

Exploring Transparency & Economic Opportunities in the New England Groundfish Fishery

A large yellow circle with a white shadow, containing the text 'FUTURE of FISH' in white. 'FUTURE' and 'FISH' are in a bold, sans-serif font, while 'of' is in a cursive script font.

FUTURE
of FISH



Convening for Stakeholder Collaboration

Future of Fish hosted a one-day workshop for stakeholders of the New England groundfish fishery on March 18, 2015, in Boston, MA. The purpose was to collaboratively design a more resilient future by exploring how improving the flow and quality of information within the fishery might lead to tangible benefits for fishermen, businesses, managers, and the fishery itself.

Through a series of discussions, collective brainstorming, and hands-on activities, workshop participants collaboratively designed frameworks for five distinct initiatives, including the basics of a plan, an execution strategy, and a core pitch.



Post-Workshop Research

Future of Fish also conducted post-workshop research and interviews with participants and experts in the field to identify past, existing, or related initiatives that might dovetail with the ideas from the workshop.

This follow-up work also provided insight into the current landscape of both challenge and opportunity. Based on findings from this more in-depth investigation, we outline recommended next steps with respect to each workshop idea.



Building on Previous Work



The workshop was an extension of Future of Fish's 2014 [joint report](#) with conservation finance expert Neel Inamdar, which identified the constraints, availability of financing, and potential fundable initiatives within the New England groundfish fishery as it continues to adjust to sector management.



Report Finding: Challenges to prosperity

Through interviews with over 100 New England groundfish fishery stakeholders, some key challenges to economic sustainability emerged, including:

- Inability to land sufficient volumes of fish
- High cost of leasing quota
- Difficulty business planning due to uncertainty about quota availability, quota prices, and dock prices
- Limited market access
- Competition from imports
- Limited available financing



Theme: Need for Better Information

The challenges identified by the research and the possible solutions for overcoming them revealed an underlying pattern — **the need for better information** — which informed the theme of the workshop.



Workshop Goals

- Name the challenges caused by the lack of complete, accurate, timely, and actionable information
- Discuss possible benefits
- Brainstorm ideas, tools, initiatives that could create greater transparency
- Creativity, not consensus



Pre-workshop Survey of Participants

Q1. What topics or questions related to transparency would you like to see addressed as part of this workshop?

- “What are the pros and cons of transparency in various parts of the system, and what are the costs and challenges to getting there?”
- “Understanding the current and future status to help our fishermen get the capital they need to sustain or grow their businesses.”
- “What is or is not considered ‘transparent?’”
- “Transparency in the lease market, and transparency (traceability) of fish through the distribution chain.”



Pre-workshop Survey of Participants

Q2. What do you hope to get out of the day? Be as specific as possible.

- “Strategies for actions leading to more transparency.”
- “An understanding of various perspectives, gaps and opportunities.”
- “A better appreciation for everyone else’s viewpoints.”
- “Just an understanding of where the industry wants to see action, and the feasibility of taking action at the scale that is needed to actually make a difference.”
- “I am not optimistic that this workshop will produce tangible results.”



Pre-workshop Survey of Participants

Q3. What personal or professional challenges have you experienced related to lack of transparency?

- “A seasonal shift in lease prices, paying higher than necessary lease prices, getting less than premium boat prices.”
- “Fishing profitability is no longer a function of skill or work ethic. This reality is collapsing fishing communities.”
- “Lack of sustainable business model.”
- “Difficulty in establishing lease rates for quota.”
- “The diversity in opinions of whether lack of transparency is even an issue.”



Pre-workshop Survey of Participants

Q4. In a perfect world going forward, what types of transparency could create benefits for all stakeholders?

- “It’s likely naive, but I feel like involvement of more stakeholders in not just the rule-making process, but also the stock assessment process could enhance transparency.”
- “‘Transparency’ means more than simply authenticating where fish was caught. There is a growing need for the systematic collection of detailed fishery dependent data, owned by the fishing industry and not simply collected by a government agency.”
- “That’s what I am hoping to learn at the workshop.”



