

Interview
With
DICK BRAME
In
Wilmington,
North Carolina

Interviewed by Scott Baker

On July 26, 2016

Transcribed by Mary Williford

For Carolina Coastal Voices

| <u>Track Time</u> | <u>Topic</u> |
|-------------------|---|
| 0:00:46 | Brame's work history and current position |
| 0:01:32 | Describing the Coastal Conservation Association (C.C.A.) and their mission; Brame's move from state to federal level management |
| 0:02:43 | When Brame got the job with C.C.A. |
| 0:03:14 | Brame's thoughts on why fisheries management matters |
| 0:03:41 | Factors that spurred the North Carolina General Assembly to act in 1994; <i>The News & Observer</i> and crab-potters |
| 0:05:18 | Interests of the recreational fishers at the beginning of the Fisheries Reform Act process; The Moratorium Steering Committee |
| 0:06:25 | Brame's involvement with the Moratorium Steering Committee meetings |
| 0:07:00 | Controversy and disagreement among different stakeholder groups; Frustration at the lack of saltwater recreational licensing included in the original legislation |
| 0:08:14 | Key leaders in the Fisheries Reform Act process |
| 0:09:05 | A funny story from a public meeting about saltwater licensing |
| 0:10:56 | The good and the bad that came out of the Fisheries Reform Act process and legislation |
| 0:12:45 | The advisory committee system before and after the Fisheries Reform Act |
| 0:13:45 | The successes of the Fisheries Reform Act, notably Fisheries Management Plans |

- 0:14:16 The shortcomings of the Fisheries Reform Act, notably in not defining “commercial fisherman” and not developing a saltwater licensing system;
Blue crab Fisheries Management Plans
- 0:16:00 How North Carolina compares to other states in terms of recreational licensing
- 0:16:48 What Brame wishes he had known back in the 1990s;
The lack of a formal process that would require government entities involved with the Fisheries Reform Act process to continue their jobs uninterrupted
- 0:18:20 Climate change and its effect on fisheries
- 0:21:05 Ecosystem-based management versus species-based management
- 0:23:42 What changes Brame believes can be made to ensure a healthy coastal ecosystem
- 0:29:17 Reflecting on how fisheries were managed prior to the Fisheries Reform Act;
The state of commercial and recreational fishing immediately prior to the moratorium

SCOTT BAKER: So, I guess I'll just say for the record, my name is Scott Baker with North Carolina Sea Grant Program, we're--Dick Brame is with me in my office. It's July 26th, Tuesday, 2016. And I'll get started with the questions. So the first question for Dick is, I guess, state your name and where and when you were born.

DICK BRAME: My full name is Richard Brame, but everybody call me 'Dick,' and I was born in Brattleboro, Vermont, but only lived there six or so months and we moved back to Wilson and Kinston, that's where I grew up. I grew up in eastern North Carolina.

SB: Okay. Um, I guess, do you want to provide an age?

DB: I'm sixty-one.

SB: Okay. Sixty-one, okay. Question two: could you provide a brief overview of your work history and more details about your current position?

DB: I have worked for a variety of not-for-profit organizations, the Izaak Walton League, the North Carolina Wildlife Federation, the Pennsylvania Wildlife Federation, and the Coastal Conservation Association [C.C.A.]. I've been with C.C.A. since 1989; I was the first Executive Director from [19]89 to '99 and then I became a Fisheries Director, primarily going to Atlantic States and South Atlantic council meetings. And about three years ago--so, about 2013 or '14--they shifted me from A.S.M.F.C. [Atlantic States Marine Fisheries Commission] to the Gulf Council. So I represent C.C.A. at the Gulf and South Atlantic councils now. I do primarily federal fishery issues.

SB: Okay. Um, what is--so, kind of reiterates that question, but what's your current relationship with the fisheries environment?

DB: I represent C.C.A. at the federal fishery council management level.

