We are recruiting 1 Postdoc and 2 PhD students

ARC Project: Linking terrestrial–aquatic carbon fluxes across Australia
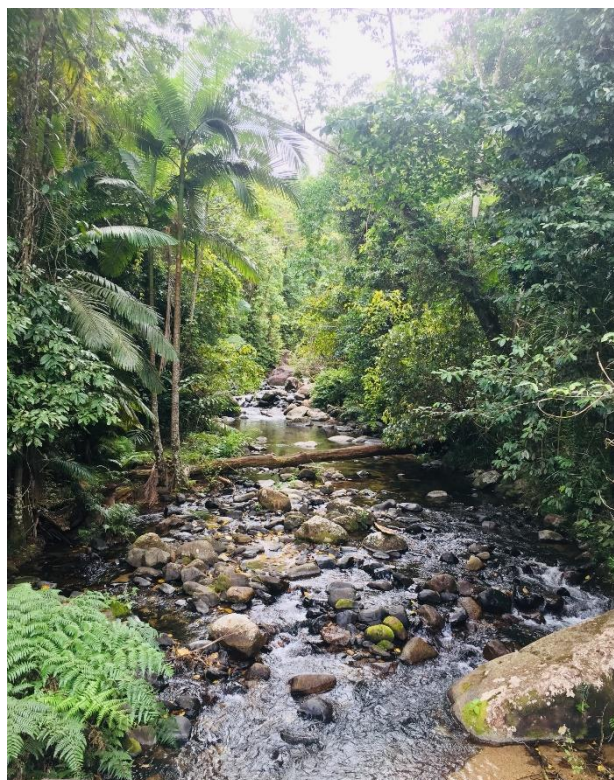
As part of a newly-funded ARC Discovery Project, we are seeking candidates for one Postdoctoral Research Fellow and two PhD student appointments. The project will start in mid-2022 and aims to develop the first nationwide assessment of carbon export via streams and rivers. The project will combine direct measurements from ecosystem observatories of the Terrestrial Ecosystem Research Network (TERN) with remote sensing and advanced statistical modelling.

Postdoctoral Research Fellow (full time, 3 years)

The Postdoctoral Research Fellow will be responsible for coordinating the different components of the project in close collaboration with the team of investigators and TERN site leaders. They will coordinate field work in remote locations of the Northern Territory, Queensland and Tasmania, operate and maintain field instrumentation and oversee laboratory analyses. They will also lead data analysis, modelling and manuscript preparation, and co-advise the two PhD students.

We are looking for someone with a PhD in environmental science, hydrology or biogeochemistry with fieldwork experience, advanced numerical skills (e.g. R, MATLAB, Python) and experience in the analysis of large datasets and statistical modelling.

The position will be based in Darwin (Northern Territory, Australia), with starting salary at Level A (~A\$94,000 per annum) or B (~A\$104,000 per annum) depending on experience and competencies, plus 17% employer contributions to superannuation. Please contact Clément Duvert (clem.duvert@cdu.edu.au) for further information. Expected start date: mid-2022.

PhD student 1 (full time, 3.5 years)

This PhD student will contribute to the deployment of field instruments, field sampling and liaison with local collaborators in Queensland and Tasmania. They will be tasked to analyse high-resolution time-series data (flow, dissolved gases, organic carbon) and derive estimates of aquatic carbon export at each site. They will also integrate geochemical and isotopic data into mass balance and mixing models.

Applicants are required to have a MSc or a BSc with 1st class honours in a relevant science discipline such as hydrology, biogeochemistry or environmental science. They are expected to have experience with programming tools (or a strong willingness to learn) and enjoy remote fieldwork.

The Research Training Program allowance is A$28,854 per year (2022 rate) free of tax + top-up scholarships will be made available for excellent candidates. Expected start date: mid-2022.

PhD student 2 (full time, 3.5 years)

This PhD student will develop approaches to upscaling point measurements of aquatic carbon flux to the continent using remote sensing and machine learning modelling. One key task will be to develop an updated carbon balance for Australia based on the most up-to-date estimates of terrestrial carbon productivity and new aquatic carbon data obtained through the project.

Applicants are required to have a MSc or a BSc with 1st class honours in environmental science, GIS or hydrology. They will be expected to have strong numerical modelling skills and a keen interest for carbon cycle science.

The Research Training Program allowance is A$28,854 per year (2022 rate) free of tax + top-up scholarships will be made available for excellent candidates. Expected start date: late 2022 or early 2023.

For both PhD offers, interested candidates should send an email to Clément Duvert (clem.duvert@cdu.edu.au) describing their background, research experience and interest in this project.

Research environment

The Research Institute for the Environment and Livelihoods (RIEL; http://riel.cdu.edu.au) is a Tier One institute that consolidates CDU's environmental research and postgraduate training. RIEL brings together around 50 scientists and as many PhD students (roughly one-third international) and provides a vibrant, multidisciplinary research environment with high quality doctoral and postdoctoral training opportunities.

Our ARC Discovery Project will provide opportunity to work within an international, multidisciplinary team made up of Dr Clément Duvert (CDU), A/Prof David Butman (University of Washington), A/Prof Marcus Wallin (Swedish University of Agricultural Sciences), Dr Anna Lintern (Monash University), Dr Pep Canadell (CSIRO) and Prof Lindsay Hutley (CDU).