

CFRF workshop tackles challenge of improving assessment process

SOUTH KINGSTON, RI – If there was one thing everyone agreed on during a research workshop held this winter about stock assessments, it was that assessments are not benefiting from industry-generated data and science quickly enough.

The Commercial Fisheries Research Foundation (CFRF) showcased some of its collaborative research projects on Jan. 24 during an afternoon meeting focused on survey methods. The goal was to highlight survey type projects underway and to open up dialogue among fishermen, scientists, and regulators to find ways to bring critically needed information into the stock assessment process in a more timely manner.

“No management strategy will work without good stock assessments,” said CFRF Executive Director Peg Parker. “There is a real need for increased temporal-spatial coverage in the assessments.”

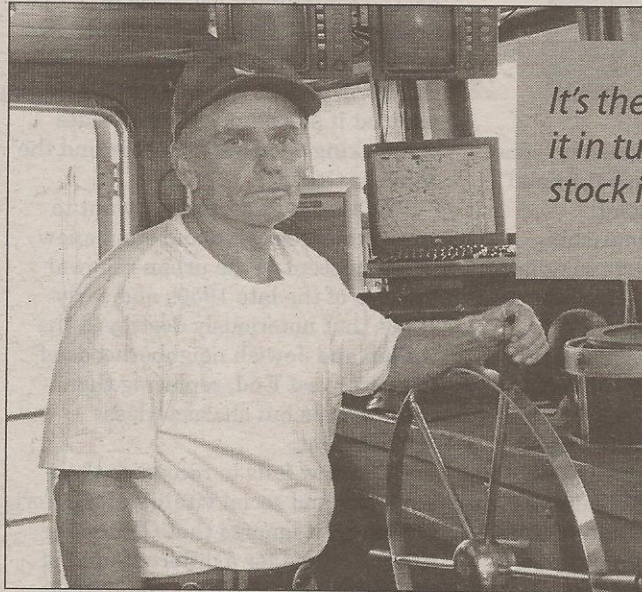
Steve Cadrin of the University of Massachusetts Dartmouth School for Marine Science and Technology (SMAST) agreed.

“We need these exploratory surveys to determine if there are some things the surveys are programmatically missing,” he said.

During the workshop, a panel of representatives from the fishing industry, research organizations, and state and federal regulatory agencies exchanged and fielded questions.

Top on the list were why it takes up to three years to get comprehensive stock assessments completed and why fishermen’s input often appears to be ignored.

Fisherman Jimmy Ruhle pointed to scup stock assessments as a prime example of how a lag in the



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—Jimmy Ruhle

coordinate the complex collaborative survey project, and Ruhle and his crew aboard the 90' Wanchese, NC-based Darana R have participated since the program began.

This partnership works well, according to Ruhle. He said he

incorporation of industry-generated data into assessments can cause problems all around.

“There was a NEAMAP survey on scup that indicated scup were declining,” he said. “But the Mid-Atlantic Fishery Management Council increased the quota. It was three to five years behind.”

As a result of this timing problem, Ruhle continued, fishermen can end up fishing harder on species that need to be left alone and can be prevented from harvesting those that are plentiful.

The Atlantic States Marine Fisheries Commission began NEAMAP, which stands for Northeast Area Monitoring and Assessment Program, in 2006 to help standardize procedures and improve data collection in inshore waters between Cape Hatteras and Cape Cod.

Researchers at the Virginia Institute of Marine Science (VIMS)

particularly appreciated the ability to have input on how tows were conducted during VIMS fish habitat surveys in Block Island and Rhode Island Sounds last year.

“If I’ve got an idea, like on the Block Island/Rhode Island trawls, that production drops off 50% with easterly winds at 15-to-18 mph, within two minutes, they put it into the protocol that they’re not going to tow (that area) in over 15-to-18-mph easterly winds,” Ruhle said.

Fishermen’s observations, such as those about the easterly wind and tides in the Great South Channel, need to be incorporated into surveys, and that’s best done by bringing together the scientific modelers, those who conduct the surveys, and fishermen, said Cadrin.

“We need to use brainstorming to have agreement on what the problems in assessment models are, and then choose the solution,” he said.

The fishermen are looking for solutions. They're not saying 'tear it down' or 'make it go away.' They're all problem-solvers.

—David Spencer

Lobster data needs

David Spencer, president of the Atlantic Offshore Lobstermen's Association and president of the CFRF board of directors, said a stumbling block for the offshore lobster fishery in federal waters is a lack of adequate data.

"I'd love to have their problems," Spencer said wryly of NEAMAP participants. "At least they have data for stock assessments."

The recent surveys that documented a sobering lack of young-of-year lobsters in Southern New England (see CFN March 2012) were conducted in state waters, but not federal waters.

If climate change is the culprit, and there are migratory or other adaptive changes occurring in response to it, surveys and sampling methods need to change, Spencer said.

