

Talking With: Steve Murawski
The Ffiles
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In 2004, Steve Murawski left his job as long-time chief the fish population dynamics group at the NEFSC to take on the leadership role at NMFS Office of Science and Technology. Within a very short time, he moved again, to his current position as the Agency's Director of Scientific Programs and Chief Science Advisor for NOAA Fisheries, a position formerly held by NEFSC alum Michael Sissenwine.

Indeed, Murawski is the third in a line of top fishery scientists from the NEFSC who have been tapped in recent years to serve leadership roles at the Agency's headquarters. He was recently followed to Silver Spring by John Boreman, who left the NEFSC director's chair this month to assume leadership of the NMFS Office of Science and Technology.

What is it about the NEFSC that prepares people to be agency leaders? That's one of the questions we put to Murawski in this interview, when we caught up with him recently in Woods Hole.

The Ffiles: We know you were recently at the J.J. Howard Laboratory at Sandy Hook, where you started with NOAA Fisheries Service all those many years ago. How long since you'd been there?

Murawski: I would say at least 10 years.

The Ffiles: Did you get any "what a long strange trip it's been" impressions?

Murawski: I did. Number one, I could see that the National Park Service has really taken over more active management and has done a good job of making the place more of a recreational experience. The other thing that really struck me was how upscale the surrounding communities have become. When I was there in '76 it was more "seaside schlock." It was very nostalgic for me and great to see our facility reborn and in good hands with Tom Noji.

The Ffiles: Was there any thing about working at the NEFSC, or in the Northeast in particular, that prepared you for the leap to HQ?

Murawski: I do think that there are two things.

First -- for all the time that I was at the NEFSC, it operated on an ecosystem approach to understanding ocean life. As you know, one of my new duties is as the lead of the Ecosystem Goal Team. We say "ecosystems approach" a lot these days, and I am not always sure that people know what it means. I can always rely on my experience here for some practical examples that help me show what it means. Coming in with that background prepared me to be involved with the Ecosystem Goal Team, and to set a pace there that includes, but looks beyond, just fish and fishing issues. At the NEFSC we have so many programs that have been monitoring ecosystem components for the long-term that the Center is in a good position, now that there's renewed interest in things we've been doing for more than 30 years.

That said, here's the second thing: with my roots here I have to be careful about appearing to be biased toward the Northeast Center, and equally careful not to let that caution work to the detriment of the Northeast.

The Ffiles: How different is it at Headquarters from working in the field?

Murawski: It's very different! The variety as well as volume of things I am involved in on a day-to-day basis is so much greater, matters involving everything from the Ecosystem Goal Team, which comprises four NOAA line offices, to all the NMFS Science Centers. I can be on the Florida Keys one minute and on to something in Hawaii the next. Another big change has been getting involved in our government's approach to oceans, mostly through the Committee on Ocean Policy. That's a White House level committee with participation from 23 ocean-related federal agencies. I'm on the Joint Subcommittee on

Ocean Science and Technology and one of the authors working on its 10-year Ocean Research Priority Plan, which could be very important in the long run for NOAA ecosystem science.

The Ffiles: We here at The Ffiles like to think of the relationship between HQ and the field as symbiotic, but sometimes it feels more parasitic. There's a laundry list of last minute calls for hard-to-collate data, short deadlines for proposals, funding that seems to materialize out of nowhere, and so on. What can you tell us about what HQ deals with that might help us understand these seeming headaches?

Murawski: People think that somehow all this stuff starts with NMFS headquarters. A lot of it starts in NOAA or at Commerce or in the Congress. When they call up with a question, they want an answer yesterday, and won't take no for our answer. So we either stop the inquiry at HQ and do our best to respond, or we try to find somebody who knows more about whatever it is, and can work in the time frame we have. When people see these impossible deadlines and think HQ has been sitting on it, most of the time that is not the case.

One of the challenges at the HQ level is to make sure that people in the field are clued in, but not overwhelmed. There are not that many people in HQ who have come from the field. So, to understand the consequences of a particular issue from the field perspective we have to go out to the field to get input. We all have too many deadlines, so I think at HQ we are trying to balance tasking so that people aren't overwhelmed, but have their perspectives accounted for in a response.

