



OCEAN CANADA

OCEANCANADA NEWSLETTER FALL 2017



CONTENTS

- [OceanCanada News](#)
- [Partner & Collaborator News](#)
- [Media Coverage](#)
- [Researcher in Profile](#)
- [Latest Video](#)
- [Recent Publications](#)
- [Recent Presentations](#)

OCEANCANADA NEWS

***OceanCanada* Director Wins 2017 Volvo Environment Prize**

Congratulations to Rashid Sumaila, who has won the 2017 Volvo Environment Prize for his research in fisheries economics and marine governance. The prize recognizes outstanding scientific discoveries and innovations within the environmental field. Professor Sumaila will formally receive the award at a ceremony in Stockholm on November 29, 2017. A video chronicling his achievements will be released on that date.

[Read the full story.](#)



William Cheung awarded Prix d' Excellence Award



William Cheung, Co-lead of *OceanCanada*'s National Data and Integrated Scenarios Working Group (NDIS) and Lead of the Changing Oceans Cross-Cutting Theme, was awarded the Prix d' Excellence Award by the International Council for the Exploration of the Sea (ICES) for his important

contributions in marine sciences. The award was conferred at the ICES Annual Science Conference (ASC) on September 18, 2017.

[Read the full story.](#)

Malta Declaration on Global Ocean Protection

Rashid Sumaila was a signatory to the *Malta Declaration: Assessing Real Progress towards Effective Ocean Protection*, which addresses the following:



- Fully protected (no-take) marine reserves are the most effective type of protected area in the ocean;
- Current protection has been overestimated;
- MPAs that don't provide real protection should not count as "protected areas."

The Declaration was presented at the *Our Ocean* conference in Malta, October 6, 2017. Other signatories were Kirsten Grorud-Colvert, Oregon State University; Jane Lubchenco, Oregon State University; Catherine Novelli, Former Undersecretary of State, Department of State, USA; Callum Roberts, University of York; and Enric Sala, National Geographic Society.

[More details.](#)

OceanCanada* Researcher in *MPA News* and *MEAM News



Nathan Bennett, Co-lead of the Pacific Working Group and Access to Resources Cross-cutting Theme, was mentioned in the October 2017 issues of *MPA News* and *MEAM News* (Marine Ecosystems and Management). In [MPA News](#), he was one of the practitioners who responded to the issue of how to best achieve effectiveness in MPA global targets. In [MEAM News](#), his profile was highlighted in "New ideas on how the social sciences could change the way we do ocean conservation and management – and already are."

PARTNER & COLLABORATOR NEWS

Joint Oceana – OceanCanada Workshop



OceanCanada held a one-day workshop with partner Oceana Canada at UBC on September 13, 2017. The purpose of the workshop was to investigate whether rebuilding Canada’s fisheries makes economic sense, by analysing the socio-economic benefits of fisheries rebuilding under different scenarios. Participants, who included academics as well as people directly involved in Canada’s fisheries, formulated criteria for species to focus on, identified socio-economic indicators, and discussed possible management scenarios. They also identified other issues that need further study, such as how fisheries benefits are currently distributed, whether there is a need for legislation, how to determine levels of recovery, and who will be the future beneficiaries of rebuilding fisheries.

Environment, Sustainability and Society (ESS) lecture series at Dalhousie University

Paul Greenberg, bestselling American author who focuses on ocean and environmental issues, launched the ESS Fall Lecture Series at Dalhousie University on September 14, 2017. The title of his talk was “Fishing, Farming and the Future of the Last Wild Food.” The event was co-sponsored with Afishionado Fishmongers and *OceanCanada*.



[Read more.](#)

Northern Nunaliit Users Workshop at Geomatics and Cartographic Research Centre (GCRC), Carleton University



In September 2017, Dr. Fraser Taylor and the GCRC at Carleton University hosted a 3-day workshop in Chelsea, Quebec for Canadian Indigenous and northern research partners. The goals of the workshop were to share knowledge and approaches to Indigenous community data documentation and stewardship in the north; learn new skills for working with Nunaliit; identify new partners and opportunities for strengthening the collective; plan future cross-community data integration projects; identify funding sources for sustainable research, development and support of Nunaliit; and collaboratively plan a roadmap for future Nunaliit framework development. The workshop was co-funded by the Social Sciences and Humanities Research Council and Indigenous and Northern Affairs Canada.



