

Climate Change Impacts and Policy in the Dominican Republic

FREC 3954

Course period: July 31st – August 12th, 2018

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Course Description:

This study abroad course will use the Dominican Republic as a case study to introduce students to the impacts of climate change on key natural resources (e.g., forests, water, and biodiversity) as well as on key ecosystems (e.g., coastal areas). The impacts of climate change on agricultural production and people's livelihoods will also be reviewed. Emphasis will be placed on the development and implementation of climate change policies. In this course, students will learn about mitigation and adaptation strategies to decrease GHG emissions and reduce vulnerability to climate change. Students will meet with climate change government officials, environmental NGOs, and scientists. Students will explore the direct and indirect effects of a changing climate through field trips, hands-on experience, meetings, lectures, and readings.

The island of Hispaniola, shared by Haiti and the Dominican Republic, is located in the Caribbean Sea, between the islands of Puerto Rico and Cuba. It is the second largest island in the archipelago of the Greater Antilles. It is the only Caribbean island divided between two nations. The island has an extension of 77,914 km². The Dominican Republic occupies 48,442 km², which represents two-thirds of the island, and has a population of 10.4 million people.

The Dominican Republic (DR) is considered among the most vulnerable countries in the world according to the *Global Climate Risk Index 2016*.¹ The DR has been ranked the eleventh country most affected by climate change in the world between 1995-2015. The country is considered a "hot spot" because of the high levels of physical, socioeconomic, environmental, and institutional vulnerabilities to climate change. Furthermore, vulnerability studies on climate change have shown that the Dominican Republic will be affected by changes in rainfall, increases in minimum and maximum temperature, sea level rise (which can already be seen in the Samana Peninsula), increased intensity and frequency of extreme weather events, increased incidence of vector diseases, among others.

Course Objectives:

- Learn about key natural resources issues in the Dominican Republic.
- Learn about national and international climate change policy.
- Understand the importance of international climate change policy at the national level.
- Learn about the impacts of climate change in the Dominican Republic.
- Learn about adaptation and mitigation efforts at the national level.
- Learn about the actors and institutions engaged in climate change policy, as well as the legal frameworks involved.
- Understand the role of policy, national and international, in environmental sustainability.
- Experience and learn about new cultures and lifestyles that are outside of a student's traditional comfort zone.

¹ Kreft, Sönke, David Eckstein, Lisa Junghans, Candice Kerestan and Ursula Hagen (2014) *Global Climate Risk Index 2015. Who Suffers Most from Extreme Weather Events? Weather-Related Loss Events in 2013 and 1993 to 2013*. Germanwatch, Munich Re. BMZ.Berlin.

Perspective Itinerary¹

Tuesday, August 1st: Arrival to Santo Domingo (SD), Dominican Republic (Hotel: Los Jardines del Teatro)

Wednesday, August 2nd: Meetings and Presentations in SD (Hotel: Los Jardines del Teatro)

- Visit to the Ministry of Environment
- Panel at *Universidad Autonoma de Santo Domingo*: Presentations by Sixto Inchaustegui (Grupo Jaragua), Eduardo Julia (Fundacion Sur Futuro), Laura Rathe (Fundacion PLENITUD) and Solhanlle Bonilla (INTEC).

Thursday, August 3rd: Meetings in SD and travel to Jarabacoa to visit Plan Yaque (Hotel Brisas de los Alpes)

- Visit the National Council for Climate Change and Clean Development Mechanism
- Plan Yaque: Design and operation of biological treatment plants/systems of wastewater, contribution to and impacts of climate change.

