Fishbanks Preparation for Instructors

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This note draws on what we learned from our colleague Dr. Michaela Thompson, a true master of Fishbanks teaching.

This simulation could be undertaken at many points in the course.   We have had the best results using it early in the course where it serves both as an icebreaker for students as they get to know one another in teams and as a shared experience in the pursuit of sustainability that we can come back to throughout the course.

The Fishbanks simulation can be played by individual students working on their own, using the materials listed in the Readings for the course. In our experience, however, the students learn much more when multiple students or teams of students participate in a play of the "game" under guidance of the teaching staff.

Fortunately, the MIT team that built the simulation has prepared extremely thorough but easy to use teaching support materials. These are available through the "Play Simulation" link toward the bottom of the Fishbanks public web site (https://mitsloan.mit.edu/teaching-resources-library/fishbanks-a-renewable-resource-management-simulation). That link will bring up a page "Welcome to Fishbanks" which has a section for 'Educators' through which teaching materials and guides are available. To access them, however, you will need to request an "educator registration code" through the last link on the page.   In our experience, this request will be granted by return email for anyone with a university-based email address.

Once you have your educator registration code, enter it on the same "Welcome to Fishbanks" page from which you requested it. This will bring up a new educator's version of the "Welcome to Fishbanks" page with links to let you set up a new class, administer an existing class, view a (great) teaching video, view an introduction pdf, and view guides for briefing and debriefing your students. We encourage you to make use of all of these excellent materials. Help is available via email at support@forio.com.

If you choose to run a multiplayer Fishbanks simulation for some or all of your students, you will doubtless devise your own variants of the strategy recommended by the MIT designers. In our experience, here are some things that seemed to help make the simulation exciting, educational and fun:

- Teams of 2 or 3 students seemed to work best. Whatever the team size one member should be designated as "the captain", responsible for entering their team's decisions on the web site during each round of play.
- Encourage teams to participate using a laptop computer rather than a cell phone or tablet.
- Giving each team a slightly weird fish-related name seemed to help set a good tone for the play. Here are some ideas though some of the references may be dating us: All About That Bass; Anti-Herring; Arctic Monkfish; Bluefin-182; Eel-vis Presley; Fleetwood Mackerel; If I Were a Buoy; Salmon and Garfunkel; The Wu-Tang Clams; Tuna Turner.
- Fish food helped. That is, we had baskets of fish-related goodies (e.g. "goldfish"; fish themed gummy candies; seaweed nori snacks) that students could munch on before and during the Fishbanks simulation game. This makes the class extra fun and memorable and helps break the ice early on for a engaged and dynamic semester.
- Offering prizes helped. We gave them both to the team that "won" (i.e. ended the game with the largest amount of financial assets) and to the team that did most to promote sustainable development of the fishery (e.g. by convincing the other teams to adopt quotas). For the "promoting sustainable development" prize, we asked the participants in the game to vote on the question.
- Being open to innovative approaches by the teams also helped. Perhaps our most pointed learning experience occurred when, faced with crashing fish stocks, all teams agreed to keep their boats in harbor for a year to let the depleted fishery grow back. But one team that has signed on to the agreement

cheated by sending its boats out anyway. That meant that it was the only team able to provide fish to the market that year, so its profits soared and it eventually achieved the highest score of any team in the game. The teams that had played by the rules were, understandably, furious and appealed to the "government" (i.e. the instructor) to punish the cheaters. The government, however, pointed out that it had no authority to do so: the teams' agreement to self-limit fishing had neglected to include provisions for punishing cheaters. The after-game debriefing made it clear that "next time" the teams would not neglect to include rules for punishing cheaters in their efforts to avoid tragedies of the commons. Our lesson as instructors was that we did the right thing when we allowed the innovative cheater team to push the game's unwritten boundaries as it provided incredible fodder for discussions of institutional rules and sanctioning mechanisms later in the course.

- Ideally, we would devote one entire 90 minute class to playing the game and then debrief the experience during part or all of the next class.
- Note that we have written the document "Fishbanks guidance for students" with our particular strategy in mind. If you choose a different one, you should probably edit the student document before distributing it.

Good fishing!