**What Costello wants:**

-For the meeting, do 20 minutes of presentation. 40 minutes of discussion. Spell out objectives of project and proposed approach. Say what analyses will do. Costello wants us to do an example of analyses on Natividad data for the meeting.

-For both meetings:What project is about? What will be the results/deliverables?Don’t talk about details of what the indicators will be.

-Mock version of what the Shiny app looks like by end of quarter. Don’t have to do it in R. Conceptual schematic of what we think the end result will be. What put in, what analysis goes in, what comes out, what interface looks like. A couple of powerpoint slides on this. Want to have this for our final meeting for the quarter.

-Put together what the topic sections will be for the guidebooks will be for next week’s meeting. Sections. One section will be data formatting. Walks through examples. List of indicators and an example of how the data and analysis and result looks like. Say is user-friendly and will only be x pages long.

-Goal for meeting: common understanding of what we want to do.

-Focus of this project: communications and data science and user interface. Not about doing the data analysis ourselves.

**Logo:**

-All choose top 3

**Trip:**

-Leave Thursday, November 10th at 4am, come back Sunday, November 13th

-Stay in Baja Cactus hotel

**Agenda:**

-Send advisors and COBI the agenda (done)

-Get skype names (done)

**Presentation:** (Melaina will present)

First slide: 1 minute of how project works and who is involved

-4 of us, each have a role (ex. project manager) and each will divide work on the project, we are supported by Costello our faculty advisor and Sean our PhD advisor, and external advisors to provide us with additional support and expertise

Project background: three different areas, explain the three types of no-take marine reserves

-After more than 15 years of collaboration with fishermen, COBI has been involved in the creation of 29 community-based no-take marine reserves (21,106 hectares) distributed among 13 different communities in the Gulf of California, Pacific coast of Baja Peninsula, and the Caribbean. They also collaborate with government agencies to design and monitor 10 Marine Protected Areas (617,703 hectares) that have no-take marine reserves (58,348 hectares) within their perimeters (i.e. core zones).

-These marine reserves can be no-take (fishing is off-limits), partially protected (extraction of specific species is not allowed), temporarily protected (only for a period of time) or a combination of temporal and partial protections.

Statement of problem:

-The extent to which these reserves have met their 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: Not about doing the data analysis ourselves.

1) Determine a set of biophysical, socioeconomic and governance indicators that can be used to evaluate the effectiveness of no-take marine reserves in Mexico.

2) Use the selected indicators to propose a framework for evaluating the effectiveness of no-take marine reserves in Mexico.

3) Develop an English/Spanish guidebook with the selected indicators that walks the user through implementing our framework.

Our approach for achieving each deliverable:

1) Selection of Indicators

-Three types of indicators: biophysical, socioeconomic, governance

-Three categories, outcome variables (due to treatment), covariates (environmental stressors), explanatory variables

-How we are selecting them: based on our literature review

2) Analysis

-Input, analysis, outputs

-Biophysical: Input of what you need ex. fish abundance and get post-pre treatment and control, DID by hand vs. linear regression, output: value of the DD estimate (positive or negative) trend and if do it by regression if this trend is significant

-We are still working on how we are going to analyze the governance indicators (since they are explanatory)

3) Guidebook

-Sections of guidebook: Introduction, Selection of Indicators (depend on objectives of reserve), Data collection, Data Formatting, Analysis: subsection for biophysical, governance and social; Interpretation of results: for each type of indicator; Recommendations for improvement

4) Shiny app

-COBI wants a physical guidebook, not a Shiny app. Because COBI wants the guidebook, our focus for this project will be the guidebook. However, we are thinking about creating a Shiny app as something extra if we have time.

-Input, analysis, output

-Input: standardized data set, then in the Shiny app select which indicators you want (based on your reserve objectives), click run analysis and it will run analysis on those indicators. Ex. fish abundance. The analysis will be DID analysis and a regression will run in background when hit the run analysis button Output: Graph of abundance in the control and treatment group over time; detailed report: DD estimate and p-value and in non-detailed report: red vs. green (for bad and good) and a section on that summary page with a recommendation of what to do to improve the reserve

-Interface:

-Add figure (Caio and JC will make)

Our next steps/what planning on doing during the summer when we are not together:

-Lit review

-Data formatting

-Data gaps/survey

-First week of fall, run analyses together

Questions?