and next steps
16:00 – 17:00	Final discussion moderated by Ratana Chuenpagdee

Notes:

Following the above workshop, participants are invited to stay for a 1.5 day workshop (June 16-17), organized by TBTI WG 1 to discuss specific details about the ISSF, including the database design, development and implementation. Those with knowledge and experience about database and information systems, as well as those interested in making sure that the 'right' information is captured in the database, are encouraged to stay and contribute. If you are interested in participating in the workshop, please email Beatrice Frank (toobigtoignore@mun.ca) and we will forward the workshop agenda to you.

LIST OF ABSTRACTS

Day 1: Neoliberalism and privatization

Fisheries privatization, sociocultural transitions, and well-being in Kodiak, Alaska

Courtney Carothers

University of Alaska Fairbanks

Scholars and fishermen alike view the privatization of fishing rights as a fundamental driver of change in fishing livelihoods and communities. As fishery economists, managers, environmental groups, and popular media sources increasingly advocate for the widespread privatization of marine resources, the social and cultural implications of these transitions need to be better explored and documented. This paper presents the results of a mixed methods ethnographic study in Kodiak, Alaska exploring: 1) how privatization of fishing rights has been experienced across diverse human groups that participate in fishery systems, 2) the relative importance and magnitude of the impacts of fisheries privatization compared with other ecological, economic, and technological drivers of change, and 3) the relationship between the social and cultural shifts linked to fishery privatization and individual and community well-being. Ethnographic interviews with a wide range of nearly 100 fishery participants in Kodiak and 250 surveys completed by Kodiak crew members, skippers, and owners provide a large data set that enables us to explore these research questions and test key hypotheses that have emerged from previous research. The research framework joins scholarship in political ecology, social-ecological systems, and the anthropology of fishing communities to provide analytical insights into the relationship between the enclosure of resources and changing nature-society relationships.

Confronting fisheries challenges and rethinking neoliberalism: a view from southwest and southeast Alaska

Karen Hebert

Yale University

This paper considers existing efforts to address environmental and economic challenges to fishing communities in coastal Alaska by comparing initiatives that have been proposed or are currently underway in the southwest and southeast regions of the state. It focuses on programs to increase local access to commercial fisheries participation; plans to promote alternative fishing economies; and advocacy aimed at bringing fisheries concerns into broader resource development debates. While the shape of these efforts is different in each region, they confront a number of common dilemmas and hurdles. These include making the ownership of commercial fishing permits and fishery quotas into an appealing proposition for rural residents amid transformed socioeconomic landscapes, and reconciling new fisheries business opportunities, such as those in the sport fishing and mariculture industries, with existing livelihood patterns. The paper provides an overview of a three-year research project designed to investigate these and

related concerns through ethnographic field research. It also steps back to ask how scholarly accounts of community-based efforts to confront neoliberalism in the fisheries sector might best understand neoliberalism given its shifting forms and tendency to recruit grassroots action to promote its ends. How do participants in small-scale fisheries understand and pursue alternatives to dominant regimes shaping coastal economies today, and how might this influence academic analysis of neoliberalism?

Managed annihilations and alternatives in North American fisheries: scientific constructs, industry and the vernacular

