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Paper Title: Teaching Sustainability and Action: Geography of Climate Change

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Abstract: Within the context of sustainability education, this case study describes a geographic approach that was recently implemented at Southern Illinois University Carbondale. An upper-level course on Global Climate Change was team-taught to provide an introduction to both the physical and social science components of this complex environmental issue. This poster provides insight into the course structure and assignments that focus on two faculty members' expertise. The first half of the course covered the physical science aspects of Climate Change, while the second portion addressed the social science components. Specifically, the physical science topics included an introduction to the climate system and fundamental climate science concepts, such as "radiative forcing" and "feedback." Introductory topics included overviews of climate observations, climate reconstruction (i.e., paleoclimate) methods, and simple and complex climate models. Students then explored Earth's climate history over a range of timescales, focusing on connecting theory and modeling results with the available physical evidence. The social science component was action-oriented and linked to geographic scale. Students learned from reading and action-activities, addressing relevant individual, local, state, national, and international sustainability themes within the broader context of the United Nations Sustainable Development Goal (UNSDG) #13: "Take urgent action to combat climate change and its impacts." This included assignments related to policies, climate communication, and social justice issues, which culminated in a Climate Summit. This final activity required each student to prepare a policy report and represent a nation in negotiating a multilateral climate agreement. While the course received high marks in student evaluations, the instructors have several recommendations for future climate sustainability courses, including ways to better integrate the physical and social science components when teaching Climate Change topics.

Key Words: Climate Change, Environmental Education, Higher Education, Interdisciplinary, Sustainability