

# FISH BYTES

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## FIMAR: who we are and where we have been?

By Sarah Harper, Anna Schuhbauer, Haley Milko, Jennifer Selgrath, Eric Angel and Neil Ladell



*Students from UBC and SFU participate in a FIMAR meeting discussing the newly adopted International Small-Scale Fisheries guidelines (Courtesy: S. Harper).*

Two years ago, Fisheries Centre students Danika Kleiber and Sarah Harper decided to form a small-scale fisheries research group. With its start at the University of British Columbia, the group has expanded to include researchers from Universities across Canada, and took on the name FIMAR (FIsheries at the MARgins) in 2013.

The group was founded to foster collaboration and peer support for students and early career scientists interested in the human aspects of fisheries. The research focus lies in small-scale fisheries, which are often marginalized geographically, politically, and socially from policy-making and therefore need to be given special attention. Hence the name of our group, which highlights the fact that research is urgently needed to elevate the profile of small-scale fisheries and reduce their marginalization. The field of small-scale

fisheries requires interdisciplinary research and our group aims to provide a platform for dialogue amongst researchers with many different backgrounds. We work in diverse geographic contexts and with an array of intersecting topics including economics, food security, governance, gender, indigenous fisheries and marine ecology.

In addition to monthly meetings discussing a range of small-scale fisheries topics, FIMAR members have been

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- **Fishing at the margins around the world**
- **A transdisciplinary academy in Oregon (USA)**
- **And as usual, plenty of News and Notes**

taking flight, attending conferences and making new small-scale fisheries connections around the world. Reporting back from these conferences, here are some of the highlights from FIMAR members who attended the International Marine Conservation Congress (IMCC) in Glasgow (UK), the 2<sup>nd</sup> World Small-scale Fisheries Congress in Merida (Mexico), and the Canadian Fisheries Research Network (CFRN) meetings in St. Andrews, New Brunswick.

First, we flew to Glasgow (UK) to take part in the IMCC, where FIMAR member Jennifer Selgrath organized a symposium and focus group exploring effective approaches for management and conservation to make small-scale fisheries more sustainable in the >99% of the ocean that remains "unprotected" by MPAs. Some of the main themes that emerged included the importance of starting conservation programs with clearly articulated goals that integrate local and scientific knowledge and values. Participants agreed that it is also important to consider the local culture's relationship to their fishing practices, which often include both social and financial arrangements. For example, fishers may prefer fishing with specific gears and such preferences are important to understand.

Our next stop was Merida (Mexico), the site of the 2<sup>nd</sup> World Small-scale Fisheries Congress hosted by the *Too Big to Ignore* research partnership (<http://toobigtoignore.net>). The conference kicked off with several workshops, including a Student Forum to bring students together, share ideas and build connections. The Forum was organized by students from Barbados, Mexico, USA and Canada (including FIMAR members Neil Ladell, Haley Milko and Anna Schuhbauer). The day was packed with two interactive workshops and a career panel. The first workshop 'Learning to effectively communicate in interdisciplinary research' revealed through a series of exercises that students from diverse disciplines did not run into major difficulties communicating with each other, highlighting that interdisciplinary thinking in research among students is not uncommon. In the second workshop, 'Better together', members of five different student groups shared their challenges and accomplishments and a lively discussion emerged about the benefits of student groups. Furthermore, a 'living document' on best practices in small-scale fisheries research is being developed online as a result of the workshop for use by students around the world. The final component of the Forum was a career panel, where four early career scientists talked about their diverse experiences in small-scale fisheries research, showing students what opportunities exist and what to consider when seeking a career in this field (a video of the panel will soon be published online).


In addition to organizing and taking part in the Student Forum, several FIMAR members also gave presentations at the Congress, spanning numerous topics such as economic

viability (Anna Schuhbauer), gender equality (Sarah Harper) and the governance of aboriginal clam fisheries in British Columbia (Neil Ladell). These presentations were all well received and provided an excellent platform for connecting with fishers, researchers and NGOs attending the conference. The conference included 450 participants from over 50 countries, representing almost all the regions of the world and a diverse set of interests related to small-scale fisheries.

Our last stop was Canada's east coast, where FIMAR members Eric Angel and Anna Schuhbauer participated in a lively four days of presentations, focus groups and discussions. The occasion was a meeting of Project 1.1 of the CFRN, home to the research network's social scientists. There were two main topics: a roll-out of the comprehensive evaluation framework for sustainable fisheries that students from the CFRN have been working on, and a discussion of training needs for fisheries management in Canada from multiple perspectives, including industry, civil society, academia, and government. While small-scale fisheries are far from the only type of fishery represented in the CFRN, they are vitally important to many coastal communities in Canada, a point that was emphasized many times during the discussions.

