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Pooley, Sam ~ Oral History Interview

Edward Glazier

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Voices from the Fisheries
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Woods Hole, MA 02543

Interview with Sam Pooley by Edward Glazier

Summary Sheet and Transcript

Interviewee

Pooley, Sam

Interviewer

Glazier, Edward

Date

July 29, 2016

Place

Oahu, Hawaii

ID Number

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Biographical Note:

Dr. Samuel G. Pooley earned his Ph.D. in Political Science from the University of Hawaii with a dissertation on macroeconomic decision-making, and a Masters in Economics from the University of Birmingham in England. He began working in 1981 at what was then the Southwest Fisheries Science Center's Honolulu Laboratory (HL), later the Pacific Island Fisheries Science Center. During his career with NMFS, he served in many roles including acting Regional Administrator, acting chief scientists, and finally Pacific Islands Fisheries Science Center Director for 10 years. Dr. Pooley retired in 2014 and currently lives on Oahu, Hawaii after decades of fisheries research in the Pacific Islands region.

Scope and Content note

Interview contains discussions of: National Marine Fisheries Service [NMFS], Pelagic Fisheries Research Program [PFRP], development of the tuna fishery, aku boat, longline, hand line, and small boat fisheries in Hawaii, the HL faculty fellowship program, and Hawaii's ethnic and economic diversity.

Dr. Pooley provides a detailed description of his work as an economist in Hawaii fisheries research and management.

Indexed Names:

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Clarke, Ray
Curtis, Rita
Hamilton, Marsha
Ito, Russell
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Kobayashi, Don
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Transcript

Edward Glazier (EG): This interview is being conducted as part of the Voices from the Science Center Project funded by the Northeast Fisheries Science Center. It is also part of the Voices from the Fisheries Project that is supported by the NMFS Office of Science and Technology. I'm Edward Glazier and this afternoon I'm speaking with Dr. Sam Pooley at his home on the island of Oahu in Hawaii. It's July 29, 2016. Dr. Pooley retired from the Pacific Island Fisheries Science Center (PIFSC) after being the Director of PIFSC for some ten years.

Sam Pooley (SP): Hey, Ed, so, I could begin my biography back in 1956 when I caught one of my only two fish, but I won't go back that far. I came to the University of Hawaii in 1970 to do international trade and economic development work and, which, in one sense informs where I

was going, and it's something I think that is different from most of the NMFS economists who came from a natural resources background. In fact, I was reading an article in the *New York Times* a couple weeks ago, about shave ice in Hawaii. And, the reviews said that "Miss Hobart's academic work had left in a conflicted relationship with shave ice . . . 'If I look at through one side of the prism, I see the tourist economy and militarization of Hawaii,' she said. 'But if I look at the other side, I'm a kid in Hawaii walking from the beach to get my shave ice, which is this beautiful delicious thing.'" And in many ways, that sort of sums up my career, or my way of looking at the world . That is, you've got these two [different] things, and about the uniqueness of Hawaii.

Anyway, I came back to Hawaii and got a job initially with the State of Hawaii in their Economic Development and Statistics Office. And part of that job involved evaluating loans to fishing vessels, both large and small. And that gave me a certain amount of visibility, and I did a little bit of work for the State on their Fishery Development Plan, I wrote the economic part of their first Fishery Development Plan, and then worked with the [Western Pacific Regional] Fishing Management Council on their first, Lobster Fishery Management Plan.

Somewhere along the way Richard Shomura who was the Director of the Honolulu Lab [of the National Marine Fisheries Service], just minutes down the street here, stole me away as the Lab's second or third economist, I'm not quite sure how to count it. The economists within the agency were sort of an original group that had been there for God knows how long, who did sort of the national economic-statistics side of business, and they were almost all located in [NMFS] headquarters as far as I know. But then with the passage of the Magnuson Act [1976], economists were salted around the research centers and so one was hired in Honolulu, which was then part of the Southwest Fisheries Science Center in La Jolla. And there was guy named Mike Adams who did that for a couple years, and then for personal reasons left fisheries, moved to Southern California, and I think actually got involved in energy economics. Which is sort of a theme: that there are people who are fisheries, or natural resource economists (I count energy as quite [close to] natural resource economics) – and then there were people who are economists of other stripes, and I was one of the other stripes type.

I'd done this fishery development work, and so that's where I thought I was going to continue to do that because that's something that the Lab had done, and although I was aware of the Magnuson Act, having worked on the [Lobster] FMP [fisheries management plan], I didn't really think that was the main thing that we were going to be doing. I met the Director of Southwest Science Center shortly after I got hired and said "hey, it'd be great looking at doing fisheries development stuff here in the central Pacific" and he said "wash that word out of your mouth, we only do fisheries management now." I was like, "Okay, I know nothing about fisheries management" even though I had worked on the FMP, all I did was look at the economics of the

industry. And so, everything I know about resource economics, basically, I learned on the job – with the help of various people.

But, that was how I got started. I knew the industry well, and before that I'd been involved in environmental issues. Here I was more involved with community issues. So, I thought I had a sense of both sides. As my career developed, I suspect other people wouldn't say it was quite so even-handed, but ultimately, began to work with other folks on bioeconomic kind of assessments. Worked actually on a lobster stock assessment with two other people at the Lab, one of who has ultimately got his Master's in Marine Affairs, Ray Clarke, from University of Washington, and a really smart young guy, Stacy Yoshimoto, who went on to try to get a Ph.D. in mathematics at Arizona. So, just even that little bit of dealing with the uncertainties of stock assessment . . . so we got this really nice little stock assessment and it was different from the Center's stock assessment, and both of them collapsed the next year, for reasons that remain unclear.

EG: The stocks crashed?

SP: The stocks crashed, yeah, and the assessment failed, too. At least ours did, though I don't remember how Jeff Polovina's assessment turned out. But certainly ours didn't work well after that. So, that's sort of how it got started. I don't know, we could develop lots of other themes out of that, but that's sort of where I got involved. If you want to put some dates on it, I got hired in December 1981 and retired in December 2014, roughly speaking. I might have retired before December, but anyway, it was at the end of 2014 [October 2014].

EG: Right . . . How did . . . the Lab was situated right next to the campus there. And during my years at UH [University of Hawaii] it seemed like the Lab was in a neat situation in terms of proximity to people and a brain trust really. Did you take some advantage of that? And I know that you had developed relationships with various professors as colleagues. I just thought that was a really neat setting. Could you elaborate on that a little?

SP: Yeah, I think we really felt that our connection at the university was key even though UH had, and I think still has, very limited fisheries expertise. They don't do stock assessment kind of work, a lot of their stuff is ecosystem related, which might be useful, or basic biology – all of which are good things, and on economics, the Econ Department had one person, Jim Roumasset, who did natural resource economics but he tended to oil and gas and that kind of stuff. But as time developed, PingSun Leung of the College of Tropical Agriculture did aquaculture economics. So, we built a relationship with him and graduate students to use some of the techniques that he was using in fisheries. In fact, this morning I just coincidentally, was meeting with PingSun and one of his graduate students looking at a mathematical programming model of the longline fleet and how it responds. So that was a pretty long, that's been a pretty long

relationship, maybe 20 years. One of his former graduate students, Minling Pan is an economist at the Center, and there's some others, actually Michelle Chan as well. So, there was that link.

