



COST is an intergovernmental framework for European Cooperation in Science and Technology established to initiate networking and coordination of nationally funded research activities on a European level. It facilitates bringing good scientists together under light strategic guidance based on networks, called COST Actions, centered around research projects in fields that are of interest to COST countries and those with reciprocal agreements with COST (Argentina, New Zealand and South Africa).

COST Action ES1104

Arid Lands Restoration and Combat of Desertification

COST Action ES1104 focuses on practical measures that can be used by practitioners, stakeholders and authorities to restore degraded drylands and manage their recovery. It will run from June 2012 to May 2016. This networking Action has its origins in the European Union but its remit is to galvanize action and innovation within and beyond EU borders. The action welcomes participation and collaboration in this endeavour to create a global 'one stop shop' for the dissemination of knowledge and solutions to people in arid lands, and also creates opportunities for education and innovation through Short-Term Scientific Missions and Training Schools.

Training School 3

Participation-driven Science in Ecology and Hydrology:

Implementation of para-ecology in dryland research and restoration

17-19 February 2014 – University of Hamburg Botanical Gardens, Germany

Background:

The combat of desertification and restoration of arid and drylands requires a concerted effort at all stakeholder levels. At the local level, individuals and communities have the advantage of being able to make continuous observations and data collection, and have a democratic right in participation and the social wellbeing that is created locally through knowledge collection and dissemination. Therefore participation of local stakeholders is a key element of sustainable research, restoration, management and monitoring of dryland ecosystems.

The training school is open to PhD students and Postdocs who work in the field of restoration and monitoring of dryland ecosystems and who are interested in learning about approaches for integrating local stakeholders through the involvement of para-ecologists. A para-ecologist is usually a local person who has become a specialist with extensive local knowledge and who has been trained largely on-the-job in one or more fields of ecological science. Para-ecologists communicate with the local and scientific communities, and contribute to both scientific research and local development (www.paraecologist.org).

The training school will appraise and formulate a synthesis of existing approaches to para-ecology (comprising restoration, management and monitoring, with a focus on dryland ecology

and hydrology), and distil them into reviews which will be prepared for publication in peer-reviewed journals.

Short description of the training school programme:

The training school aims to explore the role of para-ecologists in the sustainable management of drylands and restoration of degraded land. The training school will accept up to 8 PhD students or Postdocs who are interested or involved in participation-driven science and research in arid lands restoration with a focus on para-ecology and hydrology. We particularly welcome applications from people who have experience or are interested in involving local inhabitants in monitoring, research and restoration. The training school will investigate and evaluate existing initiatives that engage para-ecologists and explore the potential role of para-ecologists in the restoration of degraded ecosystems. The training school will gather together experience from research, pilot projects and activities, synthesize them into review paper(s) and formulate a common framework.

The training school will start with a mini-conference. Invited speakers will highlight recent developments and the current state-of-the-art, and offer perspectives on the role of para-ecologists in restoring degraded land. The trainees will also be given an opportunity to present their own experiences of para-ecology. The half-day mini-conference will be held at the Botanical Garden of the University of Hamburg. A web-conference format will be used to ensure that the mini-conference will reach a broad public

The training is provided by Dr Christoph Külls (University of Freiburg, Germany), Dr Ute Schmiedel (University of Hamburg, Germany), Dr Yoseph Araya (Birkbeck College, University of London, UK).

Programme:

Morning of Day 1:

Mini-conference on recent developments, current state-of-the-art, and perspectives on the role of para-ecologists in restoring degraded land.

Afternoon of Day 1:

Continuation of the discussion initiated during the mini-conference. Participants will share their own experience and lessons learnt in the field of participatory research, and will work towards developing criteria for successful and sustainable para-ecologist programmes.

Review of existing programmes world-wide that already involve para-ecologists (e.g. Parataxonomist programme of the Area de Conservación Guanacaste (ACG) in Costa Rica; The New Guinea Binatang Research Center in Papua New Guinea; BIOTA Southern Africa in Namibia and South Africa; The Future Okavango in Angola, Botswana and Namibia; Kakamega Environmental Education Program (KEEP) in Kenya, Mitsinjo Association in Madagascar; Missouri Botanical Garden with projects in Madagascar and East Africa).

Review of cases where para-ecologists could become integrated into hydrology and water management initiatives: Decentralized participative hydrological data collection in (RNRA, Rwanda Natural Resources Agency), citizen-based flood warning on river Elbe, river basin management cooperatives (WVB, River Maintenance Association, Schleswig-Holstein), Smart City Centre Lübeck – Smart Basins, participative monitoring with modern information and communication technology.

Morning of Day 2:

Review of the literature and other sources concerning the objectives, activities and methodology used in these programmes (group work).

Development of criteria for participation in monitoring and adaptation: discussion and preliminary evaluation of current state-of-the-art.

Afternoon of Day 2:

Continuation of the review process. Develop further questions to be asked to people involved in the initiatives (para-ecologists, programme managers, researchers) by email, telephone or Skype interviews.

Morning of Day 3:

Compile a web presentation on the training school for the Desert Restoration Hub website (<http://desertrestorationhub.com>) and the Para-Ecologist Platform (www.paraecologist.org).

Develop the content, structure and message of the review paper(s). Develop a framework for participation-driven science for Horizon 2020.

Afternoon of Day 3:

Start drafting the review paper(s) and allocate tasks and timeline for further steps towards the completion of the paper(s). A condition of an offer to attend the Training School is that the applicant will agree to contribute to the review paper(s) as required by the trainers. Compose a press release with a draft common statement on the role of para-ecologists in participation-driven science for desert restoration.

Eligibility: Applicants must be PhD students or Postdocs enrolled in or affiliated to an Institution located in a COST country: Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom and the former Yugoslav Republic of Macedonia.

Applicants from approved Near Neighbour country institutions are also eligible to apply: the Centre for Ecological-Noosphere Studies, Armenian National Academy of Sciences; Al Hussein Bin Talal University, Jordan; Ibn Zohr University, Morocco; Al-Quds University, Palestine; and the Institut des Regions Arides, Tunisia.

The interest and/or first-hand experiences of applicants should fit with the topic of this training school.

Financial support: COST Action ES1104 is offering eight places on the training school on a competitive basis. Successful applicants will be offered a **maximum grant of €840** as a contribution towards the costs of travel, accommodation and meals. The exact award offered will depend on the cost of travel as this differs considerably across eligible countries. COST rules dictate that the maximum allowance for travel expenses is €300.

Please note that the grant will be paid by bank-to-bank transfer after the course has been completed. It is the responsibility of each participant to provide adequate insurance cover (personal, travel and medical) for the whole duration of the training course and travel period.

How to apply: Send a letter of application stating your reasons for wanting to take part in the Training School to Dr Christoph Külls (christoph.kuells@hydrology.uni-freiburg.de) and Dr Ute Schmiedel (Ute.Schmiedel@uni-hamburg.de) by **5 February 2014**. The letter should be accompanied by the following documents:

- (1) a 1-2 page CV containing your personal information, current home and university/institution mailing addresses, e-mail, Skype name (if possible), university education background including current enrolment status, training/work experience, publications.
- (2) a 1 page letter of motivation stating why you would like to participate in this training school.
- (3) for PhD students only: contact details of your supervisors.