

ILTER Committee (IC) Annual Report 2014 Science Council Meeting

The International LTER (ILTER) Network is a network of 40 national LTER networks dedicated to long-term, site-based ecological and socio-economic research and monitoring.

The mission of the ILTER Committee (IC) has changed in recent years as the ILTER has transitioned from being a satellite of the US-LTER to a self-sustaining network with a governance structure and clear goals. The IC was originally formed in 2003 to support the development of the ILTER Strategic Plan, which was adopted in 2006. The IC now focuses on fostering research and education initiatives that capitalize on the opportunities made available through US-LTER's membership in the ILTER.

Specifically, the goals of the committee are to facilitate:

- development of research projects and collaborations between US-LTER scientists and ILTER Network colleagues;
- programs to connect US-LTER students (K-12 through graduate) with students associated with LTERs in other countries;
- development of the ILTER Network Information Infrastructure;
- cooperation between the US-LTER (as a member of the ILTER) and other global science programs.

General:

- IC co-chairs are Kristin Vanderbilt (SEV) and Bill McDowell (LUQ; inactive while serving as an NSF Program Officer)
- IC membership includes Rinku Roy Chowdhury (FCE), Chuck Redman (CAP), Tiffany Troxler (FCE), Sieglinde Snapp (KBS), Bob Waide (LNO), Patrick Bourgeron (NWT), Jim Tang (HFR), and Chris Madden (FCE). Ex officio members are Kate Lajtha (AND) and Dave Hartnett (KNZ)
- Minutes for IC meetings are posted online at <http://intranet2.lternet.edu/committees/us-ilter>.
- ILTER is supported through dues paid by member countries. In 2006, US-LTER pledged to pay \$10K per year as dues. Dues for 2013 were paid via an NSF supplement to the Sevilleta LTER.

ILTER Committee Activities (May 2013 – April 2014):

20th Anniversary of ILTER:

2013 marked the 20th anniversary of the establishment of the ILTER, and a special symposium was held in conjunction with the ILTER's annual science meeting to recognize this milestone. A key objective of the 20th Anniversary ILTER Symposium and Science Meeting in Seoul, South Korea (October 7-10, 2013) was to generate a vision and identify partnerships for the next ten years of the ILTER. NSF supported US-LTER participation in this process through a supplement to the Sevilleta LTER grant and IC co-chair Vanderbilt. Ten US-LTER scientists were invited to attend the meeting based on their expertise in the areas that ILTER will emphasize in the next 10 years.

To help motivate and facilitate discussions on the future of ILTER, US participants contributed in the following ways:

- Alan Covich (LUQ), Chuck Redman (CAP and IC member), John Porter (VCR), Patrick Bourgeron (NWT and IC member), and Mark Green (HBR) joined other ILTER scientists in giving plenary presentations describing rich opportunities for future new ILTER research initiatives and retrospective research relying on Big Data and data mining;
- Arthur Schwarzschild (VCR) co-chaired a working group focused on directions for ILTER Outreach and Education activities in the next decade;
- Evelyn Gaiser (FCE), Inigo San Gil (MCM), Christine Laney (then a grad student at UTEP, JRN), and Tiffany Troxler (FCE and IC member) contributed to working groups envisioning the future of ILTER in the core areas of Information Management, Research and Monitoring, Ecosystem Stewardship, and Planning and Policy;
- Patrick Bourgeron (as chair of the ILTER Science Committee) developed the program for the Science Meeting in collaboration with the rest of the ILTER Science Committee. Bourgeron is compiling all the documents from the working groups into a final report that will be used to guide ILTER activities in the next decade.

The IC will use the report from this visioning exercise to define projects that will be consistent with ILTER goals and that will offer more US-LTER researchers and students opportunities to engage with ILTER colleagues.

