



# Careers in Environmental Studies

School of Geosciences, Faculty of Science



THE UNIVERSITY OF  
SYDNEY

# Careers in Environmental Studies

## What career opportunities are available?

Environmental Studies is an interdisciplinary major in the Faculty of Science that connects science and policy-making about the environment. Graduates with a major in Environmental Studies are well-positioned for a wide-range of professional roles that involve scientific assessment and policy implementation. Within Australia, key sites of employment include National Parks authorities, catchment management agencies, urban and regional planning organisations, private consulting firms, and community-based environmental organisations.

With a major in Environmental Studies, you will gain skills relevant to the preparation and review of environmental impact statements, understand the legal and ethical issues around environmental and resource management, and obtain a broad perspective on how human activities inter-relate with the natural world. At a time when the impact of humans is causing extreme stress to so many of the processes that ultimately sustain life on this planet, the skills and knowledge obtained by Environmental Studies graduates has never been more important.



Bachelor of Science: Environmental Studies Major					
Year 1		Year 2		Year 3	
Earth Environment and Society	Selective*	Concepts in Environment and Agricultural Economics or Natural Hazards: A GIS approach or Environmental politics	Environmental and resource management	Environmental law and Ethics	Interdisciplinary project
OLE	Elective	Elective	Elective	Selective ^	Selective ^
Mathematics	Mathematics	OLE	Elective	Major2/ Elective	Major2/Elective
Major 2 / Minor	Major 2 / Minor	Major 2 / Minor	Major 2 / Minor	Major 2 / Minor	Major 2 / Minor

\*1000 level selective units: From molecules to Ecosystems, Chemistry 1A, Global challenges: Food, Water, Climate; Introductory Geography, Life and evolution, Principles of Economics

^3000 level selective units: energy and the Environment, GIS in Coastal Management, Environmental Economics, Urban Citizenship and Sustainability, Asia and Pacific field school

## Why Environmental Studies?

- To gain competencies both in the science of the environment, and the social sciences of environmental policy and decision-making.
- There is a societal need for graduates who can make the knowledge-based and policy-relevant connections that are intrinsic to effective and appropriate environmental outcomes.
- The framework of an Environmental Studies major incorporates material from both Australia and internationally, opening up graduate employment opportunities across a wide arena of possibilities.
- Environmental Studies encourages students with a passion for change, who want to chart a career that makes a positive impact on the world.

## Specific skills with an Environmental Studies major

- Broad knowledge in the natural and social sciences relevant to the environment, with additional deep understanding of the core principles that shape environmental decision-making.
- An understanding of the interdependencies between human societies and natural and managed environments at multiple scales.
- Abilities to use field-based and GIS tools and techniques in the assessment of environmental problems.
- Capacity to communicate concepts and findings about the environment through a range of modes for a variety of purposes and audiences, using robust evidence-based arguments.
- Integrate approaches across disciplines to identify, measure and analyse materials, patterns and processes relevant to contemporary environmental challenges.
- Address authentic problems in environmental science, working within collaborative, interdisciplinary teams.
- Participate constructively in decision-making consistent with regulatory frameworks and principles of sustainable development, across social and cultural boundaries.
- Reflect critically on the process of environmental decision making and on their own and others' values, knowledge and perspectives.





## **Research in the School of Geosciences relevant to Environmental Studies**

The School of Geosciences in the University of Sydney is home to numerous research projects that are creating new policy-relevant knowledge about environmental issues. The lecturing staff responsible for Environmental Studies are able to incorporate this knowledge into the teaching of this Major. Examples include:

### **GIS and Remote Sensing: Applications in Australia, South Pacific and South East Asia**

Environmental spatial analysis and modelling using GIS and related spatial technologies often forms the foundational base knowledge source for policy makers in environmental problem-solving. Our research in spatial technologies covers a range of issues including geographical dimensions of coupled human-environment systems to examine drivers of coastal change and monitoring biophysical coastal system response to climate variability using high resolution Earth observation data.