The Ffiles: The NOAA Organic Act has made some progress in Congress this year. If it passes, is that the end of line offices?

Murawski: I don't think so. I think the Admiral is trying to make sure that traditional line offices work better together. That's also the fundamental concept behind the new NOAA planning and budget development system, PPBES: to break down barriers that may inhibit more creative, holistic thinking.

NMFS almost completely falls under the PPBES Ecosystem Goal Team. But there are three other line offices at play in that team as well -- NOS, OAR, and a bit of NESDIS. Those agencies have always cooperated to some extent, but this is an attempt to make us all think of new ways of doing business that start with the capabilities of each of the four groups. I would say this cycle of 2009-2013 budget planning will have more of this crosscutting than has been evident in the past. Our immediate problem is the significant budget pressure that all the line offices have. There is really no extra money that would make this new approach work unless we are willing to invest core budget funds.

The Ffiles: PPBES has not been particularly good for NOAA Fisheries Service so far, at least as when it comes to funding. Do you think it will get better?

Murawski: I don't think PPBES has been bad for Fish. The number of projects that have been created that would not have been created without PPBES are both new and small in number. So it's hard to point to obvious success from that small group. The integrated mercury initiative put together last year has been a success. This year, we are trying to do five major projects. One point I'd like to make clear is that this is not about what's good or bad for Fish or any other line office, but what's good for NOAA. Very few people have thought in those terms in the line offices before.

The whole point is to refocus on NOAA's core missions, and whether we can do better by aligning the efforts of line offices. I think the ecosystems approach to managing oceans is a good example. Many different NOAA agencies touch that theme. But the only way we can make it operational is to work through something like goal teams, which provide a systematic way of bringing line office capabilities to bear on it; and PPBES which is a systematic way of getting the required funding.

I admit, it would be easier if we were in a budget growth cycle.

The Ffiles: But isn't one of the selling points of PPBES -- that it will make us a more responsive and accountable and therefore, fundable, agency?

Murawski: Yes. PPBES can help us make the case of why, for example, we need integrated ocean ecosystem management, how much it will cost, why it's worth it to America, and why NOAA is the agency to tackle it. If we are good at pulling that kind of package together, I think we can be more successful in attracting Congressional support.

The Ffiles: From your now-higher perch, what can you tell us about the state of the scientific effort across NMFS?

Murawski: I think one of the big successes of the last few years has been the stock assessment improvement plan. It has enjoyed steady growth because it is very defined, with measurable outcomes, and it's incremental. With more investment, there's been more accomplishment—and that's a tribute to the people who pulled that original plan together.

We've also been very successful with the NOAA ship replacement plan for many of the same reasons. We hope we can continue that, building not just the first four vessels planned, but also finishing the fleet replacement. We have also seen the marine mammal stock assessment plan develop and start to mature, and made in-roads on a habitat assessment plan as well. All of these organized development plans have helped pull pieces of NMFS together in ways that make sense to government managers in both a budget and performance way.

Some of our challenges occur because the mission is expanding fast, but we simply don't have the resources to keep up. The effect is that we assign more and more people to more and more tasks with less and less support, and that creates burn-out.

The Ffiles: Where does the agency need to invest for the future?

Murawski: I do think that one of the things we have been trying to emphasize in the goal team is to mobilize NOAA's capabilities around large marine ecosystems. For example, we need to look toward building a system that allows individual analysts anywhere to access all the data. Getting all of NOAA's data available online on that scale is where we are headed as an agency. From there, we are probably going to move to working with other agencies like the Department of Interior and EPA with the ultimate goal of providing integrated ecosystem assessments.

The Ffiles: What's the next big thing in fisheries science?

Murawski: We are going to get more real-time data about fish and fisheries and an advanced capability to link it with real-time oceanographic and climate data -- they call that "marine domain awareness," a term that came from the military -- but nonetheless it has a lot of applicability for us. Also, I think remote sensing, imaging, and microtechnologies are going to allow us to track the location of marine animals in real time. For example, we have those 300 or so Northern right whales out there that we are trying to keep out of collisions and entanglements. Just over the horizon we have technologies that will allow us to know where they are, which really increases the effectiveness of what we do to protect them.

