POSTDOCTORAL FELLOWSHIP RELATED TO BIOTA SYNTHESIS (NUCLEUS OF ANALYSIS AND SYNTHESIS OF NATURE-BASED SOLUTIONS)

FELLOWSHIP #7 - NATURE-BASED SOLUTIONS (NBS) AND URBAN INTERVENTIONS FOR CLIMATE ADAPTATION IN URBAN AREAS

1. Job Description:

Fields of knowledge: Environment and Society, Urban Planning and Design, Climate Adaptation

FAPESP process: 2020/06694-8

Project title: BIOTA SYNTHESIS – Nucleus of Analysis and Synthesis of Nature-Based Solutions

Principal investigator: Jean Paul Metzger

Postdoctoral project title: Nature-Based Solutions (NbS) and Urban Interventions for Climate Adaptation in Urban Areas

Supervisor for this position: Jean Paul Metzger and Gabriela Di Giulio

Unit/Institution: Institute for Advanced Studies, University of São Paulo, São Paulo.

Working area: Climate Adaptation, Nature-Based Solutions and Urban Planning and Design

Number of scholarships: 1

Duration: The position is offered for 24 months, starting on May/2022.

Grant: BRL 7,373.10 (monthly) plus a research contingency fund equivalent to 10% of value of the scholarship (to purchase items directly related to research activity)

Deadline for submissions: March 14th, 2022, at 10 am, Brasilia Time (BRT), UTC -3

Publishing date: April, 2022

Selection process: The selection process will happen in two phases: *curriculum vitae* evaluation and interview. Only the 3-5 candidates presenting the best evaluated CVs will be interviewed (remotely).

Local: IEA-USP: Institute of Advanced Studies of the University of São Paulo, Rua Praça do Relógio, 109, ground floor, Cidade Universitária, Zip Code 05508-050, São Paulo, SP.

Link for submission: https://forms.gle/yVECcrK4eyq3Y5h16

E-mail for contact: biotasintese@usp.br

2. General Postdoctoral fellowships 'profile:

The Biota-Synthesis initiative seeks eight highly qualified postdoctoral fellows to be part of a "Nucleus of Analysis and Synthesis of Nature-based Solutions". This Nucleus will be funded by the São Paulo Research Foundation, FAPESP, for a 5-year period (2022-2026) and brings together researchers from 5 Universities, 7 Research Institutes of the State of São Paulo and 4 Non-Governmental Organizations, as well as technicians and decision makers from the State Secretariats of Infrastructure and Environment, Public Health, and Agriculture. The Nucleus will be based at the Institute for Advanced Studies of the University of São Paulo, city of São Paulo (SP), Brazil.

The goal of the Nucleus is to support the state of São Paulo in the development of socio-environmental public policies related to agricultural sustainability, ecological restoration, zoonosis control, and disease prevention in urban areas, considering essentially nature-based solutions.

The Nucleus will work following a "synthesis science" approach, with heterogeneous and collaborative working groups, which will meet periodically in an immersive way for brainstorming discussions. These meetings will be intercalated with the analysis and modeling of existing databases, where the active participation of postdoctoral fellows is expected. See here for further details.

The desired profile for these postgraduates is of professionals with great ability to work collaboratively in teams, with high capacity for listening and dialogue with researchers and social actors with different backgrounds and professional experiences, in addition to the modeling and analysis capabilities that will be detailed for each profile. The post-doctoral position is open to Brazilian and foreign researchers who have a PhD degree, however fluency in Portuguese is desired to facilitate the discussion and dialogue with the different actors involved in the project. Each postdoctoral fellow will have a specific research project and supervisor, but it is expected that this group of fellows will work together, in close collaboration with the coordination team of the Biota-Synthesis Nucleus.

FAPESP postdoctoral fellowships are competitive (R$ 7,373.10, approximately US$ 1,340.00) and granted for 24 months, with the possibility of extension for two additional years. The fellowship includes a research contingency fund, equivalent to 10% of its annual value which should be spent on items directly related to the research activity.