SB: I guess, could you--ad-libbing on that--could you kind of explain, describe C.C.A.

and like what the mission is?

DB: It's a group of anglers, there's 120,000 members, and I can't remember, virtually every coastal state. It's a fishery conservation organization of primary recreational fishermen.

[PAPER SHUFFLING]

SB: Let's see. So, with C.C.A., has your relationship changed, over the years--I guess it's not C.C.A., this is with your relationship with fisheries management, has that changed?

DB: I've gotten away from the state fisheries management and deal more with federal fisheries management at this point, that's probably the biggest change. When I was, during the Fisheries Reform Act, I was the Executive Director of North Carolina and was very involved with state fisheries management.

SB: So now I'll return to the specifics of your involvement in fisheries management and policy generally. Question four: why did you become interested in fisheries management and policy or, perhaps, restated, how did you get involved in fisheries management policy?

DB: C.C.A. started a chapter in December of 1988 in North Carolina and advertised for an Executive Director and I applied and got the job in August--August 15th, 1989, and I've been doing it ever since.

SB: Wow. So, here's an esoteric question, I guess: why does fisheries management matter?

DB: Well, it's the proper management of any natural resource matters, and fisheries are a natural--common-property natural resource. So. It's just good management.

SB: Tragedy of the commons.

DB: Yeah. If you don't manage it--not managing is a management decision.

SB: Yeah. I agree. Um, now let's reflect back specifically on the Fisheries Reform Act of

1997: why do you think the North Carolina General Assembly was compelled to take action in 1994?

DB: As I remember, there were several causes. One was a series of articles in the *News & Observer* detailing problems at the Division of Marine Fisheries, and the political influence that was going on at the time, and you'd have to go back and look at them to read it, but it was a week-long, front-page exposé of the Division of Marine Fisheries; that was, I think, one factor in Fisheries Reform Act. I think the driving one, that I remember, was actually crab-potters. They came to the Division [of Marine Fisheries] and said, 'You need to limit us somehow, we won't limit ourselves, we need to limit the number of crab pots we can set 'cause if Joey has 400 and I got 300, I gotta get 100 more, and then he'll get 100 more, and you get too many crab pots, so we need a mechanism to limit the number of crab pots.' And at the time, both Dr. [William T.] Hogarth and Bob Lucas, who was Chairman of the Marine Fisheries Commission, took that sort of impetus and spun that into 'we gotta reform the whole fishery management system.' So I think that was a compelling reason. And I think it was a growing recreational fishing presence that had never been in North Carolina before, and it was demanding some changes. So I think those three, seemed to me in my clouded memory, sort of what drove the Fisheries Reform Act.

SB: Was there, I guess, were there specific--well, that's not a follow-up to that--but are there specific, can you remember any specific things that were like, the recreational people or folks were interested in?

DB: Um.

SB: Were there talk of a license at that time?

DB: Well, there had been off and on talk of licensing; that was probably the main thing they were interested in at that point, is some sort of licensing system.

SB: Okay. Um. Were there particular circumstances leading to the creation of the Moratorium Steering Committee. I guess that's kind of rephrasing that previous question, but.

DB: It's pretty much the same. They put a moratorium in place on new regulations and created a Moratorium Steering Committee in order to address these fisheries problems that I have brought up before, so yeah, I mean.

SB: So they actually, they actually, and I mean stopped, no new regulations while that was underway?

DB: That was part of the deal is there'd be no new regulations until they fixed it.

SB: So, question seven: how were you, specifically, involved with the Moratorium Steering Committee process?

DB: I believe I attended every Moratorium Steering Committee meeting. I was not on the Moratorium Steering Committee.

SB: Okay.

DB: I may've been, it seems like there was an advisory panel or something to do--I can't remember exactly. Seems like there was an advisory panel I may've been on, but I know I attended most, if not all, of the Moratorium Steering Committee meetings. [Pause] So I had a front-row seat.