The proximity that made it possible for me to get my PhD at UH, something I hadn't planned to do, but the Director of the Lab at the time [Richard Shomura], said "if you want to do anything other than be an entry level economist, you need to have a Ph.D." And I said "Well, I'm not really interested in getting a Ph.D. in economics anymore." At that time, the econ department wasn't particularly welcoming, let me just put it that way, to what my interests were. I mean they might have been [welcoming] personally – I knew a lot of them personally, but they...weren't doing the kind of stuff I'd be interested in. So, I got a Ph.D. in the political science department, which was fine with [Richard] Shomura, who was the director of the Lab. I think a lot of it had to do with the discipline of getting [doing?] a dissertation, as you probably know, getting your degree in sociology there, what it takes to do that. He gave me the latitude to do it. And so that was a good thing, and we did begin to have a few relationships with people in other departments, sociology, geography, and so that was good. It wasn't as much as one have might have hoped. It wasn't like University of Washington where you've got the School of Marine Affairs. On the other hand, the University of Washington and Sand Point [location of the Alaska fisheries science center], you got to drive between them, you got to figure out where to park and so forth.

And so being on campus had lots of sort of intellectual curiosity kind of advantages. With the help of the fisheries management council particularly, and funded by the congressional delegation, in the mid-90s we created a program called the Pelagic Fisheries Research Program, PFRP in conjunction with the university. So that helped fund a lot of project-based work. Not just in economics, but in biology, oceanography, and some of the other natural sciences. And I think that was, we might have been able to that if we'd been at Ford Island, but much less of that personal interaction.

EG: Yeah, logistics are key.

SP: Yeah, and I think that's one the real dilemmas about the whole Ford Island situation for the Center. But it's the same problem UH has with its marine biology program being on Coconut Island. Um, you know whenever you got a separation like that, as digital as the world is, it's not the same.

EG: Yes, right.

SP: Anyway. So that was the advantage and we were given the latitude to get degrees, go to lectures, seminars, pick up graduate students. Some of our early graduate students in our economics program were actually computer programmers, and, as opposed to the stock

assessment programmers, who tended to do the programming themselves, we picked dedicated programmers to get our data in shape for analysis. That saved us a lot of time and energy.

EG: Right. Um, tuna fish research dominated a lot of what the Lab did, given the nature of the pelagic resources here. But early on, I think most of the fishing was aku fishing. And then eventually the longline fleet came to the fore, right. I was hoping maybe you could talk a little about the evolution of the fisheries at least during your tenure at the Lab and beyond.

SP: Sure, I mean, when I first got involved in fisheries, there were basically three, maybe four major components. There was the small boat fisheries for bottomfish, reef fish and pelagics: mahimahi, yellowfin tuna, and so forth. But quite different kind of gears and so forth, but still small boats operating out of Laupahoehoe on the Big Island, or you know, off Molokai or someplace like that. And at that time that was a pretty significant part of the seafood market. The aku boat fleet was the largest by far. It was a pole and line sampan fleet, maybe 15 vessels, I'm guessing, by the time I got interested in fisheries. A little hard to know – I can't remember the history that well. But it had been shut down during World War II, because most, if not all, of the owners and operators were either Japanese-Americans or Okinawans. A lot of the captains were actually foreign nationals, here under visas. Subsequently some of them, you know, you begin to have Korean nationals come into the fleet that way as well.

So you had the aku boat fleet, it sold a significant portion, probably three-quarters of its catch at the cannery, Bumblebee Tuna [Hawaiian Tuna Packers], and the rest of it went into a fresh market. Interestingly enough, the split between the two was based on economic research by Linda Lucas who was a graduate student [at the Lab] before I got there. Her dissertation was on the aku boat fleet and its relationship to the fresh market. And then there was a small sampan longline fleet [known as flag line at that time], using really heavy rope gear. I remember before I was involved in fisheries, I'd be at Diamond Head or off Sandy Beach or Makapu'u and you could literally see the flag line boat operating from shore. They operated that close. I knew basically nothing about them at that point.

Then, just before I got involved, or just as I got involved, boats, larger mainland type boats, started coming here and going up to the Northwestern Hawaiian Islands. There'd been people who'd gone up there before, but not in a systematic way in recent times. And so, when I was doing the lobster FMP with the Council, we were trying to convince people on the mainland about something about it. I don't remember. And the head of fishery regulation for the agency [NMFS Sustainable Fisheries], kept talking about lobster boats like they were New England lobster boats which are the size of this couch. And they had a picture of a trawler on the wall there and I said, "no they look more like that trawler there," because the largest boat in the fleet at the time was 110'. Too big to make money, but nonetheless it gave part of the story. And, of course they were operating, you know, the Northwestern Hawaiian Islands are 1,000 miles long

and so they were operating a long way from Honolulu, even if they were operating on the topographical edge of the Islands.

EG: Right.

SP: And so, for reasons that are debatable, the aku boat fleet sort of dissolved, and people started trying out more modern longline techniques and so forth. And maybe this involved people coming from the mainland, or not.

EG: Well, and the cannery dissolved...

SP: And the cannery did close in 1984.

EG: '84? Uh-huh, okay.

SP: Roughly speaking. Because I organized a workshop on what happens after the cannery. They were looking at still keeping the aku boat fleet alive and using specialty packs [of aku/skipjack tuna] of various varieties, but that didn't develop because it wasn't just the cannery that caused the closure of the aku boat fleet. The aku boat fleet was heavily labor intensive, subject to gluts, they had problems with bait. The purse seine fishery in the South Pacific was probably already at that point beginning to have an impact on the local skipjack fleet, even though for 20 years thereafter the stock assessment people said "no, no, fishing isn't affecting the aku or skipjack." And now they're like, "maybe there was range contraction?" . . . And it's like, maybe there was because you know, when I got involved in fisheries, skipjack was, big skipjack, were still sold. They were caught trolling, caught on longlines and they were caught by the aku boats. Now they aren't caught by much of anything.

EG: Right, I don't think, I don't recall seeing any big skipjack.