Feedback from the diverse group of 40-or-so participants was tellingly positive: a fishing industry representative from New Brunswick immediately saw opportunities for applying the framework within her organization as a way to better articulate the interests of small-boat fishermen when dealing with the management authority; a government manager from British Columbia identified several ongoing projects within his agency where he wanted to use the framework to improve consultation processes in the small-scale fisheries he was dealing with; an east coast academic took one of the student organizers aside to point out the subversive qualities of the framework in the way it gave a voice to marginalized groups and undermined the top-down authoritative structure typical of this kind of work.

FIMAR continues to meet regularly (once a month) to provide peer support and engage in discussions, with different themes each meeting and/or presentations from members or guest speakers. A website is currently being developed but, in the meantime, if you would like to find out more or become involved, e-mail: [fimar.network@gmail.com](mailto:fimar.network@gmail.com) and we will add you to our mailing list. Furthermore, we have been active in organizing a Google group to connect international student group leaders, and will be founding part of the *Too Big to Ignore* student network.

Stay tuned for more information and activities related to small-scale fisheries research 



# Transcending disciplines: three academics learn what it takes.

By Andrea Haas, Catarina Wor and Eric Angel



Members of the Transdisciplinary Academy giving the 'iron claw' salute. Photo, from left to right: Catarina Wor, Andrea Haas, Kathryn Sobocinski, Nadine Heck, Lorenzo Ciannelli, Michele Barnes-Mauthe, Eric Angel, Karly Miller, Elizabeth Clark, Saskia Otto, Sarah Klain, Kelli Johnson, Staci Lewis, Victoria Ramenzoni, Sarah Simons, Joshua Stoll, and Ana Spalding (Courtesy: A. Haas).

From August 25<sup>th</sup> to September 5<sup>th</sup>, a group of graduate students and post-doctoral researchers gathered at the Hatfield Marine Science Centre in Newport, Oregon, to participate in the Transdisciplinary Academy in Marine Resource Sustainability (TAMRS), hosted by Oregon State University.

The course, organized by Lorenzo Ciannelli and Kathryn Sobocinski, was designed to give emerging academics the tools and understanding to work in an increasingly mixed-disciplines world, and to use these tools and work together to solve our 'big picture' challenges in fisheries and marine resources. 'Transdisciplinary' is different from 'interdisciplinary' and 'multidisciplinary', in that transdisciplinary work requires the most integrated level of collaboration on problem definition, shared methodologies, and policy solutions, rather than each discipline working in parallel on a common problem.<sup>1</sup>

Andrea (a fisheries economist) and Catarina (a quantitative fisheries scientist) both hail from the University of British Columbia's Fisheries Centre, and Eric (a social scientist) is from Simon Fraser University's School of Resource and

Environmental Management. What drew us together initially was the Canadian Fisheries Research Network (CFRN), a partnership of academics, government scientists and managers, and fishing industry members, with the shared goal of enhancing research capacity in Canadian fisheries (see [www.cfrn-rcrp.ca/CFRN-RCRP](http://www.cfrn-rcrp.ca/CFRN-RCRP)). Although each of us had experience in collaborating with different stakeholders in fisheries management, learning deeper collaboration and transdisciplinary approaches was a unique opportunity. When the chance to apply to TAMRS arose, we jumped on it.

TAMRS was borne out of "a fundamental divide between educational programs that focus on knowledge generation and those that focus on professional development",<sup>1</sup> which the authors note is creating a communication gap between resource managers and scientists. "Ultimately, transdisciplinary graduate education programs need not only to bridge the divide between disciplines, but also between types of knowledge".<sup>1</sup>

The two week long course was designed to allow participants to learn different disciplinary perspectives in marine resource issues, recognize the difficulties and explore strategies for overcoming challenges in cross-disciplinary interactions, develop and maintain professional relationships with peers from other disciplines, and lastly, carry out a transdisciplinary project on marine resource sustainability. Participants were permitted to apply with a

<sup>1</sup> Ciannelli L, Hunsicker M, Beaudreau A, Bailey K, Crowder LB, Finley C, Webb C, Reynolds J, Sagmiller K, Anderies JM, Hawthorne D, Parrish J, Heppell S, Conway F and Chigbu P (2014) Transdisciplinary graduate education in marine resource science and management. *ICES Journal of Marine Science*, 71(5): 1047–1051.

project, or take up an assigned project once accepted at the academy. We decided to apply with a project that drew on the strengths from our respective CFRN research projects: a bioeconomic model for the gillnet salmon fisheries on the Skeena river system in northern British Columbia (Canada).

Other projects included spatially explicit bioeconomic models for mixed stocks, assessment of effort drivers in catch shares fisheries, comparison of economic and ecological outcomes of catch shares, and even an evaluation of the transdisciplinary research approach itself.

The time at the academy was also filled with incredible guest speakers, such as Larry B. Crowder (Center for Ocean Solutions, Stanford University), and Marty Anderies (Arizona State University), as well as many lectures on bioeconomics, institutional structures, and fisheries management from different organizations such as the US National Oceanic and Atmospheric Administration, its National Marine Fisheries Service, as well as Canada's Department of Fisheries and Oceans.