Dean Bavington

Memorial University

This paper begins by tracking the scientifically managed destruction of world fisheries. Emphasis is placed on the scientific representation of fish as populations, fisherman as rational economic actors, and the ocean as enclosed property. This is followed by an explanation of the proposed scientific resurrection of depleted wild fish populations as domesticated species, and the transformation of the fisherman into a professionalized harvester who culls biomass from enclosed ocean spaces. Beginning at the end of the nineteenth century, knowledge about European fisheries dramatically changed. Natural history and qualitative descriptions of fish morphology shifted toward a demographic paradigm focused on the quantitative analysis of large aggregates of fish represented as statistical populations. By the end of the 20th century harvesting fish populations to produce maximum sustainable yields had become an institutionalized goal within fisheries management worldwide. This paper traces how the demographic paradigm and the maximum sustainable yield construct transformed fish, fishermen and practices of fishing around the world. It argues that to begin to understand small-scale fisheries appropriately one must gain distance from these scientific and industrial constructs and pay close attention to how small scale fisheries ought to be conceived and discussed. At the turn of the nineteenth century, after 50 years of financial support and encouragement from merchants, governments and fishery investors for a variety of European fisheries scientists, Prussian biologist Friedrich Heincke produced a statistical technique allowing the identification of single-species fish populations. By the 1930s the scientific world had adopted Heincke's demographic approach as the central paradigm of scientific fisheries research. The demographic paradigm empowered fisheries investors and scientists who could master statistical technique, but marginalized fisher people and their diverse vernacular fisheries. It also marginalized empirical knowledge about fish biology, life history traits, and behaviour in favour of aggregated statistical data on idealized single-species populations. The idea that single-species fish populations could produce maximum sustainable yields (MSY) that could be calculated in advance through fisheries models developed after World War II and shaped thinking around how global fisheries were to be organized and developed. It is both tragic and ironic that just as scientists were critiquing MSY, the scientific construct was legally embraced and codified into the United Nations International Law of the Sea. While fisheries science is presented as a neutral descriptive activity, I argue that it has fundamentally transformed fisheries worldwide and must

be critically interrogated in order to understand small-scale fisheries in ways that allows for politicization as opposed to further failed moral or managerial approaches. The idealized mathematical abstractions that form the foundation of scientific fisheries management have proven themselves deadly for fish and fishing people. To solve this tragic history, I will be arguing that empirical observations of real fish by fishing people, what Ivan Illich calls, “the vernacular” must serve as the foundation for how fisheries are studied and organized rather than universalized scientific constructs tied to imagining fishing as a scalable industry.

Ode to the Congrio fishery

Nicolas Talloni Alvarez, Mimi E. Lam and Tony J. Pitcher

University of British Columbia

Fisheries in Chile have followed similar right-based management schemes as in developed countries, such as Iceland, New Zealand, the United States and Canada. The pink cusk-eel fishery (popularly known in Chile as Congrio dorado), a type of kingklip, is a fully exploited species which is under ITQ management. The global export market has driven intensive rates of exploitation for the pink cusk-eel, creating tension between the large- and small-scale sectors of this high-commercial-value fishery. Thus, every year, the Chilean government faces strong pressure regarding the distribution of quotas among industrial and artisanal fishermen for this and other fully exploited species in Chile. This paper describes the current status of the pink cusk-eel fishery, focusing on the tension between artisanal and industrial fishermen due to differences in exploitation, management policies, political influences and power distribution. The overall sustainabilities of the large- and small-scale sectors of this fishery are compared using Rapfish, a semi-quantitative rapid appraisal technique. This work highlights some of the challenges and opportunities faced by small-scale fisheries as they compete with industrial fish.

True cost of closing the ground fish fishery in Newfoundland

Gabriela Sabau and Michael Van Zyll De Jong

Memorial University

Current fisheries policies in Newfoundland, redefined after the Cod Moratorium of 1992, focus on stock conservation, economic efficiency and global competition. This focus has had serious consequences for the economic and social sustainability of the in-shore fisheries which are the backbone of coastal communities as they “support social worlds that are much more than just the extraction of fish and marine resources” (Berkes et al., 2001). The in-shore fishery was restructured as a shellfish fishery but is still heavily subsidized, bringing low incomes and a modest contribution to the province’s GDP (Schrank, 2005). This paper argues that the fisheries policies in Newfoundland since 1992 geared toward saving individuals within the fishing industry and oblivious to sustainability of fishing communities have had immense costs for the province of Newfoundland, manifested as demographic loss, income insecurity, and under-employment. We propose to assess these costs mainly related to the in-shore fishery by using

elements of the theoretical model provided by the Genuine Progress Indicator project (Costanza et al., 2004).

