

**GUEST SPEAKER:** Now good morning, Navajo Environmental Agency members. Given the proposed revitalization of the nuclear power industry and the hints that uranium mining might be revitalized in the region, there's a growing concern amongst the agency members regarding what this means for us, especially given the controversy of historical precedence happened in this area in the 1960s.

I'm here today to explain, amongst the various measures that we are implementing, why local knowledge should be given serious consideration and why the, and why we should actually be involving the local members of community in the process of developments of uranium mining. Now firstly, the involvement of local knowledge improves and enriches the scientific process. Problem framing is an inherently subjective process, and it's not something that science can't solve on its own.

When we look at, what exactly are the problems, who are the people who are exactly going to be affected, and what do they think about it? These are questions that don't lie in science, but rather in the people. And that's why we must move away from thinking about a positivist view of science, that science holds all the answers, and involve the people and what they think about it.

And secondly, we understand from many stories in history that science is inherently uncertain. There are uncertainties involved in quantifying effects of various measures. There are uncertainties involved in determining what impacts that a particular activity, in this case, uranium mining, will have on the future generations. And therefore, look and one brings in an important element that science is not able to.

And this is ultimately patterns and trends in time and space that people live in the area have been observing over decades and over a large area. Ultimately, if you bring in scientists to examine their environmental impact of uranium mining, what will be captured often tends to be a screen shot, a shot in time of what actually is going to happen. Whereas these people have had the benefits of decades of experience, and they will be able tell us what's most likely to happen over time and space.

And lastly, democratization-- The uranium mining activities that are being taken do not involve only the scientists or only the industry members but also the people. And it's important to

ensure that their views are being heard and are being taken into account in the scientific process. Of course, there will be opposition to such views. Firstly, people might say that in the past, the reason for these problems were that proper rules and regulations were ignored, and the adverse impacts were actually minimal.

I would argue that the reason why proper rules and regulations were ignored is the fact that these people were not actually involved in the development of these rules and regulations. And also, there is a false dichotomy between scientific knowledge and local knowledge that actually, where people think that scientists are the only ones that are qualified to come up with good science. Whereas people who have not been trained in this area would not be able to do so.

Studies have shown in history that a lot of this view actually stems from the fact that people aren't used to the language and the technical terms used in science. But when that barrier is crossed, that people, given their critical thinking skills and their reasoning skills, are equally able as trained scientists to be able to contribute to the discussion. So ultimately, how should we ensure that local knowledge is taken seriously? How should we incorporate this?

This involves a mindset shift. Local knowledge does not seek to supplant scientific knowledge but rather strengthen it. We need to move away from this false dichotomy and allow locals and scientists to sit at the table as equals, not because they are equally good at something, but because they bring different things to the table that are of equal value.

We also would like to recommend that boundary workers be searched for and hired to actually take part in this process-- "boundary workers" meaning people that are not only able to communicate with those on the scientific side of the boundary but also with the local side of the boundary. These might be people, locals who have been trained in science and who not only understand the scientific culture but also the local culture.

At the same time, people, just because something is local knowledge does not mean that it is right. So in that sense, high standards have to be expected of the presentation and gathering of local knowledge, not in terms of the use of very formal technical language, but in terms of critical thinking and reasoning. And only when these scientific standards, these high standards are enforced on our local knowledge will they be taken seriously by the scientists.

And ultimately, this entire process is as much a cultural process as it is a scientific process. It's not just about the scientific methods that we use, but also in terms of leveraging the cultural

and social elements inherent in the community. For example, we might look at the social hierarchy in different regions. And this varies, actually, from community to community, from town to town.

Is there a central figure of trust that we can bring into the discussion? Do we have to forge unity between both locals and the scientists? And are there certain social practices that might need to be avoided or adhered to in terms of working, or getting locals and scientists to work together?

So ultimately, our agency's role is to avoid the events that happened in the 1960s. And I believe that one way of doing that is to actually bring in local knowledge. Not as a form of opposition to what the scientists have been doing, but as enhancement to their work, to enrich it and to ensure that whatever solution is worked out is in the best interest of both the community and the industry. Thank you.