NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
VOICES ORAL HISTORY ARCHIVES

IN PARTNERSHIP WITH
NOAA HERITAGE AND THE NATIONAL WEATHER SERVICE

AN INTERVIEW WITH LOUISA KOCH
FOR THE
NOAA 50th ORAL HISTORY PROJECT

INTERVIEW CONDUCTED BY
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Molly Graham: This begins an oral history interview with Louisa Koch for the NOAA 50th oral history project. Today's date is January 14, 2021. The interviewer is Molly Graham. It's a remote interview with Louisa in Silver Spring, Maryland, and I'm in Scarborough, Maine. You talked last time about coming into the position of Director of Education for NOAA [National Oceanic and Atmospheric Administration], and a little bit about the background of the office, its efforts, and some of your initial priorities. It seemed like you really wanted to connect NOAA educators across the agency. You also talked about softening the boundaries between outreach and education. I was curious what you meant by that. Can you say a little bit more about that?

Louisa Koch: Yes. For a lot of people, education is woven into their workday, along with a lot of other things. So for some people, it can be talking to the public as a full-time job. They may weave conversations with people from outreach, basically, just trying to get them intrigued to something about NOAA, to education, where they're trying to dig in a little bit and share information to help them better understand the topic that they're interested in, to even more like training extension, giving advice to a fisherman about bycatch, where you've really gone beyond a general education mode into something fairly specific and tangible that might affect the individual's day-to-day work life. These things may be back and forth in a day many, many times. Then, some people might be in a lab most of the day, and every couple of weeks, maybe they go out, and they do some kind of a public meeting, where their role is to do outreach. Maybe their role is to do education. Maybe again, it spans education, outreach, and extension, all three, even though that's not in their job description or in their performance plan. So we want to make sure we are supporting people that are getting the word out about NOAA. We're under the education umbrella, but the statute that authorizes us is very broad, and it clearly supports a wide range of NOAA activities. We want to make sure that we support the community in all the things that they want to do as much as we can. Obviously, our core mission is education, but outreach and training – NOAA has cadres of people trained on extension, and we have connections with them, and we support them when they're doing the education and outreach roles. Outreach really doesn't have a home other than education, so it more naturally falls into our bailiwick.

MG: You mentioned the statute. Is that the 2007 Competes Act?

LK: It is. The America Competes Act of 2007. Then it was authorized again and again and again. So we have gotten updated guidance, but it's an incredibly valuable authority. It's broad, it's clear, and it's compelling that every NOAA employee has a mandate to educate.

MG: Can you tell me a little bit about the history of that bill and how it came to be?

LK: It was a bipartisan bill. It touches on research and education for many agencies. The idea was that STEM [science, technology, engineering, and mathematics] education was very important, and supporting agencies and being able to better explore science, technology, engineering, and math, and then to better organize it, and have better guidance about what they're doing and why. Then, to use that information and connect that with the public through a wide variety of means.

MG: Are there specific provisions of that act that detail exactly how to go about implementing it?

LK: Thankfully, it's sort of an old-fashioned authority. It doesn't give us a lot of explicit guidance. When legislation gives you explicit guidance, it can become outdated pretty quickly, and it prevents you from adapting to situations as they evolve. There are some specific sections. For example, in recent bills, we have some sections on evaluation. We have some language on citizen science, crowdsourcing. But in general, it's very broad language, and it tells us to go out and do important things. It doesn't tell us how to do those important things.

MG: Is this a government-wide mandate?

LK: It's multi-agency. There is a citizen science authority that's government-wide. But America Competes is aimed at NASA [National Aeronautics and Space Administration], NSF [National Science Foundation], NOAA, and maybe a couple of other agencies.

MG: Are there specific programs that came out of this act in the Office of Education?

LK: We have used it to underpin the programs that we have. But we haven't started any new programs. We haven't started any new programs under America Competes.

MG: Okay. Something I wanted to ask about earlier when you were talking about reaching out to the educators – was it so that people doing education and outreach would go through your office and get the skills and a toolkit perhaps before they go out in the community? We're trying to do that with the Voices Oral History Archives and capture folks who are doing oral history, have them work with our office, and make sure they're properly trained before going into the field.

