

Calculating Scope 3 Emissions using Campus Study Abroad Air Travel Data and Web GIS

Thursday, October 23, 2025 10:00 AM (20 minutes)

University campuses are actively promoting their campus sustainability efforts to students and the public as evidenced in green campus sustainability ratings and third party reviewers such as AASHE STARS program. While these ratings and reporting programs are often vast in scope, almost all include assessment of carbon emissions generated by the campus(es). Assessment of carbon emissions is often focused on Scope 1 emissions, or carbon generated from consumption of energy to maintain campus infrastructure and operations. In order to provide data on Scope 3 emissions, this presentation reports on a course collaboration between the Campus Energy Manager, Campus Sustainability Outreach Coordinator, Associate Director of Study Abroad, and students of an advanced GIS course at SUNY Cortland in spring 2025. As a pilot study to develop a protocol to calculate Scope 3 emissions as requested by the Campus Energy Manager, students calculated carbon emissions for a calendar year of campus study abroad and international travel activity. In addition, carbon emissions were analyzed at the country, continent, and airport scale as well as in time sequences of semesters and intersessions. The data were presented using a variety of ArcGIS tools including ArcGIS Pro, ArcGIS Online, ArcScenes, and StoryMaps and provided possible amendments to the portfolio of study abroad locations to balance distance of travel with a reasonable amount of carbon emissions.

Is there a SINGLE day you are unavailable to present?

October 25, 2025

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Organized Session Details

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