



**CENTER FOR LEADERSHIP
IN GLOBAL SUSTAINABILITY**
VIRGINIA TECH.



Master of Natural Resources

PROGRAM GUIDE

CONNECT WITH CLiGS

VISIT: cligs.vt.edu ■ EMAIL: CLIGS@vt.edu ■ CALL: 571-858-3338

The Center for Leadership in Global Sustainability (CLiGS) is housed within Virginia Tech's College of Natural Resources and Environment and headquartered in Arlington, Virginia, near Washington, D.C.



COLLEGE OF NATURAL
RESOURCES AND ENVIRONMENT
CENTER FOR LEADERSHIP
IN GLOBAL SUSTAINABILITY
VIRGINIA TECH.

Welcome, Change Makers!



The pandemic has exposed environmental security and sustainable development issues worldwide, as well as has revealed a dire lack of people who are equipped to tackle these issues. Professionals who have the knowledge, skills, and abilities to influence and address

a broad range of sustainability challenges are likely to continue to be in high demand.

The Master of Natural Resources degree is designed for professionals aiming to advance their careers or shift to leadership roles in the environmental and sustainability fields or functions. Where do you see yourself in the future? How will you contribute to a more equitable and sustainable world? Will you be ready to lead from where you are?

The future will be here soon, and we all need to be ready to make it as good as it can be. We look forward to welcoming you to Virginia Tech!

Sincerely,

Michael J. Mortimer, JD, PhD
Associate Dean, Washington, D.C. Area
Director

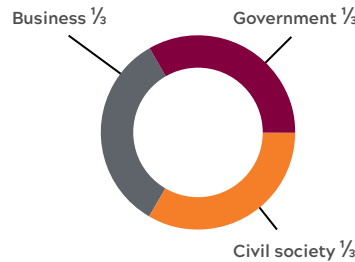


About the Center for Leadership in Global Sustainability

The Center for Leadership in Global Sustainability (CLiGS) equips current and aspiring environmental and sustainability professionals with the credentials, competencies, connections, and confidence to become more effective leaders, now and in the future.

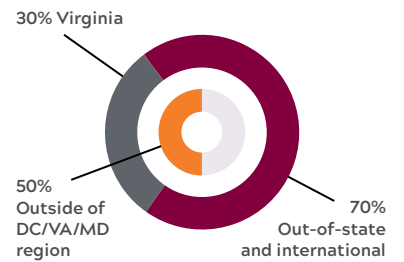
Our mission is to **educate, inspire, and empower** sustainability professionals to create a better future for people and our planet.

SECTOR



(Where our students work)

GEOGRAPHY



(Where our students live)



700+ GRADUATES

(All MNR degree programs to date)

LET'S CONNECT!

TALK TO LINDSAY KEY: ltkey@vt.edu ■ CALL: 540-541-9172



VISIT OUR
SITE FOR THE
LATEST UPDATES
ON PROGRAM
DETAILS

Two Ways to Earn Your Master's Degree

The Master of Natural Resources is delivered in two flexible formats:

- **Online** (fully online course delivery)
- **Executive** (hybrid: online plus in-person; cohort-based and accelerated)
- Both are designed for current and aspiring environmental and sustainability professionals looking to take their career to the next level.

MASTER OF NATURAL RESOURCES

PROGRAM	MNR
QUALIFICATIONS	Undergraduate degree
SCHEDULE & TIMELINE	Flexible (12–36 months)
PROGRAM BEGINS	Semester of choice (3 times/year)
LOCATION	Online + international trip
GLOBAL STUDY	A 10-day international trip to one or more* of these destinations: Argentina, Finland, Ireland, Italy, South Africa, and Spain
ENGLISH PROFICIENCY	Yes
COST	\$31,465 (+ books and international airfare)**

PROGRAM	EXECUTIVE MNR (XMNR)
QUALIFICATIONS	Undergraduate degree
SCHEDULE & TIMELINE	12 months (3 semesters); includes 11 weekend meetings (5 on campus + 6 virtually)
PROGRAM BEGINS	January
LOCATION	Washington, D.C. metro area + 6 virtual meetings + international trip
GLOBAL STUDY	One 10-day international trip. Locations are selected by faculty each year. Previous destinations have included China, Egypt, India, Mexico, Morocco, South Africa, and Turkey
ENGLISH PROFICIENCY	Yes
COST	~\$41,500 (total cost)

*MNR students interested in more than one Global Study may pursue additional opportunities through the Advanced Global Study option, to be discussed with a graduate advisor upon admission.