The GCRC Research Team. View the [GCRC main site](#).

MEDIA COVERAGE

- October 25. [Interview with Rashid Sumalia about his research protecting the future of our oceans and marine life that led to him receiving the 2017 Volvo Environmental Prize.](#)
Roundhouse Radio.
- October 16. [Sustainable fisheries solution earns prestigious environmental prize for UBC economist.](#) *Vancouver Sun.*
- October 16. [Sustainable fisheries solution earns prestigious environmental prize for UBC economist.](#) *The Province.*
- October 16. [The protector of the oceans receives the Volvo Environment Prize.](#) *Business Insider.*
- October 9. [Marine insurers join the fight against illegal fishing.](#)
Maritime Executive.
- October 5. [How vulnerable are fish to climate change? An algorithm might tell you.](#) *Vancouver Sun.*
- October 4. [La Economía Azul: se acerca una revolución industrial en los océanos.](#) *Latin American Science.*
- October 4. [Un tercio de las especies marinas están en riesgo por el cambio climático.](#) *ABC.es.*
- October 2. [Le temperature aumentano e i pesci sono costretti a emigrare.](#) *Wise Society Italia.*
- October 2. [Réchauffement climatique : les poissons souffrent aussi !](#)
LesEcos.ma.
- September 29. [Illegal fishing on the Galápagos high seas.](#) *Science.*
- September 26. [5 things: B.C.'s climate losers and winners.](#) *Vancouver Sun.*
- September 26. [Some marine species more vulnerable to climate change than others.](#) *Phys.org.*
- September 21. [Going diving in the tropics? Don't eat the reef fish!](#) *Phys.org.*
- September 12. [Study: UBC research finds climate change might be making fish smaller.](#) *The Ubyyssey.*

- September 5. [The oceans need our protection – and our lives depend on them.](#) *The Globe and Mail.*
- August 30. [Paddling to prestigious Indigenous film festival.](#)
The University of Winnipeg News Centre.
- August 22. [Climate change is causing fish to shrink.](#) *Seeker.*
- August 22. [Climate change could shrink fish by as much as 30 percent, new study claims.](#) *CNBC.*
- August 22. [Climate change likely to shrink fish size by 30%: study.](#)
Economic Times of India.
- August 21. [Amid closure of B.C. salmon fisheries, study finds feds failed to monitor stocks.](#) *Desmog.ca.*
- August 21. [Climate change may shrink the world's fish.](#)
National Geographic.
- August 21. [Warmer waters from climate change will leave fish shrinking, gasping for air.](#) *Phys.org.*
- August 21. [Warming oceans will reduce fish size? Here's 2 schools of thought.](#) *American Council on Science and Health.*
- August 14. [What future for fisheries in the South China Sea?](#)
Virgin Unite.



photo credit: Natalie Baird

RESEARCHER IN PROFILE



Nadja Steiner is a member of the *OceanCanada* Research Committee and the National Data and Integrated Scenarios (NDIS) Working Group. Within *OceanCanada*'s Changing Oceans Cross-cutting Theme (CCT), she is leading a study on the impacts of climate change on local communities in the western Canadian Arctic. She works as a research scientist with Fisheries and Oceans Canada (DFO), located at the Institute of Ocean Sciences (IOS) in Sidney, BC, with a temporary assignment at the Canadian Centre for Climate Modelling and Analysis (CCCma). She is also an adjunct professor at the University of Victoria. Originally from Germany, Nadja did her PhD on modelling sea ice roughness at the Institute of Marine Research in Kiel, and came to Canada in 2000 to work within the Arctic Ocean Model Intercomparison Project at IOS. She continued as a postdoctoral fellow within the Canadian Surface Ocean Lower Atmosphere Study (SOLAS), where she began modelling ecosystem and gas exchange processes. She now works on the development of coupled atmosphere-ocean ecosystem models to study marine sulphur and carbon cycles in the north Pacific and Arctic oceans. In collaboration with CCCma's Canadian Earth System Modelling group, she is developing parameterizations for Arctic marine ecosystems and evaluates marine ecosystem responses to climate change. She is a contributing author of AMAP's recent and upcoming Arctic Ocean Acidification assessments as well as the AMAP Adaptation Actions for a Changing Arctic (AACCA) assessment. In addition, she leads the Arctic trends and projections assessment of DFO's Aquatic Climate Change Adaptation Services Program and is co-chair of the research community Biogeochemical Exchange Processes at Sea-Ice Interfaces (BEPsII), previously SCOR-WG 140. As an active chair within the Canadian Science and advisory secretariat (Pacific) for processes in support of Canada's Marine Protected Area Network, she investigates the development of risk indicators, marine ecological classification systems, and the identification of ecologically and biologically significant areas. Nadja is *OceanCanada*'s link to the important work of the Arctic Council and AMAP and leads the contribution of our Partnership to ongoing Arctic research led by AMAP.

