

## Policy 360 – Episode 73 – Hidden Hurricane Lessons for Policymakers

- Judith Kelley: Hello and welcome to Policy 360. I'm Judith Kelley, dean of the Sanford School of Public Policy at Duke University.
- News Announcers: Let's begin with the historic weather.... Alright, hopefully, hopefully you can all hear me right now. We've been in this storm, the thick of this storm for about 30 minutes.... Here in Wilmington at the airport, not far from where we're standing right here, wind gusts reaching 105 miles per hour at one point ... The preliminary rain fall totals from Florence are staggering. The national weather service says more than 30 inches rain was measured in Swansboro, North Carolina. That shatters the states tropical rainfall record ...
- Judith Kelley: At it's peak Florence was a category four hurricane and it brought winds and rain and devastating floods this past week to a good portion of the east coast of the United States. Leaders in towns and cities affected by the hurricane are attempting to get operations running again. And soon they'll likely be thinking about how their communities can do things differently so the next big weather event doesn't cause as many problems. My guest today is Betsy Albright. She's an assistant professor of the practice of environmental science and policy methods at the Duke Nicholas School of the Environment. Betsy studies how communities recover after devastating natural disasters. So she's busy these days. For one research projects she followed seven Colorado communities for three years, following the deadly floods there. So welcome to Policy 360.
- Elizabeth Albright: Thanks for having me on.
- Judith Kelley: So Betsy, you've said that when trying to recover from a natural disaster, there's a tension between recovering quickly, and recovering well. What do you mean by that?
- Elizabeth Albright: So, in the research we've conducted with collaborators at University of Colorado, we interviewed staff, officials. town officials, and the public in seven communities as you said. And what we found is people want their lives to get back to "normal" as soon as possible.
- Judith Kelley: Mm-hmm (affirmative).
- Elizabeth Albright: While that may not be the most resilient solution moving forward. And so there seem to be tension between more deliberative processes, analyzing past policies, looking for policy failures. Involving the public. Thinking about how things could be improved, strengthened and made more resilient. Versus getting back to normal.
- Judith Kelley: So are you talking about the state level, or the public response to the disaster? Or at sort of a human level?

Elizabeth Albright: I would say both. I would say primarily at the community member, as well as the local officials, mayors, town staff.

Judith Kelley: Mm-hmm (affirmative).

Elizabeth Albright: Many officials see the need to become more resilient. Although some communities viewed the failures of the extreme flood in terms of failures of infrastructure. So thinking about the flood in terms of dams and roads out. And thinking oh, if we replace these, if we will rebuild these, we'll be fine. Whereas some communities thought, hey maybe we should think about how we're living on the land, what risks beyond floods should we think about. There are issues of affordable housing that floods only make worse.

Judith Kelley: Right.

Elizabeth Albright: Issues of healthcare, after a disaster. It's known issues of domestic abuse increase. So thinking about floods not only in terms of the amount of rainfall, and infrastructure, but cast more broadly in terms of risks across sectors of a community.

Judith Kelley: So can you tell us a little bit more about the study in Colorado? About the disaster that struck there.

Elizabeth Albright: Right. So in September of 2013, they just had their five year anniversary of the event. In the front range of Colorado about, in some areas 20 inches of rain fell over a three-day period.

Judith Kelley: Mm-hmm (affirmative).

Elizabeth Albright: Along with that, there were some dam breakages, and overland flooding, and three, well more counties, and we studied three of the most affected, or most damaged counties, and seven communities. And those counties, so this study was funded by the National Science Foundation. And we collected documents for three years after the flood, in each of the communities, all flood related documents. Interviewed town mayors, town officials, staff related to flooding. And conducted surveys both of town officials and the public.

Judith Kelley: And these local communities, they have a lot of decision making power about where they're building, right? Whether they want to build on the flood plains, or not. Is that right?

Elizabeth Albright: That's correct. Issues of zoning, land use, planning where to place parks, where to place critical infrastructure, are often times at the discretion, not fully, but a good part to the local officials.

