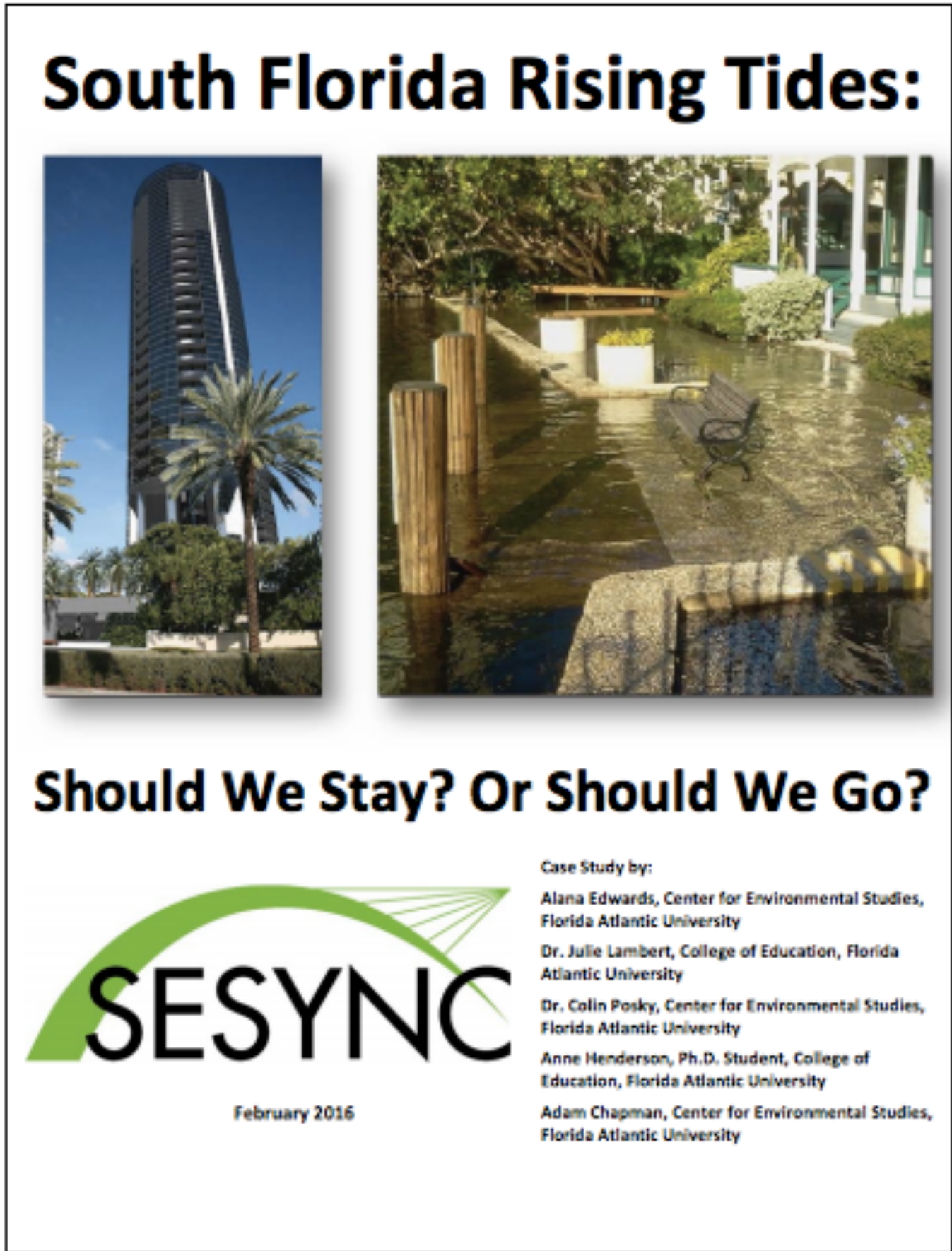


# South Florida Rising Tides: Should I Stay or Should I Go? A Pilot Study

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# Introduction



This pilot study is an assessment of a socio-environmental case study developed as part of a short-course, *Teaching Through Socio-Environmental Case Studies*, By Dr. Julie Lambert and Alana Edwards, at the National Socio-Environmental Synthesis Center in Annapolis, Maryland. Socio-environmental case studies combine data and methods from the natural and social sciences to prepare students to address complex, trans-disciplinary environmental problems. In this case study, each student assumes the primary role of a concerned citizen scientist living in one of four south Florida counties; Palm Beach, Broward, Miami-Dade and Monroe. Each student is also assigned to a county/city committee and to one of four stakeholder perspectives—water managers, residents, business leaders and Mayor. Using the cooperative learning jigsaw approach, students alternate meeting in county and stakeholder teams to analyze current articles, data, and GIS maps to identify the specific sea level related problems, socio-environmental impacts, and current/future adaptation strategies. Each county group ultimately makes recommendations to the city managers through a mock town hall meeting.

## Guiding Research Question

\* How will engagement in the case study affect student learning about the socio-environmental impacts of sea level rise?

\* Are the resources provided in the case study sufficient for students to complete the activities?

- Do the activities in the case study contribute to successful completion of the stated learning objectives?

## Method

The pilot study was conducted in a graduate level course at a large southern public university. 15 graduate level students participated over a three-week period. The students were randomly assigned groups based on the four counties: Palm Beach, Broward, Miami-Dade and Monroe. Within each group they were given a stakeholder role; either business owner, water manager, resident or a government leader (Mayor). Students were given a case study packet to read and answer the questions on a worksheet for background information about their county. Students presented in a mock town hall meeting with recommendations about their county on adaptation, mitigation or retreat.

Pre-tests and Post tests were given, and the students were asked to fill out a post case study feedback form.

## Data Collection and Analysis

Pre and Post-tests were collected to determine the level of knowledge gains. Feedback surveys were given post lesson in order to collect perceptions on the quality of the learning experience.

Analysis is in progress, but we have already identified strong themes across groups. This connection to real issues and communicative purposes motivated students to persevere through the challenging presentation demands. Also prevalent in the data were students' powerful experiences looking at the data through the eyes of their assigned stakeholder. During the culminating experience, students came to profound understandings about values, social action, and their own developing identities as agents of change.

## Student Comments

- I really liked the presentation and hearing about potential SLR adaptation and mitigation strategies, such as the western half of Miami Beach being transformed into an elevated structure with flowing water below.
- I liked playing a role
- I think it may help high school students understand the impacts of SLR. However, I am not a high school student and cannot speak for them. It would probably be best to test this study using the appropriate volunteers.
- Allowing participants to understand the topic from the perspective of multiple stakeholders was helpful.
- I enjoyed working together with other researchers
- I liked the the end presentations and hearing what other groups came up with and their solutions.

## References