

# FISH BYTES

**Newsletter of the Fisheries Centre  
Volume 20 Issue 4**

**University of British Columbia  
July/August 2014**

## **OceanCanada: an exciting new project at UBC**


By U. Rashid Sumaila



*Fishing boats tied up at the dock on Quadra Island, British Columbia, awaiting the salmon run (© Andrea Haas).*

The University of British Columbia has received \$2.5 million from the Social Sciences and Humanities Research Council of Canada (SSHRC) to examine the future health and economic potential of Canada's oceans from coast to coast to coast. *OceanCanada* is an interdisciplinary research collaboration involving 15 Canadian universities, non-governmental organizations, and Fisheries and Oceans Canada. It is led by the author of this article (Dr. U. Rashid Sumaila, UBC Professor and Director of the *Fisheries Economics Research Unit*) and 10 coprincipal investigators affiliated to both academic and nonacademic institutions around the country.

The central objective of the *OceanCanada* partnership is to integrate social, cultural, economic, Aboriginal, and environmental knowledge about oceans and coasts nationally and regionally. Researchers will map the future of the Atlantic, Arctic and Pacific oceans under different policy pathways, highlighting risks and opportunities for communities and marine ecosystems. Previous research from the UBC Fisheries Centre suggests that as oceans warm, fish move to colder waters, indicating that more and more fish could move into Canada's northern waters. Additional stressors such as ocean acidification, marine debris, and pollution create new challenges for Canadian fisheries and coastal communities. *OceanCanada*, which is a 6-year

project, will foster greater knowledge and public awareness of some of these emerging issues. Researchers will work in collaboration with policy makers and residents of Canada's coastal regions to develop a shared vision for sustainable and healthy oceans for the benefit of both present and future generations of Canadians. 

For more information on *OceanCanada*, please visit [www.oceancanada.org](http://www.oceancanada.org) and/or contact:

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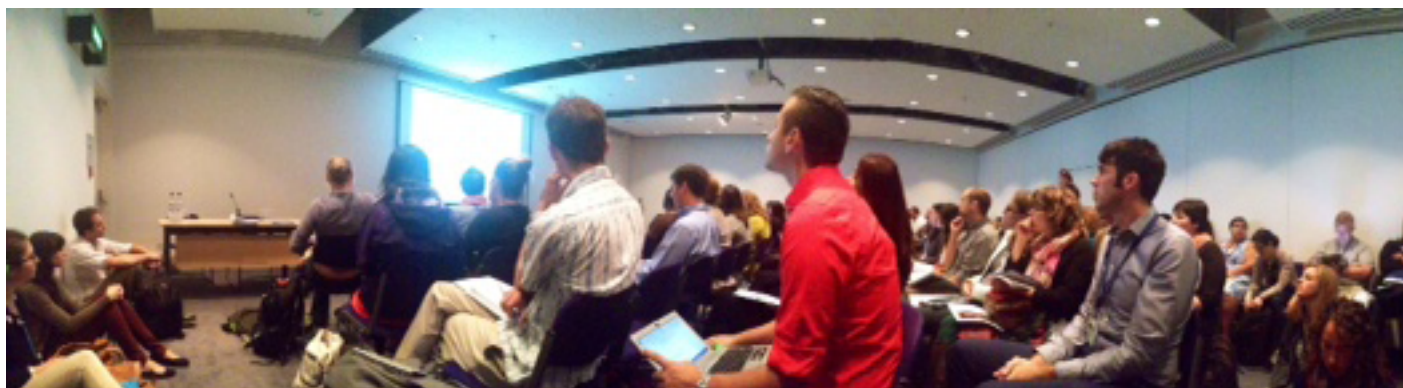
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### **In this issue**

- The *OceanCanada* partnership
- Conservation professionals meet up in Scotland
- Science without Borders in Brazil
- And as usual, plenty of news and notes

# Making waves at the 3<sup>rd</sup> International Marine Conservation Congress: prioritizing communication, optimism, and action

By Lauren Weatherdon



Full house during the Sea Around Us symposium on August 18<sup>th</sup>, 2014 (© Kathryn Matthews, Pew Charitable Trusts).

Marine conservation requires innovative and engaging approaches that translate the importance of complex and often hidden ecosystems to policymakers and the public.

In August, over 700 participants gathered in Glasgow (Scotland) at the [3<sup>rd</sup> International Marine Conservation Congress \(IMCC3\)](#), organized by the Society for Conservation Biology. The organizing committee went to great lengths to put social media and storytelling in the spotlight of the conference, thereby facilitating effective communication across geographical and disciplinary barriers.