Sense-Making

A panel discussion involving four preselected participants provided additional context from firsthand experiences about how lack of transparency was creating specific dilemmas within the fishery. Topics included:

- Problems with lack of real-time, accurate, and equitably distributed information about quota lease transactions, including actual quantities leased and prices paid.
- Difficulties lenders have when provided with imperfect information on the full picture of quota transactions and permit sales.
- Challenges created by time lag in landings reports from dealers and from NMFS.



Marketplace of Ideas

Following the panel, all participants brainstormed solutions to the challenges discussed. Of the ideas suggested below, the group voted to flesh out the ones that are highlighted:

- **Central permit registry to record permit ownership and liens**
- **New fishery data gathering process that is more inclusive of fishermen and produces more stable stock assessments year to year**
- Make NOAA more effective in terms of annualizing stock assessments to smoothing fluctuations in annual catch limits, drawing insights from how other data-limited fisheries are assessed
- Optimize an information system that allows sector managers to voluntarily collect and distribute data to a place that can collate in real time and make it useful to whoever needs it



Marketplace of Ideas

- Tool to value leased quota differently
- **Transparent quota market**
- Help fishers diversify into other fisheries in order to buffer against stock and price fluctuations
- Diversify the sector structure and allow permit splitting
- **Divert local fish to higher value markets using marketing, technology, and better traceability**
- **Creative finance using social impact bonds, for example**



Prototyping, Strategy, Pitch

Participants chose the single topic that most inspired them, and five groups were formed. Each group was provided with a kit of craft materials and instructed to build a physical model of their idea in order to activate parts of the brain that are not triggered by simply talking. The groups spent an hour building their prototypes and then refined their ideas through exercises that led them to develop implementation strategies and craft final pitches.



Idea 1: Central Permit Registry

Landscape: Access to fisheries quota is important to successful fishing operations. Financial institutions must feel comfortable with perceived risk to provide fishermen the financing they need to access permits and quota.

Challenge: There is currently no way for financial institutions to make loans to New England groundfishermen because of the lack of a trustworthy, accessible registry for both permit ownership and quota leasing. Fishermen who need financing the most cannot obtain it.

Solution: Create an centralized registry that is connected to permits and to the quota that flows from those permits — one that bankers and financiers trust.



Central Permit Registry: Pitch

The creation of a central permit registry would enable the financing of a broader array of fishermen to access permits and quota. Further, a central registry has the potential to drive innovation in US fisheries, as it is the gatekeeper for finance. With a registry in place, financial institutions would be much more likely to fund the entrepreneurs developing the businesses and market initiatives needed to align sustainability with profitability.

Team needed: Fishermen and sector managers, financial representatives, NGOs, NFMS and NOAA.

Resources needed: Information technology, money, and human resources.



Central Permit Registry: Initiatives

- A central registry was something considered a few years back, but the banking community was not comfortable with the fact that it would include both secured and unsecured liens (they wanted secured liens only) as they were concerned that the inclusion of all liens could affect their priority order in claiming compensation upon sale of the collateral.
- A permit valuation model has been developed, which is based on a theoretical quota lease rate, an actual lease rate, and a multiplier that if you leased out the quota, how many years it would take to pay it back. In general, the model values permits much lower than people think they're worth, so it's not used by many (if any) in the fishery.
- Maryland DNR worked with a nonprofit lender to write into state law that liens on permits had to be registered. "This was done over time, took time for bureaucracy to recognize need and benefit, probably took a champion within the department to move it."



