

EP. 2 : EFFECTIVELY COMMUNICATING SCIENCE

TRANSCRIPT

Kaitlyn Dirr 0:19

Hey there, my name is Kaitlyn Dirr and this is the NERR or Far podcast. On today's episode, we are going to be talking about some of the legislation and policy related to the NERRs, as well as the Coastal Training Program and the importance of effectively communicating science to those beyond the field.

Before we get into some of the legislation that led to the creation of the NERRs, let's review what the reserve system is and introduce NERRA, an organization that plays a big role in the success of the reserve system not only here in the southeast, but also nationwide. Here to speak on the importance of the National Estuarine Research Reserve Association is Keith Laakkonen, NERRA president and the Director of the Rookery Bay Reserve in Florida.

Keith Laakkonen 1:13

So, the research reserves are an amazing resource and today, the NERRs protect over 1.4 million acres of really important coastal estuarine lands in 24 states and Puerto Rico. The reserves have really been known for delivering really critical science to communities and how- and how this science can impact those communities and how they can adapt to changes over time. And so, what we say with reserves: we're "locally significant, nationally impactful", and all of us together are really moving the needle on national science and policy needs. And NERRA, of course, is what is supporting the research reserves. NERRA was created to advance the work and mission of the reserves and raise the profile of the NERRs. I said nerds, did you catch that? That's actually sort of sort of a slip there, that we talk about people at the reserves being nerds, and we actually are NERRs. But as far as NERRA goes, we really are a collective voice, and we can speak to Congress, we can speak to NOAA, we can speak to our partners all over the country on the important work that the reserves are doing, and really raise the bar in advocacy.

Kaitlyn Dirr 2:25

One very important thing that NERRA advocates to protect is the Coastal Zone Management Act, or CZMA. The CZMA was passed by the US Congress in 1972, and is an act administered by NOAA, the National Oceanic and Atmospheric Administration. According to NOAA's Office for Coastal Management, the CZMA is designed "to preserve, protect, develop, enhance and restore the nation's coastal resources". The Coastal Zone Management Act outlines three national programs, the National Coastal Zone Management Program, the Coastal and Estuarine Land Conservation Program, and the National Estuarine Research Reserve System (the NERRS). 2022 is the 50th anniversary of the Coastal Zone Management Act. Let's see how NERRA is celebrating this milestone.

Keith Laakkonen 3:19

So the Coastal Zone Management Act, or CZMA, (another one of those acronyms) is really, like you said, a cornerstone of what we do. And NERRA has been supporting and helping celebrate the CZMA on social media, but we've also been working with our members of Congress to advance the reauthorization of the CZMA itself. And some of the challenges that we're facing around the nation: we do need a stronger CZMA, one that enhances successful programs like the NERRs, delivers effective coastal management, improves community resilience in a changing climate, and benefits communities and economic sectors dependent on these healthy natural resources. So there's several national congressional efforts which are going forward, and all this is definitely amplifying the importance of the CZMA in its 50th anniversary.

Kaitlyn Dirr 4:09

Beyond the Coastal Zone Management Act, there has been a number of other efforts, both globally and within the United States, to protect valuable ecosystems like estuaries. An example of this is the US Biosphere Network and the World Network of Biosphere Regions. In 1983, the United Nations Educational, Scientific and Cultural Organization, or UNESCO, designated the Apalachicola Biosphere Region. Here to tell us more about biosphere regions is Anita Grove, the Coastal Training Program Coordinator from the Apalachicola Reserve in Florida.

Anita Grove 4:47

[Biosphere regions] are special places that in the US that are kind of set aside to preserve biodiversity, culture, and economic value. So they're a little bit different from a marine sanctuary. They want to work with the traditional economy to enhance it and enhance the kind of sustainable economy like oystering. It's a framework and it- it's projects that preserve biodiversity and nature but also enhance people's livelihood and the environment. They see humans as being part of that living community. It's just a little bit different way to look at it. And they also are learning places and places that science is done. But they also want to include- and I think the reserves try to do this too, so it works very well with our reserve designation- they want to bring the local people into the reserve or the biosphere region to help with the decisions that are made. There's 28 biospheres throughout the United States, and we are currently working together to build the biosphere network within the US and make it more well known.

