



National Institute of Advanced Studies, IISc Campus, Bengaluru 560 012

Call for Applications: Project-funded Ph.D. Fellowships and Field Assistants in the Energy and Environment Program

The National Institute of Advanced Studies (NIAS), a visionary initiative of J. R. D. Tata, has a mandate to carry out in-depth, policy relevant research from a multi-disciplinary perspective. The Energy and Environment Program (EEP) at NIAS is seeking capable and enthusiastic Ph.D. students and Field Assistants interested to conduct multi-disciplinary research funded by a 5-year grant from the Ministry of Earth Sciences (MoES) '**To understand the Interaction between components of Earth and Human Systems at various Spatial and Temporal Scales**'. The objectives of this research grant are as follows:

- To study the impact of air quality on health at the local and regional levels, and examine ways and means to mitigate the same;
- To study the spatial-temporal, seasonal and long-term trends in the level of atmospheric pollutants and their inter-linkages;
- To identify pathways of pollutants and relative contribution between local versus distant sources along with its interpretation for select regions;
- To study the microclimate of select metropolitan cities with the goal of assessing relative contribution of different emission sources;
- To make comprehensive assessments of seasonal air pollution scenario to develop strategies, enablers, and action plans to transition to a more environment-friendly and sustainable energy/transportation mix;
- To understand the water-energy-agriculture nexus in select areas where there is competing use of surface water in agriculture and in thermal power plants to provide a basis for cost-benefit analysis of optimization measures for the sharing of water between agriculture and power generation to enhance sustainable operations in both sectors;
- To establish a baseline case for assessing potential improvements in technologies and practices to optimize usage of water in thermal power plants in general, and those located in water-deficit regions in particular;
- To develop policy formulations designed to make energy services accessible, affordable, and sustainable to the households who are unserved and/or under-served;
- To study socio-economic impact of select MoES's programmes with reference to the SDGs;
- To contribute towards MoES's Polymetallic Nodules (PMN) Program, esp. with reference to its potential environmental impact.

Doctoral Fellows

Master's degree in Earth Sciences/Agricultural Sciences/Engineering/Sciences/Social Sciences/Geosciences/Geo-informatics/Materials/Public Policy from a reputed Institution/University with a minimum of 60% marks or CGPA of 7.0 (10-point scale) or CGPA of 3.5 (5-point scale) at the undergraduate and graduate levels.

Field Assistants

Master's degree in Earth Sciences/Agricultural Sciences/Engineering/Sciences/Social Sciences/Geosciences/Geo-informatics/Materials/Public Policy or B.E./B.Tech. from a reputed Institution/University with a minimum of 60% marks or CGPA of 7.0 (10-point scale) or CGPA of 3.5 (5-point scale) at the undergraduate and graduate levels.

Please see the EEP announcement on the NIAS website <http://www.nias.res.in/sites/default/files/2018-EEP-Project-PhD.pdf> for other details.