**PAESTA Podcast Series – You Asked, We Answered!**

**Episode 13 – What Causes Flooding?**

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Hello! It’s Payton Filippone here. I am a student at Penn State Brandywine and today I will be talking about flooding. I will be answering the question: “what causes floods?” Flooding is an important topic to understand because it affects many communities around the world every year. Let’s begin by learning what a flood really is.

The National Severe Storms Laboratory, or NSSL, says that a flood is “an overflowing of water onto land that is normally dry”. [1] National Geographic adds that flooding happens when normally dry land is “soaked” by an abundance of water. [2] Australian Government.com, which comes from Australia which is a country that has to deal with flooding just as much as the United States, says that flooding can be defined as “the covering of normally dry land by water that has escaped or been released from the natural confines of any lake, or any river, creek or other natural watercourse.” [3] Putting all of these definitions together can lead us to believe that flooding is when land that is normally dry is covered in extremely large amounts of water. But what causes this type of event to occur? Well, there are numerous answers to this burning question.

One extremely common cause of flooding is heavy rainfall. This happens when a natural and sizeable body of water is overflowing due to added water from rain. [4] According to the authors at the United States Geological Survey, flooding can be caused by “prolonged rainfall over several days, intense water over a short period of time, or a debris jam causes a river or stream to overflow and flood the surrounding area.” [5] As you can see, flooding can occur even without tremendous amounts of rain.

Another cause of flooding could be a break in a dam. This break could occur because of an earthquake or a poorly structured dam. For example, according to TIME Incorporated and author Kayla Webley, the South Fork Dam is a dam that is located in Johnstown, Pennsylvania. Unfortunately, it had broken open in the year eighteen eighty-nine and allowed twenty million tons of water to completely take over the town of Johnstown. Not even an hour had passed when a giant, thirty-foot barricade of water crashed down over the town. The dangerous water flowed at speeds of twenty to forty miles per hour. This catastrophe sadly killed over two thousand, two hundred people. If you would like to learn more about this tragedy, you could read a book called “Shelter from the Storm”, written by David McCullough. [6]

Some of the most deadly floods around the world take place in China. China is the home of the Huang He River, otherwise known as the Yellow River. This famous body of water got its name because of the yellow colored silt that makes up a major part of the riverbed. The most deadly flood that came from this river occurred in the year nineteen thirty-one. It flooded thirty-four thousand square miles and killed between one and four million people. As if taking these lives was not enough, the flood also left eighty million people homeless. But what caused this tragedy? What started the reoccurrence of this awful destruction? Well, sometimes, the famous, yellow silt would accumulate to the point where there would be no more room in the river for the water. Silt is fine sand that is carried by water, but the water is unable to go through it. Since the water cannot go through it, silt can act as a blockage when there is too much built up in one spot. [7] Clearly, this is another natural cause of flooding. [8]

Floods can affect humans and their ways of living in a variety of ways. For example, National Geographic states that floods can be extremely destructive. Objects as large as houses, trees, cars, and even bridges can be lifted up and taken away from where they belong by a powerful flood. [2]

Overall today, we learned a lot about floods. We learned what a flood really is, how floods affect humans, and, most importantly, we answered the original question of “what causes floods?” I hope you have all enjoyed this podcast and that it has answered all of your questions. Thank you for listening and have a great day!

*(This audio was recorded by Payton Filippone on April 9, 2016)*

**Works Cited**

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