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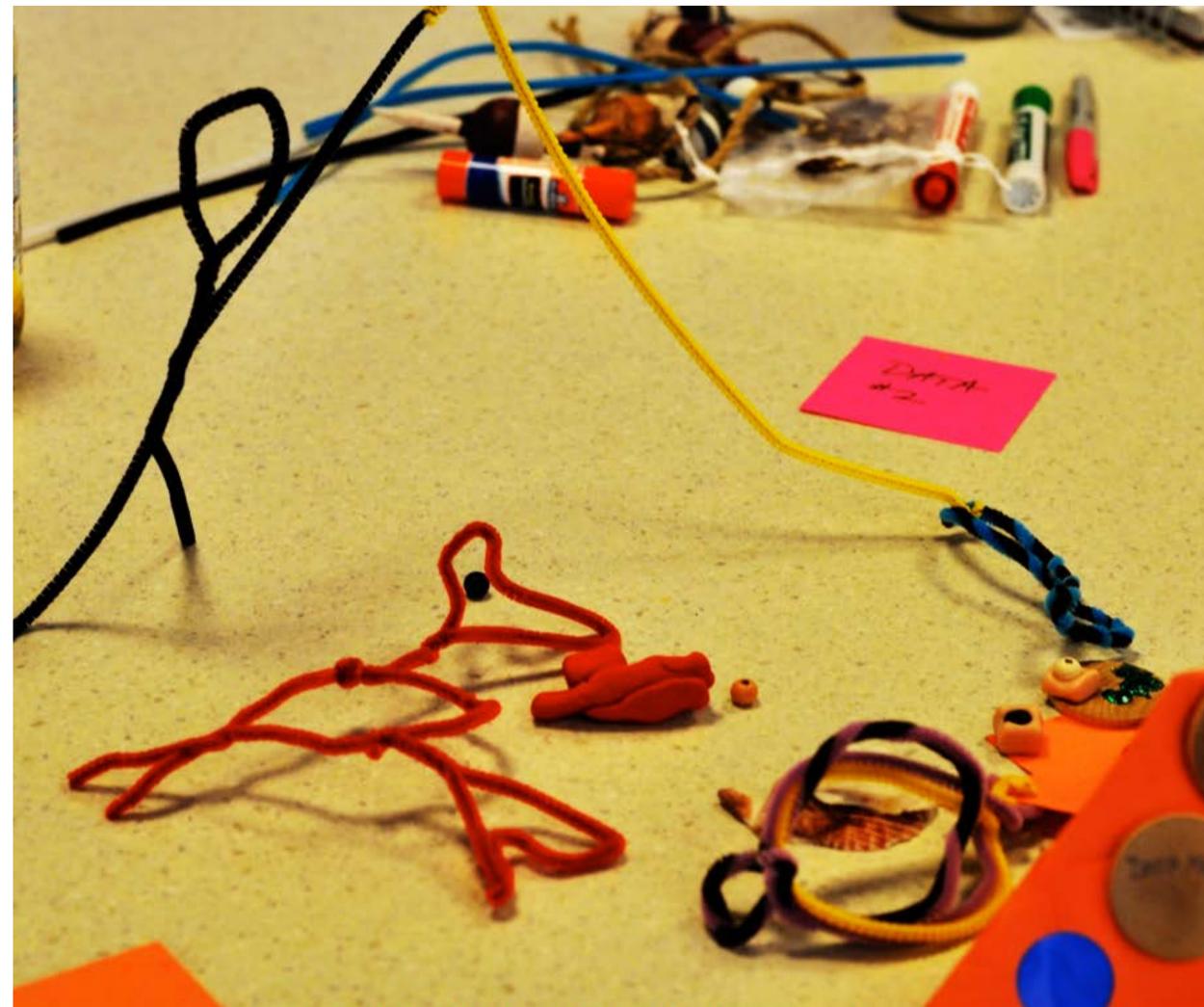


Central Permit Registry: Next Steps

The next step for moving this idea forward involves a scoping project to determine feasibility, legality, costs, benefits, and challenges. That due diligence will involve identifying key decision-makers and stakeholders from whom buy-in is critical.

Importantly, a central permit registry is required by the Magnuson-Stevens Act, but Congress has yet to appropriate funds to make it happen. Having the legal framework in place already, however, makes this opportunity ripe for development.

Idea 2: New Data Streams





New Data Streams: Overview

Landscape: There is widespread agreement that the data and analyses feeding the stock assessment process are inadequate and collected too infrequently. At the same time, fishery-dependent data — collected from the fishery itself as a byproduct of fishing activities — is underutilized as a data source that could inform stock assessments.

Challenge: Critical data needed to make optimal fishery decisions are delayed, incomplete, inaccurate, and not integrated. This affects scientists' ability to accurately characterize stock conditions, creating cascading ecological and economic consequences.

