



MASTER OF PUBLIC ADMINISTRATION IN

# Environmental Science and Policy



COLUMBIA | SIPA

School of International and Public Affairs

THE EARTH INSTITUTE  
COLUMBIA UNIVERSITY



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## About the Program—From the Director



“The Master of Public Administration in Environmental Science and Policy (MPA-ESP) trains sophisticated public managers and policymakers, who apply innovative, systems-based thinking to issues of environmental policy and sustainable development.

The program challenges students to think systemically and act pragmatically. To meet this challenge, we offer a high-quality graduate program in management and policy analysis that emphasizes practical skills and is enriched by ecological and planetary science.

The graduates of this program are creating a new profession of sustainability problem solvers: individuals who are prepared for leadership positions in local, state, and federal government agencies, as well as in nonprofit organizations and the environmental divisions of private corporations. They are also well suited for designing cost-effective programs and implementing policies. Most importantly, a deep understanding of environmental and economic sustainability informs their work, allowing them to craft the kinds of solutions necessary for our increasingly complex environmental problems.”

— Steven Cohen, Director

MPA Program in Environmental Science and Policy

## Program Objectives

Students in the MPA in Environmental Science and Policy program enroll in an intensive yearlong, 54-credit program offered at Columbia University’s School of International and Public Affairs (SIPA), in partnership with the Earth Institute. Students are immersed in courses that combine Columbia University’s hands-on approach to teaching public policy and administration with pioneering thinking about the environment. Our program emphasizes integrated thinking and learning so that our graduates will see beyond linear and fragmented approaches to coping with environmental problems.

## The Earth Institute

**The Earth Institute** develops numerous innovative courses that train students to understand and address the pressing and complex issues of environmental protection and sustainability. The Earth Institute, with its 30 research centers and programs, is conducting and applying interdisciplinary scientific research to address many cross-cutting issues, while training a new generation of problem solvers to tackle these issues in all areas of society.

Students engage with faculty from the world-class **Lamont-Doherty Earth Observatory**, a scientific powerhouse in the earth sciences, and an integral part of the Earth Institute and Columbia University. Located just 15 miles north of Columbia’s main campus in Morningside Heights, Lamont-Doherty offers students access to the facility, its scientists and research, and important archives, which include the first seafloor map and the world’s largest collection of deep sea cores.



## The Curriculum

The program focuses on the practical skills necessary to understand the formulation and management of public policy. The teaching of public policy and administration is at the core of the program. The core set of classes focuses on specific professional and vocational skills, such as memo writing, oral briefings, team building, leadership, strategic thinking, spreadsheet and other forms of financial analysis, and the use of computer programs and case studies of environmental policy and sustainability issues.

The principal goal of the core curriculum is to provide students with the analytical, communication, and professional skills required to solve problems of environmental sustainability.

Courses in environmental science round out the training so that our graduates will be able to inform decision-making processes and manage science experts. The policy and management challenges that graduates are being trained to address include global sustainability issues, such as global warming, and increasingly they focus on issues of air, water, solid waste, and toxic waste management. These challenges require an understanding of concepts such as the scientific method, including observation, hypothesis generation and hypothesis testing; the chemical processes affecting environmental quality and public health; the collection and analysis of field and laboratory data; and systems modeling.

Students move through the program as a cohort and are all enrolled in the same set of required courses. The program includes three electives, and there are substantial choices in the team and individual research projects. The program begins the day after Memorial Day, in late May/early June, and ends the following year in mid-May. Please refer to the schedule on our website for exact dates.

## Workshops in Applied Earth Systems Management and Applied Earth Systems Policy Analysis

The Workshops in Applied Earth Systems Management and in Applied Earth Systems Policy Analysis are a key part of the program. The purpose of the workshops is to teach students how to integrate the knowledge and skills they have learned in order to solve an environmental policy problem. Students enroll in the workshop while completing the program's core curriculum, and they are expected to apply the knowledge they have acquired of the natural and social sciences, policy studies, and management to policy problem solving. In all three semesters, students work in groups under the supervision of a faculty member.

The summer and fall semester workshops emphasize management issues. Students explore a piece of proposed, but not yet enacted, state, federal, or local environmental legislation (or a treaty or U.N. resolution) and develop a plan to implement and manage the new program. In the summer, the workshop focuses on the scientific aspects of the management problem, while in the fall, students complete the operational plan for implementing the program. In the spring semester, students work on projects for real-world government or nonprofit clients. They complete the workshop by writing a report that analyzes an actual environmental policy or managerial problem faced by their client.