SP: Right, and then they're not as an attractive a product as bigeye or yellowfin, but they're still, a lot of people still like them or used to like them. So, a lot of people still like aku poke better than ahi poke and so forth. To say not the least of . it was cheaper. So, the longline fleet developed and once people got away from the heavy rope gear and started using monofilament, it became less labor intensive. People began to use various remote sensing techniques, satellites and GPS, to be able to fish better, and you had, as people began to have success you have the influx of various folks. You had some of the swordfish boats from the East Coast came all the way over here and these were bigger, fancier boats, in general than Hawaii. I remember one of them saying to me, "Well we fished out New England, Nova Scotia, we fished out the Caribbean, now we'll fish out Hawaii." And they went on their first trip and they discovered the swell and the Pacific was a bigger pond, and they came back with practically nothing, whereas the smaller boats were

doing just fine. Ultimately the big boats learned how to fish. These guys were not stupid; it just took them a while to adjust. Whether they fished them out or not is another question. The swordfish fishery seems to be, you know, continues to be successful.

There were Vietnamese-American fishermen that were pushed out of the Gulf of Mexico, at least that's the way we looked at it, came here, and they came in groups and so forth. And that led to some of the first real pelagic fishery management issues – conflicts between those boats fishing near shore and the troll fleet. And so, ultimately, they ended up with this sort of variable 25/50-mile closures to separate the longline and the [small boat] troll fleet. On the one hand, you could say that was successful, because there wasn't much direct gear conflict. On the other hand, small boat fisherman had never really been happy with the idea of a longline fleet, intercepting "their" fish [from their perspective], even though the longline fleet primarily targets bigeye and the troll fleet primarily targets yellowfin. And so there were some differences there as well.

EG: That's very interesting though, there were spatial limitations that probably hadn't occurred or been established in the region.

SP: There was an informal agreement between the longline sampan [flagline] fleet and the trollers, about how the longliners would set their gear and how the trollers would operate so that they didn't have conflict. And you know, it's like a lot of common property, common use fisheries, small enough operations, people knew each other, they could work it out. And then people come in who aren't part of the clique or the club, and don't know how to communicate with them as well, do what they did where ever they come from, and it's, yeah it's an old story, not only in Hawaii, but lots of places of outsiders coming in, for better or worse, figuring out how they're going to do whatever they want to do.

EG: Right, Right, Would you, that's interesting. I observed a little bit of that with the Vietnamese fleet [in the mid-1990s]; I was working with the small boat fleet at the time. And you know the dynamics there were tricky at times, but it seems that ultimately in Hawaii and elsewhere, there may be a dominant culture that people adapt to, so it's not like things are going the other way.

SP: No, I think, yeah, there's still significant ethnic difference within the longline fleet for example. And between the longline fleet and trollers and hand liners, and between the commercial side and the charter boat, and so forth. But in general, people seem to have worked out most of the fishery interaction issues. What they haven't worked out, in the nearshore area, are some of the protective species issues having to do with dolphins and turtles, mostly with dolphins, and false killer whales and so forth. But that's something that I wasn't really involved with as an economist. . . We did a fair amount of work on the economics of small boat fleets, starting from the very beginning of my tenure at the Honolulu Lab. And then people continued to

do that but linking that up in a regulatory sense hasn't really gone anywhere. Maybe there wasn't any regulation that was required to be done. One of my colleagues said the best thing about the recreational fishery is that they don't catch very many fish. And so, from a stock assessment perspective which still is the dominant regulatory driver in the National Marine Fisheries Service, it's like, yeah, let's have all the recreational fisheries we want. Some of the economists in the agency were trying to look at recreational fishing capacity, as if there was a constraint there. On longline [fishing], there is a constraint, which is the stock of fish they're going to exploit... and the profitability [of the overall fishing effort].

EG: And there's a cap too . . .

SP: Yeah, then ultimately there have been caps; there was a turtle cap, and a now a bigeye cap. But, for recreational, it's still pretty much open access. And you know, those fisheries, if you want to call them fisheries, those businesses have ups and downs based on tourism, people's interest in going off and whacking fish, and the availability of large fish, marlin and so forth.

One of my favorite studies was done by Karl Samples, who was at the University of Hawaii at the time. And we funded the study, but he was the one really carrying it out, and he'd done these non-market value evaluations before – in Wisconsin, of all places. But nonetheless there's fishing for something in Wisconsin, whatever you fish for there. And so, he had the usual questions, why do you go fishing? To catch fish, to share fish with friends, to go out with family and friends. He did a little focus group [interview], and it turned out the dominant reason people went out fishing was to get away from family [laughter]. And so, you know, if you don't ask an open-ended question, you may not actually capture what people are trying to do out there. And it's much harder to figure that out in recreational fisheries than it is in commercial fisheries, where the sort of heroic assumption they're out there to make income, and maximize profits, is not far from the truth. I mean if they don't you know make enough income, if they don't make enough profit, they eventually won't be able to pay off their boat.

EG: There are real constraints.

SP: Yeah, there's some real constraints there.

EG: It's significant because elsewhere in the country it's the same situation and I think some of the commercial fleets are representative, the commercial fleets would argue that “wait, there is quite a significant amount of pressure coming from the recreational side.” But we're not really trying to understand that, let's look at that.

SP: I think that is a problem in other places. I just think here, I just don't think there's that much pressure. I could be wrong. That's really a Chris Boggs [head of the Fisheries program at PIFSC]

kind of question. He, you know, when we first started to begin regulating the pelagic fisheries, whenever that was, mid-90s kind of thing. We tried – Chris, myself and others, tried to look at recreational catch, commercial catch, inshore, offshore, and I think Chris, I thought made a good argument, it was pretty hard to show that foreign fleets, domestic fleets, were having much impact on the small boat fishery. The small boat guys didn't ever agree with that, but we couldn't ever dig it out of the data, let's put it that way. And like lots of things, we don't know that that's the case. But that's the best we can do, given how much energy we put into it, the technology we had available at the time, the data. You know, the longline data is really good; the troll hand line data is much weaker.

EG: Seems like a key question there would be whether there's a regional stock that could be affected, that's fairly local and stable and could be affected by distant water pressure.

SP: No, I think that's, nobody, I don't think that anybody, you know, people hypothesize that but I don't think anybody is really sure. David Itano had made some arguments about that when he was at the University of Hawaii

EG: With tagging.

SP: With tagging and so forth. But I think most of what he was looking at was bigeye and as I said, it remains the case that recreational, small boat commercial fleet really focuses on the yellowfin which comes closer to shore.

EG: Right

SP: Maybe there was impact on yellowfin, and I'm just going to be agnostic about it. In other words, I don't deny that there's an effect, it's just, you know, a lot of the regulatory side of the agency, it maybe not science based, but it has to be science-informed, or has to be data informed. And the absence of pretty strong arguments makes it hard to, to make those, to do that within the standard fishing management structure. On the other hand, you get the monument kind of stuff, Executive Orders, and those aren't data-driven, those are just politics-driven. And so, it doesn't matter if there's no data, necessarily. I think if you had really strong data that argued one way or the other, then that might be, might have an effect. But in general, it's much more difficult to make those points in the absence of data. And so you use politics.

EG: You really had a long career and moved up through the ranks at NOAA Fisheries, so, it makes me think that you had a proficient and you know, really good way to deal with administrative challenges. Were there any outstanding research or administrative issues that you dealt with that come to mind over the years? There are probably many, but...