**Exact cost will vary based on the cost of international airfare, books, and per-semester library and technology fees. Prices are subject to change.

Please check our [website](#) for current pricing.



Master of Natural Resources

The MNR is a 30-credit, virtual, and flexible degree program that prepares students for careers in environmental sustainability. The program combines online coursework and participation in a 10-day, face-to-face Global Study (an international trip) that takes the place of the typical professional graduate degree capstone project. Students interested in more than one Global Study may pursue additional opportunities through the Advanced Global Study option, to be discussed with a graduate advisor upon admission.

Whether you're about to graduate with your Bachelor's degree, are a recent grad, or have been working for a decade or longer, this flexible interdisciplinary program instills the conceptual and critical thinking skills necessary for lifelong learning and career development. MNR graduates are prepared to succeed on a truly global stage as natural resource, environmental, and sustainability professionals.

COURSES

- **Core courses:** Global Issues in Environmental Sustainability, Leadership Communication for Sustainability Professionals, Constructing Sustainability, Strategies for Sustainability, Sustainability Systems
- **Elective courses in these focus areas:** Biodiversity and Ecosystems, Cities and Urban Systems, Climate Change, Environmental Policy, Sustainable Business, Water and Marine Systems

[SEE THE FULL LIST OF ELECTIVE COURSES ON OUR SITE.](#)



LEARN MORE ABOUT THE MASTER OF NATURAL RESOURCES ON OUR SITE

Important Application Information

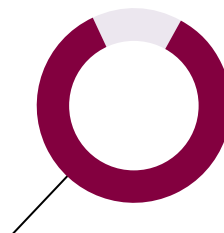
- Completed undergraduate degree
- Completed VT Application for Admission
- No GRE required
- No additional cost for out-of-state or international students
- English proficiency assessment is required for international students per Graduate School requirements



AVERAGE AGE: ~35
AGE RANGE: ~20-55



AVERAGE ENROLLMENT: ~15-20 STUDENTS PER COURSE



85% OF INSTRUCTORS ARE ACTIVE PRACTITIONERS IN THEIR FIELDS



Executive Master of Natural Resources (XMNR)

The Executive Master of Natural Resources (XMNR) is an accelerated (1 year) graduate degree program that combines the best of online and in-person education in an innovative hybrid and cohort-based curriculum focused on systems learning, leadership, and change. The XMNR is a transformative learning and leadership development experience that educates, inspires, and empowers professionals to address current and emerging challenges in sustainable development, environmental justice, climate resilience, and related topics.

XMNR students learn to make sense of complex environmental and sustainability systems, apply advanced leadership strategies and practices, engage diverse stakeholders in real-world case projects, and improve their overall professional performance to advance their careers. XMNR students typically have demanding full-time jobs, which is why our curriculum is designed to help them improve their performance at work, advance their careers, and have greater impact in the world. Executive-style graduate programs are for anyone who is interested in experiential and peer-to-peer learning focusing on professional and leadership development as related to sustainability systems.

The program is taught as a hybrid of in-person/virtual meetings and online individual and small-group work. Students gather in person 5 times a year for three-day experiential learning weekends, 6 times virtually for two-day meetings, and one 10-day Global Study experience. Meeting with your cohort virtually or in the Washington, D.C. metro area, you'll strengthen your network with access to Virginia Tech's faculty and world-renowned sustainability experts, as well as peers from across disciplinary and sectoral boundaries. You'll also

network with global partners during your Global Study, and apply lessons learned to real-world sustainability projects.