LK: Actually, we had a long debate about that because there were people in NOAA Education who really wanted to be fairly restrictive about what NOAA education and outreach meant and to create criteria for developing documents, to have any NOAA education resource be reviewed by a group of experts, and to be fairly restrictive. So we had long discussions about how top-down we should be about NOAA education products. Unlike oral histories, I think there are many ways to create education products, and different people resonate with different kinds of resources. Something that you might bring home for your kid to do as fun over the weekend might be very different than something you'd want to put in the classroom. So after lengthy discussions, we decided we did not want to have an approval process for official NOAA education resources. We have a website we look through for the very best resources that are available, and we make them available to people. We do create toolkits. We're thinking about creating checklists – if you're going to go into a classroom, here are things you might want to think about – for people that want to educate themselves about what that interaction might look like. But yes, we have not gone the restrictive route.

MG: When you talk about these discussions you were having, who was that with? Your staff?

LK: The way the education community works is the Office of Education is sort of the foundation for the conversations, and so we'll have conversations in there. Any important issue gets elevated to our coordinating committee, and they are a group of educators from across NOAA, and then they help us figure out how to present the issue and encourage dialogue about the issue with the broader community. Then we have those conversations with the Education Council. The Education Council has representatives from education programs across all of NOAA. That's where the formal decision-making takes place. Then, sometimes we go out and solicit input more broadly from the education community because lots of people are on the Education Council who are not actually Education Council representatives of their programs.

MG: Can you talk a little bit about the history of the Education Council? Did it form when this office formed? Tell me a bit more about their role.

LK: Yes. There was an education community before there was an official Education Council. But when Admiral [Conrad C.] Lautenbacher was the administrator, he wanted to formalize a structure for cross-cutting work within NOAA, and he established a lot of councils. That's when the Education Council became formalized, and a lot of the other councils: the Research Councils, the Observations Council, Oceans Council. Those were all formalized in the same process.

MG: What's their role? How often does the Educational Council meet? What are the things they're deciding on? I know that outside groups can present to them, but I wasn't quite sure why they would need to.

LK: Yes, so the Education Council, and I think most councils are open to anybody with NOAA credentials, a NOAA email. But they are closed to the public. We have to have public-facing materials to explain the organization and what its mission is, but all the detailed agendas and then the notes from the meetings are all kept within NOAA. I'm not sure I answered your question.

MG: I'm curious what their purview is, what folks present at the Education Council meetings, and then how they would make determinations.

LK: Yes. It starts with the Education Council, who creates the education strategic plan. They create the implementation plan. They provide metrics to track major outputs for education across NOAA so that we have performance metrics for the community outputs. We identify best practices. We create community products and resources. Our website is a good example of that. We have working groups that work on areas of common interest. We just fairly recently set up a community of practice around internships, so programs across NOAA that have internships can get together and talk and think about how to explore opportunities together.

MG: You're pinging lots of things in my brain. So there's a couple of things I want to ask about. First was, you mentioned strategic planning. Did your office revisit the strategic plan last year? I thought I had that in my notes somewhere.

LK: Yes.

MG: I was curious what that process was like.

LK: Yes. So America Competes asked us to create twenty-year plans every five years. So we've been on that cycle. We created our most recent strategic plan – actually, it was posted on the website yesterday. It's hot off the presses. We're going through the process of making it look beautiful because we consider it to be an archival document. So we're having some professional assistance in making that a more formally presented document. It basically lays out the goals of education and NOAA. It lays out the objectives. It talks about what it is we're trying to do, how we're trying to do it, and why we're trying to do it.

MG: How much did remote learning factor into 2020's strategic plan?

LK: We debated that a lot because it's a five-year plan looking forward. So really, we did it in the middle of the COVID year, but COVID wasn't the focus. So we talked a lot about the value of remote learning, the challenges of equity and inclusion, and lots of things that were in our minds because of COVID.

MG: I also wanted to ask a couple more questions about the first Competes Act. Did Science on a Sphere come from that mandate?

