

CONNECT to the topic page 112

Journalist: Although Hurricane Katrina struck New Orleans many years ago, people are still rebuilding their lives. What has been your family's experience?

Katrina survivor Tanya Green: We're fine—I mean, our house is fixed. I'm working again. But the memories of those first few days, and the aftermath, they really haven't faded.

Journalist: What do you remember?

Green: By the time we understood how serious the situation was, it was too late to leave. Plus, my mom and dad ignored the evacuation order because they didn't want to leave our home.

Journalist: So, what happened?

Green: So, what happened is the first floor of our house filled up with water. I mean, we knew a hurricane was coming, but no one knew how strong it was going to be.

Journalist: What did you do when the water came in?

Green: We went up to the roof of our house. Luckily we had bottled water and food. We tried to stay calm as we waited to be rescued.

Journalist: Did emergency workers come to help you?

Green: Yes, we waited three days. The whole time I was so worried about my dog, Dino. I love my dog, and I didn't know where he was. All I did was think about him, and hope he was safe. It turns out that our neighbors had taken him in. He was fine.

Journalist: A silver lining.

Green: Yes. To an otherwise very dark cloud.

Journalist: Well said. What a terrific ordeal you went through ...

FOCUS your attention page 115

Speaker: We're starting to understand how education, especially the education of children, is a vital part of emergency planning for everyone. For example, in 2004, there was a huge tsunami in the Indian Ocean. It affected thousands of people and caused extensive damage. Just as the tsunami struck, a British schoolgirl—Tilly Smith—was on the beach in Thailand with her family. She looked out over the ocean and saw that a tsunami was coming. She yelled to everyone to leave the beach, and she saved many lives. How did she know it was a tsunami? She had learned about it in geography class at school back in Britain. I'm sure her teacher was very proud of her. In December 2005, she was named Child of the Year by a French magazine for what she did. Now, that's one example of one child ...

WATCH the lecture page 116

Professor David Reed: E01 The topic of today's class is reducing risks from natural hazards. Notice I said natural hazards, not natural disasters. Natural hazards are events in nature like hurricanes, earthquakes, and tsunamis. We know they can be dangerous, but not all are. There are many small tsunamis and earthquakes we don't even, even notice, and hurricanes that just die out. **E02** By the same token, we know they can create terrible disasters in which many people die and widespread damage is sustained. Three prime examples of this are the earthquake in Pakistan in 2005, Hurricane Katrina in the US in the same year, and the tsunami in the Indian Ocean in 2004. Now all of you remember those, don't you? **(COACHING TIP 1)** **E03** Well, today we'll examine ways to reduce our risks from natural hazards so they don't become natural disasters. We can't stop earthquakes or hurricanes or tsunamis. But there are things we can do to try to minimize, or limit, their impact. So, I'm going to divide this lecture into two parts: First we'll look at some of the factors that go into designing an emergency plan. You may be familiar with some of this based on what's in place in your own communities. Then I want us to turn to the role of education in reducing risks to people in disaster-prone regions. **E04** But first, let's go over the terms we'll be using. The first is *disaster preparedness*. To *prepare* means to get ready, right? Preparedness is the state of being ready. Another term is *mitigation*. To *mitigate* means to make less severe, not as bad. **(COACHING TIP 2)** We use the phrase "disaster preparedness and mitigation" to talk about what to do to prepare for natural disaster so that the impact will be less severe, and people will suffer less. We can try to lessen, or mitigate, the damage so that people can quickly return to their normal lives. **E05** Now I'll present some factors involved in generating an emergency response plan. First, government officials need to identify the risks. What are the natural hazards? For example, in Japan, there are earthquakes and typhoons; in the US, hurricanes and fires. There are several natural hazards in every country. Second, the government needs to establish a channel of communications with scientists. Scientists must be able to share information regularly with the government as they collect data about risks. **E06** Third, government officials need to work out a process for briefing the public on what scientists tell them. The problem is, experts can't predict natural hazards with 100 percent accuracy. For example, they may know a hurricane is forming but can't say exactly when or