LEARN MORE ABOUT THE EXECUTIVE MASTER OF NATURAL RESOURCES ON OUR SITE

Important Application Information

- Cohorts start each January and have a limited number of spaces
- Admissions are processed on a rolling basis
- No GRE required
- No additional cost for out-of-state or international students
- Admission decisions are based on both academic and professional experience
- English proficiency assessment is required for international students per Graduate School requirements

SUBJECTS OF STUDY

- Climate Change and Resilience
- Energy Transitions and Alternatives
- Food and Agriculture
- Water and Marine Systems
- Environmental Justice
- International Sustainable Development
- Sustainable Business and Circular Economy
- Global Resource Flows and Supply Chains
- Urbanization and Sustainable Cities
- Biodiversity and Ecosystems
- Leadership and Innovation
- Communications and Collaboration
- Individual Development, Independent Study, and Career Advising*

*Students have the opportunity to focus their studies, specialize, and develop expertise on topics of interest and relevant to their career goals through an Individual Development Process that includes independent study projects and career coaching options.



~30 STUDENTS PER COHORT



AVERAGE AGE: ~40
AGE RANGE: ~25-60



STUDENTS ENGAGE WITH > 50 FACULTY AND GUEST FACULTY



Global Study

Every MNR student participates in a ten-day Global Study experience—a required part of our degree in both programs—to engage with real-world global sustainability challenges.

MNR students can choose from several destinations. Those who are interested in emphasizing international experiential learning during their time in the program have an opportunity, if desired, to visit multiple destinations as part of their graduate degree coursework.

For **Executive Master of Natural Resources (XMNR)** students, the Global Study destination for each cohort is chosen by the faculty. Previous XMNR Global Study locations have included China, Egypt, India, Mexico, Morocco, South Africa, and Turkey.

Given the dynamic nature of travel at the moment, we are following [Virginia Tech's travel and study abroad policies](#) to inform our decisions on destinations and timing. If traveling for Global Study is not possible—including for students' personal reasons—we have alternatives for fulfilling this requirement to enable students to graduate according to their plan of study. Please consult one of our Academic Advisors for details.

INTERCULTURAL COMPETENCE

Understanding similarities and differences between cultures, and how those factors underlie different perspectives, is a key to success for global sustainability professionals. All students undergo a standardized cultural competence test, the Intercultural Development Inventory (IDI), administered by trained faculty members. Students in the XMNR program take the 50-question assessment upon entry into the program, and students in the MNR program take it as part of the Global Issues in Environmental Sustainability core course.

LEARN MORE
ABOUT GLOBAL
STUDY
ON OUR SITE



MNR GLOBAL STUDY EXPERIENCES



CITIES IN NATURE: BUENOS AIRES AND MENDOZA, ARGENTINA

What does it mean for a city to be a part of its ecoregion? And how do sustainable cities and sustainable ecoregions fit together? In this Global Study experience, students will explore two iconic **Argentine** cities, **Buenos Aires** and **Mendoza**, as complex urban areas within their ecoregional contexts, through key themes of sustainable urban form, environmental justice, habitat restoration and protection, grassland ecosystems and resources, desert oasis cities, water conflicts, wine economies, and global commerce. By the end of this trip, students will absorb the vibrant culture of two important Argentine cities; make the connection between urban society, transportation, urban form, and equity; visit an informal urban settlement; explore the ecologically rich **Paraná Delta**; study the significance of the **Pampas** as a major and historical natural resource; investigate the **Matanza Riachuelo** restoration in comparison to other small watersheds around the world; engage in the discourse regarding benefits of certified B Corporations; connect the specific terroir of Mendoza to the global wine trade; and reflect on lessons that apply to urbanization back home and around the world.

FINLAND'S CONTESTED ENVIRONMENT: BALTIC WATERS AND NORTHERN LANDSCAPES



Finnish cultures have a long history of resilience, community values, and living closely connected to the land and the sea. This is a high-latitude exploration of themes including: climate change in the **Far North**, contested Arctic landscapes, traditional and renewable energy sources, reindeer farming, land-sea connections of sustainable water, **Lapland**, the **Baltic Sea** as an ecological and strategic resource, Nordic urban form, and resilient indigenous communities.

By the end of this trip, students will understand how global warming forces transformations onto peoples and places; recognize the conflicting forces impeding a sustainable future for specific communities; analyze essential systems of a sustainable city; appreciate the importance of geopolitics in public decision making; understand the **Baltic Sea** as a valuable ecosystem; assess the challenges of transitioning to a non-carbon future; recognize sustainable tourism as a complex objective; travel above the **Arctic Circle**; experience Finnish and Sámi cultures; visit with reindeer; and make connections between these global lessons and one's own sustainability agenda.