SP: Well, there are certainly challenges. Whether I was particularly good at handling them or not is another story. When I first got started, I couldn't get any economics projects through NOAA procurement, at all, like, whatever I did was wrong. I remember at one point, I'd submitted a request for proposal to put something out to have someone help me work on a project of some variety. And the procurement officer in Seattle said "well, you didn't justify this correctly." And I said, "well, jeez, what kind of justification should I have used?" He said, "well, I can't tell you because then I would be helping you do the procurement." And I was like, "well, I thought really that was what you were supposed to be doing" . . . and frankly until . . . so the first projects I did ironically, even though I was working for National Marine Fisheries Service, I was lent out essentially to the Corp of Engineers to do the same kind of work I would have done for National Marine Fisheries Service. Not precisely, theirs were all site-specific. Um, you know, harbor development, Kahului, Maui, or the launching ramp at Laupahoehoe or Pohoiki on the Big Island. These [are] just three examples [of what] I was doing and the interviews with small boat fishermen, you know, looking at the rationale. And there, ironically, I got the data together and discovered that the Corp of Engineers had this really tight framework under which you had to fit your results. And initially that really bugged me. But as time passed, if you're doing something over and over again, they were doing small boat surveys all over the country, having everything in the same framework so you could evaluate it, made sense. And so, that actually helped inform how I did work on fishery management, economics, and data management as time passed.

Um, let me see if I can think of . . . Yeah, one area I was able to get around that was, we could bring in experts if they were academics. So, I developed a faculty fellowship program and would bring people in for 1-3 months generally during the summer when they were on a break from their university. And basically, I said you can work on anything you want to as long as it's related to Hawaii. And so that I can get a sense of what you're doing, and some of them developed in a way that were particularly useful to us and some that weren't. One that was both, didn't actually pay off, but was a good intellectual exercise, was Ted McConnell from University of Maryland came here. We would talk about how do non-market evaluations and so forth. But there wasn't the funding to actually carry it out, but he worked on that, and a guy named Rob Mendelsohn from Yale did a thing on market-evaluation of whales, or something like that, right? I think that's what it was. Um, and there were others. The one that actually did pay off was Ralph Townsend from University of Maine, where he came out a number of times and we did a number of projects on Northwestern Hawaiian Islands fisheries on limited entry, and then alternative limited entry kind of programs, that I thought were useful. And so that was a way for me to get past the problems of procurement and nonetheless do useful work. So I guess I was being creative.

Then as I mentioned, the mid 90's, 10 or 15 years after I got started, the Pelagic Fisheries Research Program [PFRP] got started and we were successful in pitching a lot projects there and

the University procurement process was a lot easier to deal with from my side of things. From the employee side of things, it wasn't all that attractive. At that time, they had basically required all employees to be residents of Hawaii. Well, it turned out that with federal money, that wasn't legal. So, they had a hard time, so the way they dealt with that was they wouldn't offer someone a contract unless they were here in person. Well, so I hired two people, one from Indiana and one from Maryland, to work on PFRP projects, and one from Hawaii. The one from Hawaii, all she had to do was walk across the street and she signed her piece of paper. The other two it was like, "okay, I'm going to pick up and move 5,000 miles to Hawaii or 2,500, or however far it is, it's 5,000 miles, from the East Coast to Hawaii and I won't have a contract and I'll have one when I get here?" And I was like, "well, I hope that's true, I'll buy you a ticket back to the mainland if it doesn't work out." That was pretty unpleasant frankly. Um, eventually they [the University] gave in on that. But PFRP provided an avenue for bringing some people in like that and it also provided the avenue for linking up with graduate programs and people at UH primarily.

EG: Yeah, because you did ultimately generate a nice time-series of economic data for different fleets. Really solid data, I always thought, that became useful for a variety of purposes later on.

SP: Yeah, we used to think it was good, and I know it's something that the Center economists are continuing to build on. When I first got started, when the Lab was still part of the Southwest Center, the economists at the Southwest Center had a sort of consortium and we would get together twice a year to split up a small amount of money that was available for socio-economic projects and most all of it went initially basically to basic data collection. When I started, my predecessor, Mike Adams, had focused on the wholesale/retail industry and so we had some good surveys of those and I did some of that stuff. I really learned a lot doing that. I sometimes think we learn more from knowing the infrastructure side, the market side, than just from the cost-earnings side. And then as time passed, we did more and more cost-earnings stuff and there was less support for the market side of things.

But nonetheless, knowing the market made it possible when there was the big eye closure for the Center human dimensions program to go into action and look at the impact of the closure. A lot of the impact was on seafood dealers in the auction and not so much on the longline boats. The longline boats could lay up for a month or two, while seafood dealers couldn't do without product for a month or two. And I remember at one meeting, going to the meeting, and the meeting was contentious, and I went into the men's room and one of the dealers was literally crying and beating on the wall because he basically knew, he depended on all locally-sourced big eye, and felt he was just going to get demolished and I think his business survived but it was a really stressful time. And the folks from the Center that did that research [Richmond and Kotowitz] captured a lot of that, so that was good. Yeah, they weren't going to be going to the men's room, but they were captured outside of the men's room. So, anyway. Um let's see. I don't

know, I have no clue how I became Science Center Director, if that's where that question was going.

EG: It was, ultimately.

SP: As far as I know, I'm the first Science Center Director who was an economist, probably the first economist who was also an Acting Regional Administrator.

EG: Clearly, it speaks to your ability to understand a lot of different disciplines and concepts.

SP: Yeah, I think that was really my forte. It wasn't technical economics *per se*. I think I had a really good grounding in microeconomics and statistics so I could understand things conceptually, but I got bored pretty quickly with flute music kind of economics. But I could understand the, sort of, the socio-political context in which things were operating. And I think initially, the advantage was that the agency didn't know what to do with us. And so it gave us a lot of flexibility . . .

EG: "Us" being the?

SP: The economists . . . or Hawaii! Take your choice. And so, particularly when you begin to have litigation out here. Well, we've got an economist; he ought to work with the lawyers. And that worked out really well. There was an economist at the Regional Office and me at the Science Center, and we spent a lot of time in with the lawyers, trying to look at not just the economic side, but trying to put some of the basic fisheries statistics and some of the basic natural science based analysis in a way in which the lawyers could understand it and then make their arguments about it. I think that worked out pretty well.

EG: Yeah. This is a bit of an aside, but why did the paradigm necessarily seem to be primarily natural science to begin within fisheries? You could shift it around and look at it from the people's side quite easily. Fisheries is partly the people, you know?

SP: There was an idea about NMFS moving into ecosystem management, whatever that means. And initially we had to argue to put humans in the ecosystem. Because they had these circles of oceanography, they had some life sciences; I don't know what else they had. And they didn't have any human beings in the ecosystem. We literally had to argue to pull that off.