Offshore lobstermen are bringing up young of the year in their traps, and inshore surveys should be expanded to extend into federal waters to account for that, he said.

"Status quo monitoring and surveys are not reflective of the current stock," Spencer said in a follow-up e-mail.

However, federal budget cuts are beginning to affect hiring within government agencies. For example, the National Marine Fisheries Service's (NMFS) Northeast Fisheries Science Center in Woods Hole, MA has not been able to fill the lobster biologist position left vacant by last year's retirement of long-time researcher Joe Idoine. Larry Jacobson, leader of the center's invertebrate group, is currently handling lobster tasks, according to center spokesman Teri Frady.

Science center changes

Paul Rago, chief of the science center's Population Dynamics Branch, agreed that assessment science is facing new challenges, as seen most notably in the recent Gulf of Maine cod assessment (see CFN March 2012). Part of the

reason, he said, involves changes in the migration patterns of fish stocks.

In response to the need for quicker stock assessment turnarounds, Rago noted that, over the past five years, the center has doubled the average number of assessments it conducts each year. Recently completed groundfish

assessments also were accomplished through a new, streamlined approach.

And, the science center has changed the way it does trawl surveys. For example, the research vessel Henry B. Bigelow uses a net designed with input from fishermen, including Ruhle.

But, Rago said, research surveys can't always mimic the commercial fishery because their goal is to collect other information used to measure abundance. That includes trying to capture smaller-sized fish to see what is coming into the population and gauge how well a stock is doing. Commercial vessels avoid smaller sizes because of minimum size restrictions and because catching them adds to sorting time on deck.

When it comes to talking about information generated by fishermen, Rago said he dislikes the term "anecdotal" because he feels it does a disservice to the fishermen who share their insights and experiences with researchers.

"There can be a perception that the

scientist is being dismissive, as if this data's not real," he said.

Instead, Rago views what fishermen tell him as isolated pieces of information that are part of a broader picture.

"When you have the whole picture, you can see how each piece fits together," he said.

"We don't have a group to respond quickly to emerging issues," Rago said. "That's where CFRF's collaborative studies fit in."



Steven Kennedy photos

The deck of Jimmy Ruhle's Darana R set up for a NEAMAP survey trip.

that they aren't confident in the data and decline to make a firm recommendation.

Then the council has to meet to set annual catch limit recommendations, which NMFS must then review and put out for

public comment.

If a proposed rule signifies a major change in a fishery management plan, it can require a longer Environmental Impact Statement (EIS) process. And if it triggers another federal law, such as the Marine Mammal Protection Act or the Endangered Species Act, an even more complicated EIS process is needed and additional studies may be required.

It all adds up.

A lengthy process

So why does it take three years to get from data collection to comprehensive assessment and finally to regulatory action?

Rago explained that part of the problem is how long it takes to collect the data. Vessel trip reports don't come in for up to three months after the fish are caught. State reports may take even longer.

Another component of the process includes analyzing age data from otoliths (ear bones) and scales, and that takes time, Rago said, especially when there are tens of thousands of samples to clean, set in forms, slice, and read.

The process of modeling the data alone can take three to four months, he continued.

The assessment process includes meetings with lead scientists, representatives from state agencies and commercial fisheries groups, and council members to discuss and agree upon methodology, biological reference points, and more. The center has 25 scientists and technicians to analyze data and compile assessments for more than 60 stocks.

That's followed by the preparation of a report for an external peer review by the Center for Independent Experts, which has five weeks to go over the analysis and report to the regional fishery management councils' Scientific and Statistical Committees (SSC).

The SSCs are responsible for recommending basically how much fish is acceptable to remove from the biomass for the next one to three years. Or not. SSC members may conclude

Possible solutions

Rago said one of the biggest issues for scientists is the hours spent in meetings.

"Post-assessment (review) chews up a lot of time," he said. But, he added that everyone recognizes the science center must be responsive to industry and the public.

One thing many agreed might help speed up the process would be shifting from paper to electronic VTRs. Dealers already are filing electronically.

While there are some concerns about transitioning to electronic reporting, electronic VTRs would allow trip data to be entered into databases much more quickly than the current system of entering fishermen's information manually from paper reports.

Spencer added that the industry wants

to take a proactive stance by running surveys itself.

"The fishermen are looking for solutions," he said. "They're not saying 'tear it down' or 'make it go away.' They're all problem-solvers."

Jimmy Ruhle remained focused on the importance of using up-to-date data.

"It's the timeliness," he said. "Get it in tune with what the stock is doing."

In a follow-up interview, Northeast Fisheries Science Center Acting Science and Research Director Bill Karp said that, whatever happens in the future, better data collection and stock assessments will only be accomplished through collaborative processes.

"We're all in this together," Karp said. "We have to figure out better ways to work together."

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—Bill Karp

Joyce Rowley