Climate Across the Curriculum:

Educational Resources "By Teachers, For Teachers"

From publishing new lesson plans in Psychology, English Literature, and Economics to conducting teacher training workshops in South Africa, Egypt, and India, April was a busy and exciting month for the TROP ICSU project.

Over the past month, new teacher-submitted lesson plans—including the first ones in Psychology and English Literature—have been added to the TROP ICSU suite of teaching resources. The number of lesson plans and the disciplines covered continue to increase as we reach out to audiences across the world.

On the workshop front, the month got off to a great start with the TROP ICSU workshop for teachers in Pretoria, South Africa on 2 and 3 April 2019 in collaboration with our partner, the International Science Council - Regional Office for Africa (ISC ROA). The 2-day workshop was attended by approximately 30 undergraduate-level and university-level teachers from various disciplines.

Later in April, the TROP ICSU team facilitated a workshop for teachers and educators in Egypt. This 2-day workshop for university lecturers was organized in Cairo, Egypt on 15 and 16 April 2019 in collaboration with the Academy of Scientific Research and Technology (ASRT), Egypt. Approximately 100 participants from educational institutions and organizations in Egypt attended the event.

To round off the activities of the month, a half-day workshop and discussion
Technology (IIT) Tirupati, India on 26 and 27 April 2019.

According to feedback received from the participants and organizers, all these workshops were successful from the training and networking perspectives.

The overall objectives, approach, and progress of the TROP ICSU project were presented at the International Symposium on Climate Change and the Role of Education at Bishop Grosseteste University, Lincoln, UK, on 12 April 2019. A paper written by the team has been selected for inclusion in the volume "Climate Change and the Role of Education", part of the "Climate Change Management" series published by Springer.

As we increase our engagement with teachers and educators across the globe, we are collaborating with local partners in Australia, France, and China to plan and organize workshops in these countries in May, June, and July 2019.

Stay tuned to the Upcoming Events section of the newsletter for information about a TROP ICSU workshop near your location.

We hope you enjoy reading this edition of our newsletter.

Thank you for your interest and support!

Team TROP ICSU
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New Lesson Plans
Our collaboration with teachers to build and refine their lesson plan contributions is an ongoing effort. This month, several new teacher-submitted lesson plans have been published on the TROP ICSU website. Recent additions include lesson plans on

- **Stress and Coping in the Context of Climate Change** in Psychology
- **Climate Fiction** in English Literature
- **Poverty and Climate** in Economics
- **Biodiversity and Species Extinction due to Climate Change** in the Biological Sciences
- **The Timing of Fruit Production and Climate Change** in the Biological Sciences

Explore all the TROP ICSU lesson plans [here](https://tropicsu.iubs.org), and the teacher-submitted lesson plans [here](https://tropicsu.iubs.org).

To contribute to our set of teaching resources, write to us at tropicsu@iubs.org.
TROP ICSU Workshop in Pretoria, South Africa

Summary of the Workshop

A TROP ICSU workshop for teachers was conducted in collaboration with our partner the International Science Council - Regional Office for Africa (ISC ROA) in Pretoria, South Africa, on April 2 and 3, 2019.

The workshop was attended by approximately 30 participants (undergraduate-level and university-level teachers) from various

Participant Feedback and Reactions

Overall, the teachers and educators found the workshop content and activities to be useful and relevant. They provided valuable feedback on the TROP ICSU educational resources; this feedback will help the team to enhance the ease-of-use and effectiveness of the teaching resources. The participants hope to use the new lesson plan ideas (developed during the workshop) in
Medical Geology, Medical Imaging, Finance and Investment, Anthropology, and Public Health Medicine.

The workshop began with an introduction to the International Science Council - Regional Office for Africa (ISC-ROA) and their work. Then, an overview of the TROP ICSU project and its teaching resources was provided to the participants. Over the next one and a half days, the participants from universities in Johannesburg and Pretoria worked in groups to review and provide feedback on the teaching tools and lesson plans from the TROP ICSU website, and to develop new lesson plan ideas. The new lesson plans were interdisciplinary and included case studies or examples specific to South Africa.

Participants said:
"Include video clips relevant to specific topics"
"Provide appropriate figures/pictures that explain the before and after impact of climate change. e.g. sea level rise..."
"Thank you for exposing me to a new topic and allowing the opportunity to network and work with colleagues in other domains."
"Great workshop, thank you. Some suggestions will be e-mailed separately."
TROP ICSU Workshop in Cairo, Egypt

Summary of the Workshop

A two-day TROP ICSU workshop for university teachers was conducted with the valuable support of the Academy of Scientific Research and Technology (ASRT), Egypt, in Cairo, on April 15 and 16, 2019.