[LAUGHTER]

SB: Question eight: do you think the various stakeholder groups were united in wanting passage of the FRA. [Fisheries Reform Act], why or why not?

DB: There was--I wouldn't use the word 'united'. I think most people wanted it, but for a variety of different reasons. I think there was some trepidation; I know there was some trepidation in the recreational community about getting in bed with the Division [of Marine

Fisheries] and all these other folks, but we ended up attending all the meetings and then being involved in the process. But I know there was a lot of trepidation on the recreational side. And there still is.

SB: Speaking to that, what was the nature of any controversy or disagreement? And I think this is asking me to select one, but you can elaborate on that.

DB: Well, the license, which ultimately never got passed until, what, I can't remember, [200]8 or '9.

SB: It was 2000--I think I just read an article, it was 2005, implemented in 2007.

DB: Yeah, so ten or eleven or twelve years later we finally get a saltwater license. So, the one thing the recreational community wanted, we were denied out of hand.

SB: So question nine: what, who were the significant leaders of the F.R.A. and please describe their specific roles.

DB: Well, the main rhymer were Bob Lucas and Bill Hogarth. Bill was the Director of the Division of Marine Fisheries and Bob was Chairman of the Marine Fisheries Commission. It was really--what I remember--it was really their baby. They came up with the idea and the format and started the process down the road. I hope y'all are interviewing Bob Lucas!

SB: I believe so.

DB: I hope so. He was instrumental in all this.

SB: Yeah, I think they're doing ten or twelve, I think the goal was to get a minimum of ten to twelve of the key people and then they can get other people if they would. [Pause] Do you have any personal stories about, about Hogarth or Lucas that you'd like to share?

DB: Not right off the top--I mean, they were very involved and key players, but I don't have many--I was trying to think of something personal but I'm not. The thing that I remember

[laughs] more than anything--and it was pre-Fisheries Reform Act--is the first time they ever talked about a saltwater license, it was at a meeting at the Carteret Community College and Dr. Mike Orbach was chairing the meeting and there was a--to talk about revamping the entire saltwater license system, this is pre-Fisheries Reform Act, but the saltwater license recreational was part of it. And there was a guy dressed, as I remember, in coonskin cap and buckskins, and he was sitting in the front row with a little toy rifle or something and he got up, Dr. Orbach got up, and said he wanted to talk about changing the licensing system. This guy hops up and says, 'This is taxation without representation! Let's take the Capitol!' And he runs out of the room!

[LAUGHTER]

DB: I don't know why I remember that, but it was just nuts!

SB: That does sound like, sounds like a good fisheries meeting.

DB: Yeah, they used to be a lot of fun!

[LAUGHTER]

SB: A little bit more buttoned-down, ahh, it depends, I guess. There's the one, the meeting at the Marine Fisheries Commission, one of the representatives was there at the flounder meeting--

DB: Oh yeah.

SB: --that was a, that got a little heated.

DB: I bet that was tense.

SB: Yeah, that was a little tense. That was more tense than that. So, question eleven, this is a little longer question, I guess. I'll just read it just so, if you want to comment. As you know, the new law focused on five areas of reform: licensing, Marine Fisheries Commission, fisheries management plans, coastal habitat protection plans, and law enforcement. Some of the major

provisions of the F.R.A.: changing the license structure, fisheries management plans--yeah, so those, I guess, four different things, which--I guess if you had to categorize or prioritize, are there any ones that are more significant to you than others?

DB: Well, requiring the management of fishery management plans is the one very good thing that came out of the Fisheries Reform Act, that and changing the [Marine Fisheries] Commission from seventeen members to nine, making it more management even though you would argue they haven't done the best job. But it's clearly a better model. The licensing structure thing, I think, was--it made it marginally better, but you didn't get a saltwater recreational license and, as I remember, [state Legislator] Butch Redwine put in a bill, I think there were 7,000 commercial licenses at the time, so he limited it to 7,500! So, to us, that was a significant problem because, as I remember, roughly half of the licenses at the time didn't report any income, so there's a lot of latent licenses out there. So, I thought that was a significant problem with the whole system.