Day 2: Small-scale fisheries issues and alternatives to neoliberal approaches

A British Columbia groundfish licence bank: supporting sustainable small boats in the face of corporate concentration and market failure

Danielle Edwards

University of British Columbia

Rights based management approaches, such as individual transferable quotas (ITQs) and catch shares, have become an assumed "best-practice" for fisheries. There is increasing evidence, however, that these approaches can create as many or more problems than they solve. A major challenge, in light of more than 20 years of the movement towards rights based management, is the case of fisheries with well-established ITQ systems. The BC groundfish fishery is a good example of this, with ITQs implemented in the major fisheries of sablefish, halibut and trawl between 1990 and 1997. Recognizing the seemingly inevitable movement of quota to corporate interests, due to factors such as market control and access to capital, a BC licence bank was established in 2006, at the time of groundfish integration, by a group of groundfish fishermen partnering with a not-for-profit organization dedicated to building a conservation economy in coastal British Columbia. The partnership was predicated on the conviction that sustainable fisheries require sustainable fishing fleets embedded within healthy communities, and that small boat owner operator fleets using lower impact gear are a more sustainable option than a large boat corporate fleet. The licence and quota bank provides a means for a collective of independent owner operators to jointly invest in quota that they can then access for their fishing operations. While small, and limited in scope, this quota bank pre-dates many of the larger licence banks now in place in the Eastern United States, and has established a successful track record from which lessons can be learned.

A political ecology of fishing alternatives: varieties of access, property rights, and development paths in Canadian shrimp fisheries

Paul Foley, Charles Mather and Barbara Neis

Memorial University

This paper examines how small-scale fish harvesters and community-based groups were able to gain access to and benefit from Northern shrimp (*Pandalus borealis*), a shellfish with significant populations from the Gulf of Maine to the waters between Baffin Island and Greenland. Canada's Northern shrimp fishery refers to the capture of *Pandalus borealis* in areas between the east coasts of Newfoundland and Baffin Island. The current Northern shrimp fishery initially developed through a period of 'Canadianization' from 1977-1991, when the Canadian government allocated 17 licenses to East Coast interests to develop an offshore factory freezer

trawler fleet that operated mainly in northerly areas. At the outset of this phase, private corporations with processing capacity received five licenses, fishing cooperatives with processing capacity received three licenses, and community and regional-based groups that established new organizations to hold licenses were granted four licenses. Following the collapse of cod and the growth in Northern shrimp stocks in more southerly areas in the 1990s, the Canadian government allocated more than 300 permits to small-scale inshore harvesters in Newfoundland and Labrador and distributed a series of Special Allocations to various community groups and regions for economic development purposes. This paper highlights various types of resource access and development paths that evolved in Canada's Northern shrimp fishery, focusing on three regions of Newfoundland and Labrador: Southeast Labrador, the northern tip of the Northern Peninsula, and Fogo Island. We found that shrimp allocation policy guided by the principles of adjacency and regional economic development goals facilitated the establishment of two innovative regionally based fishing organizations in Southeast Labrador and the Northern Peninsula, and the consolidation of a third existing fishing organization on Fogo Island. The three organizations are differently constituted and structured, but all were geared towards enhancing regional development opportunities. Each organization used relatively small shrimp quotas productively for regional development purposes. Practically, the cases illustrate how fisheries policies that clearly allocate resources to community and regionally based organizations can significantly enhance coastal development outcomes. Theoretically, the cases demonstrate how state policies, social relations, geographic scales, and institutions can interact to produce multiple forms of resource access, property rights, and development paths even within a 'single' fishery.