where it will go. Despite this, public officials still have to decide what to tell the public and when. They can wait and say nothing, or they can tell people to evacuate. If they wait too long, lots of people might get hurt. But if they tell people to evacuate, and then nothing happens, people may get angry. In the future, they may not cooperate. Communicating with the public is a huge challenge for officials. **E07** Here's an example: In 2005, before Hurricane Katrina hit New Orleans, people were told to evacuate. But 61 percent of them didn't. We know some stayed because they had no transportation, no choice. But, of the 61 percent who didn't leave, 37 percent said they simply ignored the order to evacuate. Why? Because they didn't want to leave their homes. Scientific information doesn't do much good if it's ignored. Yet, ultimately, officials must try to keep people safe. **(COACHING TIP 3) E08** A fourth factor is evaluating what services are needed. For example, are there sufficient numbers of police, firefighters, and emergency workers who are trained to respond to a natural disaster? Is there a network in place for emergency workers to distribute supplies, such as bottled water, food, blankets, and medicine? Is there a way to inform the public about the emergency plan so that they know where to go and what to do before, during, and after a natural disaster? **E09** Well, related to this evaluation is the fifth and final factor: setting spending priorities. Countries have to decide whether to spend money for things they need now, like new schools and roads, or to allocate money to prepare for a natural disaster that may never happen. **E10** Now, let's turn to the role of education in emergency planning. **(COACHING TIP 4)** Experts agree that educating the public, especially children, about the risks is essential. Here's one way. The United Nations group UNESCO has launched an international campaign called Disaster Risk Reduction Begins at School. In turn, many schools in countries like Turkey, France, Mexico, and Cuba now have disaster preparedness and safety programs. The logic behind this UNESCO program is education will help children understand the risks where they live. They'll know specific things to do before, during, and after a natural disaster to make everyone in their communities safer. The hope is that as more children are educated, there will be fewer victims of natural disasters. For example, in Turkey, earthquakes threaten the safety of about 5 million children. So there is now an earthquake education program targeted at students countrywide. And in Cuba recently, with more school programs about hurricanes, there have been fewer hurricane victims. Now that's great news. **E11** So, let's review what we've covered today. I mentioned five factors in an emergency plan, and how education of children is considered vital to disaster preparedness and mitigation. I feel a lot of hope now because so many countries see how important a good emergency plan is. Well, that's all for today. We'll see you next time.

HEAR the language page 118

- 1 Notice I said natural hazards, not natural disasters.
- 2 Three prime examples of this are the earthquake in Pakistan in 2005, Hurricane Katrina in the US in the same year, and the tsunami in the Indian Ocean in 2004.
- 3 To *mitigate* means to make less severe, not as bad.
- 4 The problem is, experts can't predict natural hazards with 100 percent accuracy.
- 5 Despite this, public officials still have to decide what to tell the public and when.
- 6 But if they tell people to evacuate, and then nothing happens, people may get angry.
- 7 We know some stayed because they had no transportation, no choice.
- 8 Is there a way to inform the public about the emergency plan so that they know where to go and what to do before, during, and after a natural disaster?
- 9 Well, related to this evaluation is the fifth and final factor: setting spending priorities.
- 10 Experts agree that educating the public, especially children, about the risks is essential.

TALK about the topic page 119

Ayman: Yeah. So what did you guys think of the lecture?

Rob: Well, I love studying nature, so I thought it was cool. And the idea of hurricanes and everything as natural hazards instead of natural disasters—that, I think it really helps to understand that nature is dangerous, but not necessarily destructive.

Molly: Yeah, not only that, but it also really makes it clear that people have a responsibility to stay safe, you know? Like, like with Hurricane Katrina in the US back in 2005? Everyone knew the dangers involved, but not everything that could've been done was done, right?

Alana: Well, in a lot of cases, the people aren't to blame for the "disaster" part.

Ayman: Yeah, yeah. Like look at earthquakes—how can someone be responsible for something so unexpected?

Rob: Well, but, actually, scientists do know the regions where earthquakes are most likely. So you could say that in those communities people should be building stronger houses and buildings.

Molly: Yeah, what was the, the word that the lecturer used for that kind of preparedness?

Ayman: Oh, I've got, I've got it: mitigation—"making less severe, not as bad."

Alana: In a perfect world, yes, but do you remember the last factor he mentioned?

Rob: Oh, in the emergency response plan?

Alana: Yeah.

Rob: Spending priorities.

Alana: So, money's probably a big reason why some hazards become "disasters."

Molly: Well, that might be true, but I think education, like the UNESCO program, is one inexpensive way to make a really big difference.

Rob: Yeah.

Ayman: Yeah—like teaching people about the risks and to prepare for their own safety. I agree—I think it's priceless!

Rob: Yeah.

Molly: Yeah.

Rob: I mean, so long as the information gets to them.

Molly: Uh-huh.

Rob: You know, people need to be told ...