Fishackathon 2018 Challenge Sets

Enforcement

1. There is a need for digitized worker registration on small-scale fishing vessels to help discourage worker exploitation and make labor/human rights enforcement more manageable and consistent. **Environmental Justice Foundation**

2. Language and literacy barriers get in the way of ship workers reporting problems to enforcement agents. There is need for something that helps workers communicate with officials/staff using universal visual or audio cues. **Environmental Justice Foundation**

3. A tool that helps make regions and species of fish that have high risks of illegal activities more visible to fish-buying company decision makers would help them either avoid or mitigate unsustainable purchases. **Stockholm Resilience Center**

4. There is need for a smart solution to make fishers aware of relevant laws and requirements that apply to the areas they work. This could likely be based on a vessel's location. **Sea Fisheries Protection Authority**

Marketplace

5. A low-cost "fish identification" tool would help minimize human errors, the need for expensive fish surveys on vessels, and allow smaller/poorly-funded fishers to better assess the nature/value of their catch. **USGS, ReelSonar, Inc.**

6. Small scale operators often lack the resources, technical knowledge, or research capabilities needed for them to qualify for sustainability certifications. How can we match them with academics/industry professionals who can help? **Marine Stewardship Council**

7. It's hard for fishers in less-developed regions to find information on buyer prices in the open market. A platform that allows fishers to report "received" prices and buyers to report "offered" prices in real time would optimize profitability and increase market transparency, leading to a more competitive, fairer marketplace. **Environmental Defense Fund**

Sustainability

8. Over 50% of fish consumed globally is "farmed" through aquaculture. The main "feed" used in aquaculture farming are the rapidly-declining populations of wild-caught fish, an unsustainable source due to issues like overfishing. Farmers (and our ecosystem) would benefit greatly from a tool that helps them identify and compare alternate feed options based on price, environmental impact, nutrient content, etc. **Forum for the Future, Kampachi Farms**

9. A way to identify, track, and/or monitor "ports" (areas with high vessel activity) would greatly improve supply chain transparency - for agencies, buyers, and suppliers - and help with the

enforcement of environmental protection regulations. **Global Fishing Watch**

10. Protecting restricted fishing zones (e.g. marine reserves, remote areas) from illegal fishing is a huge challenge. A passive tool (maybe using sonar?) that helps identify fishing activity in restricted areas would help agencies monitor, track, and enforce laws more effectively. **University of Auckland Business School**

11. Inland freshwater areas are often overlooked when it comes to environmental monitoring. An open communication platform for freshwater 'users' to share real-time reports on environmental conditions and sightings (e.g. things like ice thickness and algal blooms) would provide data necessary to effectively navigate, manage, and protect these ecosystems. **American Fisheries Society**