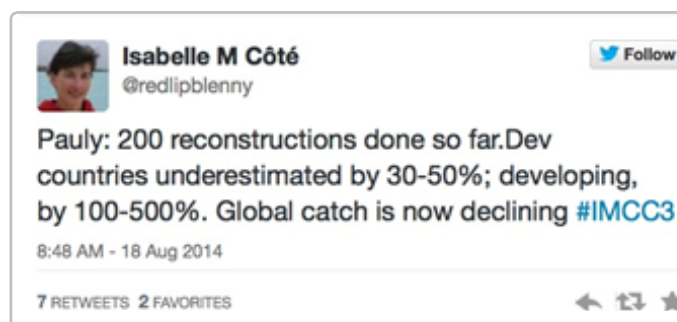
Twitter became a parallel and equally vocal platform for participants to communicate novel ideas and to connect with a much larger international audience. In fact, the successful uptake of tweeting through use of the *hashtag* [#IMCC3](#) allowed attendees to highlight key messages in real-time and capture trending issues and solutions. For example, the *hashtag* [#OceanOptimism](#) — spearheaded by the Zoological Society of London's Dr. Heather Koldewey during her plenary talk — promoted discussions of the marine conservation success stories that are often overshadowed by existing problems.

The Fisheries Centre was well represented at the conference, with symposiums and presentations organized and given by members from *Project Seahorse*, the *Sea Around Us*, the *Fisheries Economics Research Unit*, the *Changing Ocean Research Unit*, as well as the *Policy and Ecosystem Restoration in Fisheries* group.

Dr. Amanda Vincent delivered an inspirational plenary talk that set the stage for a conference focused on solutions and action. Her talk was featured in Nature's News Blog.<sup>1</sup>

<sup>1</sup> <http://blogs.nature.com/news/2014/08/dying-oceans-need-saving-before-science-is-nailed.html>

Drs. Daniel Pauly, Dirk Zeller, and Vicky Lam, as well as Frédéric Le Manach and collaborators of the *Sea Around Us* held a well-attended symposium, in which they unveiled catch reconstructions that will re-frame our understanding of the current state of biodiversity in the world's oceans.



Also, Dalal Al-Abdulrazzak led a symposium exploring ways to leverage existing international treaties to achieve meaningful marine protection; *Project Seahorse*'s Kyle Gillespie and Jennifer Selgrath organized symposiums and workshops that considered under-appreciated areas of research, such as invertebrates in marine protected area science and small-scale fisheries in resource-limited contexts; Julia Lawson gave a talk on the estimated global bycatch of seahorses that was well received and stimulated discussion regarding issues related to bottom trawling, bycatch of small fishes, and implications for other species listed on CITES.

At other sessions, Drs. Mimi Lam and Tony Pitcher discussed the ethics of sustainable seafood protection and argued for the need to consider ethics in fisheries management and policy discussions; Dr. Dana Miller gave an outstanding talk on the challenges associated with flags of convenience, thereby introducing a novel approach to

understanding governance issues related to fisheries; and Aylin Ulman presented her research on fishers' shifting baselines in Turkey and Cyprus during the poster session and furthered the discussion with several global experts at a workshop on historical marine ecology.



Finally, I was fortunate to give a talk regarding my research on the projected impacts of climate change on First Nations' fisheries in coastal British Columbia, Canada, and was rewarded with engaging discussions with social scientists, ecologists, and an epidemiologist, revealing the interdisciplinary nature of the conference.

While social media and technological platforms have been increasingly and effectively used as outreach tools for marine conservation — as exemplified by IMCC3 — a lack of regulation has led to important challenges for science. During a session titled "No, Mermaids don't exist!", scientists and prominent social media gurus David Shiffman (@WhySharksMatter) and Andrew David Thaler (@SFriedScientist and @SFriedScience) discussed the detrimental impacts of the 'mockumentaries' that are now

commonly televised by trusted educational broadcasters, such as the Discovery Channel and Animal Planet. Such 'Mockumentaries' have produced false evidence to argue for the existence of mythical creatures (e.g., "Mermaids: The Body Found") or the re-emergence of prehistoric species (e.g., "Megalodon: The Monster Shark Lives" and "Megalodon: The New Evidence"), thereby promoting a decline in ocean literacy. Statistics do not support the argument that such shows are harmless to public understanding; rather, polls conducted afterwards suggested that the majority of viewers (approximately 70%<sup>2</sup> in the case of "Megalodon") failed to differentiate between 'mockumentaries' and documentaries. Notably, the "Mermaids" mockumentary created enough public confusion that NOAA felt obliged to release a statement asserting that the claims regarding the existence of mermaids were false.<sup>3</sup>

The success of these 'mockumentaries' at engaging viewers — with 4.8 million viewers for the 2013 "Megalodon"<sup>4</sup> — highlights the need for improved communication between scientists and the public across various platforms. Solution-based narratives such as those conveyed during IMCC3 provide important 'proof-of-concepts' for policymakers and the public. In other words, through optimism and science-informed success stories, we are more likely to engage receptive audiences that support action towards marine conservation objectives.

<sup>2</sup> [www.discovery.com/tv-shows/shark-week/polls/megalodon-poll.htm#tag=ntwitter](http://www.discovery.com/tv-shows/shark-week/polls/megalodon-poll.htm#tag=ntwitter)

<sup>3</sup> <http://oceanservice.noaa.gov/facts/mermaids.html>

<sup>4</sup> <http://edition.cnn.com/2013/08/07/showbiz/tv/discovery-shark-week-megalodon/>

## Brazilian science gets a boost from the new Science without Borders program

By Adriana Carvalho,<sup>1</sup> Priscila F.M. Lopes<sup>1</sup> and U. Rashid Sumaila

Last summer, the 3<sup>rd</sup> author spent 4 weeks with the 1<sup>st</sup> and 2<sup>nd</sup> authors and their research groups at the Universidade Federal do Rio Grande do Norte in Natal, as part of a new, progressive Brazilian program implemented by the country in 2011, known as Science without Borders (SwB). This is by far Brazil's largest investment in science and technology to date. The goal of the program is to consolidate, expand and internationalize Brazilian science through exchange programs with the top universities around the world.

