



NZOAC November Newsletter

[COP26](#) has kicked off in Glasgow, but there are several OA events you can stream from the comfort of home. Tonight (10 - 11 pm NZST) the [Commonwealth Pavilion](#) is hosting the *Inclusive Ocean Acidification Action – Science to Society* side event with speakers from New Zealand, Tokelau, Fiji, Canada and the UK. Next week (Monday, 10 - 11 pm NZST), the OA Alliance, PML, IOC-UNESCO, IAEA, and GOA-ON are co-hosting the *Raising Ambition at COP26 to Deliver SDG14.3* side event. You can stream these events live at the [Commonwealth Pavilion](#). The COP26 [Virtual Ocean Pavilion](#) provides additional access to live and on-demand ocean events, including panel sessions, interviews, and virtual exhibitions.

The NOAA Ocean Acidification Program (OAP) is seeking applications for [graduate fellowships](#) that will support students conducting Master's degree research related to OA in the Pacific Islands region. NOAA will host an [informational webinar](#) on the programme at 2 pm on 11 November.

Ocean acidification in New Zealand

- NZOAC member **Chris Cornwall**'s Newsroom article, [The biggest threat to reefs in our lifetime](#), discusses the importance of coralline algal reefs and their susceptibility to ocean acidification.
- A Stuff [article](#) discusses the recent [He huringa āhuarangi, he huringa ao: A changing climate, a changing world](#) report about the impact of climate change on Māori wellbeing and culture. The report includes adaptation and mitigation options to address the impacts of OA.
- In [Glasgow showdown: Pacific Islands demand global leaders bring action, not excuses, to UN summit](#), the Conversation discusses climate change, including OA, in the Pacific Islands

Acidification, fisheries, and aquaculture

- Researchers at Cawthron, including NZOAC members **Jess Ericson** and **Norman Ragg**, developed a [method to assess the concentration and viability of bivalve hemocytes](#).
- In 2014, **Sam Dupont** showed that [exposing northern shrimp to OA conditions negatively impacted taste and appearance](#). Since then, many similar studies have been done. Most recently, last week's [article in Nature](#) showed a reduction in the amino acids responsible for the umami taste in tiger shrimp when they were exposed to OA conditions.
- At SPC's recent Vaka Moana event, **Rangi Mitaera-Johnson**, a pearl farmer in Cook Islands discussed how [science and traditional knowledge complement each other](#) and how monitoring helps farm management.

Resources

- Hawai'i released their [Ocean Acidification Action Plan](#), which includes actions and recommendations to understand, mitigate, and adapt to ocean acidification impacts.
- This open access article, [Interpreting pH changes](#), reminds us of the importance of reporting $\Delta[H^+]$, in addition to ΔpH , in ocean acidification studies.
- The Ocean Foundation released a [social media kit](#) to help people spread information about ocean-based climate solutions.
- Learn about insights we are gaining from marine eDNA analysis in **Abby Smith**'s [Counting the Kingdoms](#) article in the Otago Daily Times.

- A series of [regional fact sheets](#) have been released by the IPCC Working Group I (Physical Science Basis) as an outreach product that is fully traceable to the Sixth Assessment Report.

Upcoming webinars

- COP26: [Inclusive Ocean Acidification Action – Science to Society](#). Commonwealth Pavilion (live stream). **3 November 2021**.
- COP26: [Polar Oceans: Acidification, Warming and Freshening](#). Cryosphere Pavilion (live stream), **6 November 2021**.
- COP26: [Ocean Decade in the Asia Pacific - panel on key ocean knowledge challenges in the region, with a focus on ocean acidification](#). Japanese Pavilion (live stream). **6 November 2021**.
- COP26: [Raising Ambition at COP26 to Deliver SDG14.3](#). Commonwealth Pavilion (live stream). **8 November 2021**.
- COP26: [Expanding ocean acidification observing capacity to take action](#). SDG Pavilion (live stream). **9 November 2021**.
- [Decoupled carbonate chemistry experimental work involving deep-sea benthic foraminifera and new generation environmental simulators](#), Meryem Mojtahid, an Associate Professor at the University of Angers, France, **9 November 2021**.

Recent webinars (now available for streaming)

- This month, we highlight some great talks from the Pacific Islands that were part of GOA-ON's OA week: **Ikela Otto's** [OA at the Palau International Coral Reef Center \(PICRC\)](#), **Miriama Vuiyasawa's** [Blue Carbon Restoration and OA in Fiji](#), **Aleluia Taise's** [Responses of Caulerpa to OA](#), and **Patila Amosa's** [Current Status of OA Research in Samoa](#).
- [Integrated Policies for Ocean Climate Action: Building Coastal Resiliency in the U.S.](#), State and Federal resource managers from across the US.
- [Turning the tide of parachute science](#), Paris Stefanoudis (University of Oxford) and Sheena Talma (Nekton Foundation).
- [MPAs as part of the climate solution: The role of blue carbon](#), Sara Hutto of the Greater Farallones National Marine Sanctuary.

