How efficient are Early Career Scientists in peer-review activities?

Mathieu Casado¹,², Gwenaëlle Gremion²,³, Kelsey Aho²,⁴, Jilda Caccavo¹,²,⁵, Nicolas Champollion²,⁶, Emily Choy²,⁷, Rahul Dey²,⁸, Alfonso Fernandez²,⁹, Gerlis Fugmann²,¹⁰, Juan Höfer²,¹⁰, Shridar Jawak²,¹¹, Kyle Mayers²,¹², Sarah Maes²,¹³, Jhon Fredy Mojica²,¹⁴, Martine Lizotte²,¹⁵, Prashant Pandit²,¹⁶, Paul Rosenbaum²,¹⁷, Elisa Seyboth²,¹⁸, Sarah Shakil²,¹⁹, and Maud van Soest²,²⁰

¹Alfred Wegener Institute, Potsdam, Germany (mathieu.casado@awi.de)
²Association of Polar Early Career Scientists, D-14473, Germany
³Institut des Sciences de la Mer, UQAR, Rimouski, G5L3A1, Canada
⁴Univ. of Alaska Fairbanks, INTERNATIONAL ARCTIC RESEARCH CENTER, Fairbanks, Alaska 99775-7340, USA
⁵Berlin Center for Genomics in Biodiversity Research, D-14195, Germany
⁶Université Grenoble Alpes, l’Institut des Géosciences de l’Environnement, Grenoble 38 058, France
⁷McGill University, Quebec, Canada H9X 3V9
⁸National Centre for Polar and Ocean Research, Goa, India
⁹Dept. of Geography, Universidad de Concepción, Chile
¹⁰Escuela de Ciencias del Mar, Pontificia Universidad Catolica de Valparaiso, Valparaiso, Chile.
¹¹Svalbard Integrated Arctic Earth Observing System (SIOS), Svalbard Forskningspark, P.O. Box 156, N-9171 Longyearbyen, Norway
¹²NORCE Norwegian Research Centre AS, Nygårds gate 112, 5006, Bergen, Norway
¹³KU Leuven, 3000 Leuven, Belgium
¹⁴Center for global Sea Level Change, New York University Abu Dhabi. Abu Dhabi, UAE.
¹⁵Dept. of Biology, Université Laval, Québec, Québec G1V 0A6
¹⁶TERI University, New Delhi, India
¹⁷Dept. of Business Studies, Uppsala University, Uppsala, 75313, Sweden
¹⁸Universidade Federal do Rio Grande, Rio Grande, RS, Brazil
¹⁹Dept. of Biological Sciences, Univ. of Alberta,Edmonton, AB, T6G 2E3, Canada
²⁰Geography and Environment, Loughborough University, Loughborough, LE11 3TU, UK

In our collective endeavour towards global sustainability, there is now a broad appreciation that producing scientifically robust knowledge requires new forms of engagement between scientists, stakeholders and society. But what is the role of Early Career Scientists (ECS) in these processes that are closing the gap between science and policy? Because opportunities to interact with more experienced peers through science refereeing are scarce, the role of ECS in the peer-review process remains minor despite ECS possessing strong academic credentials. Such engagement in the peer-review process represents a valuable opportunity for ECS and the scientific community as a whole. This opportunity provides a robust platform for ECS to understand the overall review process and editorial activities related to high-credibility publications such as those conducted by the Intergovernmental Panel on Climate Change (IPCC). During May/November 2018, 174 ECS on behalf of the Association of Polar Early Career Scientists (APECS) reviewed the first and second-
order drafts of the IPCC “Special Report on Ocean and Cryosphere and in a Changing Climate (SROCC)”. Here, we present the methodology, results, and lessons learned from these group reviews. Altogether, data from participant surveys on their experience and their comments catalog illustrate ECS as competent reviewers, comparable to more experienced researchers. The diverse disciplines and geographic perspectives, fostered through APECS and its partners, are currently being mobilized in the First Order Draft of the Working Groups I and II of the Assessment Report 6 of the IPCC, and will continue during the second round of reviews of these reports in early 2020. Information gathered during these ongoing reviews will add to the findings obtained during the review of the SROCC.