Friday, August 4th: Visit the Payment for Ecosystem Services (PES) Project in Jarabacoa (Hotel Brisas de los Alpes)

- PES Project Presentation and visit to Los Dajaos community
- REDD+ (Reduction of Emissions from Deforestation and Forest Degradation) pilot sites
- Visit to 'Salto de Jimenoa'

Saturday, August 5th: Travel to San Jose de las Matas (Hotel Platino)

- Visit the sustainable forest management project: La Celestina
- Visit forest plantations

Sunday, August 6th: Travel to Montecristi (Hotel Marina del Mar)

- Visit Mangroves of Estero Barsa National Park-Manzanillo Bay: Mangrove conservation, fishing practices, and fishers' community.
- Boat tour of Manzanillo Bay and the border with Haiti
- Travel (by car) to Dajabon to see the border with Haiti

Monday, August 7th: Montecristi (Hotel Marina del Mar)

- Boat tour of Cayo Siete Hemrnos Wildlife refuge: visit the reefs (snorkeling) and other marine natural areas.
- Travel to La Recta de Sanita: Role of rice in climate change mitigation and adaptation, meet with rice farmers and community members/leaders.

Tuesday August 8th: Travel to Santiago (Hotel Platino)

- Meeting at Forestry Chamber - The forestry sector in the Dominican Republic: Current situation, potential, evolution in the last 30 years, and challenges.
- See the town of Santiago

Wednesday, August 9th: Visit research area in Plan Sierra (Hotel Platino)

- Carbon capture by endemic coniferous forests
- Coffee Systems
- Plantations for multiple uses

Thursday, August 10th: Travel to Private Reserve El Zorzal (Hotel Playa Caribe)

- Visit the communities in the reserve and the cocoa plantations
- Biodiversity conservation: bicknell's thrush
- Carbon sequestration

- Travel to Samana

Friday, August 11th: Samana (Hotel Playa Caribe)

- Visit fisher community, San Lorenzo, in Sanchez: sustainable fishing practices and eco-tourism activities
- Visit the Coral Nursery in Los Cacaos: community involvement and conservation efforts (snorkeling)

Saturday, August 12th: Las Terrenas, Samana and then travel to Santo Domingo (Hotel: Los Jardines del Teatro)

- Visit to fisher's town: sea level rising and flooding
- Visit to Salto del Limon

Sunday, August 13th: Travel to airport, leaving at 3:15 AM (return to Blacksburg)

*** Please note that this itinerary can change.**

Course Expectations and Grading

Students are expected to complete all assigned background readings and attend all course-related activities. We will have short meetings every morning, before each site visit, to introduce the main issues that we will be discussing throughout the day. We will also meet shortly at the end of the day to go over the main points and take-home messages learned.

1. Participation: students are expected to actively participate and discuss the readings and issues presented throughout the course.....**30%**
2. Electronic journal: Students are required to keep a day-by-day journal. The journal will provide students the opportunity to reflect on their learning experience (including social and cultural) and record and describe their daily observations, field visits, and activities.....**40%**

Electronic journals should address, for every activity, the following general questions:

- a. Which environmental, climate, or social issue did you observe or were exposed to?
 - b. What did you learn?
 - c. Why does it matter?
 - d. After critically analyzing the issues discussed, what insights would you provide?
3. Final Assignment: Work in small groups to develop an online portfolio for the class, that will include: pictures, videos, interviews, entries from the journals, etc., to synthesize what you learned during the course (more guidance and information will be provided before departure).....**30%**

Also, students are expected to:

- Participate in all program activities with a positive attitude.
- Respect the culture and environment of the locations visited.
- Demonstrate mature and respectful behavior at all times.
- Be respectful of all rules/regulations of each place visited, including all lodging accommodations.
- Be flexible and adapt to any unexpected changes/deviations to the course activities and content.
- Be respectful of each other at all times.

The point percentage scale below will be used for computing a letter grade:

A	93%	-	100%
A-	90%	-	92.9%
B+	87%	-	89.9%
B	83%	-	86.9%
B-	80%	-	82.9%
C+	77%	-	79.9%
C	73%	-	76.9%
C-	70%	-	72.9%
D+	67%	-	69.9%
D	63%	-	66.9%
D-	60%	-	62.9%
F	0%	-	59.9%