

2023 Study Abroad Sustainability in Brazil's Rainforest Itinerary

UCB | UESC | UEA

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This course is a collaboration between three universities: the University of Colorado Boulder, the State University of Amazonas (in Manaus, Amazonas), and the State University of Santa Cruz (in Ilhéus, Bahia). It provides students with the opportunity to learn about a wide range of social, economic, and environmental sustainability topics in the Atlantic and Amazon Rainforest biomes. The purpose of this document is to provide a full itinerary from the 2023 program both to share the experiences that students participated in and to highlight connections between the students' experiences and course objectives and key themes.

Course Dates

Week 1: May 15-18, 2023

Before traveling, classes were held on the UCB campus and via Zoom to provide students with context on topics and biomes that would be covered through the course trip.

Week 2: May 21-27, 2023

Amazonas state, Brazil

Week 3: May 28-June 3, 2023

Bahia state, Brazil



Course Introduction

Solving complex socio-environmental sustainability challenges requires an interdisciplinary and systems-thinking approach that accounts for the perspectives of multiple stakeholders. Such challenges, and the opportunities to address them, are exemplified in Brazil's Amazon and Atlantic Forest biomes. These two tropical forests are of global significance: they sequester and store carbon, which mitigates climate change; they harbor more biodiversity than any other terrestrial ecosystem; and they support the livelihoods of millions of Indigenous and traditional forest-dependent people, many of whom live in poverty, yet are also critical actors in forest conservation.

Many stakeholders are invested in the conservation and sustainable development in Brazil's forests. These stakeholders wish to avoid the continuation of some of the historic trends of deforestation, fires, large-scale infrastructure, biodiversity loss, and poverty that have characterized these regions. Instead, they hold a vision of developing a sustainable forest-based bioeconomy that conserves forests while promoting well-being and prosperity among rural populations, grounded in the commercialization of non-timber forest products, agroforestry, ecotourism, and carbon markets.

Key Questions: How might this vision of a forest-based bioeconomy be achieved? Is it possible to navigate a pathway that achieves both conservation and sustainable development goals? What governance mechanisms (e.g., policies, programs) are needed to do so? What is the role of different stakeholders? What can be learned across different regions, namely the Amazon and Atlantic Forests, to share lessons learned on integrated conservation and development? What opportunities are there for domestic and international collaborative partnerships to contribute to this vision?

-2023 Course Syllabus

Key Themes



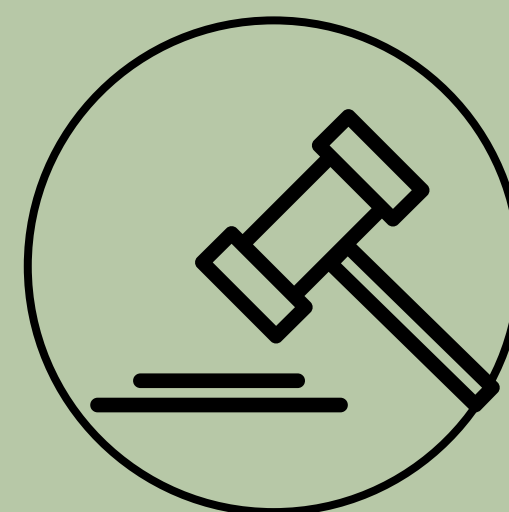
**Forest Conservation
& Restoration**



Bioeconomy



Food Systems



**Policy &
Governance**



**Sustainable
Development**

2023 Itinerary

Saturday 5.20



Students & Favio (Translator) on the boat tour

Arrival in Manaus, Amazonas throughout the day. Transportation provided.

Boat Tour (Optional)

Boat ride to the Encontro das Águas, “Meeting of the Waters,” and to visit the nearby floating communities. Introduction to the biome & ecotourism in Amazon Rainforest.

Sunday 5.21



First time all students & teachers are meeting at the on-site orientation

Manaus Market Tours (Optional)

Introduction to food & culture in Brazil. Visited three markets: produce, meat/fish & craft.

On-site Orientation

Official start to the study abroad trip. Students gained a better understanding of the range of disciplines & shared interest among the group.

Monday 5.22



Students listening to speaker, Denise Gutierrez, from INPA

National Institute of Amazonian Research (INPA)
Overview of INPA & Casa da Sciencia that served as an introduction to the Amazon biome & to the researchers working to understand & protect it.

