



## PostDoc position at the Freie Universität Berlin

### **Ecosystem services through restoration: Improving restoration outcomes through trait-based modelling**

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Mediterranean-type ecosystems appear to be among the ecosystems that are most at risk to multiple global change (e.g. invasion of exotic species, nitrogen deposition, climate change), which are likely to exacerbate the contemporary decline of ecosystem services such as nutrient supply, carbon sequestration and water supply. Ecosystem restoration projects increasingly aim at improving multiple ecosystem services, and therefore we require a fundamental understanding of the link between ecosystem composition (characterised by plant traits), related functions and services, and influencing environmental drivers.

The successful candidate will develop a process-based nutrient cycling model that will be able to simulate carbon and nitrogen dynamics of Mediterranean-type ecosystems. The model will then be linked to existing models for soil hydrology and vegetation dynamics. The development and application of this model will be in close cooperation with a PhD student, who is currently developing the soil hydrology and vegetation model, and will be accompanied by field measurements and experiments of cooperation partners in Australia and Spain. The full model will then be used to assess the linkage between different plant trait compositions and the provision of multiple ecosystem services and trade-offs among them for several environmental change scenarios. To improve future restoration outcomes in Mediterranean-type ecosystems, species assemblages towards the provision of multiple ecosystem services will be detected that minimise trade-offs among them taking account of environmental change.

#### **Your profile**

- PhD in biology, ecology, ecohydrology, environmental science, geoecology, system science or a related field
- Experience in programming (preferentially in C++ and R) and the development and application of process-based simulation models
- Background in cycling of nitrogen and carbon (preferentially)
- Excellent publication record
- Excellent oral and written communication skills in English (good communication skills in German appreciated but not essential)
- High motivation and good organisational skills, interest to closely collaborate with local and international project partners

The PostDoc position is scheduled for 2 years with an anticipated starting date in November 2016. Payment is according to the German public tariff (100% TV-L E13).

Applications (quoting the reference: Restoration\_PostDoc\_2016) should be submitted until 22<sup>nd</sup> August 2016 via email, and preferably as single pdf-file to Prof. Dr. Britta Tietjen, Biodiversity and Ecological Modelling, Freie Universität Berlin: [britta.tietjen@fu-berlin.de](mailto:britta.tietjen@fu-berlin.de). Applications should include a **letter of motivation, a CV including a list of publications, transcripts or degree certificates including grades and proofs of special qualifications**. The applicant should give **contact details of two potential referees**. The Freie Universität Berlin is an equal opportunity employer and specifically encourages female candidates to apply. Disabled persons will be preferred in case of equal qualification.