Introduction:

-Hello we are TURFeffect. Our client is Comunidad y Biodiversidad (also known as COBI), which a Mexican NGO. After more than 15 years of collaboration with fishermen, COBI has been involved in the creation of 29 community-based no-take marine reserves distributed among 13 different communities in the Gulf of California, the Pacific coast of Baja Peninsula, and the Caribbean. COBI also collaborates with government agencies to design and monitor 10 Marine Protected Areas that have no-take marine reserves within their perimeters.

-The extent to which these reserves have met their stated objectives is unclear. Each community has unique culture, natural resources, vulnerabilities, and governance structures. This hinders the use of conventional frameworks that evaluate the effectiveness of no-take marine reserves, and calls for the development of an appropriate tool capable of measuring effectiveness under the current scenario.

Objectives:

1. Determine a set of biophysical, socioeconomic and governance indicators that can be used to evaluate these reserves.  
  
2. Propose a framework for evaluation

3. Create a Shiny App using R to aid in data analysis.  
  
4. Develop an English/Spanish guidebook that walk the user through implementing our framework.

-Note, we are developing a framework, not analyzing the data for all the reserves (though we will provide some sample analyses in our guidebook).

Show preliminary results of survey and biophysical analysis (put link to webpage)

-There were gaps in available socioeconomic and governance data. During the summer, we surveyed leaders of fishing communities in Mexico to fill these gaps. We are now determining how to incorporate these data into our framework.

-We were able to gather biophysical time series that contains data before and after the implementation of the reserves.

-We have performed multiple linear regression on these biophysical data. Here are our preliminary results: click link (we will have 30 seconds to explain the results)

-In one line of code, we were able to generate a report of results. This report contains plots of each biophysical indicator over time for the no-take reserve and control area for each species of interest. It also contains a table with the results of the multiple linear regression used to find the interaction term, which describes the effect of the reserve compared to the control zone. To communicate these results, we have a “score card” that shows both the direction and significance of the results.

-On Oct. 10th, we will be giving a presentation of our preliminary results in Mexico to our client, a government decision-making body for fisheries in Mexico called INAPESCA, and other NGOs interested in implementing our framework.