

Environmental Politics and Climate Action: Political Economy of Natural Disasters

Master in International Development MID SEP-2024 S-1

Area International Relations

Number of sessions: 12

Term: Term 3

Category: elective

Language: English

Professor: **FRANCISCO SEIJO MACEIRAS**

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I have been studying change in preindustrial, industrial and postindustrial culturally powered landscapes during my entire professional career. For the past 15 years I have sought to reform global fire governance and management through my work in the board of directors of the Association for Fire Ecology. I believe the most promising path for adapting to and mitigating global environmental challenges is building long lasting public/private sector partnerships and community networks that integrate state of the art scientific, governmental, business and stakeholder knowledge to design sustainable coupled human and natural systems.

- [Researchgate profile](#)
- [Google scholar profile](#)

Office Hours

Office hours will be on request. Please contact at:

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SUBJECT DESCRIPTION

Climate change will in all likelihood increase the frequency, seasonality, severity, intensity and size of natural disasters or what ecological science conceptualizes as "disturbance regimes". In this course we examine the political economy of climate change induced natural disasters through the prism of three complementary interdisciplinary analytical frameworks: environmental politics/political ecology, landscape and disturbance ecology and coupled human and natural systems theory.

First we will review some of the basic concepts and theories in order to familiarize ourselves with these approaches. We will then proceed to examine climate change and the political economy debates associated with two specific topics; large-scale tree plantation to mitigate climate change (and its feedbacks with changes in fire regimes expected from global warming and land use change) and the human system impacts of changes in extreme weather event regime in coastal areas.

LEARNING OBJECTIVES

- Become familiar with basic climate and ecological science concepts applicable to natural disaster management
- Learn to analyze natural disasters systemically through interdisciplinary contemporary environmental politics, political ecology, landscape and disturbance ecology and coupled human and natural systems frameworks
- Think critically about nature based solutions to climate change through two case studies: tree planting and extreme weather events in coastal areas

TEACHING METHODOLOGY

IE University teaching method is defined by its collaborative, active, and applied nature. Students actively participate in the whole process to build their knowledge and sharpen their skills. Professor's main role is to lead and guide students to achieve the learning objectives of the course. This is done by engaging in a diverse range of teaching techniques and different types of learning activities such as the following:

Learning Activity	Weighting
Lectures	25.0 %
Discussions	25.0 %
Group work	25.0 %
Individual studying	25.0 %
TOTAL	100.0 %

PROGRAM

SESSION 1 (LIVE IN-PERSON)

Contentious cultural framings of climate induced natural disasters.

Technical note: Why it matters how we frame the environment. Environmental Communication Vol. 4, No. 1, March 2010, pp. 7081. (CED)

Technical note: Understanding cultural framings in disaster risk reduction. 2015, Routledge. (CED)

SESSION 2 (LIVE IN-PERSON)

A view from the natural sciences: Landscape and disturbance ecology.

Working Paper: Landscape Ecology. Encyclopedia of Environmental Biology, Volume 2 1995. (CED)

Technical note: Disturbance ecology. Conservation Biology. Volume 6, N°3, September 1992. (CED)

SESSION 3 (LIVE IN-PERSON)

Sustainability of coupled human and natural systems.

Technical note: Complexity of coupled human and natural systems. Science Vol 317 14 September 2007. (CED)

Article: A General Framework for Analyzing Sustainability of Social-Ecological Systems. Science 325, 419 (2009). (CED)

SESSION 4 (LIVE IN-PERSON)

The political economy of disasters and disaster management.

Technical note: Genealogies of resilience: From systems ecology to the political economy of crisis adaptation. Special Issue on The Global Governance of Security and Finance. Security Dialogue 42(2) 143– 160 2011. (CED)

Technical note: Reducing people's vulnerability. WIDER Research Paper, No. 2008/34. (CED)

SESSION 5 (LIVE IN-PERSON)

Intermediate exam.

SESSION 6 (LIVE IN-PERSON)

Low cost climate change adaptation and mitigation: The "trillion tree" debate, the "forest transition" and extreme wildfire events

Technical note: The trillion tree debate. Erle C. Ellis, Mark Maslin and Simon Lewis. Feb. 12, 2020. (CED)

Technical note: The global tree restoration potential. Science 365, 76–79 (2019). Bastin et al. (CED)

SESSION 7 (LIVE IN-PERSON)

The political economy of the "forest transition" and megafires: Ignoring science at our peril.

Technical note: Megafires: Characteristics and challenges. Front Ecol Environ 2014; 12(2): 115–122, 2014. (CED)

Technical note: Designing and Implementing Effective REDD+ Policies: A Forest Transition Approach. 2013, Oxford. (CED)

SESSION 8 (LIVE IN-PERSON)

A CHANS approach to the management of megafires?

Technical note: Wildfires as a socio-ecological pathology. 2016, The Ecological Society of America. (CED)

Technical note: Conflicting frames about ownership and land use drive wildfires in protected conservation areas. Springer Science+Business Media, LLC, part of Springer Nature 2020. (CED)

SESSION 9 (LIVE IN-PERSON)

Hurricanes and sea level surges: The end of the world as we know it.

Technical note: Climate change, hurricanes and tropical storms, and rising sea level in coastal wetlands. Ecological Applications, 7(3), 1997, pp. 770–801. (CED)

Technical note: The rising costs of hurricanes. Nature Climate Change Vol 2. March 2012. (CED)

Technical note: Joint effects of storm surge and sea-level rise on US Coasts: new economic estimates of impacts, adaptation, and benefits of mitigation policy. Climatic Change (2015) 129:337–349. (CED)

SESSION 10 (LIVE IN-PERSON)

Disentangling human and natural system drivers in climate induced natural disasters: The case of hurricane Katrina.

Technical note: Metaphors Matter: Disaster Myths, Media Frames, and Their Consequences in Hurricane Katrina. ANNALS, AAPSS, 604, March 2006. (CED)

Technical note: Three Years after Katrina: Lessons for Community Resilience. Environment: Science and Policy for Sustainable Development 50(5), pp. 36 – 47. (CED)

SESSION 11 (LIVE IN-PERSON)

A CHANS approach to disaster and disaster risk mitigation.

Technical note: Preparing for complex interdependent risks: a system of systems approach to building disaster resilience. 6 January 2014. Antonella Cavallo Vernon Ireland. (UNISDR)

Technical note: A systems approach to natural disaster resilience. Simulation Modelling Practice and Theory 65 (2016) 11–31. Harrison and Williams, (CED)

SESSION 12 (LIVE IN-PERSON)

Oral presentations and final paper due.

EVALUATION CRITERIA

criteria	percentage	Learning Objectives	Comments
Individual Work	35 %		
Intermediate Tests	35 %		
Group Presentation	20 %		
Class Participation	10 %		Participation

FAILING GRADE AND REASSESSMENT

When students receive a Fail in a course, they have the opportunity to present themselves for reassessment in order to earn the necessary credits toward graduation.

The reassessment of students should be scheduled between 5 and 10 working days after the review session takes place.

Grades for the reassessment are limited to a Low Pass and Fail.

Both, the initial Fail as well as the grade of the reassessment remain on the transcript. For the purpose of calculating the GPA however, only the grade of the reassessment is to be considered. Students receiving a failing grade in the reassessment of a course will not be able to continue in the program.

BEHAVIOR RULES

Please, check the University's Code of Conduct [here](#). The Program Director may provide further indications.

ATTENDANCE POLICY

Please, check the University's Attendance Policy [here](#). The Program Director may provide further indications.

ETHICAL POLICY

Please, check the University's Ethics Code [here](#). The Program Director may provide further indications.