Museum of the Amazon (MUSA)

Presentations from an archeologist, the Director of MUSA & Secretary of the Environment of Amazonas to better understand the preservation and conservation work being done in the Amazon Rainforest. Completed the day with a sunset view from the observation tower.

Tuesday 5.23

Fundação Vitoria Amazonica

Saw firsthand the significance of roads in influencing tradeoffs between deforestation and access.

Fundação Almerinda Malaquias

Observed how community projects help build capacity and social support around wood artisanship.

Pink River Dolphin Eco-Tourism Initiative

Analyzed an example of an attempt to transform a previously unregulated practice to be more responsible, sensitive and educational.



One of the two Pink Dolphins in the rehabilitation area at tourist attraction

Wednesday 5.24

Espaço EKOBÉ

Walked a dry and "wet" trail in primary Amazon rainforest. Learned more about the flora from an ecological perspective.

Depart Novo Airão

Traveled down the Ríó Negro on the Maira boat, had a seminar & began group project work. Groups led by the Amazonian students continued to work on their projects & presented later in the week.



Students traveled and slept on the Maria Boat for three nights and four days

Thursday 5.25

Celio's Workshop

Listened to opportunities and challenges that rural family businesses & producers face from Celio's perspective.

Nova Esperança Indigenous Community

Broke off into small groups to visit different parts of the community to learn about rural education, food production, and tourism. Learned more about opportunities and challenges for a rural, indigenous community in the Amazon.

Bela Vista Yara Group

Visited a women-led cooperative to learn about forest-based cosmetics, non-timber products & sustainable bioeconomy.



Students learning about challenges of bio-economy at Bela Vista Yara Group

Friday 5.26

Tayuyo Indigenous Community

Participated in eco-tourism activities and spoke with community members about their moving of locations a few years prior for increasing tourism opportunities and how these activities help them preserve their culture. Students considered the differences between this indigenous community and others they had visited thus far.

Week 1 Project Presentation

Objective: Students shared project ideas for the Samuel Benchimol award and received feedback from peers and professors

End of Week Celebratory Dinner

Students, teachers, speakers, tour guides and translators joined together for a celebratory dinner before course participants traveled overnight to Bahia for the next leg of the trip.



Tayuyo community members showing students onsite ecotourism activities



Professor Romari Martinez facilitating on-site orientation

Saturday 5.27

Arrival in Ilhéus, Bahia

Arrived in Bahia as a group and settled into the pousada.

On-site Orientation

Orientation to the Atlantic biome & social and environmental challenges in Bahia. Discussion on week 2 projects led by the UCB students.



Students enjoying a day off surfing with Thor Surf School

Sunday 5.28

Beach & Surf Day (Optional)

Option to surf, hang out on the beach or relax at the pousada.

Monday 5.29

Cacau Innovation Center, UESC

Gained a better understanding of certification needs and process for cocoa production. Also had the opportunity to see what projects some of the UESC students were working on.

Fazenda Yrere

Learned some of the dynamics of cacao agroforestry, about the Bean-to-Bar movement and the potential for win-win outcomes for forests and farmer livelihoods.

Assentamento Frey Vantuy

Gained the perspective of women-led family farming practices, challenges and opportunities.

Tuesday 5.30

Parque Estadual de Serra do Conduru (PESC)

Light hike in the state park where students learned about flora, fauna & tourism opportunities. Learned from the park director and manager how to better understand conservation efforts and challenges.

Instituto Floresta Viva

Overview of reforestation and restoring the Atlantic Forest biome.

Capoeira de Angola

Learned about the culture and history of Capoeira in southern Bahia and participated in the basics of the art.

Wednesday 5.31

Porto Sul

Analyzed threats and opportunities resulting from this large-scale infrastructure project. Previous meetings, tours and conversations with community members were utilized to better understand impacts and concerns.



Cacau Innovation Center teaching about the process to check for infected cacao



Students learning capoeira



Students at Porto Sol wearing PPE preparing for the tour

Thursday 6.1

Quilombo Santo Amaro

Learned about the history & social context of quilombos, challenges folks in Santo Amaro were facing & how ecotourism can help support community growth & preservation.

Presentations from Comprido & Erasmo at the Porto de Tras Cultural Center

Gained a perspective on how eco-tourism can contribute to a sustainable bioeconomy in Itacaré through the lens of urban quilombos and capoeira perspectives.



