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

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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.