SB: What about--just so the F.R.A. actually created the four standing advisory committees and the four regional advisory committees at the time--

DB: Yes.

SB: --so, was that a good thing or--were those any types of advisory committees in place prior to that?

DB: Yes. I don't remember exactly, seemed like there was a finfish advisory committee and then some regional advisory committees that met off and on. Part of the reason that they were required in the F.R.A. is that people had the idea that, or the perception that, they weren't listened to. And like all advisory committees, some are listened to and some are not. So, I think these put in place probably more than they needed. I always thought they ended up with too

many advisory committees, it kind of went overboard, and now they've cut back.

SB: Yes, scaled back.

DB: Scaled back. But I think, for a while, there was too many.

SB: So, question twelve: what are the greatest successes of the F.R.A.?

DB: The greatest success is managing by fisheries management plan. Requiring F.M.P.s [Fisheries Management Plans] and not just managing by guess and my gosh. And reducing the size of the Marine Fisheries Commission from seventeen to nine.

SB: So, at the second part of that would be what were the shortcomings?

DB: Well, obviously, the saltwater license was a problem. You had the largest user group and not licensing to determine how many or, be able to adequately sample them. But also, they never did define a 'commercial fisherman'. I always thought that was something that should've been a cornerstone or any Fisheries Reform Act is defining who a true commercial fisherman is and then limiting the--let them fish professionally because you are giving them gear that is, can be quite destructive and very efficient, and there needs to be a professional fishery and that was sort of, kind of, what was sold, at least with the crab pot things, make it a professional crab pot fishery where you limit the people--we can optimize the number of pots where they made the most money with the least number of pots. That never came to fruition; that was the biggest shortcoming, one of the largest shortcomings, I thought.

SB: And by, I know that one of the iterations of the blue crab F.M.P. that, I guess maybe ten years ago that came up, big crab pot issues came up again, the Division [of Marine Fisheries] was thinking about trying to put a limit on it and it was, they were really struggling with the differences between say, down here and up in the Albemarle, you know, it was going to be regional even then there were, I guess, very vocal people who were really against it.

DB: Yeah.

SB: 'Cause there's such a huge range, probably quarter-magnitude in terms of number of pots people have. Um, so, do you remember back, so back in, back then, [19]94, how many other states had recreational fishing licenses?

DB: I think all the ones to the south of us had licenses and Virginia had a bay lic--Virginia or Maryland or both had a bay license, it seemed like. But that was--I know most of the Gulf states had a license and the southeast states had one, as I remember.

SB: So we were one of the few--

DB: We were one of the few--

SB: --in the southeast.

DB: --in the southeast that didn't.

SB: So were we the last state, basically, in the southeast?

DB: I couldn't say for sure, but I think so.

SB: Is there anything that you know today about the implications of the F.R.A. that you'd wished you had known in 1997?

DB: I wish it had provided for a way for citizens to sue the Division of Marine Fisheries for not acting. It didn't do that. I remember speaking, before the Fisheries Reform Act, one of the biggest, most contentious issues was weakfish, and North Carolina was, it was a severely depressed population and they were--that's literally why the A.S.M.F.C. [Atlantic States Marine Fisheries Commission] got its authority was North Carolina's refusal to manage weakfish, as I remember. And I lost my train of thought; what was the question?

SB: Um, so is there anything you know today about the implications of the F.R.A. that you--

DB: Oh! I remember asking a D.N.R. [Department of Natural Resources] attorney, I said, 'It says right here in the fisheries manual that you should conserve, protect, educate, promote, do all this.' And he looked at me and said, 'But nowhere does it say they have to be good at it.' So there's, there's literally no, there's very little way for a citizen to sue the Division [of Marine Fisheries] or to make the Commission, for them to do their job.