I think because initially, you had an agency . . . it did a fair amount of economic work, it just wasn't fisheries management or fisheries development, market development, yeah I don't know. Somebody from the East Coast would probably be better placed than me. Someone like Phil Logan or somebody from Northeast Center [Woods Hole] who was probably around before I got

involved with things. Or, and things on the East Coast, took a while to migrate to the West Coast and Hawaii. We were involved in fishery development long after people on the East Coast were beginning to deal with allocation issues and so forth. My guess is just, it started out as an academic discipline related to fish and the fisheries part of it came along later. But that's a guess, not knowledge.

EG: There seems to be some, just a little bit of lingering fisheries development in the Pacific. I recently saw something that actually attached the word development to fisheries. That's got to be almost the end of the line there.

SP: Well you can, I was talking to PingSun Leung this morning at UH [wind chatter] and part of development and part of management is trying to figure out how to get the highest economic value out of a fish. And so, like aku, the highest economic value might not have been sticking it in a can and selling the can for 20 cents back then. It might have been able to figure out how to put it on a table and sell it for a dollar kind of thing. I think you could still make those arguments. The question is whether it ought to be the federal government that does that. And one of the things to happen just when I got hired in the first year of the Reagan administration, and one of the things that the Reagan administration did was really cut back on a range of fisheries development and business development activities within the federal government. So, it's not just within NOAA, National Marine Fisheries Service, but in [the Department of Commerce's] Economic Development, Administration [EDA]. Lots of other things got cut back and the idea being that the industry can do it better themselves. And whether that was true or not, um--

EG: Even though the intent was to facilitate, it was a little bit different twist.

SP: Yeah, I mean, you know, certainly, as far as I'm concerned National Marine Fisheries Service didn't do anything to promote the longline fishery. That was developed organically within, for various reasons. But on the other hand, some federal money had been used to work on the first State [of Hawaii] fishery development plan and the state was looking how it could facilitate development and the whole Pier 38 thing had been conceptualized 30 years before Pier 38 became a fisherman's village kind of idea. I don't think that anybody thought it was going to be at Pier 38. Pier 17 was an idea, even Kewalo Basin and so forth. But, of course, Hawaii is so driven by tourism that the fishing industry, which is a small segment of society and the economy, has to figure out where it's going to fit in. And lot of that's entrepreneurial stuff, some of that is political connections.

I didn't actually see it, strangely enough and it's interesting, because I saw it online but I didn't see it in the newspaper. The fishing industry organized a press conference a couple days ago against the idea of expanding the Northwestern Hawaiian Islands monument. They had two

former governors there and a former senator, yeah, for various reasons, the fishing industry had a lot of political support. And my degree in political science doesn't inform me of any of that. I, really, as a federal employee stayed as far away from local politics as I possibly could. It just seemed like it was hard enough to be objective, let alone be perceived as objective and independent without getting involved with any kind of local issue. When I first got hired, I'd been teaching at Honolulu Community College, and we taught in the prisons. And shortly after I got hired at NMFS there was a sit-down strike by the prisoners at Oahu Prison on Dillingham and so I went down there with some other faculty from Honolulu Community College and people from some feel-good organizations as sort of, let's not do an Attica in Hawaii, kind of thing. Which I don't think was going to happen, but nonetheless.

EG: Yeah, it was that era, yeah . . .

SP: And somebody from the Lab saw me there and said, "You really have to be careful" and so I asked the guy who was the de-facto Deputy Director, and I said, "How constrained am I?" and he said "Look, you got your first amendment rights, it's not a fishery environmental issue, you can do what you want to. At the same time, it's a small town" And I was like, okay.

EG: It's an island, right?

SP: Yes, It's an island. Okay, there's other people who can deal with the prison issues and with other political issues, so I went from being somewhat politically active to pretty much being inactive for 30 years. I don't know if I'll change my stripes now, but at least I haven't yet.

EG: Yes, indeed. There was, there's some [topical] interest in this [oral history] project in technological changes and their effect on fisheries research and management. On the economic side, I don't know how that would be extremely relevant, but since you were Director, is there anything there you would like to mention? I mean, we came from a period when computers were just being [developed for personal use] . . .

SP: Well, that's it, the obvious big thing. It applies to economics as well. I did my master's where I key punched data three hours a day for three months, two or three hours a day for three months, onto cards, and I would carry the card stack over to the computing center and if any card got bent, the whole thing got shot out and I would have to submit it again the next day. It was one turn-around a day kind of thing which really encouraged me to become a computer programmer working for the University, so I could get inside the glass wall.

That was still the case when I started at the Lab. Brent Miyamoto who works in our fishery program, I mean fishery statistic program now, used to be carrying those [card boxes] across to the university computing center. I carried these across, all sorts of people did. Um, and you

know the computing power of an IBM 360 was probably less than my iPad right here. And in fact I got, as part of that Corps of Engineers project I was talking about, they couldn't pay us, so they said, "Well, what do you want?" I said "I'd like a laptop computer," and so they bought me a really expensive laptop computer that had a whole hell of a lot of computing power on it. And so the ability of the economists to run, to the Center as a whole, to manage data better was still a struggle at the time I left. Really depends a lot on increases in computing power. Then for economists, not something that paid off for me, but paid off for the more sophisticated economists, was the ability to run analysis in maybe not real-time, but rapidly and over and over with, you know, pretty easily, very sophisticated analytical techniques, crunching a lot of data into simultaneous equations and so forth. I know that some parts of the agency, and I would assume that this is mostly stock assessment or ecosystem relationships in stock assessment, are now using super computer approaches and these are things that just weren't possible 20 years ago, let alone 30 years ago.

So, computing was really an advantage for a whole range of the analytical techniques. One of the costs were that even though key punching is slow, whether when you went from cards to mag tape to, I think there's also been a tendency to rely on remote sensing and other electronic means of monitoring of fisheries that meant that there's less human interaction. So, I always spent a lot of time down at the docks. I actually went to the auction one morning a week for a couple years. I didn't even do anything. I just went there and stood and watched for an hour or two, did it you know, before I went to work. The Lab had somebody down there that monitored it six days a week. Ultimately, they [the auction, United Fishing Agency] computerized things. They bar-coded everything. Now we don't need to be there every day, but you lose something by not being there everyday. And that's an unfortunate thing.

I think the other thing that, at least from my perspective, that has really helped a lot, it could have helped the agency, and I think it has in other parts of the country, is vessel tracking information. It allows much more micro-level analysis. In Hawaii, vessel tracking data is almost, if not exclusively, used for enforcement. And we had no access to it when I was working at the Lab and at PIFSC, which frankly I think is absurd. It's a public resource, you know, we had demonstrations back in the late '80s where you could show when a longline boat, maybe at that time it was a lobster boat, a boat was beginning its set and ending its set. You knew exactly what it was doing. You could get a sense of time motion study kind of thing, which is standard industry economics. It's not standard for a regulatory agency to do it, I don't think, though maybe it is in some of the energy industries. Maybe the nuclear regulatory commission can actually look at the innards of how people operate a nuclear plant, but it would have been a really good resource. Then, just the remote sensing, the use of satellite testing and LIDAR, now drifters and gliders and so forth, drones, you know. Everybody knew what monk seals did until they put a critter cam on it. And they go "Oh, well, that's not what we thought they did." And you know, in retrospect it's obvious.