Foregone harvests: opportunities for local, community-based fisheries to improve economic conditions and provide culturally appropriate employment in southern Alaskan villages

Steve Langdon

University of Alaska Anchorage

Neoliberal policies of effort limitation and privatization have reduced commercial salmon and other fishing opportunities available to the coastal, predominantly Alaska Native, villages of southern Alaska. However, there are a variety of circumstances, including the manner in which the current commercial fishery is prosecuted, that lead to surpluses of unharvested salmon, and potentially other species, available in certain areas. This paper will discuss the circumstances that lead to "foregone harvests" and the possibilities such conditions create for the development of small-scale, local and community-based fisheries. Case studies of possible Huna Tlingit and Kaigani Haida salmon fisheries will be presented. These examples will demonstrate how such fisheries could be built on local and traditional knowledge, as well as currently used subsistence technologies resulting in new economic opportunities compatible with local cultural patterns and interests and buttressing local identities and commitments.

Customary trade: non-market fishing economies on the Yukon River, Alaska

David Jenkins

Federal Subsistence Management Program, Fisheries Resource Monitoring Program

People who live along the Yukon River in Alaska eat subsistence caught fish, but they also sell it outside of the market economy, which has caused no end of confusion and ebate, and considerable anxiety—for both Natives and non-Natives. The confusion stems from the coexistence of different kinds of economies. The debate emerges between those who recognize only a Western market economy as legitimate, and those who continue to practice traditional economic exchanges for which supply and demand, competition, cost/benefit calculations, and other market forces are irrelevant. Both sides fail to understand that modern economies, especially at the peripheries of the capitalist system, are never monolithic; they are always mixed. The anxiety derives from the fact that certain fish stocks are in sharp decline, with Yukon River Chinook salmon at the top of the list. The consequences of the decline are cultural, economic, and environmental—categories that remain difficult to tease apart with any precision, providing additional layers of confusion, debate, and anxiety. This paper analyzes how and why a non-market economy founded on subsistence caught Chinook salmon has become the object of increasing regulatory pressure

Fishing down the river: exploring the changing realities of artisanal fisheries in the St-Lawrence River

Sabrina Doyon

Université Laval

Artisanal commercial fisheries in the St-Lawrence River are in a critical condition. The fishing grounds, permits, and number of fishermen are decreasing since the 1950s. The eel and Atlantic sturgeon fisheries are exemplary in this regard. Fished all the way up to the Ontario Lake until the 1950s, they have now disappeared from the fluvial seaway between the Great Lakes and the Middle Estuary. While the sturgeon, a high economic value species, has been monitored, researched, and the object of protection measures allowing it to still be commercially fished in the St-Lawrence - the only place left in the Atlantic - the eel, on the other hand, has had a different fate. This fishery has been the object of various policies aiming its dismantling since the 1950. There are two main justifications to these measures, and the consequent withdrawal of government investment in this activity: it's artisanal character, the governments want to develop efficient and technologically advanced fisheries, and it's low economic value. Recently, biologists have also warned against a dramatic decrease in the eel population, insisting on implementing urgently protecting measures, which led to a massive buying back of fishing permits by the government. The great differentiation between the 3 main types of eel fisheries (elvers, yellow and silver) challenged the negotiation leverage of the Quebec's eel fishermen association and has favoured the policies' implementation. Therefore, the number of permits has gone from 1100 in 1960 to 27 in 2009. However, as eel and sturgeon fisheries seem to disappear,

new local fish markets enthusiasts are advocating for a reconnection with those “traditional” species, activities, tastes, and practices, local festivals are held, and an ecotouristic economy is developing around the eel fishery landscape, while the Asian markets are aggressive to get this product, fuelling hopes of the St-Lawrence artisanal fishermen. These are but two examples of the challenges facing artisanal fisheries in the River and the Estuary. Thriving from various ethnographic accounts and with the help of a historical lens, this paper will reflect on the diverse strategies these and other artisanal fisheries are adopting in the St-Lawrence, the changing policies affecting them since the 1950s, and their socio-economic, environmental and political consequences in a neoliberal context.