LATEST VIDEO



World Premiere of new *OceanCanada*-supported film

The world premiere of *Glwa: Resurgence of the Ocean-Going Canoe*, co-produced by Ian Mauro, Knowledge Mobilization Working Group Co-lead, took place on October 20, 2017 in Toronto at the ImagineNative film festival. The film follows Frank Brown and a group of Heiltsuk youth as they paddle down the coast of BC to Washington State during Tribal Journeys 2016. The journey helped youth learn and revitalize their cultural songs, dances, stories, language, teachings, and other traditions.

[Read more details and view the trailer.](#)

RECENT PUBLICATIONS

JOURNAL ARTICLES

Abe K, Ishimura G, Tsurumi T, Managi S, **Sumaila UR**. 2017. (*Fisheries Science*) [Does trade openness reduce a domestic fisheries catch?](#)

Alava JJ, Barragán-Paladines MJ, Denkinger J, Muñoz L, Jiménez PJ, Paladines F, Valle CA, Tirapé A, Gaibor N, Calle M, Calle P, Reyes H, Espinoza E, Grove JS. 2017. (*International Journal of Fisheries Science and Research*) [Massive Chinese fleet jeopardizes threatened shark species around the Galápagos Marine Reserve and waters off Ecuador: implications for international fisheries policy.](#)

Andrello M, Guilhaumon F, Albouy C, Parravicini V, Scholtens J, Verley, P, **Sumaila UR**, Mouillot D. 2017. (*Nature Communications*) [Global mismatch between fishing dependency and larval supply from marine reserves.](#)

Ban NC, Cox M. 2017. (*Ecology and Society*) [Advancing social-ecological research through teaching: summary, observations, and challenges.](#)

Cao L, Qiu Y, Ye Y, Xue G, Chen Y, Dong S, Zhang W, Hanson A, Huang B, Little D, Leadbitter D, Pikitch E, Sadovy Y, **Sumaila UR**, Williams M, Zhou Y, Zhuang P, Naylor RL. 2017. (*Proceedings of the National Academy of Sciences of the United States of America*) [Opportunity for marine fisheries reform in China.](#)

Christie P, **Bennett NJ**, Gray NJ, Wilhelm A, Lewis N, Parks J, **Ban NC**, Gruby RL, Gordon L, Day J, Taei S, Friedlander AM. 2017. (*Marine Policy*) [Why people matter in ocean governance: incorporating human dimensions into large-scale marine protected areas.](#)

Davies TE, Maxwell SM, Kaschner K, Garilao C, **Ban NC**. 2017. (*Scientific Reports*) [Large marine protected areas represent biodiversity now and under climate change.](#)

Dunstan PK, Moore BR, Bell JD, Holbrook NJ, Oliver ECJ, Risbey J, Foster SD, Hanich Q, Hobday AJ, **Bennett NJ**. 2017. (*Marine Policy*) [How can climate predictions improve sustainability of coastal fisheries in Pacific Small-Island Developing States?](#)

Finkbeiner EM, **Bennett NJ**, Frawley TH, Mason JG, Briscoe DK, Brooks CM, Ng CA, Ourens R, Seto K, Switzer Swanson S, Urteaga J, Crowder LB. 2017. (*Fish and Fisheries*) [Reconstructing overfishing: moving beyond Malthus for effective and equitable solutions.](#)