Community members from the Quilombo Santo Amaro playing music & teaching traditional dances

Friday 6.2

Conversation with the Itacaré Secretary of the Environment

Discussion about how the Brazilian government works at different levels to address environmental issues with a focus on solid waste management and how it is being addressed.

Week #2 Group Project Work

UCB students' project involved creating an outreach document that included an analysis of the overall course. All students participated in a UCB project brainstorming session to provide insights about their experiences during the course.

Group Work: Overall Analysis

All students synthesized the similarities and differences of the Amazon & Atlantic Rainforests. The group worked together to define challenges and opportunities they noticed throughout the trip.

Saturday 6.3

Final Goodbyes

Students & professors from all three schools briefly discussed their final takeaways from the overall course experience.



Students discussing similarities and differences of Amazon & Atlantic Biomes



Students & professors enjoying their final evening together

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Sustainability in Brazil's Rainforest

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This intensive and immersive study abroad course is a collaboration between the United States' University of Colorado Boulder and Brazil's State University of Amazonas (in Manaus, Amazonas) and the State University of Santa Cruz (in Ilhéus, Bahia). It takes place in the states of Amazonas and Bahia, with an emphasis on the Amazon and Atlantic Forests and the people living there. Over three weeks the students study and analyze themes including bioeconomy, conservation, sustainability, and socio-environmental systems through various lenses, such as food, tourism, and infrastructure. The subsequent paragraphs highlight some of the thematic connections made by students during the course.

Amazon Thematic Connections

In the Amazon Forest, we visited indigenous and forest communities playing a part in in bioeconomy through sustainably sourcing and producing goods. We met Celio, a carpenter who works with wood collected from the forest floor, such as fallen trees and broken branches. He participates in bioeconomy through teaching carpentry workshops focused on environmentalism, selling goods over the internet to folks around the world, and his involvement in ecotourism where tourists are invited to stay in his lodge and become immersed in his way of life. This example is also indicative of sustainable practices we noticed on the trip, as the business model and practices work with nature, using a renewable resource to support both the bioeconomy in Brazil and the health of the environment. This also touches on conservation, as there are no external influences imposed onto the forest by Celio's work, such as deforestation. With these examples together the socio-environmental systems at play are easier to see and understand. Celio participates in the bioeconomy, but also relies on NGOs to support his carpentry in the market. While we saw sustainability and conservation at play in his work, we also learned of harmful environmental practices in the Amazon, such as illegal gold mining as mentioned in our meeting with the State Secretary of the Environment.



Celio speaking about his work



Conversation with the State Secretary of the Environment, Eduardo Taveira



Students at MUSA

Atlantic Thematic Connections



Students at UESC

In the Atlantic Forest, cacao was one of the main topics discussed, both at the CIC (Centro de Inovação de Cacau) at UESC (State University of Santa Cruz) and at Fazenda Yrere, a cacao cabruca farm. The bioeconomy of the region is intertwined with cacao. It is a major player in the market, and includes cultivation and production of chocolate products in the Bean-to-Bar and Tree-to-Bar movements and collaboration with institutions like UESC to attain certification. This certification analyzes social and environmental sustainability requirements as well as considers if the area is a designated conservation area, all of which support the wellbeing of the environment and provide increased income to farmers. In this way sustainable practices and conservation areas are supported in cacao production and improve the value chain. Here, too, socio-environmental systems are understood through the interconnectedness between bioeconomy, conservation and sustainability, as they build upon and support each other. Additionally, it also highlights where the similarities and differences between the Amazon and Atlantic Forests lie.



Students at the CIC learning about cacao bean quality testing



Presentation at the Fazenda on cacao bean drying



Students at Fazenda Yrere learning about agroforestry

Analysis of Connections

In both cases there is a lack of governmental action and support for producers. In the case of the Amazon the support originates from NGOs, and in the Atlantic forest the certification process and resulting networks support producers. In both examples there is a history and reasoning behind why these people do what they do. With Celio he is looking to spread sustainable art and environmental education to spur a new movement in art focused on conservation. With cacao, we see the certification bettering livelihoods and environmental practices in farming. These go hand-in-hand with the importance of environmental marketing. Whether the product is a wood handicraft or a bar of chocolate, part of the marketing includes highlighting the environmentalism surrounding the production and how conservation is upheld. Again, in a similar vein, a trend of reliance on nature to sustain came forth from our experiences and from the lens of these two examples. There is an important relationship that must be upheld with nature to sustain culture, livelihoods, and the bioeconomy.