00:04

I guess all of you have a smartphone or an iPhone, and this morning, probably you checked on the weather, if its going to be rainy to carry your umbrella, if it is going to be sunny to use your sunglasses, or if it is going to be cold to have an extra coat. It's going to give you, sometime, good information and sometime not. Let me tell you, my best app is my grandmother.

00:37

(Laughter)

00:40

She's called Mamadda. She can tell you not only today's weather but she can predict the next 12 months, if it's going to be a good rain season or not. She can tell you just by observing her environment, by observing the wind direction, the cloud position, the bird migration, the size of fruits, the plant flowers. She can tell you by observing the behavior of her own cattle. That's how she knows better the weather and the ecosystem that she's living in.

01:22

I'm coming from a pastoralist community who are cattle herders. We are nomadic. We move from one place to another one to find water and pasture. We can move up to a thousand kilometers, the size of California, within one year. And this life helps us to live in harmony with our ecosystem. We understand each other. For us, the nature is our supermarket, where we can collect our food, our water. It's our pharmacy where we can collect our medicinal plants. But it's our school, where we can learn better how to protect it and how it can give us back what we need.

02:13

But with the climate change impact, we are experiencing a different impact. In my community, we have one of the top five fresh waters in Africa. It's Lake Chad. When my mother was born, Lake Chad used to be about 25,000 kilometers square of water. When I was born, 30 years ago, it was 10,000 kilometers square. And actually now, it's about 1,200 kilometers square of water. Ninety percent of this water just evaporated, disappeared. And you have more than 40 million people living around this lake and depending on it. They are pastoralists. They are fishermen. And they are farmers. They do not depend on the end of the month's salary. They depend on the rainfall. They depend on the crops that are growing or the pasture for their cattle. The shrinking resources, you have many communities that are fighting to get access. The first come is the first served. The second have to fight unto death.

03:46

So climate change is impacting our environment by changing our social life, because the role of man and woman in this region, it's different. Man is supposed to feed his family, take care of his community, and if he cannot do that, his dignity is under threat. He cannot do anything else to pay it back. So climate change takes our men far away from us. That is the migration. They can migrate to a big city where they can stay for six or 12 months, where they get a job, they can send back money. If they didn't get it, they have to jump into the Mediterranean and migrate to Europe. Some of them die there, but none of them stop going.

04:54

Of course, it's sad for the hosting country, who are developed countries, who have to adapt to host the migrants coming. But how about those who are left behind, the women and the children who have to play the role of men, the role of women, who have to take care of the security, of the food, of the health of the entire family, children and old people? So those women for me, they are my heroes, because they are innovators, they are solution makers, they are changing the little of the resources into the big for the community. So those are my people.

05:43

So we use our indigenous people's traditional knowledge to get better resilience to what we need to survive. Our knowledge is not only for our communities. It's to share with each and others who are living with us. And indigenous peoples around the world are saving 80 percent of the world's biodiversity. That's the scientists who say that. Indigenous peoples in the Amazon, you can find the most diverse ecosystem, better than the national park. The indigenous peoples from the Pacific, the grandma and the grandpa, they know where to get food after the hurricane hits them. So the knowledge that our peoples know is helping us to survive and helping other peoples also to survive the climate change impact. The world is losing. We lost already 60 percent of the species, and it's increasing every day.

07:00

So one day, I took a scientist to my community. I said, you are giving the good weather information through the TV and radio, but how about coming to my people? And then they come, they sit around, and suddenly, as we are nomadic, we just start packing our stuff, and then they say, like, "Are we moving?" I'm like, "No, we are not moving. It's going to rain." And they're like, "Oh, there's no cloud. How do you know it's going to rain?" We're like, "Yeah, it's going to rain." We pack our stuff. Suddenly, heavy rain starts coming, and we are seeing the scientist running around, hiding under trees and protecting their stuff. We already packed ours.

07:47

(Laughter)

07:50

After the end of the rain, the serious discussion starts. They say, "How do you know that it's going to rain?" We say, "Well, the old woman observed the insects taking the eggs inside their homes, and while the insect cannot talk or watch TV, they know how to predict to protect their generations, how to protect their food. So for us it's the sign that it's going to rain in at maximum a couple of hours." And then they say, well, we do have knowledge, but we do not combine ecological knowledge and weather knowledge all together. So that's how I started working with meteorological scientists and my communities to give better information to get peoples adapted to climate change.

08:48

I think, if we put together all the knowledge systems that we have -- science, technology, traditional knowledge -- we can give the best of us to protect our peoples, to protect our planet, to restore the ecosystem that we are losing.

09:10

I did that in another way, also. I used a tool that I really love a lot. It's called a 3D participatory mapping: participatory, because it can bring women, men, youth, elders, all the intergenerational peoples. Then they use science-based knowledge, and the community comes together, they build this map, they figure out all the knowledge that we have about where is our sacred forest, where is our water point, where is our corridor, where is the place that we move during each season. And these tools are amazing, because it's building capacity of women, because in our communities women and men cannot sit together. Men talk always, women just sitting there, but in the back. They are not there to take any decision. So after the men figure out all the knowledge, we say, well, you call the women, "Come and have a look." They say, "Yes, sure," because they've already done the first work.

10:20

(Laughter)

10:21

When the women come, and they look at the map, they're like, "Mm, no."

10:26

(Laughter)

10:27

"This is wrong. Here's where I collect the medicine. Here's where I collect the food. Here's where I collect --" So we changed the knowledge in the map, and we called the men. Well, they think about what women said. All of them shaking their heads. "They are right. They are right. They are right." So that's how we build the capacity of the women in giving them a voice in this 3D participatory mapping, so women get the detailed knowledge that can help the community to adapt. And man have the bigger picture knowledge. So when we put it together, this map helps them to discuss but to mitigate the conflict between the communities to access the resources, to share better these resources, to restore it and to manage it for the long term.

11:23

Our knowledge is very useful. Indigenous peoples' knowledge are very crucial for our planet. It's crucial for all the peoples. Science knowledge was discovered 200 years ago, technology 100 years ago, but indigenous peoples' knowledge, it's thousands of years ago. So why we cannot put all of these together, combine those three knowledges and give the better resilience to the peoples who are getting the impact of climate change? And now it's not only the developing countries. It's the developed countries also. We saw the hurricane. We saw the flood around all the places. We saw the fire, even here in California. So we need all this knowledge to come together. We need the people in the center. And we need the decision makers to change, scientists tell them, and we tell them, and we do have this knowledge.

12:31

We have 10 years to change it. Ten years is nothing, so we need to act all together and we need to act right now.

12:42

Thank you.

12:43

(Applause)