The program is sub-divided into two main categories: training of Brazilian students and researchers abroad and attraction of top-notch scientists and promising young researchers to Brazil. By 2015, the program is expected

to offer 101,000 grants (97,000 to Brazilians), from which 75,000 will come from the Brazilian government and 26,000 from the private sector ([www.cienciasemfronteiras.gov.br/web/csf-eng/home](http://www.cienciasemfronteiras.gov.br/web/csf-eng/home)). The program, as designed currently, excludes most of the Arts and Social Sciences, resulting in Engineering, for example, receiving 45% of all grants, and biology, biomedicine and health, 17%. While we see the need for an emerging country such as Brazil to emphasize science, technology, engineering and mathematics (STEM), total neglect of Arts and Humanities would be costly to society as progress in all areas of knowledge and scientific endeavours is needed for the full and comprehensive understanding of what it takes to achieve the wellbeing of nations.

Both visitor (Sumaila) and hosts (Cavalho and Lopes) believe that the Science without Borders program is a sign of progress by Brazil. We believe that this is another sign

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that Brazil is indeed emerging to be an influential country in the world, and that this program is worth spreading to other countries, especially developing ones. This is because it is a well-known fact that in general societies that invest in education and the generation of knowledge do better than those who don't.



#### Further reading

OECD (2014) PISA 2012 results: what students know and can do —

Student performance in mathematics, reading and science. OECD Publishing, Paris (France).

Regalado A (2010) Brazilian science: riding a gusher. *Science* 330: 1306–1312.

Salles Filho S (2002) Política de ciência e tecnologia no I PND (1972/74) e no I BDCT (1973/74). *Revista Brasileira de Inovação* 1: 397–419.

dos Santos Junior JL (2013) Ciência sem fronteiras e as fronteiras da ciência: os arrabaldes da educação superior brasileira. *Revista de Políticas Públicas* 16 (2).

Schwartzman S (1988) Brazil: opportunity and crisis in higher education. *Higher Education* 17: 99–119.

## News & notes

### Congratulations

Drs. **Villy Christensen** and **Andrew Trites** agreed to serve as co-Directors of our Fisheries Centre for the period July 1 through December 31 2014. They are taking over Dr. **Bill Milsom**, whom we would like to warmly thank for his contribution towards improving the Fisheries Centre over the past year.



Our new co-Directors: **Villy Christensen** (left) and **Andrew Trites** (right).

Congratulations to Dr. **U. Rashid Sumaila** as well, who has received a major Canada-wide SSHRC grant (see p1).

Dr. **Dana Miller** from the *Fisheries Economics Research Unit* was also awarded the 9<sup>th</sup> Postdoctoral Travel Award in the Faculty of Science. Congratulations!

Many students also defended their theses over the summer:

- **Andrea Haas** from the *Fisheries Economics Research Unit* defended her thesis on the distribution and concentration of access in BC's salmon and herring fisheries;
- **Danika Kleiber** and **Julia Lawson** from the *Project Seahorse* defended their PhD and MSc theses, respectively. Danika's thesis was on gender and small-scale fisheries in the Central

Philippines; Julia's was on the implications of rare seahorses for small fishes in bycatch;

- **Frances Robertson** from the *Marine Mammal Research Unit* defended her PhD thesis on the effects of seismic operations on bowhead whale behaviour;

- **Laurenne Schiller** from the *Sea Around Us* also defended her MSc thesis on the use of catch data to assess the ecological impacts of commercial tuna fisheries in the Pacific Ocean;

- Finally, **Lauren Weatherdon** from the *Changing Ocean Research Unit* defended her MSc thesis on the impact of climate change on coastal First Nations' fisheries;

### Welcome

'**Vatosoa**' **Rakotondrazafy** joined the *Nereus Program* in July (until December 2014). She is visiting the Fisheries Centre as part of a United Nations' internship.

**Dayna Szule** is the new *Sea Around Us* financial clerk. She previously worked as Administrative Assistant and Facility Booking Coordinator at the UBC Botanical Gardens.

Finally, the *Fisheries Economics Research Unit* welcomed **Sandra Ignagni**. Most recently, Sandra was a Visiting Scholar at the UBC Faculty of Law and a Lecturer in Canadian Politics and Public Administration at Simon Fraser University and Kwantlen Polytechnic University. Among other things Sandra will help coordinate the *OceanCanada* Partnership (see p1).

*FishBytes* is the newsletter of the Fisheries Centre at the University of British Columbia (UBC). It is published six times a year, and subscriptions are free of charge. Opinions expressed in this newsletter do not necessarily reflect those of the Fisheries Centre or its members.

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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