



Including early career researchers

The efforts of early career researchers are many and varied, but how they are acknowledged requires improvement. Nature Reviews Earth & Environment is now part of a peer review trial to include, train and acknowledge early career referees.

Early career researchers (ECRs) drive science forward, bringing fresh ideas and enthusiasm to research. During this intense career stage, learning is perhaps the unifying factor among the many and varied roles an ECR takes on — learning methods and how to research, write and be a part of the broader scientific community. Some of this process is more formal, through seminars or training programs and some with more glory — authorships, titles and fellowships. However, many activities that ECRs devote substantial time to are neither formalized nor recognized, including peer reviewing manuscripts. In this regard, *Nature Reviews Earth & Environment* (*NREE*) is encouraging ECR participation in peer review, joining five other Nature Reviews journals in an ECR [peer review initiative](#).

In this initiative, we offer invited referees the option to include an ECR, such as a PhD student, as a co-referee. In so doing, referees can mentor ECRs throughout the peer review process, facilitating key training in scholarly communication, critical assessment and providing collegial feedback. This training is especially useful when assessing Review articles, a different beast to the often more familiar evaluation of primary research papers. Additionally, the inclusion of ECRs brings a new enthusiasm to the review process — a Review might be just another line on the to-do list for an established researcher but it can be an exciting challenge and learning experience for a PhD student.

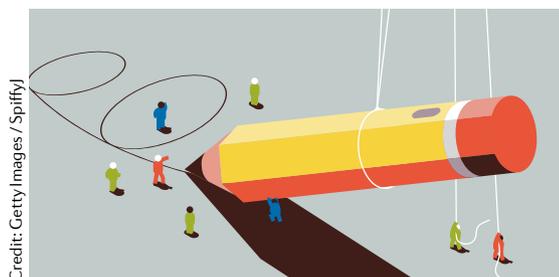
Reviewing a paper takes a lot of time and mental capacity that could have been devoted to your own research (or recreational!) activities and frequently is rewarded just with a ‘thank you.’ Since our launch, we have provided the option for referees to be formally acknowledged by name in our published articles. We extend this option to our ECR co-referees. In addition, the ECRs will also be able to register their reviewing activity for *NREE* on their ORCID profile, as can all

of our referees. Cataloguing this activity demonstrates a history of reviewing manuscripts, further showing a researcher’s expertise and authority in a field — especially important while establishing a research career.

Involving ECRs in reviewing is important, but we are also eager for ECRs to write for *NREE*. Our ‘Tools of the Trade’ articles, for example, are commissioned from and written exclusively by ECRs to describe methods they use to carry out their research. In addition to highlighting the hard-earned expertise of these early researchers, such as [using oceanographic data collected by seals in ‘hats’](#) or [measuring under-appreciated volcanic gasses](#), writing these articles provides opportunities to practice communicating to a broad audience, guided by our editors. We hope this feedback can be used in future endeavours in a scientific environment that increasingly requires strong communication skills and cross-disciplinary or trans-disciplinary collaboration.

ECRs contribute immensely to science, so it is only natural that they are also authors of our Reviews and Perspectives. We commission full-length articles from ECRs who are emerging leaders in their fields. For example, postdoctoral researcher Taylor Maavara led a [Review](#) discussing not only the impacts of river dams on biogeochemistry but their consideration in dam management and planning. When commissioning from more senior researchers, we encourage them to include co-authors across career stages, which includes inviting ECRs who have already made notable scientific advancements on the topic and can bring a new and complementary perspective. Indeed, numerous ECRs have made key contributions to many of our articles led by experienced academics.

At *NREE*, we are immensely grateful for the contributions of our ECR authors and are excited to involve more ECRs in peer review. We encourage all invited referees to consider including their mentees in the ECR peer review initiative and more broadly to formalize peer review training for their students, to give them experience and insight into publishing. We hope our ECR authors also feel some reward for writing with us — either learning new writing tricks, receiving more recognition for their hard-won knowledge, or even gaining a little bit of confidence in themselves as scientists and communicators. Through each initiative and invitation, we aim to support ECR development and will continue to work towards editorial policies that benefit them.



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