### **Environmental governance and regulation: monitoring and evaluating socio-ecological governance**

Environmental protection and conservation are an area of pressing policy concern and in this research area we consider environmental regulation and governance dynamics across Australian and the Asia-Pacific. Our research ranges from critiquing international environmental laws through to documenting localized environmental regulatory problems. We assess the human-environment dimensions of biodiversity conservation through an examination of protected areas, wetlands and world heritage site-management in our region. Our concern is to enhance our understanding of the role of law and regulation in shaping land/waterscapes using the lens of legal geography.

### **Environmental and socio-ecological change**

The tropics are a critical component in the Earth System, regulating atmospheric and oceanic circulation, and driving global climatic change. They are also extraordinarily diverse in their environments and cultures both over space and through time. The history and dynamics of the global tropics is a fascinating area of research and one with enormous currency as the tropical regions of the earth - populous, rapidly developing and disproportionately threatened by climatic change - move into an uncertain environmental future.

## Introducing Some of Our Graduates



**Maeve Molins, Bachelor of Science (Environmental Studies) 2016:**

I am a sustainability consultant with Aurecon, an engineering and advisory firm, working in the Built Environment team. Day to day this means I provide advice to architects, builders, engineers and developers on opportunities to improve sustainability on projects. Whether it's developing water management plans,

investigating on-site renewable energy or assessing how the impacts of climate change affect our built environment, I'm part of a team that's always looking for ways to embed long-term sustainability into design & construction of some pretty big projects.

What I love about my role is applying practical skills and collaborating with a range of different disciplines to solve real world problems. I work at a range of scales, sometimes I'm thinking about just one small element of a building and sometimes I'm looking at large scale precinct planning projects, so my geographical perspective definitely comes in handy for being able to think adaptably and drawing connections across scales and places.

My degree focused on environmental studies and this enabled me to study a combination of ecology, development studies and urban geography subjects. This meant that I graduated with a diverse set of ideas about the environment, climate change, science, biodiversity and social sustainability. I knew that I wanted to apply these ideas to a career where you can focus on solutions, so I chose to pursue work in the built environment sector because the impact on people and the environment is so huge. During my time at university I gained an understanding into the types of environmental challenges that we face and saw how our actions today will shape our future – so I'm really happy that my career allows me to be a part of that.



**Alex Vaughan, Bachelor of Science  
(Environmental Studies) (Honours)**

**2019:** The environmental studies major is oriented around the intersection of environmental, social and economic issues, situated in the Australian context. This major has provided me with a well-rounded understanding of the climate science, regulatory mechanisms and social processes that are contributing to degradation or protection of the environment. I have been fortunate enough to complete multiple field units, one in India, and the other in the Northern Territory and Western Australia. These subjects have been important vehicles for me to apply my learnings from the classroom into these unique environments. I completed my environmental studies major with an informed understanding of the state of the environment in first semester, 2019.

This major has given me the confidence and knowledge to delve into

environmental issues I care about in class, as well as empower me to advocate for changes I care about outside of the classroom. It has pushed me forward into a position where I am helping develop the University of Sydney's new Sustainability Strategy, educating others about environmental issues, and visiting communities in the north-west of NSW impacted by the fossil fuel industry and the water crisis. This major has also given me access to receiving the Denison Summer Research Scholarship in which I researched environmental advocacy in the Brigalow Belt South bioregion.

Currently, I am writing my Honours thesis on the renewable energy transition in Sydney, with a focus on community participation and energy justice. This has enabled me to develop my research skills enormously and to meet community groups, government and industry who are integral participants in Sydney's renewable energy transition. Knowledge contained in the environmental studies major is vital as we transition to low carbon-based economies.



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**For more information**

**Faculty of Science** | School of Geosciences

**W** [sydney.edu.au/science](https://sydney.edu.au/science) | [www.geosci.usyd.edu.au](https://www.geosci.usyd.edu.au)

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