LK: Science on a sphere was developed by Dr. Sandy MacDonald, who was the director of the Earth System Research Laboratory [ESRL] out in Boulder. He actually just told the story of its conception. He was working closely with Vice President [Al] Gore on basically Earth system science and the need to better communicate about climate change and the ability of humans to dramatically alter the Earth's system. Gore kept saying, "We need something compelling. We need to be able to help people understand that the Earth is fragile, that the Earth is finite, that the Earth can be affected and is changing due to human impact." It took Sandy a while, but eventually, with a beach ball in his garage and some cameras, he figured out how to wrap images from four projectors onto a sphere in such a way that the image looks uniform. So the boundaries are over overlapping but integrate, and the lighting is mediated so that it's consistent across a fear. So you really get the sense that you're looking at the Earth from outside. It's an incredible exhibit, and it has become the iconic exhibit for NOAA to communicate Earth system science on. So it didn't come out of that. But it was around the same time, and the Office of Education has played a big role in helping to get that sphere out there in part through monies that we got from Congress connected to that same energy of wanting NOAA to educate.

MG: What about the Ocean Hall exhibit? Was that connected to this act or your efforts?

LK: Well, we were deeply involved in the Ocean Hall. Actually, there was funding given to NOAA to create an exhibit. That's sort of a funny thing, too, because it's so popular for members of Congress to create exhibits at the Smithsonian that they made it very difficult for members of Congress to give the Smithsonian money for specific exhibits. So they've gotten a little bit sneakier about it. They give money to other agencies to work with the Smithsonian to make explicit exhibits. And that's what they did. They gave NOAA a bunch of money to work with the Smithsonian to create the Ocean Hall. NOAA was deeply involved in that. Educators across NOAA were deeply involved, but it was actually led by OAR, NOAA Research.

MG: You also mentioned citizen science. I was curious if you could say what that is and the ways in which your office supports it.

LK: Yes. So that has a completely different trajectory. Dr. [Jane] Lubchenco was the administrator of NOAA. She was coming up to the end of her four-year stint as the administrator. She wanted to talk about her accomplishments. She saw one of her accomplishments being the promotion of citizen science. So the Office of Education was asked to coordinate that statement of accomplishment. We sent out an email across – I think it actually came out through the Education Council, but we asked them to disseminate it broadly. We got so many responses. So many people were interested. It was such an active chain of communications that we decided that we should create a community of practice. Our role is to basically convene the community and listen to them, hear what it is that they want, and then support that. Also, our citizen science lead in our office is also NOAA's representative to the interagency federal citizen science community, which is the same kind of thing. We create a conduit across the federal government.

MG: You also mentioned a couple of scholarship opportunities. I wanted to ask you about those. The first being the Hollings Scholarship. Where did that come from? Who was Hollings? What have you been able to do with that?

LK: Lots of people have had big roles in our education programs. The Hollings program is named after Senator Fritz Hollings. When he retired, they provided us funds to support the Hollings scholarship, and it's been an incredible infusion of talent into NOAA.

MG: Tell me how.

LK: Well, we bring between one-hundred-and-twenty-five and a hundred-and-fifty scholars a year into NOAA. They pursue their passion. They work with programs in every part of NOAA – Alaska to Hawaii, California to Maine. They bring a lot of energy. They bring new skills. They've done incredible work helping NOAA achieve its mission, and many of them are now becoming NOAA contractors and NOAA employees. It's really fun.

MG: Yes, it seems like a great entree into the myriad things NOAA does.

LK: Yes.

MG: Is the NOAA Graduate Science Program in your office?

LK: We have a program called the Educational Partnership Program with Minority-Serving Institutions; we call it EPP. Through that program, we have funded graduate scientists who come as master's or PhD students and work with NOAA. They come for internships, and then we hope that they also become NOAA employees. In a similar way, there aren't as many Educational Partnership Program scholars as there are Hollings Scholars, but they represent a diversity that's vital to the future of NOAA.

MG: I was curious about how those initiatives developed. When did the office recognize the importance of diversity and inclusion and implementing these types of programs?

LK: What happened there is that South Africa invited NOAA to come to advise on environmental education and on environmental science. They saw this as an area where they needed more domestic capability. So a group of representatives from the Commerce Department, including Robert Mallet from Howard University, from Florida A&M University – the leaders in the Black community that were promoting environmental science. [Editor's Note: From 1997 to 2001, Robert Mallet served as United States Deputy Secretary of Commerce.] They went, and they advised. On the way back, they were talking, and Robert Mallet, the Deputy Secretary of Commerce, said, "I think this is a capability we need to enhance in the United States as well. Clearly, this is an important area, and we should promote an initiative." So he worked with NOAA, and they created a proposal, and then he worked with the Hill, and it's been funded. It's filled a very important niche for NOAA.