Solution: Build a data collaboration among fishery stakeholders that could create and optimize the use of new fishery-dependent data streams.



New Data Streams: Pitch

A multi-stakeholder fisheries data collaboration and information sharing system would increase the timeliness and quality of the information available to NMFS scientists for making more accurate and frequent stock assessments. The main benefit of this effort would be annual catch limits that are less volatile and more aligned with what fishermen are seeing on the water. Less volatility means fishermen are able to plan better, and lenders feel more comfortable investing in the fishery.

Team needed: Sector managers, fishermen (commercial and recreational), scientists (independent and government), marketing specialists.

Resources needed: Long-term funding, ecosystem information from all existing sources, technological expertise, human resources.



New Data Streams: Initiatives

- As part of NOAA's Fishery Dependent Data Modernization project, GMRI is working with SMAST and NOAA Fisheries to “holistically review fishery dependent data collection methods and systems across New England and the Mid-Atlantic regions. This project aims to develop a catalogue of data needs for fishery dependent data users, understand how it can be collected accurately, and determine how it can be made more accessible to end users.”
- A project by SMAST in 2009 outlined a Decision Support System for Fisheries Science. The tool takes multiple data streams into account for fisheries management and seeks to optimize the fishery as well as ecosystem and stock health. Although nothing has come of this work, it is worth consideration should the fishery scientist community decide to explore new approaches to data collection and analysis.



New Data Streams: Initiatives (cont'd)

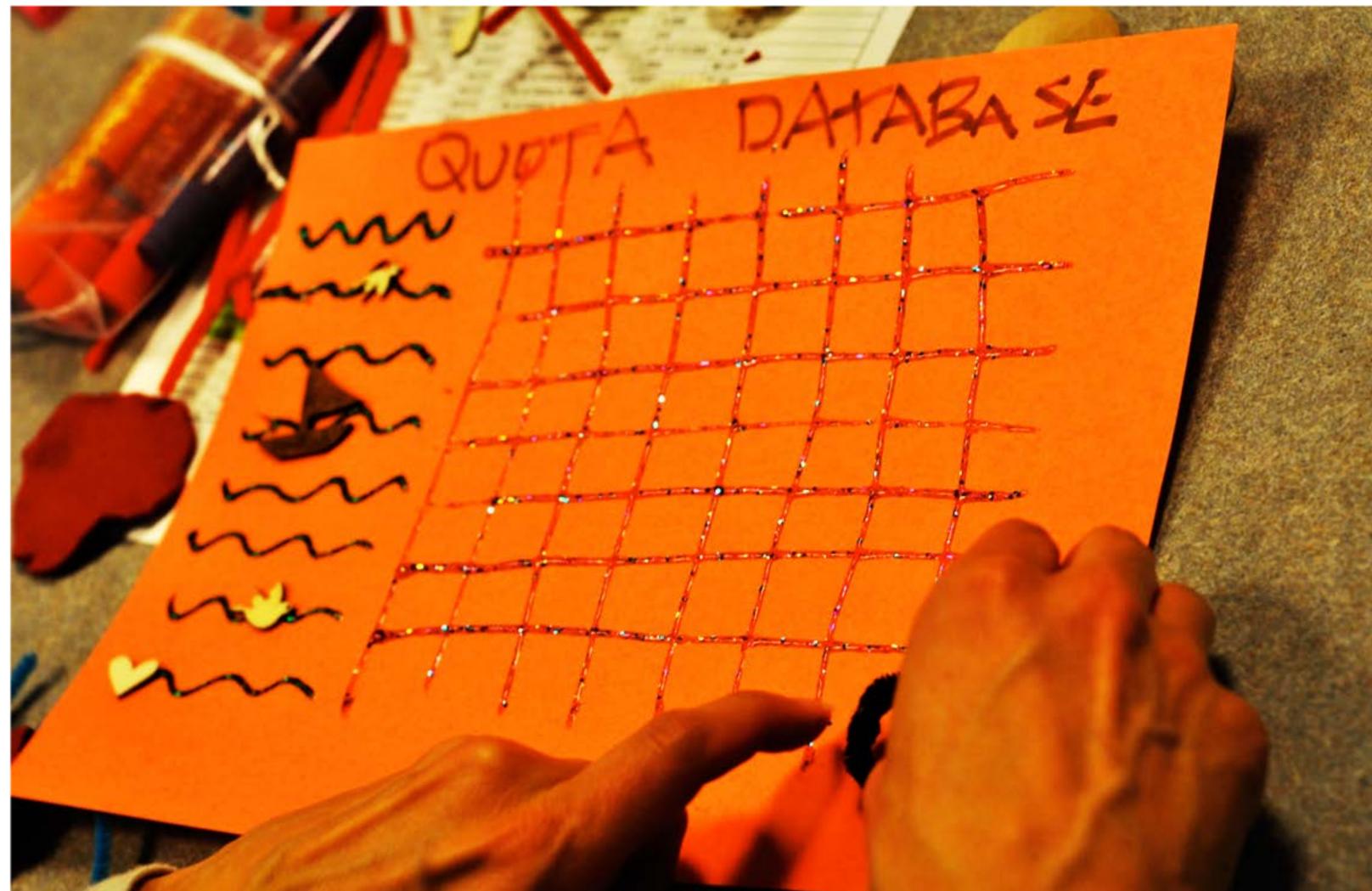
- EDF is working with researchers from SMAST to determine the breadth and depth of fishery-dependent data currently collected, how it is used, and how it could be used. So far, it seems an enormous amount of fishery-dependent data is collected, but relatively little is input to stock assessment models.
- GMRI has held several meetings with fishery stakeholders around identifying potential data gaps in the Gulf of Maine cod stock assessment, formulating industry-led research questions to address data gaps through collaborative research or the use of fishery-dependent data, and sharing ideas with NOAA Fisheries on improving communications around stock assessments. A number of potential solutions have been suggested, the most promising of which will be presented to NOAA for consideration and feedback in summer 2015.