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# Curriculum and Course Schedule

## SUMMER

- ENVP U6112 Urban Ecology
- ENVP U6115 Climatology
- ENVP U6116 Hydrology
- ENVP U6220 Environmental Chemistry
- ENVP U6221 Risk Assessment and Environmental Toxicology
- ENVP U6241 Earth Systems and Environmental Politics, Policy, and Management
- ENVP U6246: Analytics for Environmental Science
- ENVP U9229 The Workshop in Applied Earth Systems Management I

## FALL

- ENVP U6225 Ethics, Values, and Justice
- ENVP U6230 Political Context of Public and Private Management\*
- ENVP U6234 Sustainability Management
- ENVP U6310 Quantitative Techniques and Systems Analysis in Policymaking and Management I
- ENVP U8213 Microeconomics and Policy Analysis
- ENVP U9230 The Workshop in Applied Earth Systems Management II

## SPRING

- ENVP U6224 Environmental Data Analysis\*
- ENVP U6320 The Economics of Sustainable Development\*
- ENVP U8201 Financial Management
- ENVP U8216 Economics and Policy Analysis II
- ENVP U9232 The Workshop in Applied Earth Systems Policy Analysis

\* recommended but not required

## Our Faculty

Our faculty combines a wide spectrum of private and public experience with more traditional academic work. Many of the science faculty members come to the program from the Earth Institute's various research centers. They bring a fundamental body of science knowledge in Earth systems to the MPA-ESP students, including cutting-edge research in water resource management, environmental risk assessment, and climatology. The program's public policy faculty members have managed policy, analyzed environmental and sustainable development challenges, and are leaders in the field of environmental policy. For more information about the program faculty, please visit our website.

## Our Students

Students come to the program with a broad array of academic and professional experience. Nearly two-thirds of the class have undergraduate backgrounds in the sciences, including chemistry, environmental science, physics, biology, computer science, and geology. Around a quarter of each class is from outside of the United States, providing a mix of perspectives and experiences for the group projects.

## Our Community

Columbia University is located in New York City, which is a global center for finance, media, entertainment, research, technology, and education. Students have the unique opportunity to study at an Ivy League institution with a rich 260-year history, in a city that provides unparalleled access to leading sustainability practitioners, internships, and work opportunities.

## Our Alumni

Since 2002, the MPA in Environmental Science and Policy program has given students the hands-on experience and the analytical and decision-making tools to implement effective environmental and sustainable management policies. Nearly 700 graduates of the program have advanced to jobs in domestic and international environmental policy arenas, and work in the government, private, and nonprofit sectors. Their work focuses on issues of sustainability, resource use, and global change, and the fields include air, water, climate, energy efficiency, food, agriculture, transportation, and waste management. They work as consultants, advisers, project managers, program directors, policy analysts, teachers, researchers, and environmental scientists and engineers.

### Government

- EPA—Environmental Protection Agency
- FERC—Federal Energy Regulatory Commission
- NASA—National Aeronautics and Space Administration
- National Cancer Institute
- National Parks Service
- New York City Office of Emergency Management
- NOAA—National Oceanic and Atmospheric Administration
- UNDP—United Nations Development Programme

### Private Sector

- AIG Environmental
- Booz Allen Hamilton
- CH2M Hill
- ICF Consulting
- PricewaterhouseCoopers
- Shell Exploration and Production

### Nonprofit

- Conservation Fund
- The Earth Institute, Columbia University
- Greenbelt Alliance
- Natural Resources Defense Council (NRDC)
- New York City Audubon Society
- Waterkeeper Alliance
- Wildlife Conservation Society



# Admission

## WHO SHOULD APPLY

Admission to the School of International and Public Affairs is competitive, based on academic excellence and professional focus. Applicants must have a bachelor's degree from an accredited institution. Undergraduate work should include courses in economics. Students should also have taken chemistry and biology at an AP level. We advise those lacking an economics background and a basic understanding of chemistry and biology to make up these deficiencies before entering the program. International students will be required to show proficiency in the English language. Applicants to the MPA in Environmental Science and Policy program are accepted for the summer term that begins in late May/early June.

## APPLICATION DEADLINES

**November 1:** Early application deadline with fellowship consideration  
Applicants will receive notification by December 1

**January 15:** Regular application deadline with fellowship consideration

**February 15:** Final application deadline

## HOW TO APPLY

For complete information about how to apply to the program, please visit:  
[mpaenvironment.ei.columbia.edu/admissions-apply](http://mpaenvironment.ei.columbia.edu/admissions-apply)

## FINANCIAL AID

Applicants to the program who are U.S. citizens or permanent residents are typically eligible for federal Stafford student loans. All interested applicants must complete the Free Application for Federal Student Aid (FAFSA), online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov), or through SIPA's Office of Admissions and Financial Aid. SIPA's FAFSA code is 002707. Students are strongly encouraged to submit their FAFSA forms as soon as possible for the summer and will be advised by the school of their eligibility.

## FELLOWSHIPS

The School of International and Public Affairs and the Earth Institute, Columbia University, award a limited number of fellowship/scholarship grants to incoming students on the basis of merit and need. International students are considered on the same basis as domestic applicants. A fellowship application is included as part of the application for admission. Students must apply by either November 1 or January 15 to be considered for fellowship awards.

## APPLICATION MATERIALS CHECKLIST

*Only complete applications are reviewed.*

- ☐ Completed application form
- ☐ \$95 application fee
- ☐ Transcripts from all post-secondary schools attended
- ☐ Standard résumé/CV
- ☐ Quantitative/Language résumé/CV  
(should include relevant coursework; examples can be found on our website)
- ☐ Three letters of recommendation
- ☐ Standardized test scores
  - GRE (school code: 2161)
  - TOEFL score (SIPA requires a minimum of 100 for students who received their bachelor's degree in a country where the primary language of instruction is not English)

Students are encouraged to apply online through SIPA's website.



## PROGRAM CONTACT

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