Sturgeon aquaculture and rural livelihoods: an ethnographic study of conservation-as-development in Canada

Jaime Yard

University of Victoria

Through my doctoral research with logging and fishing families on the Sechelt Peninsula of British Columbia I developed an interest in how occupation related environmental stewardship activities articulate with broader provincial, federal and international socio-economic and policy changes. What kinds of environmental knowledge and ethics are generated from extraction labour in place over time? In my field site accounts of love of rural life and nature were near ubiquitously paired with stories of knowledge and skill gained through work. Often the accounts that I was offered of entrepreneurial ventures undertaken to secure a living in place seemed prescient of current neoliberal ideology that suggests rural residents must innovate or vacate. However, historical and contemporary forms of innovation can often be distinguished by the shift from volume-driven fisheries and logging to the pursuit of value-added niche commodities most-often destined for foreign markets and the conjoining of economic and environmental sustainability goals. In this paper I present a preliminary framework for considering and positioning the domestication of endangered sturgeon for caviar production in British Columbia and New Brunswick as a strategy for securing sustainable environmental and economic futures in place. I will position these small-scale capital intensive conservation/commodity-development ventures within a longer history of rural economic development and nature conservation in Canada.

Lumpers vs splitters: aggregate pressures on First Nations fishing rights

Caroline Butler¹ and Bruce Watkinson²

¹*University of Northern British Columbia and* ²*Gitxaala Environmental Monitoring*

First Nations in Canada, such as the Gitxaala Nation of northern coastal British Columbia, are actively seeking recognition of their jurisdiction over marine territories, and their rights to manage, harvest, and benefit from marine resources. Aboriginal fishing rights are protected in the Canadian Constitution, and these rights are recognized by the Department of Fisheries through a

number of co-management structures and governance agreements. The “government to government” relationship between the federal fisheries regulatory structure and First Nations in BC is however, increasingly one of proxy and regional representation. There is a powerful force of consolidation and aggregation at work on the expression of First Nations fishing rights which works to restrict the authority and jurisdiction of individual coastal nations. The sovereignty implied in the exercise of Aboriginal fishing rights is eclipsed by the aggregate approach to the expression of First Nations concerns and articulations of management priorities. This paper explores the ways in which participation in aggregate co-management structures and regional-level marine planning limits expressions of sovereignty.

When seals are fish: Gitxaala contemporary seal fishery

Charles Menzies

University of British Columbia

For many urban North Americans and western Europeans seals are anthropomorphized and represented as infant-like. Seals are, for these non-Indigenous people, one of a prestigious set of green icons in the arena of animal rights struggles. For Gitxaa³a people, however, seals are food. More a fish than cuddly icon, seals form a critical component of the diet of Gitxaa³a people living in the traditional home village. This paper documents and describes the contemporary Gitxaa³a seal fishery within its own historical and social context.

Tipping the Scale Away from Privatization and Toward Community-Based Fisheries: Policy and Market Alternatives in New England

Brett Tolley

Community Organizer Northwest Atlantic Marine Alliance

In New England a key fisheries policy is currently being debated which may safeguard smaller scale fishermen and foster a more diverse fishing fleet. Learn how fishermen, academics, scientists, food advocates and others are organizing to advance policy and transform local markets at the same time.

Privatizing the environmental and social costs of fisheries

Mimi Lam

University of British Columbia

I have proposed that a harm principle should be introduced in fisheries management and policy to reduce the environmental harm caused by fisheries. Here, I explore this concept further, focusing on how the harm principle privatizes the environmental and social costs of fisheries. By requiring the fishing industry to pay for the privilege to fish, via both access fees for the opportunity to catch fish and extraction fees for the fish caught, private enterprises that benefit

from public fishery resources would also bear the costs of their exploitation. If combined with a progressive environmental tax, the access and extraction fees can discourage overcapitalization and overfishing, respectively, and thus favour sustainable small-scale fisheries. To strengthen this proposal in fisheries, I will discuss examples of where such user fees have been implemented for private access of public resources, including water, trees, and parks.