Finkbeiner EM, Micheli F, **Bennett NJ**, Ayers AL, Le Cornu E, Doerr AN. 2017. (*Marine Policy*) [Exploring trade-offs in climate change response in the context of Pacific Island fisheries.](#)

Gibson D, Sumaila UR. 2017. (*Marine Policy*) [Determining the degree of 'small-scaleness' using fisheries in British Columbia as an example.](#)

Hilmi N, Safa A, **Sumaila UR**, Cinar M. 2017. (*Ocean and Coastal Management*) [Coral reefs management and decision making tools.](#)

Jupiter S, **Epstein G, Ban NC**, Mangubhai S, Fox M, Cox M. 2017. (*Society and Natural Resources*) [A social-ecological systems approach to assessing conservation and fisheries outcomes in Fijian locally managed marine areas.](#)

Kaplan-Hallam M, Bennett NJ. 2017. (*Conservation Biology*) [Adaptive social impact management for conservation and environmental management.](#)

Lance Q J, Mu Y, Zhao Z, Lam VW, **Sumaila UR**. 2017. (*Aquaculture*) [Economic challenges to the generalization of integrated multi-trophic aquaculture: an empirical comparative study on kelp monoculture and kelp-mollusk polyculture in Weihai, China.](#)

Law EA, **Bennett NJ**, Ives CD, Friedman R, Davis KJ, Archibald C, Wilson KA. 2017. (*Conservation Biology*). [Equity trade-offs in conservation decision making.](#)

Maldonado A, Lopes PFM, Rodríguez CA, Lasso CA, **Sumaila UR**. 2017. (*Marine Policy*) [Transboundary fisheries management in the Amazon: assessing current policies for the management of the ornamental silver arawana \(*Osteoglossum bicirrhosum*\).](#)

Miller DD, **Ota Y**, **Sumaila UR**, **Cisneros-Montemayor AM**, **Cheung WWL**. 2017. (*Global Change Biology*) [Adaptation strategies to climate change in marine systems.](#)

Singh GG, **Cisneros-Montemayor AM**, Swartz W, **Cheung WWL**, Guy JA, Kenny T, McOwen CJ, Asch R, Geffert JL, Wabnitz CCC, **Sumaila UR**, Hanich Q, **Ota Y**. 2017. (*Marine Policy*) [A rapid assessment of co-benefits and trade-offs among Sustainable Development Goals.](#)

Sumaila UR. 2017. (*International Centre for Trade and Sustainable Development [ICTSD] Information Note*) [Shared stocks and fisheries subsidies disciplines: definitions, catches, and revenues.](#)

Sumaila UR. 2017. (*International Centre for Trade and Sustainable Development [ICTSD] Information Note*) [Small-scale fisheries and subsidies disciplines: definitions, catches, revenues, and subsidies.](#)

Swartz W, Schiller L, **Sumaila UR**, **Ota Y**. 2017. (*Marine Policy*) [Searching for market-based sustainability pathways: challenges and opportunities for seafood certification programs in Japan.](#)

Teh LSL, Witter A, Cheung WWL, Sumaila UR, Yin X. 2017. (*Ambio*) [What is at stake? Status and threats to South China Sea marine fisheries.](#)

Watson RA, Nichols R, Lam VWY, **Sumaila UR.** 2017. (*Marine Policy*) [Global seafood trade flows and developing economies: insights from linking trade and production.](#)

Zador SG, Gaichas SK, Kasperski S, Ward CL, Blake R, **Ban NC,** Himes-Cornell A, Koehn Z. 2017. (*ICES Journal of Marine Science*) [Linking ecosystem processes to communities of practice through commercially fished species in the Gulf of Alaska.](#)

BOOK CHAPTERS

Belhabib D, Padilla A, **Sumaila UR,** Pauly D. 2017. (*Handbook on the economics and management of sustainable oceans*) On governance in fisheries in Senegal: from top-down control to co-management.

Sumaila UR, Jacquet J, **Witter A.** 2017. (*Corruption, natural resources and development: from resource curse to political ecology*). When bad gets worse: corruption and fisheries.