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GREENING THE EMERALD ISLE: IRELAND

Ireland is a small country, slightly larger than West Virginia, with a population of just 5 million. It is also 100 years young, having only become an independent state in 1922 following centuries of conflict.

The students on this Global Study will explore Ireland's goal of achieving net-zero GHG emissions by 2050 and the barriers and opportunities that being a young, small, European Union country steeped in culture present. Students will examine connections between socio-ecological systems of agriculture and energy; the role of the EU, national, and local governance in the transition to renewable energy; and the ways that culture hinders and enables decarbonization efforts.

The group will travel from the bustling capital of **Dublin** to the coastal town of **Galway**, with a stop in the medieval village of **Athlone**. During the journey, students will meet with government agencies and research organizations facilitating Ireland's shift to renewable energy; learn how community engagement supports efforts to reduce carbon emissions; discuss issues related to sustainable rural development with rural farmers and advocates; visit universities, a working farm, a restored bog, and a wind park; explore the **Burren** and **Cliffs of Moher**; and immerse themselves in Irish culture.

TRANSPARENCY IN FOOD AND FASHION: LESSONS FROM ITALY



Italy is famous for two of the most impactful human activities—eating and getting dressed. This experience will shed light on food and clothing systems using Italian case studies. Traveling from **Prato** to **Chianti** and **Parma**, and finishing in **Milan**, students will experience the rich flavors of Italian culture; gain a transparent understanding of the impacts of clothing on the global environment; discuss important issues of sustainable clothing with leading innovators; model quality food production and distribution as a complex system; relate the UN Sustainable Development Goals to best business practices; understand the significance of B Corps and Benefit Corporations; recognize “greenwashing”; visit a textile mill; tour a centuries-old vineyard and winery; see the connection between landscape, history, agriculture, and tourism; and ride an Italian high-speed train at 300 kilometers per hour.

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AFRICAN TRANSFORMATIONS: SOUTH AFRICA



The wealthiest of African nations and the financial gateway to the continent, post-apartheid **South Africa** is a fascinating place to consider the complex relationships between sustainable management of natural resources and biodiversity, social justice, poverty, development, and governance. Beginning in **Cape Town** and the Cape winelands, continuing eastwards to the coastal town of **Knysna** along the spectacular Garden Route, and then on to **Gqeberha** (formerly Port Elizabeth) and the Kariega Game Reserve, students will explore South Africa's complex

cultures and history and the critical role these play in sustainability challenges and opportunities. By the end of this journey, students will be able to make connections between social justice, culture, and the sustainable management of natural resources; recognize diverse transformations necessary to achieve sustainable global communities; learn about sustainable tourism and urbanization as complex propositions; appreciate the significance of UNESCO World Heritage designation; understand the **Cape Floral Kingdom** as a valuable ecosystem; make connections between these global lessons and one's own sustainability agenda; experience a safari and understand the complex links between sustainable tourism, biodiversity conservation, and sustainable development; and understand how global warming forces transformations onto peoples and places.

SPAIN: JOURNEYING THROUGH CATALUÑA



Students on this Global Study field experience will explore sustainability questions across a transect of rural and urban landscapes. The first stop is world-famous **Barcelona**, the capital of **Catalonia**, known for its beauty and world-class innovations promoting sustainable development. We will visit one of Europe's largest ports to learn about global trade, upon which so much of our economy depends, and what is being done to reduce the associated pollution and greenhouse gas emissions. We will engage entrepreneurs reimagining Barcelona's urban transportation by promoting sustainable mobility and quality of life; visit organizations working to sustain Barcelona's water supply; and explore how water flows through the city, starting with farmers in the headwaters and going all the way to desalination plants at the city's edge.

Afterwards, we'll head north towards the mountains to spend some days in **Olot**, a quaint rural village settled

amidst a series of dormant volcanoes in the county of **Garrotxa**, province of **Girona**. While there, we'll sample sustainable dairy and pork farms, tour biodiversity preserves and a nature park, and engage with a community group struggling to balance development pressures threatening the area's rich cultural heritage. The field experience examines overlapping themes: history and culture, 1,000 years of land use, agriculture and the environment, water quality, tourism, climate change, and sea-level rise.