Day 3: Spatial planning and well-being of SSF

Spatial modeling to assess the risk of bycatch of marine mega-fauna in small-scale fisheries

Ellen Hines (NAM RC)¹ and Rebecca Lewison²

¹*San Francisco State University and* ²*San Diego State University*

The incidental capture, or bycatch, of marine megafauna is a problem with global implications. Bycatch rates can be especially difficult to quantify in developing countries, where there are substantial knowledge gaps in the distribution and intensity of fishing effort, incidence of species interaction, and sustainable bycatch mitigation strategies. The dugong (*Dugong dugon*) is an IUCN listed vulnerable species of marine mammal found from the eastern coast of Africa to the western Pacific and is highly susceptible to small-scale fisheries bycatch. To address these knowledge gaps, we used existing survey and fishing effort data to spatially characterize the risk of bycatch for this species. Our approach involves habitat modeling to first identify dugong habitat and then evaluate habitat distribution relative to coastal fishing effort maps. With the northern state of Sabah, Malaysia as a case study, we compared presence-only modeling techniques to identify habitat associations of dugongs using maximum entropy and Mahalanobis distance methodologies based on sightings data from previously published studies and a number of geophysical parameters, including depth, distance from coast, solar radiation, and “openness.” Split-sample iterations of the MaxEnt model consistently show that distance from coast is the highest-contributing variable to dugong presence. The Mahalanobis distance model showed sighting locations to be more closely related to depth, a variable correlated to distance from coast. These results will be combined with previously published fishing effort maps of this area to develop a predictive bycatch risk surface that can inform conservation management strategies in the future. Our analyses fill an important knowledge gap for our case study area and also provide a template for how sightings data can be used to facilitate conservation action.

Social-ecological resilience in small-scale fisheries in Monterey Bay, California

Stacy Aguilera, Kenny Broad University of Miami, John N. Kittinger, Rebecca Martone, Elodie Le Cornu

Center for Ocean Solutions, Stanford University, Stanford

Monterey Bay has a long dynamic history of fishing activities at all scales. This study examines the long-term social-ecological dynamics of small-scale fisheries (SSF) in this productive central California region and characterizes elements for SSF sustainability. Our interdisciplinary approach will explore multiple dimensions (ecological, biophysical, social, cultural, economic) of SSF in this region, using the Ostrom social-ecological system (SES) framework to characterize long-term SES dynamics in a case study approach. In particular, we are interested in

the social-ecological linkages that have initiated ecological recovery in this region, and how transformations in this system have enabled sustainability. Key SSF fisheries in this region include salmon and albacore troll fisheries, groundfish (e.g. halibut, sole, sablefish) trap and line fisheries, squid and ‘wetfish’ (sardines, anchovies) fisheries, and crab and spot prawn trap fisheries. We will gather extensive historical social and ecological datasets, using the Ostrom SES framework to identify the key attributes of each fishery and how specific variables in the framework have changed through time. These attributes include aspects of governance and management systems, resource user communities (social and economic organizational attributes), and ecological and biophysical attributes of the fishery, with the overarching goal to gain insights that can be applied to the sustainable management of SSF. Findings will be assembled into a model able to be used to evaluate any SSF case study as well as allow other communities to incorporate key characteristics into their own systems and foster co-development strategies. This project aims to bring SES and SSF research frontiers into new, critical areas, and in particular toward areas with real-world relevance to management and policy.

Developing indicators of wellbeing for small-scale fishing communities

Sarah Breslow

NOAA Seattle

This paper will critically reflect on an emerging agenda to develop quantifiable indicators to track “human wellbeing” with respect to marine and coastal management. Contributing to a worldwide trend, in 2010 US agencies were directed to manage ocean and coastal resources according to the principles of ecosystem-based management (EBM) in which ecosystems are broadly defined to include human drivers and social conditions in addition to biophysical factors. Faced with uncertainty as to how to account for “human dimensions” in ecosystem models and management plans, NOAA scientists have proposed the “integrated ecosystem assessment” (IEA) as a systematic and socially inclusive way to analyze the numerous social and ecological variables that must be considered in EBM. An IEA measures multiple indicators of the ecosystem’s social and biophysical conditions and analyzes their changing values under different drivers, stressors, and management strategies. “Indicators” are quantifiable attributes of a system that are periodically measured and reported to track the changing condition of a system, and to structure dialogue and inform decision-making. Social scientists charged with developing meaningful indicators of human wellbeing face the challenge of determining indicators that adequately account for local, potentially variable definitions of well-being, yet also gain credibility with scientists and managers working at much larger scales of governance. In this paper I will discuss the early stages of developing indicators of wellbeing for small-scale fishing communities of Washington State, with particular attention to tribal fisheries. I look forward to the guidance and insight of workshop participants.

