



Critical zone observatories in the southern hemisphere – An international workshop.

Ancient soils and modern land use – A challenge for critical zone science

Perth, Australia, 10th – 12th April 2014
2 day workshop & 1 day field trip

Scope of Workshop:

This workshop addresses questions related to establishing the first CZO in the southern hemisphere. In the southern hemisphere, many soils and near surface materials have a long weathering history, often lacking renewal of soil parent material by various processes during the Pleistocene - an important difference compared to many areas of the northern hemisphere. Additionally, in the southern hemisphere agricultural development and land use have very different histories. Both the ancient and recent drivers of critical zone processes make a Southern Hemisphere Critical Zone Observatory a unique and much needed opportunity for critical zone science.

The workshop will bring together scientists, NGOs, farmers, land managers, representatives from funding organisations and politicians to address questions necessary to implement critical zone science in the southern hemisphere.

Key Areas to be Addressed:

- Understanding critical zone processes in ancient, highly weathered soils including weathering, transport of nutrients and pollutants, biology and ecology
- Adaptation of agricultural practices on ancient soils to climate change scenarios, climate variability, unsaturated zone hydrology and groundwater recharge
- Re-vegetation and rehabilitation of disturbed sites (e.g. mines)
- Necessary steps towards CZOs in the southern hemisphere (funding, networks etc.)
- CZO research facilities for cross-hemisphere scientists to apply, test and adapt theories
- The role of southern hemisphere CZOs for the global CZ community – steps towards international funding

Keynote Speakers

International keynote speakers from the USA, the UK, South Africa, New Zealand and Australia will share their expertise and guide the sessions:

- Dr Tim White, Pennsylvania State University, USA – *NSF cross CZO initiative*
- Prof Oliver Chadwick, University of California at Santa Barbara, USA – *future SA CZO*
- Prof Steven Banwart, University of Sheffield, UK – *European SoilTrEC program leader*
- Dr Lesego Khomo, University of Cape Town, SA – *future SA CZO*
- Dr Luitgard Schwendenmann, University of Auckland – *Ecological studies in CZOs*
- Prof Alex McBratney & Dr Uta Stockman, University of Sydney, AU – *TERN program Australia*

Preliminary Outline of Workshop

Dates: Thur 10th – Sat 12th of April 2014

Thur 10th Apr 10am – 6pm, University Club at UWA

Fri 11th Apr 9am – 6pm, University Club at UWA

Sat 12th Apr 7am – 8pm, a full-day field trip to the site of the CZO at the UWA Farm, including a stop in the jarrah forest and concluding with an Aussie barbeque.

As we are in the planning stage of the final program, we are open for comments to strengthen the program towards the needs of establishing CZOs in the southern hemisphere.

Webpage

Look for update details: <http://www.see.uwa.edu.au/research/czo-critical-zone-observatory>

Collaborating universities



Sponsors



If you want to be a part of this exciting event, or if you have additional questions please send your expression of interest to: czo-sci@uwa.edu.au, or contact

Matthias Leopold or Deirdre Gleeson, School of Earth & Environment (M087),
The University of Western Australia, 35 Stirling Hwy, Crawley WA 6009 AUSTRALIA,
Ph: +61(0)8 6488 2769 or Ph: +61(0)8 6488 3593 Fax: +61(0)8 6488 1050