Judith Kelley: So what were you trying to document, when you were collecting all this information?

Elizabeth Albright: So what our main question undergirding much of the study, is do communities learn from experiencing disasters? What policies do they change? What policies don't they change? How do they involve the community in these decisions? And does that affect the future direction, how they adapt and learn from the event?

Judith Kelley: Mm-hmm (affirmative). I mean it's interesting here in North Carolina, we don't have to go that many years back since we had a catastrophic event, similar to what we've just had now.

Elizabeth Albright: Correct.

Judith Kelley: Did any learning take place in that period?

Elizabeth Albright: One of my main concerns in North Carolina about Florence, is many of the communities are very much still recovering from Matthew.

Judith Kelley: Right.

Elizabeth Albright: Many of the communities haven't received full funding from FEMA after Matthew.

Judith Kelley: Right.

Elizabeth Albright: Much of their towns, you know may have lost a third of their population who haven't moved back. So thinking of issues of repetitive major events, as well as the history and the level of poverty in many communities in our coastal plain. As well as issues of institutionalized racism and as well as environmental concerns of concentrated animal feedlot operations, and other hazards on the plain.

Judith Kelley: Sure. So we go back to Colorado. So if you look at the different communities you studied there, did they respond very differently? Was there variation in what you observed?

Elizabeth Albright: Yes, there was great variation in what we observed. The level of damage across the seven communities varied. As well as the resources available to the communities. Both the community itself, and community members varied across communities. And so while one town, what I would say is a fairly blue-collar, lower medium household income community, really struggled with the lack of resources in response to the flood. Had to rely much more heavily on the state. Both in terms of resources and expertise to help them move forward.

Judith Kelley: Right.

Elizabeth Albright: Compared to Boulder, Colorado which is much more highly resourced, and have already been thinking about issues of resilience. In terms of their planning. So very different responses there. And than the community of Lyons, was, experienced the greatest damage across the seven communities. And although

the community members are highly resourced, highly educated, the town itself was very devastated, and didn't have a large staff before the floods. But we actually saw the greatest level of learning there, where because they didn't have a large number of staff on board, they brought in community members and developed seven task force of them, to basically replan their community.

Judith Kelley: Mm-hmm (affirmative). So you talk about ... I mean the thing that struck me when you're talking about the differences in the communities, how well resourced they were. How rich they were. And the one thing about we're hearing, now in the aftermath of the floods we've just observed here, is how they disproportionately hurt the poor. But it sounds like you're talking about the recovery process also being very disparate, according to wealth levels?

Elizabeth Albright: Correct. We found that it's a function of fiscal resources. But beyond just fiscal resources, often the capacity of the local government themselves.

Judith Kelley: Mm-hmm (affirmative).

Elizabeth Albright: Do they have staff on board to process the FEMA reimbursements, to apply for grants both government and foundation? Do they have the technical expertise to do so as well. So it's not only a matter of fiscal resources, but staff resources, and communities members ability, which again is a function of their own resources, to participate in recovery processes going long term.

Judith Kelley: Did any of the communities you observed there, take the chance to really make drastic changes to their zoning or planning?

Elizabeth Albright: The one that I would think that did the most effectively again, is Lyons. It's a fairly small community that was highly devastated. In some of the communities, a specific neighborhood would be affected, but maybe not affected across the whole community. Lyons downtown was ruined.

Judith Kelley: Mm-hmm (affirmative).

Elizabeth Albright: And you know after the event, I'm not remembering how many days after, but they held public meetings, and more than 500 people attended. And then from that starting point they then developed these community task force, which were a mix of community members and staff. To really think about how, you know where should the library go? What are the issues with affordable housing? What about healthcare? What about transportation? And had task force for each of those sectors.

Judith Kelley: Right.

Elizabeth Albright: To really think about where can we get grant money? How should we redevelop? How can we move to more renewable energy sources? So really

thinking. Came up with a recovery plan, which very few the other communities did.

