



Hope in a changing climate

Ethiopia: Trees for life

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I started research with this tree, at a time, about 21 years ago, at a time when people believed that it's very difficult to propagate this tree. So, what I did was, to start with, the reproductive biology of the tree, examine how the tree reproduces, how fruits are formed on the tree, and identify the male and the female individuals of the tree. Then I established, about 20 years ago, an in vitro system for easy propagation of this tree. Conifers have unique biological characteristics. And it is dioecious, which means the female and the male tree are separate individuals. So, it has a far-reaching implication when the propagation of the tree is considered. So, one has to be knowledgeable about the sexes of the tree. And once you establish this, then you also have to establish the distance between the sexes. It shouldn't be over 100 metres to have efficient pollination. 50 metres is very good. 25 metres is excellent. So, the closer the two sexes come together, the more fertile the fruits will be.

Climate change is better withstood with trees. You know, humans, no matter how intelligent we are, no matter how capable we are, with all our technologies, we are helpless in the face of climate change. We have not yet properly understood the miracles performed by trees. First, with converting energy, dissipating energy coming from the sun.

They convert this into chemical energy. They moderate. Imagine all this energy flowing from the sun falling on bare ground, imagine that being reflected into the atmosphere, we will literally be cooked.

We are here now at the Centre for Indigenous Trees Propagation and Biodiversity in Ethiopia. This is the first of its kind in this country. It started five years ago. So, this is a platform where our students take part in research and development. In ten years' time, I am sure that Ethiopians will plant more trees, we will have more trees on the landscape, we'll have more watersheds restored, more mountains covered with vegetation. But we need to keep in mind always that we have also to control our population, human population must be controlled. Animal population is also important, it has to be controlled. We have the largest cattle numbers in Africa, we are number one in Africa, maybe number ten in the world. So, we have to control this free grazing, we have to control cows, goats, sheep, so that we have more vegetation in our landscape.

Restoring this huge, vast landscape is critical for Africa, particularly for Ethiopia. You know, half of Ethiopia is mountain, and this mountain system is degraded. And this degradation of this huge landscape, huge mountain chain of Ethiopia, is critical not only for Ethiopia but also for the entire region. Consider Egypt, look at the Sudan, where 86% of the Nile flows to these countries. How can we support life in Egypt without restoring Ethiopia's mountains. So, this is regional, national and international.