SB: So there's no metric, basically, of how successful they are?

DB: That's right.

SB: Of managing.

DB: Yes.

SB: And so, is that something that you think should be considered--

DB: Absolutely.

SB: --if they do revisi--if they do revisit the F.R.A.?

DB: Yes. Absolutely, I think that's something that should be considered.

SB: So as we wrap up our conversation together, let's discuss the act's capacity to address emerging issues going forward. I'm specifically thinking of fisheries management challenges that include issues like climate change, shift in fisheries distribution, imported seafood, and changing domestic and global markets, and the transition from single-species management to ecosystem-based management. So first, I wanted to know your thought as to what you think the emerging issues are related to fisheries management in North Carolina.

DB: Well, climate change is one of them because fishery populations are moving and we have to be able to adapt and be able to manage fisheries that we have never seen before, and we're gonna lose fisheries that we've had for a long time. So I guess, managing by fishery management plan would hopefully promulgate that. I don't know for sure, but you would hope

that it would.

SB: Do you think, um, do you think in general, the clientele is open? I mean, I think that they will--there's always this--we deal with this in Sea Grant, we deal with trying to educate people about climate change and stuff like that and, you know, there's definitely a segment of people that either don't believe it or don't see that it impacts them directly, but this is a situation where we're already seeing evidence of that. You know, some fisheries are moving more northerly distribution or, in fact, leaving our area, or one that's in our area, type of thing. So at least that's something that, make them more, could bring it home, I guess, to them.

DB: M hm. M hm. Well, when it affects 'em, they'll [laughs] they'll change. But I mean, there's been big changes in the fishery since I was fishing on piers in the [19]60s. I mean, in terms of ethics and what you saw and what you caught. We used to catch several hundred king mackerel a year off the end of these piers at Topsail [Island, N.C.] and now they catch dozens. They probably think, they've probably caught more tarpon than they've caught king mackerel, I don't know for sure, but it seems like I read more about it. There's something shifting.

SB: Right.

DB: Fish are shifting. We're certainly not seeing--we certainly don't see the menhaden we saw back in the [19]60s and '70s. We used to see, I remember the first time I saw a school of menhaden, I thought it was some sort of, something had broken loose, it was an algae drift or something, seaweed, and it's blocking--and a fish cut through it and all these menhaden jumped out of the water and, 'Oh, man, that's a school of fish!' And they were everywhere. You just don't see that anymore.

SB: What, I guess, what do you think--just ad-libbing to this question--what are your thoughts on, like, ecosystem tran--or, a wanted transition to ecosystem-based management as

opposed to single-species?

DB: I'm all for trying. I'm a skeptic about it actually working, but I think we gotta try. Especially for stuff like forage species, where they have a role other than surplus production. You know, they--every--in a sense, every menhaden matters, because they're all, if they're not contributing to the spawning stock or reproduction, they're getting eaten, which is as important a role. But--and I think, we've gone further than I thought we would in my lifetime, so I think it's a good effort, but I think we know each trophic level, we know a good bit about limnology, we know a good bit about zooplankton and phytoplankton and about the things that eat them and the things that eat the things that eat the zooplankton and phytoplankton, but we don't know anything about the interactions between those different trophic levels; I'm not sure we'll get there any time soon, but we need to try. I think it's a worthy effort, but I don't look for any great breakthroughs.

SB: Yeah, it seems to me that most of us, I guess, the most comprehensive work I've seen has kind of been like, in Chesapeake Bay where they had all these folks focus on menhaden and striped bass and, you know, croaker. So, they've got all of those surveys and all that, all the brains up there looking at that. But even then, I mean, that's just a one small piece.