EG: They forage.

SP: Yeah, exactly. Some of the impact of technology is either to understand the critters or how the fleet itself operates. The impact of Jeff Polovina's work and Don Kobayashi's work on oceanographic impacts on swordfish grounds, on turtle interactions. All that kind of stuff was stuff that I don't think National Marine Fisheries Services could have done. I think Japan had enough of a presence out on its' fleet with research vessels that they might have been able to grind through it in a non-remote sensing kind of way. But we didn't have that kind of capability. We did research cruises and when I started at the Lab, the expectation was everybody would go to the weekly seminars. That disappeared once we started to move out of just all being on Dole Street into separate locations. But that meant that everybody had a sense of what was going on. And the other expectation was somebody, everybody outside the secretarial pool, would be expected to go out on research cruises. So I got an airplane and flew to Guam and got on the *Cromwell* and was like, "What the f- what am I doing out here!?" Well, I learned a little bit about what research cruises were like and I discovered I liked it. There was a theory that my great-grandfather was a sailor and I ended up going on five cruises on the *Cromwell* in a period of 20 years and there's no economics involved in that but it contributed to my understanding. I always argued that I was unskilled labor, which was definitely true. But at least at that time, I was fairly physically fit for unskilled labor, so I could, at least I could do physical stuff out there. The *Cromwell* was enough like a large Japanese longliner or small Japanese longliner that you could get a sense of what it was like to operate over the side or off the back of a vessel and try to process fish, some sense of the risks and the difficulties. I don't know what that contributed to me but I thought it was a good thing to do and I'm glad I did.

EG: Sure. We could take a break if you like?

SP: Nah, it's all right

EG: Are there any projects or achievements that stand out in your mind as particularly memorable or that had an outcome that you had hoped for? Or were enjoyable?

SP: Yeah, I really liked almost everything I did. I really enjoyed doing this; this is not something I ever would have planned to do. I'm allergic to seafood, and so I didn't eat my product. I argued, when I worked for the State, that I couldn't be bribed because, you know, at that time the only way people were passing out favors were passing out fish and my friends said you could pass on fish to us! Well, okay.

The PFRP, the High Five program, where the fishing industry vessel economics programs where initially we brought in Marcia Hamilton, Rita Curtis, Mike Travis to work on that and that

expanded out to include other people as time passed. That was enjoyable and stressful at the same time. There were a lot of expectations. The longline turtle litigation was interesting, trying to do the economic analysis for that. I [also] did the economics of the compensation program for the Northwestern Hawaiian Islands . . . The lobstermen and bottom fishermen were pushed out when the monument came into effect. And that was, you know, something that was interesting. It was something that was done completely secretly; nobody, literally nobody, in Hawaii knew I was doing it. I was doing it on behalf of the Office of Management and Budget . And why they decided to do it that way, I don't know, but we already had the information necessary, so it was just pulling it together. We eventually did some of the same thing for the Hawaii longline closure, the swordfish closure and how that affected people. That was more public. Or maybe it was the other way around chronologically, but the same thing.

Developing the Human Dimensions group wasn't something I did very much with other than hire somebody. But then it developed on its own. But it really was a different way of doing work there and I thought it was really helpful and I enjoyed the output of it. I think I mentioned my collaboration with Ralph Townsend on alternative fisheries management approaches. And then I was, got involved with - what was the acronym? International Association for the Study of Common Property (IASCP). It's now got a different name, but nonetheless, out of Indiana University, and I went to a couple of their international meetings and so forth. And fisheries are commonly used as examples there. I did an FAO [Food and Agriculture Organization of the United Nations] thing at the same, different time, but the same thing of looking at things internationally. Those were all sort of fun projects to be involved in. But like I said, I enjoyed most of what I did.

EG: Yeah, that's terrific. I would think part of you might miss some of that.

SP: No, it's interesting. So, I've been retired almost 2 years now. For the first year I didn't miss it at all. I had, well, it's like I was just . . . People retire in different ways. A lot people say you got to have a plan. You got to go develop a hobby if you don't have one already, and this that and the other thing. My theory was, I'll figure out what to do once I retire because then I'll have lots of time to figure it out. And I'm glad I didn't fall over dead the next day. I did talk to a girl who said- she wanted to go out with me in high school, but she didn't bother to tell me when I was in high school. And her husband had literally died the day after he retired, and so at least I've survived that.

EG: So there was some decompression?

SP: It wasn't difficult at all partly because it wasn't . . . I used to think of being the Science Center Director and before that the Laboratory Director as not very stressful jobs.

EG: I never would have anticipated that.

SP: Yeah, well [perhaps] it didn't seem like that until I retired. And then it was like, "oh, I'm much more relaxed now." You know and I've, up until now, still been pretty careful, if anyone asks me about fisheries stuff, I'm still fairly guarded. A woman asked me a question about the monument expansion the other day and I realized I was venting for the first time in public, so to speak. I was like, "Oh, I'm not sure I really wanted to say that." You know, I'm starting to get involved in some stuff at UH, may teach a course in political science on fisheries policy, maybe the same thing in the College of Trop Ag on fisheries economics. Somebody asked me today if I would work on a project with them. So, I was like, okay I've been retired for two years and basically I've paddled the stand-up paddleboard back and forth along the beach park more than long enough for Russell Ito to say "it's time for you to go [surfing] out there." But maybe I will someday.

But, no, I think I felt that, Mike Seki was in a good position to pick things up. He's going to do it differently than I did it. Frankly, I'd just as soon not know how it us. I'd like to think everyone is happy with what he did and not relieved that I was gone. That's for them to decide. No, it hasn't been hard for me to step away from it. And the politics of fisheries is really tough, and when I was the Acting Chief Scientist for NOAA Fisheries for four months I did a fair amount of stuff up in New England. And boy that's tough. It's just tough. And here, trying to make sure stuff is done for the fishery management council on time was tough.

And you know, I guess I'll still call him a friend of mine, an old friend was talking about the Sanders supporters at the convention and he said "you know, you've heard the expression, "getting democrats together is like herding cats," so getting Sander's supporters together is like heading feral cats." And he's a Sanders supporter, so he can make that expression, he can say that. Well, it's a little like the fisheries management side of things. Its heavily political, I think that's the way Magnuson, I think it was really good the Magnuson Act was set up that way, to have stakeholders involved. I don't like the way that agencies that can hide behind formal processes do it. I like the contention of the fishery management council and FSC[fisheries science center] even if I don't like it in a sense. It was stressful at times. It was like "Oh my god how can you say that?" Or somebody writes about it in a way that nobody said that there. It's not what the scientific evidence says. It could be really frustrating. But I think it was, I think it was the right way to do things. The fact that I think it was the right way to do things, doesn't mean I want to do that forever. In fact, I was perfectly happy to walk away. And not very many people invited me to get involved in that, nobody's invited me to get involved in that side of things. But I'm doing a little more on the academic side of things and if that develops, that's great, and if it doesn't, too bad.

