

Lesson 3 One Planet, One Chance

Reading 1

The Earth in Danger: Climate Refugees

Host: Hello, everyone. Welcome to the special webinar, "The Earth in Danger." I'm your host Lisa Johanssen. What comes to mind when you hear the word "refugee"? Most of you would probably think of people who have fled their country because of war or political reasons. But did you know that climate change could also cause people to become refugees? Today, we have Dr. Maria Gomez, Dr. Benjamin Scott and Professor Junha Park, who will shed some light on the climate refugee problem. Can you start us off, Professor Park?

Prof. Park: Sure. Climate refugees are people who have been forced to leave their homes due to the effects of climate change. Perhaps this sounds like something that doesn't concern you, but we are all in danger of becoming refugees in the near future. A recent report predicts that approximately 1.2 billion people around the world could be without homes by 2050 as a result of climate change and natural disasters.

Host: That is a very serious situation, indeed. Could you tell us about the causes of climate refugees and give us some examples, Dr. Scott?

Dr. Scott: Well, the biggest reason for climate refugees is rising sea levels. Continuous global warming is melting glaciers, causing sea levels to rise. The Maldives is one of the lowest countries in the world and is facing a significant risk due to this phenomenon. The UN has even warned that the island nation is likely to sink underwater by the year 2100. Another island nation, Kiribati, located in Oceania, is experiencing a similar problem. In 1999, two of its islands went underwater, and all the remaining islands are predicted to sink within this century.

Dr. Gomez: Island nations are primarily at risk of disappearing, but coastal areas are not safe, either. The state of Louisiana in the United States is losing approximately 65 square kilometers of land every ten years because of rising sea levels. That is the size of 9,000 soccer fields! A 2016 NASA study found that certain parts of New Orleans, the biggest city in Louisiana, are sinking at a rate of 5 centimeters per year.

Host: So sea level rise is a really serious concern for islands and coastal regions. Are other areas safe?

Prof. Park: Not really. People living far away from the coast can also become climate refugees. As global warming gets worse, fertile land is turning into desert. This desertification leads to food shortages and migration. When people cannot grow crops on the land where they live, they have to move somewhere else in order to survive. For example, the Gobi desert in China expands more than 3,600 square kilometers every year, so people living in the surrounding areas have to migrate to other places.

Dr. Gomez: That's not all. Natural disasters are becoming more frequent and intense, creating more climate refugees. Outbreaks of wildfires have been steadily increasing every year. Extremely hot and dry weather conditions now occur at regular intervals. This results in frequent wildfires that destroy homes and lands of the local people. According to experts, an average of more than 200,000 people around the world have been displaced each year over the past decade because of wildfires.

Host: That sounds rather dreadful. Is there anything that can be done?

Prof. Park: Fortunately, yes. One of the leading countries addressing the climate refugee problem is the Maldives. As Dr. Scott mentioned earlier, parts of the Maldives are sinking into the sea. To prevent its people from becoming climate refugees, it constructed an artificial island named Hulhumale in 2002. If it were not for this island, over 50,000 people would have nowhere to go. Building on the success of Hulhumale, the Maldives has high hopes for the Maldives Floating City, the world's first floating city.

Host: That's really impressive! We are almost out of time, so does anyone have a final message for our viewers?

Dr. Scott: Frankly speaking, many of us often think of climate change as someone else's problem. But we need to recognize that it is a danger not only to climate refugees but to all global citizens. It is important to start thinking of climate change as everyone's problem and work together to come up with a solution.

Host: That's right. We all need to cooperate in this moment of global crisis. Today, we've talked about the causes of climate refugees and actions taken on the issue. In the next session, we will explore possible actions to battle climate change. Thank you for your time.

Reading 2

Don't Mess with Peat!

Say hello to peat. Peat is a type of soil made of dead plants that have not completely rotted. Now, that doesn't sound very appealing, does it? Don't be so quick to judge. Peat makes up large areas of peatland that does wonders for our ecosystem in battling climate change.

Let's find out how peat forms.

Under normal circumstances, when plants die on dry land, they rot away. During the rotting process, carbon(C) is released into the air. When it comes into contact with oxygen(O), it turns into carbon dioxide(CO₂). On wet ground, however, dead plants do not rot away completely, preventing the carbon from being released. The water preserves the plants, and they stay moist and turn into peat. Peat prospers in wet ground that is not well drained. It takes thousands of years for a large area of peatland to form.

Then, what is peatland good for? Peatland looks like useless land. It is too soft to build houses on and too wet to farm on. But peatland plays a vital role in our ecosystem — it is a natural storage of carbon. Peatland covers only three percent of the earth's surface, but it stores about a third of the carbon in the world's soils.

Without peatland, this carbon would be released into the atmosphere, resulting in the formation of a great amount of carbon dioxide. This would contribute to a rise in greenhouse gas levels and the acceleration of global warming.

Despite the important role peatland plays in the environment, people have been damaging peatland for their own profit. In fact, humans have already destroyed about 15 percent of the world's peatland. Even as we speak, some countries are draining large patches of peatland so that they can be used as farmland. There are even plans to drill for oil beneath the Congo peatland. But such actions will release a significant amount of greenhouse gases into the air, accelerating global warming.

We need to stop disturbing peatland so that it can remain a carbon keeper and not become a carbon releaser. Will peatland continue to be our friend against global warming or will it turn against us and become an environmental nightmare? The answer is up to us.