Recent articles from our members

- [Heterogeneity around CO₂ vents obscures the effects of ocean acidification on shallow reef communities](#), Blain, C.O., Kulins, S., Radford, C.A., Sewell, M.A., Shears, N.T., ICES Journal of Marine Science
- [Understanding coralline algal responses to ocean acidification: Meta-analysis and synthesis](#), Cornwall, C.E., Harvey, B.P., Comeau, S., Cornwall, D.L., Hall-Spencer, J.M., Peña, V., Wada, S., Porzio, L., Global Change Biology
- [Reduced seawater pH alters marine biofilms with impacts for marine polychaete larval settlement](#), Espinel-Velasco, N., Tobias-Hünefeldt, S.P., Karelitz, S., Hoffmann, L.J., Morales, S.E., Lamare, M.D., Marine Environmental Research
- [Seeking natural analogs to fast-forward the assessment of marine CO₂ removal](#), Bach, L.T., Boyd, P.W., PNAS
- [Adult exposure to ocean acidification and warming remains beneficial for oyster larvae following starvation](#), Gibbs, M.C., Parker, L.M., Scanes, E., Byrne, M., O'Connor, W.A., Ross, P.M., ICES Journal of Marine Science
- [Flow cytometric validation of a commercial kit to assess the concentration and viability of bivalve hemocytes](#), Ericson, J.A., Ragg, N.L.C., Rolton, A., Fish and Shellfish Immunology
- [Reproductive changes in Foveaux Strait *Ostrea chilensis*, Southern New Zealand, after *Bonamia exitiosa* epidemics](#), Heenan, S.D., Michael, K.P., Smart, D.C., Lokman, P.M., Lamare, M.D., New Zealand Journal of Marine and Freshwater Research

- [Review of the biology of the krill genus *Nyctiphanes* G.O. Sars, 1883 \(Euphausiacea: Euphausiidae\): challenges for future research on environmental change](#), Lagos, P.F., Gómez-Gutiérrez, J., Sabadel, A.J.M., Burrit, D.J., Lamare, M.D., Journal of Crustacean Biology
- [The complex provenance of Cu-binding ligands in the South-East Atlantic](#), Zitoun, R., Achterberg, E.P., Browning, T.J., Hoffmann, L.J., Krisch, S., Sander, S.G., Koschinsky, A. Marine Chemistry
- [Safe in My Garden: Reduction of Mainstream Flow and Turbulence by Macroalgal Assemblages and Implications for Refugia of Calcifying Organisms From Ocean Acidification](#), Kregting, L., Britton, D., Mundy, C.N., Hurd, C.L., Frontiers in Marine Science

ECOPs (early career ocean professionals) and outreach happenings

- **Outreach:** Congratulations to **Rebecca Zitoun** on becoming a member of the [SCOR committee on Capacity Development](#). Rebecca, with two other European Marine Board Young Ambassadors, organised a science communication [workshop](#) for the ICYMARE 2021 Conference. The most important take-home messages are summarized in their blog post [Co-creation and networking: keys to science communication in the real world](#).
- **Article:** Thinking of postgraduate study? PLOS Computational Biology just published [Ten simple rules for choosing a PhD supervisor](#).

Conferences, events, and workshops

- [UN Climate Change Conference-COP26](#) (hybrid), **31 October-12 November 2021**
- [IMBeR West Pacific Symposium](#) (free, virtual event), **22-25 November 2021**
- [International Workshop on Application of ocean science and technology for the practice of sustainable “Blue Economy” in developing countries](#) (virtual), **8-9 November 2021**
- [2nd Ocean Observers Workshop](#) (free, virtual event), **29 November - 1 December 2021**.
- [In New Zealand Australasian Coasts & Ports Conference 2021](#). Christchurch, New Zealand, **30 November- 3 December 2021**
- [International Ocean Data Conference](#) (virtual), **14-16 February 2022**
- [2022 Conference for Shellfish Growers](#), **7-8 March 2022**
- [Ocean Sciences Meeting 2022](#) (hybrid), **27 Feb - 4 Mar 2022**
- [The 8th International Symposium on Gas Transfer at Water Surfaces](#) (in person), **17-20 May 2022**
- [The 5th International Symposium on the Ocean in a High CO₂ World](#) (in person), **13-16 September 2022**
- [NZOAC - 15th NZOAC Conference](#), Nelson, New Zealand, **2-3 November 2022 (TBC)**

International opportunities

- **ECOP:** The IOC-UNESCO has just launched a call for applications for [short-term consultants](#) to assist with developing regional networks of the ECOP Programme in Africa, Asia, Oceania, and Caribbean SIDS, **7 November 2021**.
- The call for [2022 SCOR Visiting Scholars](#) is now open.

