**Important information:**

-Ask Costello for Professor Deschenes’ lectures on DID (Sean will send those to us by end of quarter from his lecture with him)

-Don’t include Costello on emails that are not necessary

-Sean will be available over the summer and will continue on with our project in the fall

-May 16th meeting with Gavin and Costello

-June 1st for Spring Review Meeting (no for 30th because is a holiday)

\*Important stuff discussed in meeting is highlighted in red (for if you just want to skim through)

**For Friday, May 6th:**

Work plan:

-All work on

**For next Wednesday, May 11th:**

NDA:

-Caio: Write draft by next Monday (informal, call it a Data Use Agreement, write up a set of bullet points for rules of engagement)

Indicators:

-All: Revise list of indicators with Costello’s advice by list indicators by type (1, 2 or 3; see notes below), determine what counterfactuals are for type 1 indicators; revise list with COBI’s advice after hear back from COBI

Data:

-All: collect as much data as can about reserves and counterfactuals; get public landings data per region, get landings data per community (from application of legal recognition of reserves by the government); Can get harvest data back in time for communities that do not have the reserve?Social baseline data: what does it entail?

-JC: get data from COBI at Mexico City meeting (COBI’s socioeconomic baselines, COBI’s data on landings, location of all reserves, information that answers the questions listed in the “Running Questions” section)

Analyses:

-Melaina and JC: create list of analyses, meet with Sean to discuss

Trip to Mexico:

-JC: set up a time in November to go

Literature Review:

-All: as per readings assignments

Random:

-JC: post the presentation COBI sent you last night to our Github

-Jael: send Costello a link to our group’s website

**Running list of things to do:**

-Blog: First blog post: Jael write who we are, what we are going to do, write a short blog post, one paragraph. Second post: what sites will be working on (interactive map of location of sites), number of reserves, how big they are, about where they are, area protected, what fishers fishing; blog post every two weeks.

-Logo: Caio asked a friend, Melaina should ask a friend, Jael will come up with a design too.

-Find examples of guidebooks (doesn’t matter if it is for a different field).

-Melaina and JC: Run analyses on sample data (Natividad Island data).

-Jael and Caio: make list of deficiencies in the data COBI collects. Write a suggestion for what COBI what they should do this to improve data collection.

-All: figure out which of COBI’s controls are badly designed and suggest new controls

-Jael and Caio: survey design

**Running Questions:**

-Is COBI’s goal to use the guidebook/tool to inform changes in management or to say yes/no this reserve is successful? Does COBI want this tool to help itself or to help the fishermen or both?

-Does COBI wants us to provide a tool (or make suggestions) for what data to collect and indicators to analyze for current and future reserves or to for analyzing the effectiveness of reserves that already exist using data they already have or both?

-Does COBI want to use socioeconomic (and governance) indicators to help them select communities and/or does COBI want to know if reserves have improved socioeconomic condition?

**Agenda:**

-Data Presentation by JC

-NDA

-Schedule Spring Review meeting

-Review of selected indicators list

-Website

-App

-Data

-JC’s summer internship with COBI

-Mexico City meeting

-Trip to Mexico

-External advisors

-Human survey

-Analyses

**Data presentation by JC:**

*Overall goal of presentation:*

-How designed data collection procedures, what collecting and how, what are doing with data so far

*How COBI collects data:*

-When first start to engage with community: baseline data

-When MRs are designed, set objectives and goals

-MRs can be partial, total, temporal, or permanent

-Designed databases; no centralized database

-Select frequency of monitoring

*What data COBI has:*

-Baseline (only right before implemented reserve)

-Ecological surveys (equal frequency of monitoring between reserve and control; once a year, roughly the same time)

-No systematic monitoring of any social data; COBI wants to work on protocol for social data; how know if people were better off or worse off from reserve: income goes up or down because of reserve, change in social attitude towards environ; if only monitor after reserve in place, if question is are people better off after reserve (compare baseline with now)

-Could get landings data -> because have to report publically to get legal recognition of reserve; could get some not systematic data from COBI

-COBI has been asking resources in MPA vs. outside area, trends in hypoxia etc.

-COBI trying to use info to convince fishermen it was a good idea; fishermen don’t know if increase in income is because of reserve or that spillover is indeed happening

-Present info to communities and government yearly

-Meetings should lead to adaptive management (reserve + help get fishery certified), is the idea but haven’t been doing it

-Harvest data would be for a single TURF or a single community (document to gov should be per year; diff communities will have diff time spans of data; at least two years of data: Costello wants harvest data data now. Wants us to find this online. JC has started search.)

-Have landings data for 10 years for 3 communities right now

-Fishing has started from 1910, 1960s, etc.

-Reserves, 2004/05, some this year

-Have map of reserves for Pacific, will get more info at Mexico City meeting

-Who does analysis now for presentation? No one in charge

-Economic alt: fishermen are now scientific divers for hire, make pearls shaped as a dolphin by abalone (while wait for aquaculture), tourism dives, certification for seafood

-Note: only have baseline for social data, no other social data -> so plan to do survey design

-Social baseline data: what does it entail? How much making? What fishing for? How much permits have? Which areas fish the most? Etc. Every communities has it.