The Ffiles: Is there a big threat?

Murawski: We are starting to see the ecological affects of climate change. That's a high threat for marine life productivity and distribution. We will be called on to demonstrate what changes are occurring because of our management efforts and which are because of climatological conditions. In order to understand what's going on with ocean life, we will have to put all of NOAA's capabilities to work on it. I think you will see out of this year's PPBES a more concerted effort to link climate and ecosystems together.

The Ffiles: At The Ffiles, we're hearing more hallway optimism about new focus on environmental issues at the national level. Do you sense that the worm is turning?

Murawski: I see we are getting past the issues on climate change. There's a general recognition of the situation. We are moving away from talking about "who is to blame?" and on to "what do we do about it?" Inevitably, that will lead to demands for solutions: ways of living with it, and mitigating or reversing it, and that's a place where NOAA's capabilities can be crucial.

The Pew Oceans Commission and the U.S. Commission on Ocean Policy conducted their work, issued their reports, and then I think people got frustrated because there wasn't an immediate response and no big influx of money. But remember, when the Stratton Commission got started, it took it some time to get traction as well. The two commissions have stuck with it, joined forces, and are now issuing frequent reports and updates on how they think the national response is going, keeping the issue in the public eye. There's a new Council on Environmental Quality structure that breaks out ocean policy. There's a high emphasis this year on getting the Magnuson Act reauthorized, and a major new U.S. marine sanctuary was just created off Hawaii. So I think there is a lot of new, serious interest in environment in general, and oceans in particular. If the overall federal budget picture gets brighter, then I think we will see more investment in ocean-related issues and agencies.

The Ffiles: One Magnuson-Stevens reauthorization question. We still don't know if the act will be reauthorized this year or what exactly it will contain. However, all of the versions seem to retain a formalized approach to ending overfishing and rebuilding depleted stocks within specified time frames. Do you see anything in the mix right now that might help break the cycle of recrimination that has been such a feature of rebuilding efforts here in the NE, largely over whether rebuilding and sustainable fishing are occurring fast enough?

Murawski: The agency has been putting emphasis on eliminating overfishing by a time certain, early in a rebuilding plan, as opposed to emphasizing rebuilding within a specified time frame. I think that will help. I hope we can be successful in getting this concept into the Magnuson Act.

The Ffiles: Are you concerned at all about the number of retirements of very senior NEFSC scientists who have not been backed up over the years by recruiting bench level people to learn from them? And about maintaining infrastructure we already have to make it useful in the coming decades?

Murawski: It is harder and harder to support all of our programs as we have in the past because the budget isn't growing enough. For us to maintain, let alone take on new tasks, we need to be in an active budget growth scenario. To compensate, we have prioritized our use of resources around specific mandates. Many of the things that science centers have done in the past are not hardwired to these mandates.

What gives me some hope is that there is the increased understanding that we need a broader ecosystems approach to managing ocean use and resources. If that persists, then many of the long-term programs at the NEFSC are about to come full circle—these data and the people who understand them are going to be increasingly important.

The capabilities we have for interpreting and measuring change will also greatly improve through technology in the coming years, and we have to be ready to take advantage of those improvements. The satellite ocean color imager intended as a replacement for SeaWiFS in the next decade, for example, will increase by more than a factor of 10 the resolution we can achieve for coastal ocean color. The new NOAA fisheries survey research vessels are much more capable than our current ships, explicitly designed to do many kinds of data gathering at once. I really see NOAA setting a foundation right now, for a true ecosystem-based approach to management. With all the experience and information in the Northeast, this center is well positioned to influence how, and how well, that happens.

The Ffiles: Anything you'd like the peeps to hear?

Murawski: It's fun to hide out here in the Northeast when I get the chance. There's always a buzz about science going on at the NEFSC -- that's what we should be focusing on, the cool things about science. I am impressed by the number of young people -- it's the summer of course, but still it's good to see some

new blood coming into ocean science. I was able to sit in briefly with the EMAX group, which is a good cross-section of the Center, looking at the next generation of trophic modeling. They are on the right track -- this is the kind of collaborative approach that we really need to foster.

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