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Alums

Our graduates live and work all over the world, but they remain closely connected, both in person and online. Here’s a small sample of the types of jobs and organizations where you can find our alums.

“What was most valuable for me was the confidence I gained in discussing important and complex sustainability issues. I now have the credentials to speak up and make an impact.”

ARSLAN AHMAD

“Throughout my experience, I learned how to step back and see things at a broad level—only then can problems be identified and broken down to achieve a long-term goal.”

MIKE BECKNER

“This degree has helped me to build an international work portfolio and is also helpful as I assist in urban renewal programs in my hometown of Detroit. Challenges of sustainability are truly relevant wherever we find ourselves.”

MAGGIE STRIZ CALNIN

“They’re really teaching you the skills you need to be a leader in your field and to understand decisions that other leaders are making.”

VIRGINIA FOSTER

“I was looking to move my career from a mid-level government employee to an executive position. After graduating, a year and a half later I became the executive director of a non-profit.”

KATE FRITZ

WHO ARE OUR ALUMS?

- Executive Director, Alliance for the Chesapeake Bay
- Energy and Sustainability Liaison at District of Columbia Public Schools (DCPS)
- Sustainability Consultant, Dominion Energy
- International Trade Policy Leader at USDA Foreign Agricultural Service (FAS)
- Senior Client Engagement Lead at the Global Carbon Capture and Sequestration Institute
- Environmental and Social Specialist at MIGA-World Bank Group
- Conservation Strategy Specialist, Restoring America’s Forests at The Nature Conservancy
- Country Director at the Institute for Sustainable Communities
- Sustainability and Environmental Specialist, U.S. Geological Survey
- Senior Product Manager at National Geographic Society
- Utility Programs Manager at project:HOMES
- Deputy Director of Parks and Recreation for the City of Greenville
- National Program Coordinator, U.S. Environmental Protection Agency
- Natural Resource Specialist, U.S. Bureau of Land Management
- USAID Grants Auditor, Macfadden
- Communications Strategist and Science Writer, Duke University
- President, Sustainable Designs LLC
- Site Manager, GE Renewables





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Student Resources

Whether it's student advising, career coaching and resume help, financial aid, or veterans' benefits, all MNR students can count on the support of Virginia Tech's faculty and staff.

GREEN CAREERS

As the sustainability field matures, employers look for skills beyond technical expertise. The issues and challenges are complex, global, and interconnected. People working on solving these challenges need to have the ability and the training to think strategically and systemically, and work collaboratively across many disciplines.

CAREER COACHING AND RESUME GUIDANCE

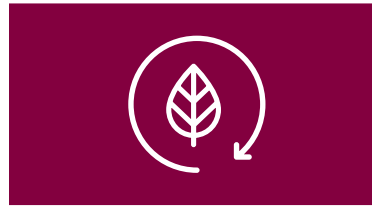
All our graduate students and recent alums have access to personal career coaching. Even if you have a solid grasp of your values and skills, career coaching can help you advance in your career or pivot successfully to a new one.

FINANCIAL AID

Students may qualify for financial aid, usually in the form of student loans. Learn more on our [website](#).



THE VALUE OF A MASTER'S DEGREE



~\$100,000/year average salary of employees in the Environmental, Health, Safety, and Sustainability field*



~\$5,000/year salary boost with graduate degree for employees with <15 years of work experience**



50% of mid-career sustainability professionals have advanced degrees**

*Source: 2020 EHS&S Salary Survey

**Source: National Association of Environmental Management (NAEM)



Virginia Tech has been awarded designations as “Military Friendly, Silver Medal” by [militaryfriendly.com](#) and “Best for Vets” by [MilitaryTimes.com](#). Students who are veterans, active military, or military spouses comprise nearly 20 percent of each Executive MNR cohort, and almost 15 percent of each graduating class in the MNR.

LET'S CONNECT!

TALK TO LINDSAY KEY: ltkey@vt.edu ■ CALL: 540-541-9172