Kaitlyn Dirr 6:09

Biosphere regions are nominated and maintained by national governments, but the great thing about them and what connects them to their purpose is that they're run by local organizations. Through the designation of these regions and partnerships between community members and public land managers to come up with practical solutions, the US and World Networks are achieving great strides towards a more harmonious relationship between humans and the natural environment. In summary, biosphere regions aim to: 1) promote biodiversity and healthy ecosystems, 2) inform local decision-making through a combination of education, research and open dialogue with the community, 3) create a balance

between the needs of people and nature, taking local culture and economies into consideration and 4) truly work as a network where regions globally can share knowledge and learn from the experiences of other regions. As Anita said, it is easy to see how the goals of these regions go hand-in-hand with the designations of the local reserves. Getting back to the NERRs, let's talk about one of the reserve focuses: coastal training. The coastal training program offers diverse training opportunities to the community, including courses as unique as "An Introduction to Shorebirds for Ecotour Guides". But how can these reserve programs help improve decisions about coastal resources in the Southeast and spark better relationships with local businesses?

Keith Laakkonen 7:42

That's a really great question and the coastal training program or CTP, as we call it, is a really unique piece of the National Estuarine Research Reserves. And we're really geared towards coastal decisionmakers. So we say the difference between coastal training program and education is people in the education program, they sort of pay to be there right? They pay admission to go to the ELC, whereas coastal training folks are paid to be there. They're actually learning skills to help them be better coastal decisionmakers as part of their jobs. So, what's a coastal decisionmaker? Well, that involves anybody of course from elected officials, city and local planners, folks from the water management district, people who issue permits... realtors are very important coastal decisionmakers because they understand what's going on. And as you said, even people like the ecotour operators. And so, by hosting these programs at the reserve, the CTP program is able to get information in professionals' hands that will make them better understand how they also have the ability to protect places like Rookery Bay and our coastline.

Kaitlyn Dirr 8:47

The Coastal Training Program works to promote scientific understanding amongst a variety of different decision-making audiences in coastal communities. Erik Smith, the manager of the North Inlet- Winyah Bay Reserve in South Carolina, is here with more on the importance of effectively communicating science to those beyond the field.

Erik Smith 9:07

Effective science translation and communication is really central to what we do. Sure, we like to do research and train students and publish papers and get it out there in the scientific literature. But science in a vacuum, science just published in those journals that only scientists read is not enough. We need to get that scientific knowledge and understanding into the hands of the public, into the hands of the decision makers as we like to call them (that's the primary audience of the Coastal Training Program) so that they can use the best available information to make decisions on coastal management issues. We don't as reserves, as scientists advocate (push one position or another). But we've- really important to make sure that the decisions that affect all of us who live in the coastal zone are informed by the best available information. And so, the Coastal Training Program is really so important in being the vehicle to translate, disseminate, communicate science and our current understanding, facts to the

decisionmakers so we collectively as a society and as communities can make the best decisions for the coastal zone that we call home.

Kaitlyn Dirr 11:03

The ability to communicate science to those be on the field is crucial to informing coastal decision-making. It also plays an important role in fostering stewardship and a love for the environment in others. Here with more on being a good communicator and educator is Josephine Spearman, Education Coordinator for the GTM Reserve in Florida.

Josephine Spearman 11:26

I think it's really important because it helps your audience to- to actually not just get an understanding of what it is that you do and why it's important, but to feel connected. So I think a good communicator or educator not only informs but connects their audience to what they're trying to teach so that they care. So you know, when we bring students out here, we want to teach them about what an estuary is, what are the functions of it, but get them excited and like you know, get them holding that fish and they're like, "wow, that's so cool!" and "this is in my backyard?" and "I really, you know, felt connected with the animal ambassador, that the diamondback terrapin that we got to meet today". And so then they feel like almost like an ownership and then they want to protect this place. So I think- I think those are good things to keep in mind when communicating.

Kaitlyn Dirr 12:12

One of the most important questions that we have to answer in science is why should we care? Why should we care about the coastal zone? Why should we care about estuaries? Providing the answers to these questions, whether it be through coastal training courses, forming connections through experiences on the estuary, or drafting policy to conserve our coastlines, is what keeps these places beautiful and communities engaged in their protection. The NERRs play a priceless role in informing communities on the coast, and in the next episode, we will explore a number of coastal estuarine habitats and their benefits. Benefits we could lose without their study and protection. Until next time, I'm Kaitlyn, and this is NERR or Far: The Reserves Are Where You Are.