EG: There's still the paddleboard.

EG: That could be good way to end it. But maybe we could talk just briefly about; it's such a unique region. Is there anything you'd like to point out about what it was like to work in the Pacific Islands Region and ultimately direct a Science Center? There's probably many dimensions here you could talk about. But any compelling points?

SP: Yeah, that's something I think is really important. And I think it, you know, the cultural diversity here and the sort of meshing, but not necessarily the melding, of all these cultures is something that is not [wholly] unique to Hawaii. But this is, I think, the only place in the United States where everybody is a minority. And you know you can say, yeah but you're a *haole*, you came from the mainland, you know, what some would call white-skin privilege, you got that and you walk into an office where everybody is not *haole* and all of a sudden you go ... okay, this is different! And I remember, before I got involved with fisheries, I applied for a job in another state agency, and the administrator who was Native Hawaiian said "I think you're overqualified for this job but I can offer it to you and you're going to be the only *haole* working here." And I felt really comfortable with him, I thought ... and as it just turned out, like the next day, I got offered the position at Honolulu Community College, which is the direction I wanted to go in, I thought I was going to make more money, though as it turned out I didn't. Community colleges get paid crap in this state and I regret in one sense that I didn't do that [that being the state job with the native Hawaiian administrator]. On the other hand, I wouldn't have gotten involved in fisheries.

But you now, in [Hawaii] fisheries you've got many different ethnic groups. People look at things differently. They come together at the seafood market to a certain extent and then . . . I think that diversity is important. When I got hired at the Lab, the Director and the de-facto Deputy Directors were all Japanese-American. They'd hire me. They hired Jeff Polovina, they'd hired a number of *haoles* with either Ph.D.s or Mike had his master's at the time. I used to make the argument, if you're the smart local kid, you're going to go into law or medicine, you're not going to go into biology. And then people say, well, that's disparaging about those who did go into biology. Well, okay, I didn't mean that. But there's a lot of opportunities for folks outside of fisheries here, now, whereas maybe before there weren't so many opportunities for folks. And so you got that aspect of things which is just interesting and challenging at the same time.

Fisheries are challenging enough. You go to New England and you know, I won't pick on New England. My folks moved to New York, on the Hudson River, after I graduated from high school and there was an Italian part of town and there was a Portuguese part of town. It's like, how much alike can they be? And you quickly discover that they are not alike. And so there's ethnic differences all over the United States. But Hawaii is unique that way. It's also a small town in many ways. The physical distances aren't great. Back when I got involved, you could buy round-trip neighbor island ticket for hundred bucks and could buy, literally buy a coupon

you could take to the airport at anytime and get on a plane. And so it was easy for us to go over and meet with people on the neighbor islands. And you fly over the first flight in the morning and come back last flight at night. It was pretty cheap field research.

EG: How about on the economic side of things? I often wonder, it seems that household economies may be little different between ethnicities here. Maybe less so now. Did you pick up on that some years ago? You know, a Hawaiian family on the Big Island may have used more fish, for instance, or grown more food, I don't know.

SP: So the work that had been done just as I started at the Lab, we tidied it up, was looking at fish consumption in Hawaii and so forth. But we didn't really focus on the ethnic difference that much. And that may have been our mistake but nonetheless we didn't yeah? When I got started, people were still - well, they still do in a different way - there would be trucks that go through neighborhoods like Kalihi and so forth with fresh aku and sell off of the truck. Now sometimes you see people parked out along the Kahekili Highway or Kaneohe side. But the idea of trucks going through neighborhoods and selling, not just fish, but boiled peanuts, um you now all sorts of stuff . . . But that wasn't something that I was [acutely] aware of [ethnic] differences, differences in terms of how people treated fish and so forth.

This isn't a fish story, but I got divorced at one point along [the way], on New Year's Eve, officially, so great! And I'm in this tiny apartment, near Punchbowl, and my neighbors let off a gazillion firecrackers that night. I was not in a good mood and so forth. I'm like, "This really sucks" and so anyway, the next year, New Year's comes along and they were pounding mochi in the afternoon and I just happened to ride up on my bicycle and they say "hey, come on over, brah." I'd lived there over year and I didn't know their names and so forth and they just invited me over. And we drank beer and they pounded mochi and then I stood there and they lit off their gazillion firecrackers and like it's also, coincidentally, their kid was one year old and so it was a super big deal for them. I saw this is really different from anything I grew up with. How important it was for them. It always pissed me off about the fireworks ban, you know it's like; it was so much a deep part of so many communities here. I don't particularly like firecrackers, but turn the air conditioner on or do something. Lots of people can't afford air conditioners, and their dogs get all freaked out about it. And so I understand, but at the same time, a year later I also understood how important it was for them.

EG: Of course, a lot of people ignore the ban.

SP: Well yes, yes, fortunately not that much in this neighborhood. They used to. My neighbor here used to ignore the ban. He got a permit and I think everybody in his family got a permit. And so they had strings of fireworks going out and it was great. But they did them at like 9

o'clock, because everybody goes to bed too early. It's not just that we're old, but everybody who's going to go party hasn't even woken up to go party yet at 9 o'clock. Anyway so.

But that, those differences, definitely apply to how people looked at fishing and so forth and the importance of community. And when people could make bridges between ethnic groups within a community and when they couldn't. And, yeah, I missed out on some opportunities to get involved with Hawaiians and fishing. I'd been involved with Hawaiians on some other issues but there were a fair number of Hawaiians still involved with the aku boat fishery before I got involved. I had a couple of opportunities, like, no, I'll get around to that. I'm busy--

EG: Sure, you've only got so much time.

SP: --Then poof, the industry was gone and they were gone. And I was like, "damn, I missed out on it." I don't know if it would have been good, but I might have been terrified to be out on an aku boat. Probably would have been, but it would have been interesting. Yeah, and I think I did what I could do for the aku industry, focusing on the cannery side. I think I understood how industrial processes worked and in most there's not a huge ethnic component to it, though there may be an ethnic dimension on the labor side. Somebody would laugh about how when the cannery let off and people who were going home to Kalihi were going to get on the bus, the front door of the bus, everybody on the bus would get in the back. Because the smell you were in the cannery, you definitely smelled like you'd been in the cannery. And you now it was, a sort of community of interest of people who don't, it wasn't a high wage job. It was probably better to be a sugar worker in some cases, better unionized and so forth. But, shared communities of interest doing the same thing and working together. You know by that point. Primarily, I think local Filipinos were working in the cannery. But a whole suite of people had gone through there at different decades in the life of the cannery. Same thing with the pineapple cannery, Dole Cannery and so forth, that manufacturing side of Hawaii has pretty much disappeared, particularly in the concentrated way. And that's part of the struggle with the presidential election here. You got sort of the globalization which in many ways leaves primary producers behind, with the idea that globalization will be good overall. Well, yeah overall is one thing, but whether it's good or not for Cleveland, for example, is a different story. And you know eventually people will adjust and so forth.

