



Job Profile: Tenure Track Assistant Professor on Sustainability in the Food/Water/Energy nexus

The Institute for Biodiversity and Ecosystem Dynamics (IBED) plays a leading role in several important teaching programmes of the University of Amsterdam with a strong interdisciplinary component such as the Bachelor Future Planet Studies and the Master Earth Science. To strengthen the links between research and teaching, and in particular the underpinning of interdisciplinary teaching with interdisciplinary research, IBED is seeking to recruit an interdisciplinary tenure track assistant professor on the topic of Sustainability within the Food/Water/Energy (FWE) nexus. To this end, IBED seeks to expand and strengthen the existing collaboration in the area of interdisciplinary teaching and research on sustainability with the FWE nexus between IBED, more specifically the Ecosystem and Landscape Dynamics (ELD) department and the Amsterdam Institute for Social Science Research (AISSR), more specifically the Governance and Inclusive Development (GID) programme group. Furthermore, IBED seeks to expand its activities in the 'Coupled human and natural systems' theme of the Institute for Advanced Studies (IAS).

Background

As humanity we find ourselves in a situation where a growing world population aspires to fulfil infinite ambitions on a finite planet. This is captured by the Planetary Boundaries concept that identifies several interlinked planetary systems where it postulates a safe operating space within which sustainable development is possible, having thresholds that once surpassed threaten to trigger irreversible tipping points. Meeting Social Floors (as required by human rights law and the Sustainable Development Goals) may in itself lead to crossing planetary boundaries if technological and redistribution options are not adequately explored. Our food, water and energy systems are closely interlinked and directly coupled to multiple planetary boundaries and the Social Floors. The need for sustainable development within the FWE nexus is globally recognized as illustrated by their direct linkage to several of the United Nations Sustainable Development Goals. However, the necessity to steer clear of the planetary boundaries poses an enormous challenge to make such development truly sustainable and socially just. Sustainability in this context pertains both to ecological sustainability and social sustainability. While the planetary boundaries are defined in terms of earth scientific and ecological parameters, e.g. global N fluxes, fresh water extraction and land-use change, it is globally differentiated human behavioural patterns that determines the current values of these parameters.

The dynamics of ecosystems and human systems each have their own challenges in the context of sustainability in the FWE nexus, but the interaction of both systems is especially of relevance. From an earth scientific / ecological perspective we need to understand biogeochemical cycles in soil and water, and quantify the effects of land-use change thereon. A particular challenge in this is connecting different levels of scale. How does for instance the molecular dynamics of soil organic



matter affect N fluxes at the landscape, regional and even global scales? From a governance perspective, we need to understand what social, economic, ecological, institutional and other drivers shape behavioural patterns and what kinds of policy mixes can best address these drivers at multiple levels of governance.

Job description

The tenure track assistant professor will perform cutting-edge interdisciplinary research at the interface of ecosystems and human systems focusing on the challenging road towards sustainability within the food, water and energy systems. Based on the background of the candidate, the emphasis may lie on one of the three systems or, preferably, combine them. The work ideally combines field and laboratory work with theoretical analysis and modelling using systems' thinking and/or complexity science approaches.

While the global FWE systems are the focus of the research, special emphasis will be placed on the interaction between the Global North and the Global South, the latter being the domain where the challenges faced both from an ecosystem and human system perspective are often the largest. The described interdisciplinary research will form the foundation of an extensive research-based interdisciplinary teaching portfolio within the Bachelor Future Planet Studies and the Master Earth Science, with minor contributions to other relevant programmes. This will include project courses where students gain their first experience with performing their own interdisciplinary research projects within the FWE nexus, as well as theoretical courses that form the foundation for such projects.

In this position you are expected to:

- perform cutting-edge interdisciplinary research at the interface of ecosystems and human systems focusing on the challenging road towards sustainability within the food, water and energy systems;
- develop an extensive research-based interdisciplinary teaching portfolio within the Bachelor Future Planet Studies and the Master Earth Science, with minor contributions to other relevant programmes;
- publish in high level international journals, present at leading conferences and supervise PhD students;
- attract external funding to sustain and expand the research line;
- actively pursue collaborations with relevant stakeholders inside and outside academia

What do we require?

- a PhD in an interdisciplinary topic within the food/water/energy nexus that combines a strong earth sciences and/or ecological component with a substantial contribution from the relevant social sciences; and a demonstrated track record of contributing to collaborative interdisciplinary projects outside of the candidate's main domain of research;



- specific experience with the appropriate disciplinary as well as inter- and transdisciplinary research methodologies from both the earth sciences/ecology and the social sciences, including experience in an international context;
- a relevant network in the field and experience in acquisition of research funding;
- high affinity with university teaching, and the development and organization thereof, including specific experience with interdisciplinary teaching within the food/water/energy nexus;
- experience with supervising BSc, MSc and PhD students;
- excellent communication skills, including excellent writing skills and a growing scientific publication record;
- fluency in English and in Dutch, or willing to learn Dutch to a level appropriate for teaching in Bachelor programmes taught in Dutch;
- a driven personality and a good team-player who can serve as role model for students as well as junior lecturers and junior researchers.

Our offer

We offer a temporary employment contract for six years and 32-38 hours per week with a tenure track agreement for the duration of five years. The intention of the tenure is a permanent appointment as Associate Professor level 2 after 5 years with intermediate promotion to Assistant Professor Level 1. In case of an insufficient evaluation the appointment will end after 6 years.

The starting salary will be in accordance with university regulations for academic personnel, and depending on experience and qualifications. It will range from a minimum € 3,746 to € 5,127 (scale 11) gross per month based on full-time employment.