

Current Status of electronic logbooks in the North Pacific fisheries: November 2003

The following is an overview of the electronic data collection program for the catcher vessel trawl fleet in the North Pacific. It includes a brief history of the electronic logbook development, two projects in which the electronic logbook was involved and the lessons learned from those projects.

Brief history of Electronic LogBook (ELB) development

2000:

- OceanLogic receives private contract for data visualization project
 - GIS based data collection and interpretation project for harvest enhancement
- Electronic logbooks are developed as a need for data standardization arises
 - Several iterations of ELB's occur

2001

- Fishermen request that the ELB be compliant with NMFS data collection standards in order to avoid double entry of harvest data

2002

- OceanLogic starts working with NMFS: Sustainable Fisheries (for their specific data needs) and NMFS/OLE (in order to develop evidence-grade data collection standards)
- During 2001 and 2002 we enjoyed tremendous support from fishermen at WFC and NMFS
- Receive waivers for ELB to use as alternative to DFL (Daily Fishing Log, paper log)
- ELB Prototype in 2002 and expanded into the GOA

2003

- NMFS approves ELB
 - OceanLogic conducts training for Industry and Enforcement agencies
 - USCG
 - NMFS/OLE
 - The dynamics of "Acceptance" changes
 - In general, the change is positive giving our work a high degree of legitimacy within the fleet
 - However, to some who were very supportive of our work, the legitimacy brings about a deepening sense of "Big Brother"

Two NMFS Projects: (1) General ELB distribution for economic study - fifty stand-alone ELB licenses distributed to fishermen in the catcher vessel trawl fleet in the Bering Sea/Aleutian Islands fisheries and (2) Evaluation of Observer coverage in the Gulf of Alaska Rockfish fishery

Alaska Fisheries Science Center buys 50 Licenses:

- The AFSC was looking for an efficient way to collect economic data from the catcher vessel fleet
- The paper logbook contains enough raw data that when properly matched to a fish ticket and queried can yield valuable economic data. The ELB provides that access to the logbook data much faster and accurately than the paper DFL.
- AFSC and PSMFC purchase 50 licenses
 - We install ~ 35 (mostly in the BSAI)
 - ~ 80% use them regularly and continue to use them
 - ~ 30% send data to NMFS

NMFS/AKR initiates Gulf of Alaska Rockfish Project:

- AKR purchases ~25 ELB licenses and OceanLogic services to install and maintain software and provide training to ELB users in order to evaluate fleet fishing patterns in the GOA rockfish fishery
- We install ~25 copies
 - ~90% use them

Note worthy to both projects:

- Almost all vessels have to spend additional financial resources in order to use ELB
 - Biggest financial installation issue: GPS-to-computer hardware hookup. Some expenses included (from most common to least common):
 - Signal splitter
 - New COM ports
 - More memory
 - New GPS
 - New computer

Achievements and Challenges:

- Achievements...
 - Fishermen are using the ELB because they want to, they see value in it:
 - They are taking ownership of their data
 - They are collecting better data
 - For most skippers, it is easy to use (buttons & reports)
 - Electronic access to vessel harvest data
 - Catch database
 - Vessel management
 - Fleet management

- Fishing history with fish ticket augmentation
 - More efficient at-sea boardings
 - EFH (...and other Council issues)
 - Where fishermen fish
 - When they fish
 - How they fish
 - NMFS is using the ELB data
 - Timely information
 - Accurate catch information
 - Set & Haul positions and times
 - Effort & location
 - Est. Weights
 - Accurate ADF&G stat areas attribution
 - Percentage of time and catch in area
- Challenges...
 - Technical
 - Old computers
 - (Proposed solution: New computers or upgrades)
 - Overloading computer systems
 - (Proposed solution: New computers or upgrades)
 - Boat electricity infecting computer software
 - (Proposed solution: Automate computer software maintenance to daily schedule)
 - Data transfers from the vessel
 - (Proposed solution: Move away from Standard C)
 - Social
 - Computer literacy
 - (Proposed solution: Industry specific training programs)
 - Understanding the regulations
 - (Proposed solution: Better outreach)
 - Big Brother stigma
 - (Proposed solution: Better outreach)
 - At-Sea Enforcement boardings
 - (Proposed solution: Better training at the USGC/NPFTC in Kodiak)
 - Sending data to NMFS
 - This proved to be a bigger issue than we anticipated. We expected that fishermen would email their data to NMFS once they reached shore. In most cases that happened, when fishermen were comfortable sending in their data. Here it is important to note that many fishermen were not comfortable sending in data. These reasons included:
 - Fear of mistakes: This was the biggest reason. Fishermen, who were not comfortable using a computer, knew that

NMFS was really going to look at their data for the first time on a consistent and regular basis. Data submission increased as fishermen's comfort levels grew.

- Not having access to email in some ports prevented fishermen from sending in catch data.
- In cases where data was to be dropped off for pick-up, the pick-up person did not always show up.

*points
during public
comment.*

• **Lessons Learned:**

- ELB's collect better data than paper logbooks.
- Management personnel have faster access to decision quality data with ELB's.
- Fishermen will respond positively to electronic data collection programs when they are co-owners and users of the data.
- Fishermen must trust that the data they collect will be used to benefit their fishery and assist them in their livelihoods
- Data collection projects require initial investment of time and financial resources due to technical and social challenges that come with implementing an electronic data collection program. However, once rolling, they produce seamless, inexpensive, accurate data, in real and near-real time.
 - Our experience is similar with other projects around the country
- Implementing an electronic data collection program is as much social science as it is computer science

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