Judith Kelley: Mm-hmm (affirmative). So it seems like these kinds of natural disasters, really are opportunities for local leaders to step forward and show their skills, and be creative.

Elizabeth Albright: Ideally yes. And it's a great opportunity for communities to reflect on past policies. Past policies, land use plans. So anything that may have failed, and the hurricane may, or the flooding event, may reveal such failures. It's also a great opportunity, we heard lots of stories about communities working with other communities. So not only learning from the event itself, but learning from other communities who had experienced the event. Whether or not that's in another state or locally in the same county.

Judith Kelley: So speaking of learning, what do you think we can learn, now from your studying Colorado, from the people in Colorado? Here in North Carolina now.

Elizabeth Albright: What do I hope they will learn? Or what do I think they will actually learn?

Judith Kelley: What can they learn? And what do you think will happen? I guess both.

Elizabeth Albright: This is an excellent question. So while I put up Lyons as an example of more in depth learning with greater social learning policy learning, most of the communities that we met with displayed or demonstrated what I would call instrumental learning, or more incremental learning. Learning about FEMA processes. Learning about emergency response. But not really thinking about in depth, how we're living on the land. Kind of value focused ways to go forward. So what I hope for the coastal plain and communities that experience flooding, as well as those that don't, is to reflect on how they've developed to date. Where were their problems. I hope that they engage community members in discussions. No one knows what flooded where and when and what the problems are, better than people that are living there. And so I think it's critical to increase the number of voices being heard in the recovery process. So I'm looking to see if that occurs.

Judith Kelley: Mm-hmm (affirmative).

Elizabeth Albright: But I also think that that's really resource dependent both on, for community members to be involved, one, they still have to be around. They have to have time to do so. So obviously that's you know, that's a struggle as well.

Judith Kelley: Yeah. So, on a sort of related note, after hurricane Joaquin-

Elizabeth Albright: Mm-hmm (affirmative).

Judith Kelley: Brought so much flooding to South Carolina in 2015, you talk to people about climate change. And the severity of storms which of course is related to how frequently we might be experiencing and reexperiencing these events, and about learning. When you spoke with them you were surprised about what you learned about climate change and their attitudes. Can you tell me a little bit about that?

Elizabeth Albright: So after Joaquin hit in 2015, along with collaborators and students we went down to interview and survey flood survivors, and ask them about their experiences and their beliefs about climate change. The one thing that jumped out at us in analyzing the data is I had gone in with the hypothesis that if you experience an extreme event that you would be more concerned about climate change. And we actually didn't find that result. Not it's not quite as simple as that. If you were in a community that experienced climate change more broadly-

Judith Kelley: Right.

Elizabeth Albright: Your propensity to think climate change is a problem did increase. But if you were individually affected it didn't seem to matter. And that was similar to findings in Colorado as well.

Judith Kelley: So when you experience a natural disaster, you're not necessarily more inclined to think that climate change is a problem.

Elizabeth Albright: Yeah correct.

Judith Kelley: You sort of ascribe it to, I don't know, cosmos.

Elizabeth Albright: A one off event.

Judith Kelley: A one off event. Yeah. Well it would be interesting to go out and figure out whether people in North Carolina having now experienced it twice, whether it starts to hit home at some point. Unfortunately this seems to be a time where your work is becoming more and more relevant. Which is, it's a wonderful thing that you have done that work and can comment, but of course the underlying cause of it is tragic. But we hope that it can be of some help to policymakers who are in the midst of trying to deal with the effects of hurricane Florence, and hopefully also, that we can do some forward thinking about things we can and should be doing, and not just for places that have already been hit, but that we can imagine would be hit in the future. So thank you very much for talking with me today Betsy.

Elizabeth Albright: Thanks for having me on.

Judith Kelley: Betsy Albright is assistant professor of the practice of environmental science and policy methods at the Nicholas School of the Environment, at Duke

University. We'll have a link to her Colorado study that we discussed, here on our website [policy360.org](http://policy360.org). Thanks for joining us, I'm Judith Kelley.