3. Application procedure:

Applications must be submitted until March 14, 2022, 10 am, Brasilia Time (BRT), UTC -3, through the following link: https://forms.gle/yVECcrK4eyq3Y5h16. If you have any further questions, please contact us at biotasintese@usp.br. A same applicant can apply for more than one scholarship at the same time.

- Curriculum Vitae following FAPESP format, including Lattes (for Brazilian candidates), ORCID and Publon links, as well as citation indicators (e.g. number of publications and citations, H index); please indicate experience in teamwork and with the development of public policy, if applicable;
- Research statement specifying why the candidate is suitable for the fellowship position;
- Three reference persons who can be consulted if the candidate is selected for an interview.

If you don't receive any subscription confirmation by March 20th, please contact us again.

For each of the 8 fellowships, 3-5 candidates will be selected for an interview (to be done virtually). The initial selection will consider the adequacy of the candidate to the fellowship profile, as well as the candidate's professional experience and publication records.

The interviews are expected to take place at the end of March/beginning of April, and the fellowship will begin in May, after validation of the selective process by FAPESP, according to the Institution's norms. All postdoctoral fellows will be formally linked to the postdoctoral program of the University of São Paulo.

4. Summary of Fellowship #7 project - Nature-Based Solutions (NbS) and Urban Interventions for Climate Adaptation in Urban Areas

Cities, particularly large urban centers, are characterized by problems concerned to inefficient infrastructure, urban logistics, green (e.g. parks, squares, afforestation) and blue infrastructure (e.g. rivers, lakes). The risks and impacts associated with the deficiencies in urban areas are evident and increasingly frequent: severe and recurrent flooding, excessive heating of urban surfaces (contributing to urban heat islands), poor air quality, among others. The climate change effects may further exacerbate these risks and increase the vulnerability conditions of certain social groups, since adaptation measures have not been yet concretely embedded in the political agendas of Brazilian municipalities. While urbanization carries with it such problems, it also presents an opportunity for climate change adaptation aligned with sustainable development goals. This post-doctoral research seeks to study the association between green infrastructure, urban planning design, and their effects on ecosystem services, considering different climate change scenarios and urban areas in the state of São Paulo.

The goals are: (1) to map climate vulnerability at different scales (cities, metropolitan regions, macrometropolis, São Paulo state) and for different social groups; (2) to evaluate the ongoing climate change adaptation process and adaptive capacity at these different scales; (3) to evaluate, through predictive models for future scenarios involving climate change and urban planning and design, the feasibility of such interventions aligned to nature-based solutions (NbS) at these different scales; and propose new projects for afforestation or expansion of green areas compatible with the built environment.

The results will provide inputs for the development of climate adaptation strategies in urban areas, identification of areas for new urban forests projects or expansion of green areas, and vulnerability reduction actions in the state of São Paulo.

The post-doc researcher will lead the following activities:

- Literature review
- Development of climate vulnerability models and application in different urban contexts
- Development and application of climate change adaptation indicators at different urban scales
- Application of predictive models for future scenarios involving climate change and urban planning and design, and estimation of the feasibility of possible interventions
- Identification of areas for new urban forests projects and expansion of urban green areas
- Elaboration of future prognostics and scenario analysis to support public policies
- Preparation of reports and articles

5. Requirements for the position:

- PhD in (Geography, Environmental Sciences, Architecture and Urbanism, Urban Planning and Design, Environment and Society) or related fields (PhD certificate will be required for the acceptance of the grant), obtained no longer than 7 years before the grant acceptance date;

- Experience in climate adaptation, urban planning and design, modeling of future scenarios;

- Literature review skills;

- Database management skills;

- GIS;

- Remote sensing;

- Good knowledge of Portuguese and English;

- Ability to work collaboratively in group, including non-academic stakeholders;

- Excellent oral and written communication skills.