New Data Streams: Next Steps

The lack of progress on modernizing stock assessments to incorporate more sophisticated data and analyses does not appear to be for lack of interest on the part of fishery stakeholders, nor is it for lack of data. Given the number of projects, workshops, closed-door meetings, proposals, etc. around this issue, it would be useful to map those various efforts in order to gauge the landscape of players and activities. It may also serve to prevent unnecessary replication, reveal opportunities to leverage collective influence, and identify gaps — areas that, if addressed, might help advance some of the individual project objectives and goals.

Idea 3: Transparent Quota Market





Transparent Quota Market: Overview

Landscape: The sector management system is a rights-based structure meant to give fishermen freedom to decide how they want to maximize the value of their quota portfolios. However, imperfect information about current and historic quota transactions has created negative outcomes for some fishermen, and for the fishery at large.

Challenge: Imperfect and untimely information about quota lease transactions prevents fishermen from knowing the true price of quota at any given time, the best reflection of the resource's shadow value, hindering their ability to make optimal business decisions.

Solution: Develop an online quota exchange that increases the fluidity of the market and shows quota available for lease and the actual prices being paid in real time.



Transparent Quota Market: Pitch

A transaction platform would allow fishermen to maximize the value of their quota portfolios and optimize their decisions about when and what to fish and when and what to lease. Because quota lease prices are a window into what is happening on the water, this platform would also tell managers what is happening with a stock, and whether the annual catch limit is likely set accurately. Another result would be more stable landings volumes and, thus, more stable dock prices.

Finally, information about quota prices will allow for a more accurate assessment of permit values, which is essential information for lenders considering a loan to a fisher.

Team needed: Sector managers, fishermen, 3rd party IT provider, permit holders (including permit banks), state agencies.

Resources needed: Financing, legal council, server to host platform, software, outreach and education to industry, app developer, credit facility.



Transparent Quota Market: Initiatives

- The New England Fisheries Management Council had considered a transparency provision as part of Amendment 18. Although several stakeholders argued strongly for the provision at the May 2015 council meeting, it was ultimately defeated. Under MSA, lease data is protected, so the government does not have the power to implement a transparency requirement and, thus, could not support its inclusion in the management plan.
- One attempt at a voluntary online quota lease market was made shortly after sectors were implemented in 2010. The project failed due to lack of uptake, perhaps because sectors were too new.