-Summary: we only have biological data and governance data

*Costello’s concerns:*

-Clear: to determine effect of biomass on fish inside vs. outside of reserve

-Socioeconomic: compare to baseline with data, but a lot of other stuff could have changed that can’t control for ex. whole system got more productive (better oceanographic conditions) not just the reserve; if ask how much are fishing, are only fishing in the control zone which outside the reserve; there is no control inside of reserve because can’t fish in there; so can’t control for productivity of system; can get harvest data back in time for communities that do not have the reserve?

-Our project is to provide a framework for them to do the evaluation in the future, not for us to do the evaluation

-If the question is what is effect of the reserves on socioeconomic data, Costello is concerned. Wants us to determine which data they should measure to answer that question. If start collecting data in fishing zone outside the reserve, how will it inform our question on whether or not reserves are improving socioeconomic situation? If landings are increasing over time, are better off and continue to improve (is everything improving -> need a control), Should landings go up faster than are?

-We can advise COBI on how to collect (we are on target with this); but how they analyze the data to test the efficacy of the reserve needs more thought on our part

-Example control design: Go back in time: Determine what year each reserve was established for each site, (issue if do not have multiple reserves in same type of habitat/similar oceanographic data)

-Or maybe use landings for ex. lobster whole region as a control (better idea than the above); if all lobsters were declining, and the lobster in the community was declining until the reserve was implemented, after reserve was implemented, have sig more landings of lobster/increase of lobster = indication of effect of reserve

-Maybe only focus on current reserves are implementing and future reserves, but COBI wants us to analyze the effectiveness of reserves the already have with data they already have

-For our project: focus on control design, COBI’s controls are bad because their reserve (treatment) affects their control (because control is right outside of the reserve)

-TURF and closed areas are similar on abundance, but open access area was the bad one; benthic species research though

-Make a model and determine if actual is better than model (Costello doesn’t think we should do that in this place)

**NDA:**

-Do not want us to go to university formally/get it involved; want an informal agreement; Costello will talk to Casey and convince her to let us to sign this informal agreement

-Write up a set of bullet points of rules of engagement

-Do not call it a Data Use Agreement (or MOU, memorandum of understanding)

-Caio: will send draft on Monday

**Schedule Spring Review meeting:**

-May 16th with Gavin and Costello

-June 1st for Spring Review Meeting (no for 30th because is a holiday)

**Review of selected indicators:**

- Think about each indicator and what the counterfactual would be, something we have to test

-Ex. landings, counterfactual=landings in the region for that species

-Cost of implementing (is an explanatory variable not indicator of effectiveness): fishermen have to pay for fuel, captain, divers to do monitoring

-Three types of variables we have stated we want to collect: 1. Variable that might be caused by reserves (ex. harvest) 2. Socioeconomic variable that is important but not effected by reserve (ex. cost of monitoring) 3. Covariate (ex. temperature)

-Go through list and figure out which one is which; and if it is a variable that might be caused by the reserve, come up with a counterfactual

-Alternative economic opportunities: something else being implemented to offset the cost of implementing the reserve (ecotourism, certification, etc.); better question: how many fishermen are fishing and if leave, what do they do (type 1 and type 2, when reserve goes in does number of fishermen go down)

-Community knowledge: Costello likes it. We need to think about a series of questions to see if perceive the reserve well, make as quantitative as possible (maybe on a scale of 1-10)

-Ask COBI: Is focus really on the impact of reserves on indicator (measures of success); given you have a TURF with a reserve in it, are your indicators good?

**Website:**

-Likes it. Send Costello a link.

**App:**

-Shiny app, easy for us to do that without a counterfactual (controls); hard for each of those variables are actually better off or just better off from last year; for every variable need a counterfactual of what would have happened if didn’t implement the reserve

**Data:**

-Get data next week at meeting in Mexico City

-Have data from 1990 to 2015

-Collect as much data as can on counterfactuals and reserves

-Sean wants a clear idea of what data we have tomorrow at our meeting with him

**Summary internship:**

-Only focus on GP stuff

-By end of summer, do all analyses you want to do. Want half way through written report

**Mexico City meeting:**

-COBI agreed to pay for it, won’t be here on the 16th

-JC gone from 9th-20th

**Trip to Mexico:**

-Costello: set up a time with COBI

-Schedule trip for November

**External Advisors:**

Mar-yes, Gavin-yes, haven’t heard back from Jono (Sean will meet with him on Friday and will put a word in for us), just emailed Basurto, will email Caselle and Fio Michelli; stop after this list. Costello likes our list.

**Human survey:**

-All have to take exam and can’t change questions after you do that (us 4, Costello, and Sean)

-Can design survey in English and translate to Spanish

-Tomorrow is a workshop on this (time and place?)

**Analyses:**

-Meeting with Sean for tomorrow (Thursday, May 6th) to discuss Rm 1306 at 11:30am