

APPLY 64-2022

# Researcher/Modeler - climate-economy-environment

## IIASA ENERGY, CLIMATE, AND ENVIRONMENT (ECE) PROGRAM

IIASA looks to recruit a motivated and talented researcher in the area of system dynamics modeling to join the [Energy, Climate, and Environment \(ECE\) Program](#).

### BACKGROUND

The ECE Program at IIASA is one of the world's leading global Integrated Assessment Modeling (IAM) teams, and works to deepen understanding of rapid, just, and feasible systems transformations toward environmental, social, and economic sustainability. Continuing a long tradition going back to the foundation of IIASA, ECE's modeling tools stand at the heart of the institute's integrated assessment capabilities, used to explore linked solutions for energy, food, land, and water. Interdisciplinary teams within ECE use these and complementary methods to study trade-offs and synergies between multiple policy priorities and objectives, typically across multiple sectors. ECE's scientific outputs inform international and national policy efforts related to climate change (e.g., implementation of the Paris Climate Agreement) and sustainable development (e.g., pursuit of the Sustainable Development Goals).

ECE seeks a strong candidate who can support advancing the representation of social systems and behavioral factors in climate-economy-environment modeling. Demand reduction through behavioral changes is considered an important mitigation option, and the crucial role of social systems in rapid decarbonization is increasingly acknowledged. Extending global models to explicitly capture bottom-up behavioral change and human-earth system feedbacks will enable assessing the feasibility of widespread behavioral changes and social tipping mechanisms.

The incumbent will contribute to developing modeling methods and data to study the social dynamics of low-carbon behavior changes, such as shifts to plant-based diets, emerging from individual behavior change and in relation to economic, environmental and political factors. They will join and (co-)lead existing research efforts, while helping identify, plan, and create new opportunities and research directions. This work will include, but is not limited to:

- Extension of the [FeliX system dynamics model](#) to capture the individual, social, and structural factors behind behavior change for low-carbon consumption at a global level.
- Complementary qualitative and quantitative analysis of the feedback mechanisms leading to widespread behavioral changes and their cascading effects.
- Computational, model-based analysis of the impacts of large-scale behavioral changes on food and energy demand, and the key drivers or barriers of those.
- Design and execution of linkages between human and earth systems through collaborations with climate and economic system modelers.

The successful candidate will represent IIASA and ECE in the international [WorldTrans Project](#) funded by Horizon Europe. If the successful candidate does not already have a PhD, there will be opportunity for them to work towards one at Radboud University, Netherlands as an external PhD candidate.

## TASKS AND RESPONSIBILITIES

- Contribute to the development of conceptual and formal system dynamics models of widespread behavioral changes for low-carbon food and energy consumption; source appropriate data/measures; and implement scenario analyses with a high degree of rigor.
- Contribute to the extension and maintenance of the FeliX simple integrated assessment model; apply the tool to address diverse research questions.
- Process large volumes of data on (inter alia) consumption statistics, consumer preferences and citizen attitudes, beliefs and values on climate change and climate policies; collaborate with other data analysts to quantify the models.
- Produce figures, maps, and visualizations to check results and efficiently communicate findings.
- Collaboratively develop model and data analysis code that is version-controlled, documented, and reproducible, to enable low-cost adaptation of methods for different contexts.
- Participate in and/or facilitate participatory modeling activities with international research partners and stakeholders.
- Present methods and results to both technical and non-technical audiences; write reports and scientific papers to communicate findings.
- Contribute to ongoing and future projects, and participate in external fundraising/grant applications, related to the social dynamics of low-carbon consumption and climate change mitigation, and their implications for broader sustainable development issues.
- In line with the team spirit that prevails at IIASA, the incumbent may occasionally work on other tasks assigned by their superiors, that might not be directly related to this appointment but where the post holder has relevant experience and skills, and/or a shortage of immediate personnel capabilities requires such.

## SKILLS, QUALIFICATIONS, AND EXPERIENCE

### Essential:

- Min. master's degree (or equivalent) plus research experience in a related field e.g., economics, engineering, or social sciences.
- Knowledge of and hands-on experience with dynamic systems modeling, such as system dynamics or agent-based modeling.
- Knowledge of a system dynamics modeling software (preferably Vensim, or Stella, PowerSim, AnyLogic etc.).
- Full fluency in English; good presentation skills; and experience writing publications.
- The ability to work in, and have respect for, an intercultural environment, and [IIASA core values](#).

### Desirable:

## APPOINTMENT TERMS

The selected candidates should be available to take up the position as soon as possible (start date negotiable). We offer an initial fixed-term, full-time (40 hours per week) employment contract for one year, with the possibility of extension thereafter. Applicants wishing to work part-time hours may also be considered.

Duties will be carried out at the IIASA premises in Laxenburg, near Vienna in Austria (up to 100 days per year home office working within Austria possible).

The successful candidate will be hired as a Researcher (R1) or Research Scholar (R2) in accordance with their corresponding profile in the [IIASA profiles for research careers](#).

## WE OFFER

A gross annual, full-time salary of:

**Minimum** EUR 33,924.00 for R1 researchers

- Programming ability, ideally in Python, R, or a similar language.
- Experience in integrated assessment modeling and/or with models representing human behavior such as social diffusion, innovation adoption, epidemics or behavior change; with facilitation of participatory modeling activities preferred.
- Strong domain knowledge in demand-side mitigation, the role of food and energy consumption choices in climate change mitigation, and the role of psychosocial factors in behavioral changes.
- Experience with GitHub and version control systems.

**Minimum** EUR 44,204.00 for R2 research scholars.

IIASA salaries are:

- Exempt from income tax in Austria
- Negotiable, based on the qualifications, skills and experience of the selected individual.
- Subject to deductions for health insurance and/or social security.
- Not directly comparable with other employers in Austria, due to the unique legal status and privileges granted to IIASA.
- Subject to the principle of income aggregation (Progressionsvorbehalt in German).

### IN ADDITION:

- Educational subsidies for children of school age enrolled in private schools in Austria.
- A generous annual leave allowance.
- Moving and settlement allowances and paid home leave for employees in scientific and professional categories hired from international locations.
- Assistance for newcomers to Austria with visa, work and residency permit applications.
- Support finding accommodation in Austria.

Further details [here](#).

## About IIASA

IIASA is committed to a working environment that promotes equality, diversity, tolerance and inclusion within its workforce. This is reflected in our [IIASA core values](#). We encourage qualified candidates from all religious, ethnic, and social backgrounds to apply. In the case that candidates are equally qualified, preference will be given to applicants from countries where IIASA has a [National Member Organization](#) (NMO).

## Further Information

For further information about this opportunity please contact:

[Dr. Sibel Eker](#), Research Scholar, Sustainable Service Systems Research Group

For general information about working at IIASA: [recruitment@iiasa.ac.at](mailto:recruitment@iiasa.ac.at)

## Applications

To apply for this opportunity, you will need to provide the following documents in English:

- A cover letter outlining your motivation for and fit to the position
- A detailed Curriculum Vitae

- The names, addresses (including e-mail), and telephone numbers of two work-related reference givers.

Review of applications will begin immediately and continue until the post has been filled.

Deadline for receipt of applications: until filled

[APPLY](#)