International Symposia Featuring ILTER

IC members organized two symposia at the 2013 INTECOL meeting (August 18-23, 2013) in London to showcase ILTER research and enhance visibility and name recognition of the ILTER. The symposia included speakers from throughout the ILTER Network:

- *“International perspectives from long-term research on ecosystem carbon budgets”* (co-organized by IC member Tiffany Troxler and Guanghui Lin (Chinese Ecological Research Network))
- *“Phenology and climate change: perspectives from ecosystems across the International Long Term Ecological Research Network (ILTER)”* (co-organized by IC members Jim Tang and Kristin Vanderbilt)

LTER Europe (among others) organized an International Symposium entitled “Ecohydrology and Engineering: Towards the Harmony Between Biogeosphere and Society on the Basis of Long Term Ecosystem Research” (16-20 September 2013, Łódź, Poland) and ILTER Science Committee Chair Patrick Bourgeron was an invited keynote speaker. Kinga Krauze (Poland LTER) and Bourgeron co-led a session which dealt with the resilience of both ecological and social systems drawing on ILTER examples.

ILTER Information Management Workshop

The Taiwan Ecological Research Network (TERN) Ecoinformatics Team sponsored a workshop in Taiwan (October 3-6, 2013) to continue the very fruitful interactions between US-LTER information managers and information managers from the East Asia-Pacific ILTER region. Participants from the US-LTER (Kristin Vanderbilt, John Porter, Inigo San Gil, and Christine Laney) were supported via the supplement to SEV LTER for travel to the ILTER annual meeting in Seoul. Collaborative ILTER information management projects include an ILTER multilingual controlled vocabulary and the internationalization of the Drupal Ecological Information Management System (DEIMS), software originated by the US-LTER community and adopted by

LTER-Europe, LTER Mexico, and TERN. Use of common software tools throughout the ILTER promotes documenting, keywording, and structuring data in similar ways, all of which support US-LTER research through improved data discoverability and access.

ILTER Research Initiative Publication

Martin Forsius (Finland LTER) led an ILTER science initiative that utilized biodiversity and ecosystem services data from throughout the ILTER. A paper based on this work was published in 2013. Jim Tang (HFR) and Patrick Bourgeron are co-authors: Petteri Vihervaara; Dalia D'Amato; Martin Forsius; Per Angelstam; Cornelia Baessler; Patricia Balvanera; Bazartseren Boldgiv; Patrick Bourgeron; Jan Dick; Robert Kanka; Stefan Kloltz; Manuel Maass; Viesturs Melecis; Petr Petrik; Hideaki Shibata; Jianwu Tang; Jill Thompson; Steffen Zacharias. 2013. *Using long-term ecosystem service and biodiversity data to study the impacts of and adaptation options in response to climate change: insights from the global ILTER sites network*. *Current Opinion in Environmental Sustainability*. Current Opinion in Environmental Sustainability (Elsevier). 5:53-66.

Ongoing and Upcoming IC Activities (2014/2015):

Ecosphere Special Issue on ILTER

ILTER was the topic of the LTER Science Council meeting in May, 2013 and from that meeting the idea bubbled up for a special journal issue about ILTER. Papers in this issue will illustrate how ILTER has been leveraged to provide US-LTER scientists expanded research opportunities. Kristin Vanderbilt and Evelyn Gaiser are organizing this effort, and nine papers will be published in the journal *Ecosphere* by August 31, 2014. Two of the papers will be based on the INTECOL symposia (see above) and a third is based on John Porter's presentation at the 2013 NSF minisymposium, which featured talks about ILTER collaborations.

First All Scientists Meeting of the Americas

IC members are involved in planning and organizing symposia for the First All Scientists Meeting of the Americas to be held in December 2014 in Chile.

International Mountain LTER (Mt_ILTER)

<http://gmba.unibas.ch/mountainLTER/mountainLTER.htm>

Scientists from the French Alps LTER organized a workshop on High Elevation Ecosystem Dynamics which grew in to the International Mountain ILTER node (see Mark Williams' presentation from the 2013 LTER NSF Minisymposium: [Establishing the International Mountain LTER Network](#)). Several US-LTER scientists, including Patrick Bourgeron, are engaged with the Mt-ILTER.

Funding for US-LTER/ILTER Collaboration

The IC is developing ideas for NSF PIRE and/or RCN proposals to support future research and informatics education with ILTER partners.