Jobs

- [Ranger Marine Reserves](#) with the Dept. of Conservation in Whitianga, New Zealand. Closes **3 November 2021**.
- [Postdoc - Shark Lab](#) with California State University in Long Beach, CA, USA. Closes **7 November 2021**.
- [Senior Fisheries Management Officer](#) with the Dept. of Primary Industries, Parks, Water and Environment in Launceston, Australia. Closes **8 November 2021**.
- [Senior Research Officer](#) with the Australian Institute of Marine Science in Northern QLD, Australia. Closes **8 November 2021**.

- [Technical and Laboratory Officer \(Aquaculture/Marine\)](#) with Southern Cross University in Coffs Harbour, Australia. Closes **9 November 2021**.
- [Project Assistant](#) with the Cawthron Institute in Nelson, New Zealand. Closes **10 November 2021**.
- [Postdoc - Hyperspectral Imagery to Assess Effects of Warming on Kelp Forests](#) with the University of Massachusetts Boston in Boston, MA, USA. Closes **10 November 2021**.
- [Senior Fisheries Scientist - Officer Grade 3/4](#) with the Dept. of Regional NSW in Lismore, Australia. Closes **14 November 2021**.
- [Spatial Systems Ecologist](#) with the University of Tasmania in Hobart, Australia. Closes **16 November 2021**.
- [Marine Ecosystem Advisor](#) with The Nature Conservancy in Wellington, New Zealand. Closes **19 November 2021**.
- [Senior Scientist - Coastal and Marine](#) with the Waikato Regional Council in Hamilton, New Zealand. Closes **24 November 2021**.
- [Postdoc - Research Associate in Nitrogen Cycling and Nitrous Oxide Emissions](#) with Southern Cross University in Lismore, Australia. Closes **1 December 2021**.
- [Postdoc - Coral Resilience & Restoration](#) with the University of Hawaii in Kaneohe, HI, USA. Closes **11 December 2021**.
- [Marine & Freshwater Taxonomist](#) with SLR Consulting in Nelson, New Zealand.
- [Associate/Principal - Marine Science Consultant](#) with SLR Consulting in Nelson, New Zealand.
- [Spatial Ecologist](#) with Spectrum Ecology in Perth, Australia.
- [APS 5 - Natural Resource Ranger](#) with the Dept. of Agriculture, Water and the Environment in Lismore, Australia.
- [RRAP Risk Management Coordinator](#) with the Australian Institute of Marine Science in Northern QLD, Australia.
- [Senior Fisheries Technician 2/3](#) with the Dept. of Regional NSW in Coffs Harbour, Australia.
- [Fisheries Scientist](#) with the Dept. of Agriculture, Water and the Environment in the ACT, Australia.
- [Principal - Offshore Wind Approvals](#) with RPS in Brisbane, Australia.
- [Marine Environmental Consultant](#) with BMT in Perth, Australia.
- [Senior Environmental Scientist - Marine](#) with PKEL Consulting in Brisbane, Australia.
- [Senior Operations Officer](#) with Fulcrum Robotics in Hobart, Australia.
- [Marine & Environment Consultant](#) with RPS in Melbourne, Australia
- [Marine Technician](#) with Australian NAVY in Hobart, Tasmania, Australia.
- [Postdoc - Marine Global Change Ecology Lab](#) with the University of Massachusetts Amherst in Amherst, MA, USA.
- [Postdoc - Dept. of Rosenstiel School of Marine and Atmospheric Science](#) with the University of Miami in Miami, FL, USA.
- [Postdoc - Modelling Wind Energy and Shellfish Fisheries](#) with Rutgers University at the Haskin Shellfish Research Laboratory in Port Norris, NJ, USA.
- [Postdoc - MAP Shellfish Stock Assessment](#) with the Virginia Institute of Marine Science in Gloucester, VA, USA.
- [Postdoc - San Francisco Bay River Plume](#) with Rutgers University, Dept. of Marine & Coastal Science in New Brunswick, NJ, USA.
- [Postdoc - Marine Symbiosis](#) with the University of New Hampshire in Durham NH, USA.
- [Postdoc - Fisheries Conservation](#) with the University of Washington in Seattle, WA, USA.
- [Postdoc - Fisheries Simulation Modelling](#) with Saltwater, Inc. in Anchorage, AK, USA.
- [Postdoc - Modeling Interactions among Wind Energy and Shellfish Fisheries](#) with Rutgers University at the Haskin Shellfish Research Laboratory in Port Norris, NJ, USA.

If you have news, opportunities, resources, or a published article you'd like included in the next newsletter, let us know by replying to this e-mail.

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Cheers,

Christina McGraw, Habibeh Hashemi, Jesse Vance, Rebecca Zitoun, and the NZOAC Council