

## It takes a community to define a discipline: the 5th anniversary of Environmental Research Letters

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2012 Environ. Res. Lett. 7 010201

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## EDITORIAL

# It takes a community to define a discipline: the 5th anniversary of *Environmental Research Letters*

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When does a scientific journal become a community?

This is not the question that we explicitly set out to address five years ago when IOP Publishing agreed to launch a new format interdisciplinary journal, *Environmental Research Letters* (ERL). However, on reflection, that is what ERL has become, and what it needs to continue to explore during its next years of growth and evolution.

The motivation for founding ERL was initially more focused: to alter the mode of publication and review in the diverse, yet linked fields of environmental and resource studies and to ensure new levels of interaction, inclusion and equity, providing the platform for the world-changing research findings published in ERL. The key driver in this conversation was the issue of access. Specifically the situation that too many research findings were produced by, and for, very specific academic ‘clubs’, and that the opportunity to engage in discussion and debate over important emerging findings about our world was being severely limited by the process of publication in frequently slow-to-publish and tremendously expensive traditional academic journals.

The need for change was, and still is, obvious. Environmental and resource studies have been the fastest growing and most diverse nexus of academic research, private sector concern and public sector action. Universities worldwide are adding academic and extension professorships and staff as well as experiencing increasing student interest in this area at a record pace. Corporate social and environmental sustainability has been changing dramatically and, in lurching fits and starts, a mosaic of environmental regulations—both carrots and sticks—are emerging worldwide. The ‘Rio + 20’ Earth Summit in June 2012 will be a testament to both the dramatic broadening of this interest, and the frustration about the lack of progress at building strong global institutions to permit international cooperation. This is a clear call for an on-going and evolving process of community building.

ERL sought and continues to seek ways to lead this conversation.

## 1. Open access and equity

First, all ERL articles and data sets are entirely open access. Once published, the materials are free to all users, affluent and poor, anywhere in the world. This is vital for a number of reasons. Environmental stress, degradation, and the creation of innovative solutions involves a global dialog, where traditional expensive subscription and single article costs, as some journals charge, are a complete barrier to researchers, fledgling entrepreneurs, and the public sector in developing nations and in poor communities. Instead, ERL charges authors a fee, generally covered by research grants. Further, we have been able to waive the open access article charge for authors based in areas of the world where this fee may prove prohibitive, as it can be in many developing countries.

In this open access format, ERL publishes cutting-edge original research letters, commentary-style 'Perspective' pieces and editorial articles. ERL is committed to staying at the forefront of the 'gold standard' for open access publishing of articles and data—something that journals are increasingly taking up—and as new ideas come in as to how to improve this process, we will look to put them into practice.

## 2. Build a network researching sustainability

Second, a journal that reaches across so many disciplines needs to be a place where results are not only reviewed and published quickly, but are then accessible to a broad audience, and are available for debate and conversation. ERL strives to maintain a 90 day timeline from submission to fully peer-reviewed publication online. This process in particular has only been possible with the incredible support of two groups: (1) the dedication of IOP Publishing and the amazingly talented staff they have been able to identify and recruit to work on ERL, and (2) the journal's Editorial Board. We have a team of Editors made up of the most remarkable researchers in their fields, each of whom have committed to this rapid review process. I have often remarked that my academic dream would be to be on a faculty with this group, and ERL has facilitated that vision both virtually and through our meetings. This group is responsible for both the quality of published articles and the speed of our review process.

Rapid publication of rigorously reviewed short-format articles that in their language and style are widely accessible across disciplines has a huge impact. Young researchers doing innovative cutting-edge work often need to get papers out rapidly, and researchers, both junior and senior, gravitate to a journal where important findings can appear rapidly. The results here have been striking and can be showcased by a selection of highlights, such as:

- Achieved an ISI Impact Factor of 3.049 in 2010.
- An average of over 40 000 downloads per month in 2011.
- Hit 50 000 downloads in January 2012.
- Individual articles published in 2011 were downloaded over 650 times each on average during the same year.
- Submissions are up over 50% in 2011 compared to 2010.
- Citations to ERL content up 80% from 2009 to 2010.

## 3. Build a network conversation about sustainability

The second part of the community building around sustainability, which ERL is now working to develop, is how to facilitate conversation about ideas that the research articles raise. Several exciting developments have shown that we can, in fact, do this particularly effectively, even in these early stages. As an example, ERL's sister community website, *environmentalresearchweb*, launched in 2007, publishing news, opinion, commentary, jobs, events and promotion of ERL authors' work. To date there are over 9000 registered users and over 6000 weekly newswire subscribers, popularity that reflects the incredibly high standards and wide accessibility of the expert journalistic content published on the site. *environmentalresearchweb* provides a discussion and commentary environment, a unique service in itself, and also a specific forum for research published in ERL.

Individual topics often come up that warrant not only single articles, but collections of assessments, and ERL has published focus issues in key areas of environmental science including: tropical deforestation, wind energy, the Deepwater Horizon oil spill and climate engineering. ERL is currently publishing

seven high-quality focus issues in cutting-edge areas such as arctic vegetation dynamics and cryospheric changes.

Research letters appearing in ERL have received regular and significant coverage in the wider media, with several major news outlets and agencies choosing to cover ERL research, such as *Nature*, *BBC News*, *New Scientist*, *The Guardian*, *Scientific American*, *Le Monde* and many others.

#### 4. The future community of ERL

The process of community support will take many forms at ERL. The journal is growing—we have published the highest number of articles ever in a single volume in 2011 and are looking to continue this growth through into 2012. ERL had an over 50% increase in submissions from 2010 to 2011.

One initiative to mark the journal's 5th anniversary was the 'Best articles' collection [1]; a nominated compilation of articles showcasing the quality of published work in ERL as well as the subject area breadth. Co-authors of the five winning articles have been awarded free publication in ERL until the end of 2012. We can also see the open access model working, in that our articles are highly downloaded outside of the traditionally strong geographical areas of academia (North America and Western Europe), showing that the journal's readership is geographically diverse with high interest from Asia, South America and Africa.

The journal is committed to progress and innovation; coming soon will be a set of new communication tools and online innovations, including:

- Video abstracts from the start of 2012 (for example, the video commentary published alongside this editorial).
- Enhanced HTML format of the full-text article from 2012 onwards—'Article Evolution', an on-going community feedback-driven project to improve the online delivery of research articles.
- New focus issues covering the latest cutting-edge areas of environmental science, with seven planned focus issues for 2012, including: second-generation biofuels, biodiversity, human health and well-being and environmental risks and migration.

These innovations are improving all the time as a result of community response and feedback, both in terms of rating and critiquing the services that ERL provides, and also in looking for ways that the science-practitioner–implementer–regulator nexus can be strengthened.

On all of these I offer my thanks to the ERL community; readers, authors, Editorial Board Members and many others, and extend a request for further suggested innovations for us to try in the next five-year window.

#### References

- [1] Kammen D and Wright G 2011 'Best article' prize for the 5th anniversary of *Environmental Research Letters Environ. Res. Lett.* **6** 040201