MG: Yes, it's very impressive. It seems like you really understand how each line office operates, the different programs they have going on. How do you approach that? How do you keep up to date with the various line offices and what they're looking at in terms of climate change, tsunamis, storm prediction, etcetera?

LK: Well, I was lucky to work as a deputy in NOAA Research for close to ten years. They do so much amazing work across much of NOAA's portfolio. Also, as the Director of Education, we work across all of NOAA's portfolio. I'm also the National Team Lead for regional collaboration. There again, I get to work across NOAA's portfolio. For a little bit of time, I was the Deputy Undersecretary for Operations, and I got to work all over NOAA's portfolio. So I've really been very lucky to have lots of opportunities to come at the NOAA portfolio from different perspectives.

MG: Do you feel like you can feed all the mouths you have to feed?

LK: Sometimes it's overwhelming. But it's also a privilege. I feel very lucky to have the connections and the access that I have. I hope I'm able to make a worthy contribution.

MG: There was one program I kept reading about in doing my research: NAAEE. Can you say what that is?

LK: Yes. That's the North American Association for Environmental Education, and they are an amazing group in the US and Canada, and they're focused on convening environmental educators across the nation. They are an important partner of ours. They do great work. They actually have, in every state, coalitions of environmental educators that work together, and they try and promote environmental education across the country.

MG: I think it was last year that you did a brown bag webinar on "One NOAA." I was curious if you could speak to that a little bit. You talked about its history, how it was something John Byrne had talked about, but it was something that Admiral Lautenbacher really wanted to implement. [Editor's Note: John Byrne served as NOAA's Administrator from 1981 to 1984.]

LK: John Byrne's famous quote is, "NOAA only exists in the mind of the administrator." When he arrived at NOAA, he felt like he was the only hub in a wheel with a thousand spokes. It was not a very pleasant experience for him in a lot of ways. When Lautenbacher came in, when he was confirmed, he walked down the halls of headquarters, and the offices were empty because the leadership of NOAA was all political. It was one of the big changes that he made. He wanted to make sure that NOAA had strong career leadership who could carry it through transitions and ensure that there was a focus maintained and momentum maintained, and a focus on integration. I'm a big supporter of trying to make all the pieces add up to a greater whole.

MG: Is that happening in formal ways? Are there certain goals set out in order to connect the agency this way?

LK: So one of the reasons that councils were established is to create that integration in those key areas like education, like research, like observations. It's why it was actually Admiral Lautenbacher who created the Regional Collaboration Network. That was to create integration outside the Beltway so that NOAA actually became more integrated and able to address regional priorities outside of Washington, DC.

MG: I know it's probably hard to talk about every program and every school you you've worked with. But are there any that stand out to you or any that you want to discuss here?

LK: You have asked a lot of good questions. We've talked about Hollings and the Educational Partnership Program. So the two programs – I don't know if we've talked about the Bay Watershed Education and Training program or the Environmental Literacy Program. Those are the other two big programs we run in our office. The Bay Watershed Education and Training program is focused on formal K-12 education, primarily middle school, upper elementary, and high school. The focus there is to get kids out of the classroom and into the watershed, to understand the role of the watershed in their community. It can be going down –the classic experience is having kids go to a local stream, hopefully, to be able to walk to it from their school if they're in an area where streams are plentiful, and just to look at the stream, and to be able to bring little nets and to see if there's anything alive in the stream, and to see how clear the water is, and does it smell, and is there trash around, and just take a moment to think about how they connect with nature, how the watershed is a part of their community, and why taking care of the watershed is an important community value. We do lots of really fun things there. There are some great videos online, walking through how it's different in Hawaii than it is in Maine. The environmental literacy program really focuses on resilience. The goal is to try and help communities adjust to climate change. A lot of communities don't want to talk about climate change. Honestly, from an education perspective, talking about climate change is not a very effective approach because it's so overwhelming and daunting for so many people that the kids shut down, and the educators have a really hard time coping with it. It's hard to educate about climate change in a positive way. So resilience is a way that you can look at climate change, look at the impact that it's having on whatever aspect of human existence you want or the Earth system that you want, and then think about how can we combat climate change? How can we make our ecosystems and our communities more resilient? How can we make the ocean more

resilient? What steps can we take to both reduce the pressure and increase the ability to respond? So those are both very important programs.