Transparent Quota Market: Initiatives (cont'd)

- GMRI has submitted a proposal for an S-K grant to take the results of a groundfish ACE lease market model to a customized business planning tool that would help sectors and their members become more accustomed to the ACE trading system, and to be able to identify the optimum composition of ACE given projected landings. If funded, this may be an appropriate lead-up to more transparent, predictable, and competitive ACE market access conditions, as it could prove the need for sectors to increase use and value of underutilized sector allocations through ACE trading. If the S-K grant is not awarded, external funding for this project will be needed in order to continue reaching out and working with all participating groundfish sectors to improve their economic viability and efficiency.



Transparent Quota Market: Next Steps

Due to confidentiality requirements outlined in the Magnuson-Stevens Act, government and fishery management agencies cannot release, nor require the release of, information that could disclose the identity of the person or business reporting the information. Thus, all data must be released in aggregate. As such, the development of a transaction-based transparent quota lease market would, by law, have to be industry-led and voluntary. Although many individual fishermen and some sector managers are in favor of making quota transaction data transparent, the industry still appears to be largely resistant. The work proposed by GMRI seems to be a first and necessary step toward providing sectors with market and leasing information that would enable short- and long-term business planning. Seeing the benefits of that data could pave the way for greater industry openness to transparent transactions in the future.

Idea 4: Better Markets for Storied Fish





Better Markets for Storied Fish: Overview

Landscape: Fishing sustainably *and profitably* is a challenge. Most locally landed product, even when harvested sustainably, flows into the commodity market, where it competes with cheap, high-volume imports. As a result, fishing can no longer sustain the economies it once did. Jobs that have existed in the community for hundreds of years are being lost.

Challenge: Fishermen currently have few options for selling their fish, and little negotiating power around landing prices. In some cases, fishermen lose money on catch because prices are so low, and their fishing costs exceed revenue received at the dock.

Solution: Foster new market channels within the existing value chain that preserve and offer verified story as a selling point to consumers who will pay for it.



Better Markets for Storied Fish: Pitch

Creating new markets that value fish with verifiable story can increase profits for fishermen and stabilize their livelihoods. Growing demand through consumer education for non-traditional stocks (including abundant under-utilized species) that can be fished sustainably could take pressure off overfished stocks, while also educating consumers about the quality, taste, and accessibility of sustainable, locally harvested seafood.

Team needed: Fishermen, processors and distributors, culinary experts, retailers, NOAA, NGOs, traceability platforms, branders and marketers.

Resources needed: Money, technology, verification of data, education and training in the supply chain, outreach to consumers, supporters and committed stakeholders.



Better Markets for Storied Fish: Initiatives

- There are a number of regional efforts to promote local, storied product from this fishery, but they tend to be small and difficult to scale. These include fisher association brands (e.g., Cape Ann CFA, Maine CFA, Cape Cod CFA, GMRI's Responsibly Harvested), CSF's in Port Clyde, Gloucester, and Rhode Island, and Red's Best in Boston.
- A number of technology companies, including Backtracker, ThisFish, and Trace Register, are working with some brands to help verify the origin claims of their products.
- EDF is working with Backtracker to do a market analysis of the local seafood supply chain. They will attempt to map the origins of products coming into the local buyers, as well as the ultimate destination of the local product. That research should be complete in August 2015.



Better Markets for Storied Fish: Initiatives (Cont'd)

- GMRI received NFWF funding to work with the Maine Coast Fisherman's Association and Trace Register to take traceability information at the boat level and track it through the supply chain. They hope to integrate ThisFish into the electronic monitoring system as well.



Better Markets for Storied Fish: Next Steps

Despite numerous efforts to promote better markets for NE groundfish, most of these types of initiatives have difficulty scaling. Further, the promise of higher prices for fishermen often doesn't materialize, despite the fact that consumers are willing to pay more for storied fish. That fact begs the question: Who within the supply chain is absorbing the additional margin? One next step toward creating systems that reward markets for storied fish would be to research the barriers to storied fish gaining traction. Why do current efforts stay small, and what would be needed in order to make storied fish a more scalable concept? To what degree are fishermen benefiting? To what degree are there ecosystem impacts? Are there successful examples in other fisheries or sectors or countries? While no workshop participants expressed interest in leading this initiative, Future of Fish would welcome an opportunity to research the questions posed above through our Discovery process.