On the weekend (between our two working weeks), the participants were treated to a camping trip to Mount Bailey and Crater Lake. Mount Bailey proved to be a gruelling hike, but the trip to Crater Lake afterwards removed any thoughts of aching legs from the participant's minds.



*The authors at Crater Lake, fostering collaborative relationships for future research. From left to right: Andrea Haas, Catarina Wor, and Eric Angel (Courtesy: A. Haas).*

The most fruitful collaborations often take place far from the offices and computers, and true to that, the collaboration amongst several participants to re-write the Eagle's 'Hotel California' as a TAMRS-themed rendition provided laughter for everyone.

So, what did we take away from our experience at TAMRS? Well, a lot actually. This learning experience showed us that transdisciplinary research is often much harder than it seems. Having a common language and understanding of the research problem to be addressed emerged as one challenge that collaborative researchers need to overcome. As well, a dominant methodology will often emerge to address the research question, and both natural and social scientists must be able to relinquish the ideology that their discipline has the 'right' way to tackle a problem. Rather, transdisciplinary collaborations require finding the complementarity in their respective disciplines that allow them to tackle the 'big picture' problems in a holistic fashion. Transdisciplinary research also takes much longer than expected, largely due to the many iterations required in these processes of problem definition, methodological agreement, and policy implication.

Overall, the response from participants going forward was overwhelmingly in favour of transdisciplinary research, despite the hurdles. Participants felt that transdisciplinary collaboration was the new frontier where scientists, managers, and stakeholders will overcome some of the biggest questions of our time. However, as Ciannelli *et al.* noted in their paper,<sup>1</sup> there has been institutional inertia in universities in promoting this concept. While some universities are beginning to foster graduate education in interdisciplinary programs, the incentives for collaborative endeavours and job prospects for those who undertake them (particularly at the tenure track level) are sparse.<sup>2</sup> Ciannelli *et al.* liken our disciplinary 'bubbles' to mastering certain cuisines in the kitchen, but being unable to collectively cook a gourmet meal.

So, perhaps the momentum for transdisciplinary research will be a grass-roots movement. Managers, stakeholders, and certainly the academy participants and organizers, all embrace the concept of this deep level of collaboration and cooperation. Professional relationships were fostered at this academy that will serve all of us well in this new frontier.

As one anonymous participant remarked: "I'm completely sold on doing all work with other people". So let's get cooking 🐟

<sup>2</sup> Rhoten D and Parker A (2004) Risks and rewards of an interdisciplinary research path. *Science* 306: 2046.

## News & notes

### Congratulations

Dr. **Carl Walters** has received the *Prix d'Excellence* of the International Council for the Exploration of the Sea (ICES) in A Coruña (Spain). The *Prix d'Excellence* recognizes the highest level of achievement in marine sciences and important contributions to ICES vision. We join the ICES Award Committee in congratulating Dr. Walters for his achievements and contribution to marine sciences during his academic career.



Dr. **Carl Walters** has received the ICES' *Prix d'Excellence*.

**Aylin Ulman** has successfully defended her MSc thesis on the actual and perceived decline of fishery resources in Turkey and Cyprus.

**Andrés Cinesros Montemayor** has also successfully defended his PhD thesis on the value of information for fisheries policy.

Congratulations!

### Welcome

With the start of the new academic year, the Fisheries Centre has welcomed numerous new students:

- **Darah Gibson, Rebecca Singleton** and **Allison Witter** have joined the *Fisheries Economics Research Unit*;
- **Hassen Allegue** has joined the *Marine Mammal Research Unit*;
- **Sahir Advani** and **Jeff Scott** have joined the *Policy and Ecosystem Restoration in Fisheries* group;
- **Clayton Manning** has joined *Project Seahorse*;
- and **Myriam Khalfallah** has joined the *Sea Around Us*.

Ms. **Maria Ho** has also joined the *Sea Around Us*. She will be providing administrative support to Drs. **Daniel Pauly** and **Dirk Zeller**. Previously, Maria has worked at BC Children's Hospital for about 10 years, and prior to that, at UBC Sauder School of Business and UBC IT Services.

*Project Seahorse* has also welcomed Dr. **Sigal Balshine** from McMaster University as a Visiting Professor. She will stay at the Fisheries Centre for a year.

### Farewell

Both **Elise Bultel** and **Alasdair Lindop** have left the *Sea Around Us*. We wish them good luck on their next adventures.

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All queries, subscription requests and address-changes should be sent to the *FishBytes* editor, Frédéric Le Manach, at [fishbytes@fisheries.ubc.ca](mailto:fishbytes@fisheries.ubc.ca). For past issues, please visit the Fisheries Centre website [www.fisheries.ubc.ca](http://www.fisheries.ubc.ca) and follow the Publications link to *FishBytes*.

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