The workshop for university lecturers was attended by approximately 100 participants from various disciplines such as the Biological Sciences, Agricultural Sciences, Chemistry,

Participant Feedback and Reactions

All the participants found the workshop activities to be effective in demonstrating the use of climate-related examples to teach topics in various disciplines. Feedback included suggestions on adding more disciplines and corresponding teaching resources, and ideas on customization of existing lesson plans.
The workshop began with a few plenary sessions that introduced the work of ASRT, the objectives of the workshop, and the TROP ICSU project and teaching resources. Then, participants carried out hands-on, interactive activities to explore and use the digital teaching resources on the TROP ICSU website. They worked in discipline-based groups to review the resources and to develop new lesson plan ideas for teaching topics in their discipline with the help of climate-related examples.

"Participants said:"

"[Include] subject matter expertise in medicine because effect of climate changes on human health"

"I would like to see an Engineering discipline on your website..."

"It is excellent event and it better to extend the workshop for three days"

"It was fantastic workshop, Please try to expand the idea to primary and prep school levels. Thanks a lot"
TROP ICSU Workshops in Tirupati, India

Summary of the Workshops

A half-day TROP ICSU workshop and discussion with climate experts was held with the valuable support of the Indian Institute of Technology (IIT) Tirupati at the IIT Tirupati campus on April 26, 2019.

The workshop was attended by 12 participants whose research and teaching interests lie in areas directly or indirectly related to climate change and its impacts. After an introduction to the TROP ICSU project and its educational resources, the group discussed ideas for new lesson plan ideas and plans for continued engagement and collaboration.

On April 27, 2019, a one-day TROP ICSU workshop was conducted for university-level teachers and educators at the IIT Tirupati campus. The workshop was attended by approximately 45 participants from various disciplines such as Biotechnology, English, Transportation Engineering, Water Resources Engineering, Computer Science, Economics, Hydrology, the Biological Sciences (Phenology), and Statistics.

Participant Feedback and Reactions

The climate experts found the TROP ICSU educational resources to be useful and discussed ideas in Economics, Hydrology, the Biological Sciences (Phenology), and Statistics that could be used to create new lesson plans with climate-related examples, case studies, and activities.

In the teachers workshop, participants provided positive feedback about the workshop content and activities. They found the introduction to the usage of digital pedagogical tools and the creation of structured lesson plans to be useful and relevant.

Participants said:

"Innovative and Modern Methods for teaching"

"Please conduct Webinars"

"It's great work and it is also better to add Engineering branches also"

"Available resources are quite good"
Mechanical Engineering. The TROP ICSU team presented the project and its resources. Then, participants worked in discipline-based groups to review the existing teaching resources and to develop new lesson plan ideas.

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**TROP ICSU at the Symposium on Climate Change Education in Lincoln, UK**

The TROP ICSU project was presented at a session titled "Climate Change Education Across the Curriculum" at the [International Symposium on Climate Change and the Role of Education](https://us19.campaign-archive.com/?u=792378e66e9138deb30c8b5a1&id=ee10ecdfaa) on 12 April 2019 at Bishop Grosseteste University, Lincoln, UK.

The symposium, which took place on 12 and 13 April 2019, was organized by Bishop Grosseteste University (UK), the Hamburg University of Applied Sciences (Germany), and the International Climate Change Information Programme. It focused on the role of education in climate action—the use of education as a tool for climate change adaptation and mitigation, and as a means to build climate resilience.

Details of the conference program are available [here](https://us19.campaign-archive.com/?u=792378e66e9138deb30c8b5a1&id=ee10ecdfaa).
Upcoming Events

The TROP ICSU team will facilitate three workshops in Australia in the month of May:

- a teachers workshop in Melbourne on 24 May 2019 in collaboration with Monash University,
- a workshop for climate experts in Melbourne on 27 May 2019 in collaboration with the University of Melbourne, and
- a workshop for teachers in Adelaide on 30 and 31 May 2019 in collaboration with the University of Adelaide.

Other upcoming workshops include a teachers workshop in France in partnership with Paris-Sud University (Université Paris-Sud) in June 2019 and a teachers workshop in Beijing, China to be held in July 2019 in collaboration with the Beijing Institute of Genomics, Chinese Academy of Sciences.

Around the Web: Climate-related Educational Resources

Climate-related Educational Resources for Various Grade Levels

- MADE CLEAR, the Maryland and Delaware Climate Change Education Assessment and Research program

Resources for Teaching Climate Change in the Context of Different School Subjects

- Teachers Climate Guide, a concept by a Finnish environmental educator, Pinja Sipari