Idea 5: Social Impact Bond





Social Impact Bond: Overview

Landscape: The New England groundfish fishery is facing economic crisis due to severe cuts in catch limits for key stocks, volatility in quota prices, poor landing prices, rising costs, and unpredictable environmental changes. Promising (but unproven) ideas for improving the situation lack the funding necessary to gain traction. Philanthropic funding is not always available, and few businesses are able to secure traditional investments due to the unstable nature of the fishery.

Challenge: Develop a creative financing structure that leverages the compelling story of the fishery and the promised effectiveness of the initiatives in order to access capital that is not contingent on high rates of financial return.



Social Impact Bond: Pitch

A social impact bond would finance private initiatives with the potential to achieve a level of economic and environmental stability that would result in significant public sector savings (e.g., reduced unemployment benefits, lower healthcare costs, fewer bankruptcies and housing foreclosures), as well as public benefits, such as healthier ecosystems, abundant fisheries, and larger tax revenues from increased economic activity.

Team needed: Fishermen, fishing communities, investors (broadly defined), public sector representatives, government agency representatives, early supporters for pilots, entrepreneurs to lead initiatives, foundations as partners, NGOs, and universities.

Resources needed: Finance, legal expertise, data for metrics, information for storytelling and outreach.



Social Impact Bond: Initiatives

- Currently no social impact bonds exist in fisheries, though models have been tested for funding improvements for other social issues e.g. recidivism.
- SSG Advisors is an international development and impact investment advisory firm that is developing investment models to promote sustainable fisheries in Africa and Asia, but those tend to be focused on marine protected areas.



Social Impact Bond: Next Steps

Social impact bonds have three criteria: (a) there must be proven causality between the initiative and the outcome, (b) there must be a measurable financial return, and (c) there must be a metric for success. For a social impact bond to be an option for funding an intervention in the groundfish fishery, research must be undertaken to determine the project that would meet those three criteria, while also being tenable given the nature of the fishery and its stakeholders. Possible initiatives to explore include electronic monitoring, new stock assessment models using fishery dependent data, and alternatives to boat buyback programs. Partners may include Federal Agencies, or State or local governments that would realize cost savings (e.g., from reduced unemployment, lower healthcare or insurance costs, or reduced fishery management costs) or increased tax revenue.



Closing Thoughts

To close the workshop, participants shared their thoughts, concerns, and hopes for the future:

- Several attendees committed to report the results of the workshop to their networks, others pledged to lobby for support of the ideas within their organizations. Many offered themselves as resources to assist with moving the ideas forward.
- One attendee promised to go back to his community with the encouragement that they haven't been forgotten, and that there were good ideas that people are working on that may bring them out of this dark winter. "When I came here I was feeling downcast about the fishery. I finally see a ray of hope."



More Closing Thoughts

- Some expressed concern about the degree to which the proposed ideas relied on the sector managers, who do not always play decision-making roles within the sectors.
- The group was assured that while NOAA is not the solution for every problem, people within the agency care about fishers and ecosystems.
- Several attendees expressed feelings of gratitude and inspiration.
- Future of Fish renewed its commitment as an embedded ally: “We will stand with you and we will keep being relentless for you. We will do what we can to move these ideas forward.”



Recommended Next Steps

Based on the workshop outcomes and follow-up research, Future of Fish recommends the following next steps be taken to advance the positive momentum built during the convening and to capitalize on work already underway:

- Create opportunities for formal conversations and coordination among organizations spearheading initiatives that relate to, could support, or might dovetail with one or more of the ideas proposed in the workshop. Consider where those connections could lead to catalyzing change, better coordination, or collaboration.
- Secure funding for researching ideas that need further development and due diligence before launching a proof-of-concept or pilot project.
- Maintain communication with stakeholders and other interested parties wanting to stay informed or potentially support workshop outcomes.



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