



ILTER-Nitrogen Initiative International Training Course

Long-term trends in nitrogen cycles in ecosystems

- Field monitoring and global comparisons -

Second circular

Date: June 16-24th, 2016

Venue:

Hokkaido University (Kita-9, Nishi-9, Kita-ku, Sapporo, Hokkaido, 060-0809, Japan)

Uryu Experimental Forest, Japan (Moshiri, Horokanai, Hokkaido, 074-0741, Japan)

The International Long-Term Ecological Research (ILTER) Network is organizing an international training course on long-term trends in nitrogen cycles in ecosystems – Field monitoring and global comparisons. This training course is designed to expose young researchers (PhD students, Postdoctoral Researchers and Early Career Faculty) to state-of-the-art approaches to analysis of nitrogen cycling in ecosystems with a focus on key ecosystem processes and implications for environmental pollution. The course will include lectures, field classes, data collection and analysis, and group discussion. Participants will learn about standard research protocols, emerging methods, recent findings and data analytical tools and will gain experience working with international colleagues. Please join us!

➤ **Program overview:**

● **LTER lectures**

Various lectures will be given by the LTER experts around world. Participants will learn the overall concepts, current problems, new findings and emerging issues related to the nitrogen cycle. The tentative list of lecturers and their topics are following:

- **Peter Groffman** (US-LTER; City University of New York, Advanced Science Research Center, USA): Long-term patterns and processes in N₂O emission in ecosystems
- **Hideaki Shibata** (JaLTER; Hokkaido University, Japan): Impact of winter climate change on soil nitrogen dynamics in Japanese forest ecosystems.
- **Yiching Lin** (TERN: Tunghai University, Taiwan): Lessons for statistical analysis of long-term ecosystem data at the ILTER network.
- **Ika Djukic** (LTER-Austria: Environment Agency Austria): Global meta-analysis of litter decomposition using teabag experiments at ILTER sites.
- **Keisuke Koba** (JaLTER: Tokyo University of Agriculture and Technology, Japan): Nitrogen saturation and stable isotope signals in Japanese forest catchments.
- **Jianwu Tang** (US-LTER; The Ecosystem Center, Marine Biological Laboratory, USA): Global meta-analysis of N₂O emission in the ILTER network.
- **Kazuo Isobe** (JaLTER: The University of Tokyo, Japan): Advances in molecular approaches to understand the role of soil microbial communities in nitrogen biogeochemistry
- **Cristina Branquinho and Pedro Pinho** (LTER Portugal; Faculdade de Ciências da Universidade de Lisboa): Global and long-term ecological indicators of the effects of nitrogen on ecosystems
- **Ayato Kohzu** (JaLTER; National Institute for Environmental Studies, Japan): Long-term changes in nitrogen cycles, water quality and isotopic composition in Lake Kasumigaura, Japan.
- **Hideyuki Doi** (JaLTER: University of Hyogo, Japan): How to detect early warning signals in long-term ecological data?

- **ILTER field data collection**

Participants collect data on nitrogen cycle processes including **N₂O** emission (with analysis of **stable isotopes**), **stream chemistry**, **litter decomposition**, **soil N dynamics** and others using various instruments and equipment in a JaLTER-core site, the Uryu Experimental forest, Hokkaido University, Japan. Participants will also analyze and interpret the collected data in a small group to elucidate patterns and mechanisms and develop further research questions.

- **ILTER archived data analysis**

Small groups will conduct cross-site analysis of long-term datasets on nitrogen cycles and budgets archived in various ILTER sites. The groups will develop specific questions and hypothesis, followed by data comparison and synthesis. The most successful groups will be encouraged to develop manuscripts for peer-reviewed journal by collaborating with the relevant ILTER experts and data providers as co-authors.

- **Joint symposium – JaLTER Day**

This course is jointly organized by JaLTER (Japan LTER network) as a part of the 10 year anniversary the JaLTER program. Several keynote talks and oral and poster presentations will be given to celebrate this milestone. Participants are encouraged to contribute poster presentations to this event.



- **Schedule overview** (tentative):

Date	Activity	Venue*
Jun 15 (Wed)	Arrival (no official program)	Sapporo
Jun 16 (Thu)	Introduction / Keynote lecture / Welcome reception	Sapporo
Jun 17 (Fri)	ILTER lectures / Preparation of group work	Sapporo
Jun 18 (Sat)	ILTER lectures / Planning of group work	Sapporo
Jun 19 (Sun)	JaLTER Day (Oral and poster presentations) /Joint dinner	Sapporo
Jun 20 (Mon)	Transportation to Moshiri*/ LTER lectures	Sapporo → Moshiri
Jun 21 (Tue)	ILTER data collection	Moshiri
Jun 22 (Wed)	ILTER data collection / LTER archived data analysis	Moshiri
Jun 23 (Thu)	ILTER archived data analysis / Group work synthesis / Farwell dinner	Moshiri
Jun 24 (Fri)	Closing the course / Transportation to Sapporo* / Departure	Moshiri → Sapporo

*Sapporo: Hokkaido University

*Moshiri: Uryu Experimental Forest

Bus transportation between Sapporo and Moshiri will be arranged by the local organizer.

- **Cost for participant:**

Items	Price (JPY)	Number	Subtotal	Note
Registration fee	15,000 /person	1 person	15,000 JPY	
Accommodation in Sapporo	3,300 / night	5 nights (Jun 15-20 th)	16,500 JPY	Not including meals
Accommodation in Moshiri	3,000 / night	4 nights (Jun 20-24 th)	12,000 JPY	Including meals
Dinners fee	5,000 / person	1 person	5,000 JPY	

Total: 48,500 JPY

Notes:

- Available rooms are dormitory style (i.e., shared room) for both accommodation in Sapporo and Moshiri.
- Transportation by bus between Sapporo and Moshiri on Jun 20 and 24th are covered by the local organizer.
- Accommodation fee in Moshiri includes breakfast, lunch and dinner.
- Payment procedure will be given later.
- Accommodation in Sapporo: "Sapporo International Youth Hostel" (6-5-35, Toyohira-6, Toyohira-ku, Sapporo, Hokkaido, 062-0906, Japan; Tel +81-11-825-3120)
- Accommodation in Moshiri: "Uryu Experimental Forest" (Moshiri, Horokanai, Hokkaido, 074-0741, Japan; Tel +81-165-38-2125)
- JPY = Japanese Yen

Application procedure:

- ✓ Please fill out the application form in the separate sheet, and send it to the local organizing team (ilter-japan-2016@ml.hokudai.ac.jp) by January 30th, 2016. Online application is also available in the web (<http://goo.gl/forms/g1180q9jIM>).
- ✓ When the number of applicants exceeds the capacity (ca. 20 participants), the local organizing team will choose the participants based on the quality of the application and the balance of country, gender and backgrounds.
- ✓ The notification of the acceptance will be informed by the middle of February 2016.

Organizer: International Long-Term Ecological Research Network (ILTER)

Co-organizers: JaLTER (Japan LTER); TERN (Taiwan LTER)

Local organizing team: Hideaki Shibata, Toshiya Yoshida, Karibu Fukuzawa, Makoto Kobayashi, and Yoshitaka Uchida (Hokkaido University)

Contact: ilter-japan-2016@ml.hokudai.ac.jp

