

NatureNet Science Fellows Program

The Nature Conservancy is pleased to solicit applications for the [NatureNet Science Fellows program](#), a trans-disciplinary postdoctoral fellowship program aimed at bridging academic excellence and conservation practice to mitigate and adapt to climate change.

The Program

The Nature Conservancy recognizes climate change as the single greatest threat to our mission, and to humanity. Never before has there been an issue that so tightly integrates the health of the planet with the economy, food production, clean, reliable water, health, and equality. The NatureNet Science Fellows program seeks to bring leading early career scientists and engineers from diverse fields into the realm of problem solving at the interface of climate change, technology, and conservation.

This program drives research to tackle the two overarching challenges of climate change: 1) Halting climate change and 2) Adapting to the change that is already underway.

Theme 1: Halting Climate Change

The majority of projected climate change impacts can be avoided, if we act quickly and aggressively towards a low-carbon energy system. Getting there will require major new advances in the science and engineering behind energy technology -- from storage, improved efficiency, and transmission, to new source development--and in how we deploy all energy sources--from encouraging major energy source shifts to siting and operating new infrastructure with minimal environmental impact. Fellows may tackle these challenges from the fields of physics, chemistry, landscape planning, electrical engineering, biology, nanotechnology, political science, meteorology, waste management, computer science, energy technology, geography, or transport engineering and may address issues like:

- Identifying priority areas for new renewable energy development that maximize production and minimize environmental impact
- Discovering and deploying new low carbon energy sources with minimal environmental impact
- Identifying the full suite of environmental, social and economic risks of new energy technologies, carbon capture technologies, or even geoengineering
- Analyzing policy or market options to encourage a rapid transition to a low-carbon economy
- Developing economic mechanisms and ecological approaches for landscape modifications that capture carbon, such as large scale habitat restoration

Theme 2: Adapting to Climate Change

Climate change is already happening, and current levels of greenhouse gasses in the atmosphere have already locked the planet into significant climate disruption. The NatureNet program supports research that will identify new means for reducing these impacts and improving the ability of both nature and people to adapt. Relevant challenges will be addressed by fellows from fields as wide ranging as coral biology, agricultural technology, political economics, coastal geomorphology, ecology, forestry, water and sanitation health, climatology, environmental toxicology, agronomy, irrigation engineering, animal husbandry, fisheries, or coastal engineering, and may include:

- Protecting coastal habitats, urban areas and vulnerable communities from sea level rise
 - Predicting and responding to extreme events to reduce impacts and ensure disaster response does not further damage vulnerable ecosystems and people
 - Managing habitats as carbon sinks, migratory corridors and water filters to lessen species loss and water supply impacts
 - Designing and incentivizing climate-smart agriculture, with lower fertilizer and water needs, higher drought and flood tolerance, and lower environmental impacts
 - Establishing networks of corridors and reserves that will be resilient to climate disruption
- Consideration of assisted migration and enhanced evolution to facilitate resilience

Through this ground-breaking research, the program will create a network of fellows, university scientists, engineers and conservation scientists that increases the rigor and breadth of thought applied to the issue of climate change, and ensures that breakthroughs will reach well beyond the network to create impact.