The Center for International Earth Science Information Network (CIESIN) is a data and research center of Columbia University's Earth Institute that addresses human interactions with the environment. Our focus is on the impacts of human activities and institutional arrangements on the environment, and, in turn, how environmental changes affect society.

CIESIN has several core programs and collaborates widely with partners around the world on projects related to environmental change and sustainability.

The Center for International Earth Science Information Network (CIESIN) is located at the Lamont Campus of Columbia University in Palisades, New York. Its international staff have advanced training in a range of fields, including geography, demography, political science, economics, natural resource management, information management, library science, geospatial technologies, software engineering, and computer science.

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The Earth Institute, Columbia University, mobilizes the sciences, education and public policy to achieve a sustainable earth. Through interdisciplinary research among more than 500 scientists in diverse fields, the Institute is adding to the knowledge necessary for addressing the challenges of the 21st century and beyond. With over two dozen associated degree curricula and a vibrant fellowship program, the Earth Institute is educating new leaders to become professionals and scholars in the growing field of sustainable development. We work alongside governments, businesses, non-profit organizations and individuals to devise innovative strategies to protect the future of our planet.

www.earth.columbia.edu

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Selected Collaborative Projects

Assessment of Potential Flood Impacts to Buildings in the Hudson Valley/Long Island Regions
CIESIN is developing geospatial infrastructure and supporting a new framework for GI systems for coastal sustainability. A five-year award from the National Science Foundation to Columbia’s Fu Foundation School of Engineering and Applied Science
1.usa.gov/1eXq8am

High-Performance Green Infrastructure (GI) to Sustain Coastal Cities
CIESIN is developing geospatial infrastructure and supporting a new framework for GI systems for coastal sustainability. A five-year award from the National Science Foundation to Columbia’s Fu Foundation School of Engineering and Applied Science

twap.org/

Vulnerability of the U.S. Atlantic Coast to Hazards Associated with Extreme Winter Storms (StormEVAAC)
CIESIN is contributing to a research component on coastal vulnerability, for a three-year project led by the Lamont-Doherty Earth Observatory and the Center for Climate Systems Research

Planning for Resilience in East Africa through Policy, Adaptation, Research, and Economic Development (PREPARED)
With Tetra Tech/ARD, CIESIN is developing data/information systems for climate change adaptation, biodiversity conservation, and water supply and sanitation services in East Africa. Funded by the United States Agency for International Development
1.usa.gov/1QHoHwS

Hudson River Flood Hazard Decision Support System
An online flood assessment mapping tool for the lower Hudson Valley being developed by CIESIN and the Stevens Institute of Technology. Funded by the New York State Energy Research and Development Authority (NYSERDA)

Ecological Assessment of the Hudson River
With the Nature Conservancy, CIESIN is implementing a physical habitat model of the Hudson River floor and conduct a comprehensive ecological assessment to characterize the habitat units, as a foundation for the Hudson River Comprehensive Restoration Plan

Africa Exposure Data Development
In collaboration with ImageCAT, Inc., CIESIN is using optical remote sensing and demographic and economic data, along with inventories of critical infrastructure facilities and transportation networks, to establish a baseline for assessing natural disaster impacts for Kenya, Ethiopia, Uganda, Niger, and Senegal. Funded by the World Bank

Improving Estimates of Building Exposure to Hazards
CIESIN and ImageCAT, Inc. are using remote sensing data to improve estimates of building exposure to earthquake and related hazards for the risk reinsurance industry. A three-year award from the NASA Applied Sciences Program

Detecting Water Quality Regime Shifts in Jamaica Bay
For a two-year project funded by the US Department of the Interior, CIESIN, Brooklyn College, and partners of the Science and Resilience Institute at Jamaica Bay are developing an integrated data management system to assess water quality patterns in the Bay, and creating an online interactive mapping tool

groads.org

Terra Populus: A Global Population/Environment Data Network (TerraPop)
TerraPop integrates population census data with environmental data to build a unique data access/analysis system for understanding local and global human/environment interactions. Led by the Minnesota Population Center under a five-year grant from the National Science Foundation

terrapop.org

Connected Worlds Project
A three-year collaboration between CIESIN, the New York Hall of Science (NYSci), and other partners to prototype and implement a data-rich interactive environment for learning about sustainability. Exhibit opened July 2015 at the NYSci facility in Queens, New York. Funded by the US National Science Foundation

crcrun.org/

Consortium for Climate Risk in the Urban Northeast
The Earth Institute and four academic institutions are addressing climate change risks in the urban Northeast under a five-year award from the NOAA Regional Integrated Sciences and Assessments initiative. CIESIN is supporting training and outreach and operating the project Web site

Climate and Health Analysis for Global Education (CHANGE) Viewer
With the Institute for the Application of Geospatial Technology. CIESIN developed this 3D mapping tool. Part of the NASA Climate Change Impacts and Human Health program

climatechangehumanhealth.org/changeviewer/