EG: It's a tough question.

SP: It's a tough thing in the meantime. And economics hasn't been real good with those distributional effects. In fact, when I got started, they didn't even want to look at distributional effects. I tried to figure out how to do it, but I wasn't very good at it. You could see them, but it was hard to bring them in. You could see them if you went down to the docks and you saw the people that were successful.

I remember there was an issue about shark finning here. I just coincidentally happened to be at Kewalo Basin, not because I was doing fisheries stuff, I think I was swimming. And this woman drove up in a Jaguar. And at that time . . . now Jaguars seem to be a dime a dozen in Honolulu. But at that time, Jaguars were [flashy], and it was a shiny Jaguar. She got out of her car and parked right along the Kewalo Basin, popped the trunk, somebody picked up three or four bags out of a fishing boat and dumped them in her trunk and drove off. And I was like, "what the hell is that?" and I asked around, and you know, that's shark fins. There was some woman in a fancy car, and she was doing okay on the shark fin side of things. And so when people said, "oh shark fins aren't worth very much," if you're moving around and the same thing happened in a lobster fishery, where the question was "well, lobster isn't worth very much." You could deliver, the buyers would literally come from the mainland, the gold chain guys, and they would be handing out fists of money to the boat captains to offload to them and not to somebody else. It was before it was a regularized kind of thing. But yeah, there's some real money there. And there's some other poor schmuck whose didn't know how to do it quite as well or something like that and nobody was giving him handfuls of money.

EG: Relative to other industries, perhaps not that much money. But when you think about it in an economy like this, seafood is quite significant in economic terms. I often think about that,

SP: Well, I think it's socially significant. Economically, it's less than half a percent of gross state product.

EG: Maybe that's changed. Right.

SP: Tourism and the military just dominate the economy here. And makes everything else, and then if you add everything that is just really directly associated with the military or tourism, you don't have much left anymore. Um, but you know, seafood is a primary producer.

EG: I think I thought of that last night, looking at the prices of sword[swordfish] at the market. It's a valuable commodity, at least for certain sectors.

SP: Absolutely. I think yeah, I was down at the Safeway here, which is not the prime place to buy fish, but you know, bigeye is like \$25 a pound right now. On the other hand, we were in Switzerland and walked in through a market and there was stuff there that was like, \$25 an ounce. It was incredible, what the hell is this stuff? And it was some sort of fish; I don't know what it was. Then I actually saw some tuna from the Mediterranean and it looked horrible. Nobody here would ever buy that and it was probably \$25 a pound. So, you know, it can be a highly valued product and you can see it at the auction, every year. It's on television. What's going on with the auction with sashimi? What's happening in terms of redfish and so forth, those

remain incredibly important. I don't know if, though, how long they'll be important. It's like my ancestors came from Scotland and England and other than going to Scotland and getting a tartan when I was like 8 years old, it's, like, I'm no more Scottish than I am Irish or Italian. That's a bad example. If I were Italian, I'd still be Italian. Italians have maintained their ethnicity better than English and Scots and so forth. But so, some of that erodes and you look at that. You used to be able to tell who the Japanese tourists were here. And now, the Japanese tourists and local Japanese and Koreans, everybody's dressing the same and so forth. And obviously there are differences, but it's no longer quite as easy. I was in a meeting in Nagasaki and went to the bomb site there and there is a separate section where I think Korean conscripts were working when the bomb went off. And they're all buried separately from the Japanese and there's actually a plaque there and half of it's in English and says this is absurd. Once you burn off all the skin, we all look alike. But we're still, these vestiges of the past. And I think the vestiges of the past are what make Hawaii interesting, the pride that people have.

EG: Okay, I think maybe we can wrap this up by talking a little about your perception of the future of fisheries in Hawaii and the larger region.

SP: So, I've got three thoughts. One of which is fisheries economics in the sense of being, sort of a dying field of itself. I was talking to people at UH about that this morning. The whole bio-economic kind of framework and the constraints on analysis that does, as opposed to sort of standard microeconomics where you look at things the way you look at other industries with constraints. In stock assessments, NMFS has had to take to basically training its' own and giving money to universities to train stock assessment people. We try to do that at UH and strange enough at UCSD [University of California San Diego] and neither one of them, even though we gave them a fair amount of money, they didn't hire stock assessment people with stock assessment money which really frustrated people. The same thing is true of economics. So the idea of fisheries economics as sort of as a dying field is a problem. But applying microeconomics and econometrics, different kinds of behavioral economic techniques to fisheries, I think has a lot of opportunity and it will broaden the field out away from a small field of people who had this natural resource/economics background to a much broader field of economists. And I think that will be good. How it works out, we'll see.

The second thing that I think that has already begun to happen, the fishery management council and the economic impact assessment of fishing regulation was a dominant theme for 20 years, 25 years, and then slowly environmental, endangered species issues became [predominant] but still involved the Council. Now a lot of the pelagic fisheries issues are dominated internationally – the Western Central Pacific Commission [for instance]. And that takes the Council out of a lot of issues. And litigation in general has tended to bypass . . . And so the Councils end up with the smaller scale fisheries, closer-to-home fisheries, and then you have tension with the State over who manages and who doesn't and I think that limits the role for economists because we're more

site-specific. The negotiators in general, internationally, at least on the U.S. side of things don't seem that interested in economic analysis of fisheries. As opposed to Australia where they do quite a bit economic analysis of their international fisheries.

A third thing, I think, NOAA as a whole ought to be looking at ecosystem effects, not just biologically or oceanographically, but also in terms of economics. And in particular looking at watershed issues, shoreline development issues, integrating land and sea. I think that's a natural for Hawaii. And maybe that's not natural on the mainland, I don't know. But here the whole ahupua'a concept I think is really important in terms of nearshore fisheries and fishing communities. I think that there's a lot to be developed there.

Anyway, so that's sort of my 2 cents worth. And you know, as you were talking about earlier, climate change and how that effects coastal communities, I think there's a lot of economics related to coastal communities that could be integrated and not divvied up into different parts of NOAA, into different regulatory sites and all that.

EG: Well, terrific. Sam, I really appreciate it. It's been very interesting

SP: Well, hopefully I didn't stick my foot into my mouth anymore than necessary.

EG:[shakes head, meaning "of course not"]

Thank you very much.

SP: You're welcome.