Variations in fisheries performance: an integrated social, economic, and ecological perspective from Baja California, Mexico

Rebecca G. Martone, Bonnie McCay, Laura Gonzalez, Sergio Guzman del Proo, Salvador Lluch-Cota, German Ponce-Diaz, Mario Ramade Villanueva, Elisa Serviere-Zaragoza, Geoff Shester, Saudiel Ramirez, Courtney Abshire, Chris Costello, Alison Haupt, Wendy Weisman, Jim Wilson

Hopkins Marine Station Stanford University

Monterey Bay has a long dynamic history of fishing activities at all scales. This study examines the long-term social-ecological dynamics of small-scale fisheries (SSF) in this productive central California region and characterizes elements for SSF sustainability. Our interdisciplinary approach will explore multiple dimensions (ecological, biophysical, social, cultural, economic) of SSF in this region, using the Ostrom social-ecological system (SES) framework to characterize long-term SES dynamics in a case study approach. In particular, we are interested in the social-ecological linkages that have initiated ecological recovery in this region, and how transformations in this system have enabled sustainability. Key SSF fisheries in this region include salmon and albacore troll fisheries, groundfish (e.g. halibut, sole, sablefish) trap and line fisheries, squid and ‘wetfish’ (sardines, anchovies) fisheries, and crab and spot prawn trap fisheries. We will gather extensive historical social and ecological datasets, using the Ostrom SES framework to identify the key attributes of each fishery and how specific variables in the framework have changed through time. These attributes include aspects of governance and management systems, resource user communities (social and economic organizational attributes), and ecological and biophysical attributes of the fishery, with the overarching goal to gain insights that can be applied to the sustainable management of SSF. Findings will be assembled into a model able to be used to evaluate any SSF case study as well as allow other communities to incorporate key characteristics into their own systems and foster co-development strategies. This project aims to bring SES and SSF research frontiers into new, critical areas, and in particular toward areas with real-world relevance to management and policy.

Recreational fisheries in developing countries: identification of knowledge gaps and management priorities

Shannon Bower¹, Steven J. Cooke¹, Øystein Aas², Robert Arlinghaus^{3,4}, Douglas Beard⁵, Ian G. Cowx⁶, Andy Danylchuk⁷, Katia Freire⁸, Warren Potts⁹, Stephen Sutton¹⁰

¹Carleton University, ²Norwegian University of Life Sciences, ³Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), ⁴Humboldt University of Berlin, ⁵United States Geological Survey, ⁶University of Hull, ⁷University of Massachusetts Amherst, ⁸Universidade Federal de Sergipe, ⁹Rhodes University and ¹⁰James Cook University.

Recreational fisheries are growing swiftly around the world. Estimated to account for as much as 12% of the total annual global harvest, recreational fisheries already represent the dominant use of fish stocks in the inland fisheries of industrialized countries and have overtaken commercial fisheries in areas such as the Brazilian Pantanal. Currently, little is known about recreational fisheries in developing countries, though research indicates that they are growing

rapidly and that these regions may be more sensitive to ecological and economic changes occurring via growth in this sector. While recreational fisheries contribute an estimated \$39.7 billion dollars a year to the global economy and benefit local economies through increased employment, direct and indirect expenditures, there are significant biological and sociological risks posed by sector development that need to be addressed. Overfishing, genetic effects, invasive species, changes to populations and ecosystems, as well as issues of gender, governance and cultural conflict surrounding angler behaviour have all been identified as concerns in the growth of recreational fisheries. In an effort to create a global view of the sector, we conducted a survey of fisheries managers in developing countries that was designed to identify knowledge gaps and management needs surrounding recreational fishery growth in addition to gathering information on specific fishery attributes. Knowledge generated by the survey in these key areas will help to clarify the magnitude of the sector, facilitate the development of pro-active growth strategies for these fisheries and contribute valuable information to support sustainable fisheries management.