DB: Yeah, they did the multi-species V.P.A. [Virtual Population Analysis], the model, the first model where they modeled the effect of weakfish, bluefish, and striped bass on menhaden populations. In one of the first iterations, if you depleted menhaden, the first thing that went away was weakfish, which is exactly what we've seen. So I always thought that was sort of telling, because they happened to--as I understand it, as menhaden decrease and those striped bass died, you basically have this population of striped bass that spends the summer off of Massachusetts and the winter off of North Carolina, Virginia, and as it's moving down the coast

in the fall, that's when the young weakfish are going out of the inlet. And if they don't have menhaden to eat, they eat whatever they can, they're eating weakfish. So that would explain the rise in natural mortality and the lack of weakfish.

SB: Let's see, so moving on, couple more questions. What, if anything, should be changed to ensure sustainable fisheries and healthy coastal ecosystems?

DB: Well.

SB: I guess I should've said this in the beginning, but if you want, if you want--and you've done this pretty well--but if you want to, like, rephrase that question in your response so they can use it. [Laughs] That's kind of a big question anyway!

DB: [Laughs] That's right! 'Why is there air?' Um [pause] well, clearly the sustainable fisheries, there need to be metrics that they can be measured by, they have to manage to a standard, not just to the best that they can. They need to manage to the standard, and if they don't meet it, they need to be taken to task for that. And by 'they' I mean the [Marine Fisheries] Commission and the [Marine Fisheries] Division, so that citizens can have an effect on marine fishery management and help the coastal ecosystems. I mean, that's just a whole 'nother ball of wax.

SB: Yeah, it's water quality, development--.

DB: Development. You know, we--I think one of the early iterations of the Fisheries Reform Act was, there was an--as I remember, and I think Melvin Shepard was part of this, it actually gave the Marine Fisheries Commission the authority over coastal development, as I remember. And of course, that got booted pretty quick in the process! [Laughs] But there actually was one interaction, or were some part of coastal development, but it was pretty broad-reaching and it was a recommendation the fisheries, the Moratorium Steering Committee, and it got

booted out pretty quick. It didn't even make the first cut, I don't think.

SB: I would imagine so. So, two questions left: what, if anything should be changed to assure sustainable coastal economies and communities?

DB: If the economics will support it, they will be sustainable. I don't know how you change things to make something that might not be economically-supportable to keep it there. I'm not sure how you would do that.

SB: Yeah, I mean, market forces are gonna--.

DB: Market forces are gonna drive it, and you're not gonna change that, I don't think. So you, I mean, in order to be sustainable, they'll have to adapt to the current market forces and not the other way around.

SB: So I'll just ad-lib to this question: what do you think, I mean, I guess if you look at the numbers, describe how recreational the numbers of licenses--since we have that now--over the last several years, has it, it's kind of increased? Or it's been relatively stable.

DB: It's been at least stable if not increased, 'cause I think nationally, it's decreased during the recession. And I think recently it's either stabilized or started to increase again, but don't quote me on that. I haven't looked at it.

SB: I know some of the, like, off-shore trips and stuff like that went way down, for-hire and stuff like that, and even private, off-shore trips went down like 2008, when the economy hit.

DB: Yeah. Well, that's the one thing we're finding: as popular as it seems to be that off-shore special like red snapper and gag grouper are, what we found, if you look at the number of trips, is less than ten percent of the trips are greater than three miles off the beach. So in a survey like the Marine Recreational Information Program, M.R.E.P., it doesn't adequately sample those things. It's like they do, N.O.A.A. [National Oceanic and Atmospheric Administration] really

should have come to the forefront and said, 'we need an off-shore strata, we need to identify these people and sample 'em.' And that's what's happening in the Gulf; they've created these off-shore permits to have a universe they can sample from.

SB: We're, you know, we're working with D.M.F. [Department of Marine Fisheries] to create some, or pilot some like infographics, kind of taking some of their annual reports and making a picture out of it. And just one of the things that we, I noticed from the last, from--not the stock status report, but the landings--if you got the top five species by weight, are all like off-shore, you know, tuna, mahi, you know. And those are a very, like you said, those are a small segment of trips.

