The National Socio-Environmental Synthesis Center (SESYNC) and Georgetown University invite applications for a two-year postdoctoral fellowship opportunity, focused on Coping with Disaster in a Warming World. The postdoc opportunity is for August 2018 through August 2020, and is open to applicants who have completed their PhD in a relevant field no later than July 1, 2018 and no earlier than July 1, 2014.

The Postdoctoral fellow will co-develop a project designed to address critical gaps in our understanding of how societies cope with the sorts of natural disasters that are expected to become more frequent and more devastating in coming decades. Climate change is expected to increase the frequency and strength of extreme weather events. This research program would bring together socio-economic data with meteorological and land use data to build a better picture of how individuals and societies make critical decisions both in anticipation and wake of natural disasters.

A successful candidate will have some experience working with meteorological, land use, and other large GIS databases, such as NASA’s GES DISC databases including MAPS, and Landsat. This fellowship will build on these core competencies in the utilization of such large geospatial datasets, and develop new skills for integrating these data with socio-economic information. Mentorship in research methodologies and analysis will be provided, along with education in topic areas necessary to conduct this research such as social and environmental synthesis, and modeling and cyber support from SESYNC.

The starting point for this research is a study of the role played by regional trade patterns. Trade can potentially mitigate the economic disruption caused by extreme weather events, since it allows those hit hardest to substitute local goods with imported goods in the aftermath of a natural disaster. On the other hand, trade also encourages greater specialization in production, which decreases the availability of imported substitutes when a natural disaster strikes. If managed well, trade can potentially serve as an important form of social insurance against major weather shocks, but if managed poorly, it could make dire circumstances much worse. Yet the role of trade as a mechanism for insuring against climatic events is not well understood. Our aim is to learn more about the human consequences of natural disasters, and acquire a better understanding of society’s coping
mechanisms. The fellowship recipient could contribute to a specific component of one or more of these existing projects, or co-develop new projects within the broader research program. We are currently investigating new databases that could help us understand other coping mechanisms, including migration, remittances, infrastructure investments, fiscal transfers, and international aid.

The successful applicant will demonstrate innovative approaches to studying how societies cope with unexpected natural disasters, building on established evidence and co-develop the project with the collaborating mentor, Dr. Raphael Calel, Assistant Professor McCourt School of Public Policy at Georgetown University. Questions could include: Using the Philippines as a case study, how do the production of and trade in different crops change in the aftermath of extreme weather, such as typhoon events? What are the world-wide ripple effects of cyclones on Chinese manufacturing exports? Is it possible to trace micro-scale or prefecture level production shocks in existing databases? Are the production shocks from regional weather events visible in importer countries and along a network of trading partners?

The Postdoctoral Fellow will be based a minimum of three days a week at SESYNC in Annapolis, Maryland and two days a week at Georgetown University, in Washington, D.C. The Fellow will join a cohort of Postdoctoral Fellows at SESYNC and will take part in the SESYNC Postdoctoral Immersion Program [1] and other professional development opportunities. The Fellow will also have full access to the data science and modeling expertise at SESYNC. For additional information, please contact: Jennifer Eagleton, J.D. (Jennifer.Eagleton@georgetown.edu [2])

Director of Interdisciplinary Initiatives, Georgetown Environment Initiative, Georgetown University.; for questions about the SESYNC program, contact Dr. Carrie Hritz (chritz@sesync.org [3])

Application process

Preliminary Screening Application Deadline: December 14, 2017

1. Applications should submit a single PDF that includes a C.V. and a detailed cover letter. The letter should explain in detail the qualifications that make the candidate competitive for this specific postdoctoral project and how this project and an interdisciplinary fellowship will advance the candidate’s career trajectory.

2. Applicants who are not completing their PhD prior to the application due date, must have the Director of their graduate program or major advisor submit a letter to Dr. Carrie Hritz verifying that the applicant is on track to complete all requirements for their PhD by July 1, 2018.

Proposal Co-Development with Collaborating Mentor

1. Successfully pre-screened candidates will be invited to co-develop a project proposal with the collaborating mentor, Dr. Raphael Calel. Project Proposals are due February 1, 2018.

2. Arrange to have two letters of reference sent directly from referee to Dr. Carrie Hritz (chritz@sesync.org [3]) no later than February 1, 2018, 5:00 PM EDT.

3. Research Proposal (five pages max, including references).

   ◦ Problem statement: Clear and concise statement of the project goals including specific research questions and how the project will advance understanding of socio-environmental systems
   ◦ Methods to be used for the synthesis project.
   ◦ Description of prospective Fellow’s and Research Collaborator’s respective roles in the project and plans for maintaining communication throughout the project.
The University of Maryland is an Equal Opportunity Employer [Minorities and Women Are Encouraged to Apply]

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[3] mailto:%20chritz@sesync.org