Power and perspective: marine renewable energy development and small-scale fisheries

Carrie Pomeroy and Madeleine Hall-Arber and Flaxen Conway

MIT Sea Grant Program

Marine renewable energy (MRE), a relative newcomer to the ocean and coastal context, poses particular challenges to coastal fisheries and fishing communities. State and federal agencies with primary oversight for MRE have focused on the identification of places where MRE might proceed unhindered by other uses, most notably coastal fisheries. These agencies and MRE developers have focused on potential space-use conflict and standard mitigation measures for loss of access to that space. However, discussions with fishery participants and other community members, and observations of processes on the US west and east coasts, reveals the need for a more nuanced consideration of these areas. Marine space use is dynamic and multi-dimensional, with important linkages within and across fisheries, communities and other interests, as well as across the land-sea interface. Results of our recent ethnographic research on potential space-use conflicts and mitigation for MRE illustrate this phenomenon and demonstrate the weak position of fishing communities in marine spatial planning in general and in the context of MRE development in particular. This paper will provide comparative analysis of the implications of MRE for US east and west coast fisheries and fishing communities while considering the sociocultural, economic and political context of the regions' small-scale fisheries and associated communities. It then will identify the ways in which fishing communities have sought to rise to the challenges posed, the outcomes of these efforts, and opportunities that may lie ahead for them.

LIST OF PARTICIPANTS

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CONFERENCE LOGISTICS

VENUE

The meeting will be hosted at the University of British Columbia (UBC) in the AERL 107 room.

UPLOADING PRESENTATIONS

Presenter planning to use PowerPoint files will be able to load their presentation to the designated laptop prior to their sessions. Please bring all files on a flash drive.

FROM THE AIRPORT TO UBC

Public transit: there is no direct bus service from the Airport, but the Airporter Shuttle and public transit will take you downtown. Take the #4 or #17 bus from Howe Street downtown. The trolley bus loop on campus is located in front of War Memorial Gym, approximately a 3 minute walk from The Gage Towers.

Another option is to take the Canada Line sky-train (Translink: <http://www.translink.ca/>) to Oakridge/41st Avenue Station. Exit the station and cross 41st Ave. to get to the north side of the street where you can take the #43 UBC Express bus. The bus end stop is at the UBC Bus Loop.

Taxi: Black Top (+1 (604) 731-1111) and Yellow Cab (+1 (604) 681-1111) are taxi companies that provide transportation services to and from the airport. The trip will cost approximately \$25-35, and takes about 30 minutes.

ACCOMODATIONS AT UBC

The Gage Tower are located at: 5959 Student Union Blvd., Vancouver, BC Canada V6T 1K2.

Walter Gage Residence at UBC (<http://www.housing.ubc.ca/walter-gage/overview>) offer a private bedroom with single bed in a six-bedroom shared apartment. Guests share a washroom, lounge with flat-panel TV, breakfast bar and kitchen (not equipped with dishes, cookware, etc.). Housekeeping service will include beds made daily, towels changed daily, and linen changed weekly.

Check-in time is 3:00 PM; check-out time is 11:00 AM. Guests staying in their rooms beyond the check-out time without authorization from The University of British Columbia will be charged for an additional night.

The Gage Tower are 3 min walking distance from the UBC Bus Loop. From the bus station walk north towards the three 17 storey, grey concrete towers.

DRESS CODE

The dress code for the workshop is smart casual.