DB: M hm.

SB: And then, the numbers, the landings by numbers, you know, spot, bluefish, those are all obviously more--

DB: In-shore.

SB: --in-shore.

DB: That's right.

SB: You know, and of course, the species that people are targeting when you ask them what they're fishing for, you know, drum, flounder, trout. Those are all in-shore type things. So it's definitely, you know, a tale of two, you know, two fisheries. Just depends on which way you look at it in terms of pounds or numbers, you know.

DB: That's right. And do it, to expect a broader-based survey to be able to adequately sample something that occurs less than ten percent of the time is foolhardy. So, I mean, it's something that should be addressed.

SB: So with that, I'll just say, is there anything else you'd like to share or add, I guess

regarding the Fisheries Reform Act, the first version or they're gonna move forward with--I don't know what, I think part of the goal of this project was to capture thoughts from the people that were there so that, when this does come due for reissue, people do talk about it again, that they don't, you know, aren't reinventing the wheel in terms of looking at things.

DB: Well, you'd have to remember what it was like before the Fisheries Reform Act, where you would just have a problem and you'd throw a regulation at it. These regulations were often taken in a vacuum and there were times when regulations the commission passed and what became law were not the same, either. I mean, it was just sort of, almost like the Wild West. And so, changing to the fishery management plan concept, I think, was like I said, probably the most important thing, and provide for at least a framework for rational management. There needs to be a metric that they need to be measured by, but I think--that's the big thing, is to understand what it was like before, because they were, they would just do a regulation on scarpfish, wouldn't relate it to any particular species but you couldn't have but so many pounds of scarpfish in operation. You know, it wasn't through a management plan, and then the next meeting they'd talk about shrimp trawling or crab trawling or some whatever. So, it was all over the place. It was hard to have any kind of rational management.

SB: Um, just I guess a follow-up to a previous question, I was thinking what was the--if you remember--what was the economics like of commercial fishing and recreational fishing at the time prior or, I guess, on the cusp of the F.R.A. in the mid-[19]90s?

DB: I don't recall, but the rule of thumb was if you looked at economic impact, the recreational fishery was about ten times the commercial fishery. Which is not a reason not do anything, anything one way or the other, but it is, it just shows the relative importance of them. But I don't recall, exactly. The one thing I do recall was--and this is, again, my hazy memory--

but seems like there were 7,000 commercial fishermen at the time, and I remember half of them did not report any income, and I think 1,500 of them reported more than five or ten-thousand dollars, I can't remember. So, the pool of true commercial fishermen who made a living at it was very small.

SB: Yeah, and that, I mean, that's similar to today, I don't know the numbers but, you know, seems like only a percentage of the licenses that are active have landing attributed.

DB: That's right.

SB: Okay. Well, I guess that concludes our interview. Do you want to share anything else?

DB: It seemed like that was--oh, imported seafood!

SB: Yep, yep.

DB: Again, that's driven by market forces. But I've often wondered if my grandfather sat around the table back in the 19--early 1900s, and said, 'Well, I'm not gonna eat a farm-raised pig. I'm only gonna eat wild pigs.' I mean, I wonder if they had those conversations.

SB: Right.

DB: I mean, like it or not, farm-raised seafood is the future. If we didn't have modern animal husbandry techniques, there wouldn't be a deer or turkey left.

SB: Yeah, I mean, ninety, ninety percent of U.S. seafood's imported, about fifty percent of that is aquaculture. I mean, and that's grown by leaps and bounds. Wild-caught production's pretty much stable, if declining for some species. It's reached--in other words, it's reached pretty much to capacity.

DB: Yeah.

SB: So there's not really gonna be much more growth, I don't--they're not gonna find

any new, uncovered stocks anywhere. But could be said more for aquaculture, though.

DB: That's right. Anyway.

SB: Okay. Alright.

[END OF INTERVIEW]