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WORKING PAPERS

Bendriem N, Roman R, **Gibson D, Sumaila UR**. 2017. [Wild vs. farmed: selected review of a dichotomized status of Coho salmon in British Columbia.](#)

Berdej S, **Armitage D**, Silver J. 2017. [Reflecting on issues of governance and social-ecological 'fit' in the Pacific Herring \(*Clupea pallasii*\) fishery: Sitka, Alaska and Haida Gwaii, B.C.](#)

Gibson D, Sumaila UR. 2017 [Socio-economic contribution of small-scale versus large-scale fisheries in British Columbia.](#)

POLICY BRIEFS

Bennett NJ. 2017. [Exploring diverse relationships between humans and the environment with a solution-oriented lens.](#)

Sumaila UR. 2017. [Scientifically-supported economic incentive approaches for the long term sustainability of Atlantic Bluefin Tuna fisheries.](#)



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RECENT PRESENTATIONS

[Cape Town, South Africa, August 29-31, 2017. Sumaila, Rashid.](#)

Climate change, fish, and people in Africa. Climate change and marine fisheries in the context of Sub-Saharan Africa, World Bank Conference.

[Auckland, New Zealand, September 4-8, 2017. Sumaila, Rashid.](#)

New visions for nature and nature's contributions to people for the 21st century. International Panel on Biodiversity and Ecosystem Services (IPBES) (workshop participant).

[Whitehorse, YT, September 7-8, 2017. Steiner, Nadja.](#)

Multi-stressor impacts on subsistence fisheries in the western arctic bioregion – regional climate modelling and eco-physiology. Inuvialuit Game Council Meeting.

[Sagkeeng, MB, September 10, 2017. Mauro, Ian.](#)

Traditional knowledge keepers and scientists at Turtle Lodge (roundtable participant).

[Geneva, Switzerland, September 18, 2017. Sumaila, Rashid.](#)

Designing effective and appropriate special and differential treatment. Knowledge-Sharing Seminar on Fisheries Subsidies, International Centre for Trade and Sustainable Development, World Trade Organization (WTO).

[Tokyo, Japan, September 23, 2017. Sumaila, Rashid.](#)

Increase transparency in fisheries subsidies in support of Sustainable Development Goal 14: Life Below Water. Fisheries Economics and Social Science, Fisheries Science for Future Generations, The Japanese Society of Fisheries Science.

[Luxembourg, September 25-26, 2017. VanderZwaag, David.](#)

Canada's Arctic disputes: cooperative bridges, foggy waters. Bridge Over Troubled Waters Workshop: Dispute Resolution in the Law of International Watercourses and the Law of the Sea, Max Planck Institute for Procedural Law.

[Woods Hole, MA, October 2-5, 2017. VanderZwaag, David.](#)

Marine biosphere research for a sustainable ocean: tacking in a sea of governance challenges. Keynote address at IMBIZO 5 Conference: Marine Biosphere Research for a Sustainable Ocean: Linking Ecosystems, Future States and Resource Management, Woods Hole Oceanographic Institution.

[Malta, October 5-6, 2017. Sumaila, Rashid.](#)

Economics of MPAs. Our Ocean.

Economic benefits from no-take marine reserves. The Malta Declaration: assessing real progress towards effective ocean protection (Our Ocean side event).

[Tallinn, Estonia, October 12-13, 2017. Sumaila, Rashid.](#)

When are subsidies harmful? Beyond 2020: supporting Europe's coastal communities (workshop participant).

[Puerto Varas, Chile, October 18-21, 2017. Sumaila, Rashid.](#)

Assessment of marine protected areas for restoring ocean health, improving fisheries management, and supporting a sustainable blue economy. Pew Fellows Program in Marine Conservation (workshop participant).

Incorporating the gender dimension in marine conservation. Pew Fellows Program in Marine Conservation (roundtable participant).

[Inuvik, NT, October 24-26, 2017. Steiner, Nadja.](#)

Beaufort Sea Partnership Meeting (workshop participant).

[San Francisco, CA, October 26-30. Sumaila, Rashid.](#)

Can we save the oceans from ourselves? World Conference of Science Journalists (session panelist).



The *OceanCanada* Partnership is a Social Sciences and Humanities Research Council (SSHRC) project that brings partners from across Canada together to holistically study the challenges and opportunities facing Canada's oceans and coastal communities.