MG: I'm aware we're running out of time. So I wanted to ask, looking back on your career so far, have there been certain challenges or hurdles for you personally or for the program?

LK: I have been blessed with many opportunities and not a lot of challenges. We were zeroed out of the budget by the [Barack] Obama Administration for several of our programs, and the [Donald] Trump Administration zeroed out the rest of them. So it would be really nice to be back in the President's budget. That's definitely a goal. But Congress has continued to provide strong support for us, and it really hasn't slowed us down.

MG: That's good. I wanted to ask if this is how you pictured your career unfolding. I'm always curious how people approach their career steps. I was thinking of the stories you told last time about being a river guide in the Grand Canyon to ending up in NOAA's Office of Education.

LK: I am not one of those planners. I'm definitely laid back about it. My image is, I get someplace, I look around, and I decide if I like it. If I don't like it, I keep moving. If I like it, I settle in and look around and see if there's someplace else I want to go. So I've just been incredibly lucky to get here.

MG: What did last year look like for you and your office during COVID with going remote and the stay-at-home orders? How has everyone been managing the program during the pandemic?

LK: So March 13, [2020] was our last day in the office, and my goal was to make sure that our people were protected. We have incredibly good support from the CIO, chief information officer. We all had computers that we could take home – actually, not everybody. We had a few people we had to equip, but most people were ready to go on day one. The rest, we sent them home, and then we worked with them to establish their connections and meet their equipment needs. It's incredible to me how seamlessly we've been able to make that transition. There have been a lot of casualties. Having our students have virtual internships, having our fellows have to interact virtually has definitely lessened their experience. But we've done everything we possibly could to make it as valuable as the time allowed.

MG: How do you think the rest of this year will unfold in terms of going back to the office and its next steps?

LK: When it's safe for our staff to go back in the office, we'll go back in. People who need more time will get more time. We've demonstrated the ability to do everything that we need to do remotely. I know a lot of people are eager to get into the office, and we're actually constructing new space. So we'll be moving into a completely new location. I'm hopeful that the vaccine will get out there, and we'll all be able to move forward together.

MG: Is there anything else you wanted to say about your career with NOAA before I ask you a little bit about your life outside of work?

LK: I have a husband and two daughters, who I adore. My daughters built me a rain garden for my birthday this year. I'm looking at it. It's out the window. It's actually not completely built yet. But they have a lot of blisters and sore shoulders to [show for] it. I'm lucky to have a nice home. I've had a lot of time in that home in COVID. It's wonderful to know that there'll be hummingbirds and flowers there for me this summer.

MG: How did you meet your husband? I imagine you both have really interesting conversations because there's some areas of his research that overlap with your experience in terms of analyzing government policies.

LK: Yes, for sure. For an interview that's almost over, you ask a lot of very good questions. My husband and I – I don't know if it's because we're together – we've always both had an interest in policy. But neither of us were focused on education when we met, and now we both have a significant focus on education. It's obviously the core of my career now. He has focused a number of research papers on the return on investment for early childhood education. So we're both very happy to be policy wonks and helping move policy in better directions.

MG: Good. Well, I really appreciate the time you've spent with me. I'm sure we could talk all day. Thank you so much again.

LK: Thanks very much, Molly. It's been a pleasure to talk to you. You asked so many good questions, and you're such a good listener. It was a pleasure to talk with you. Cheryl Oliver told me I didn't have to retire after completing the interview. So I was relieved to hear that.

MG: [laughter] But please stay in touch with what you're up to. I'm really a fan. It's great to know more about the history and inner workings of the Office of Education.

LK: Well, I do think there's a lot of connection between oral history and education. It's a form of educating, really. I would be happy to talk to you and whoever else in your office about how we can better connect.

MG: I think that's a good idea. We'll have to stay in touch about that, and also your transcripts and everything else.

LK: Sounds good.

MG: Talk to you soon. Thank you so much.

LK: Bye-bye, Molly.

----------END OF INTERVIEW----------
Reviewed by Molly Graham 2/1/2021
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