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RESPONDING TO NATURAL DISASTERS

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P R O C E E D I N G S

MS. BUZARD: I'm very, very pleased to be here as part of the launch of this first Brookings and London School of Economics review of natural disasters 2010.

It's a very exciting publication. If you haven't read it, I urge you. It's easy reading. It's got some excellent statistics and some very critical insights that are important for all of us who are in the disaster preparedness, response, and recovery business.

2010 was a very extreme year. The American Red Cross, we responded to everything starting with the Haiti earthquake, which continues to be a very intense operation. Quickly followed by the earthquake in Chile. Then we had the drought in Niger. We had the earthquake in Christchurch. We had the heat and the fires in Russia. Then we had Cyclone Megi in the Philippines. And finally, flooding throughout Colombia. Those were the big markers, but at the same time there were lots of smaller disasters that contributed to terrible displacement and suffering of many people.

As someone who works in the disaster response field, I found this publication really not only a good read but really important because what it's trying to drive at is that natural disasters are displacing more and more people internally. And so it's not just conflict, and it's certainly not just refugees, but it's people who are being displaced, often -- though not always -- those who are most vulnerable.

It's very important that we start to think more deeply about the

complexity of displacement for natural disasters. As someone who spends a lot of time doing logistics and relief, and the fast onset responses, we know that. But we also know that there's a very complex side of response, and certainly recovery.

And I think Haiti is probably the most glaring example of that, where you were really struggling with land rights and what in this publication is called the renter's dilemma. And hats off to Elizabeth and others who have started to wrestle with an extremely thorny issue that is only going to increase as we have more and more urban displacement and issues of renters and who owns. And for donors, whether they're individuals or governments, are they really ready for humanitarian and development agencies to start struggling with issues such as owner financing homes, et cetera? This is not something that most people think is what they're paying for when they pay for disaster response, so we really have a lot of education to do.

So, on this first day of June, which is the official start for the hurricane season, for those of you who don't follow that, June 1 through November 1 is the Atlantic hurricane season. As last year, it's predicted to be a very intense season with at least seven named hurricanes expected between now and the end of October.

I am honored on this first day of hurricane season to be here with this very eminent panel. We're going to have three speakers here, followed by questions and answers with all of you. And I think we're also being televised for an Icelandic television show, which I think is a recognition both of the special

mention of volcanoes here in the publication. And perhaps they know something that we don't about future volcanic eruptions for the summer.

We're going to start with Elizabeth Ferris. I think that she needs no introduction to most of you. She's an eminent scholar as well as humanitarian practitioner. She is the senior fellow in Foreign Policy here at Brookings, but also the co-director of the Brookings-London School of Economics Project on Internal Displacement. I've known her for years, watched her do humanitarian work and she's a wonderful advocate for the rights of people who have been affected by disasters, and particularly internally displaced.

We're going to follow Beth with Alice Thomas. She is the climate displacement program manager of Refugees International. Prior to that, she was a staff attorney at Earth Institute, otherwise known as the Sierra Club Legal Defense Fund -- Fund? Yes. And before that, she was the deputy director of the American Bar Association Asia Law Initiative, which worked with many Asian countries on development issues, good governance. And I think that we're going to hear a lot about Refugees International's work.

And finally, we'll talk to Donna Derr, who's the director of development and humanitarian assistance for Church World Service. She heads up emergency response, recovery, and development programs. A very full plate. And the bios for all of them and their work is available on the back.

So, we'll begin with Elizabeth.

MS. FERRIS: Thank you very much. And let me add my word of welcome to you this warm morning here at Brookings.

I'd like to begin by saying just a few words about the report we did on 2010 and then move into some of the disaster issues that we're currently confronting, with a particular focus on developed countries and a particular focus on Japan.

First of all, as Nan mentioned, last year was a terrible year for disasters. There were twice as many floods, for example, as has been the case of the average of the past 10 years. When we looked at the number of people affected, what immediately comes to mind about last year is Haiti and Pakistan. And yet, in terms of the numbers of people affected, China was far and away the largest disaster scenario with 130 million people affected compared to 3 million in Haiti and perhaps 18 million in Pakistan.

International response to disasters is uneven. It seems to depend very much on media coverage. If you look, for example, at international funding for natural disasters as measured by the UN's tracking system -- which isn't perfect, but it's the best measure we have -- 96.6 percent of all international funds for natural disasters went to Haiti and Pakistan. There were a total of 373 recorded disasters last year, but 96 percent went to those 2 big disasters. Fifty-four other disasters shared about 3-1/2 percent of the funds, and the other 300+ disasters never made it into the international tracking system.

In terms of amount of international funds per affected person, the disparities are even more evident. If you take the total number of people affected and divide it by the amount of international funds that came in, the figure for Haiti is $948 per person; for Pakistan, $121 per person; for Chile, which affected

almost 3 million people in the earthquake that they experienced, it's $25. And again, many disasters that received no coverage at all.

As Nan mentioned, we -- our attention is drawn to the big disasters, the mega-disasters. And yet we suspect that the cumulative effect of smaller disasters may actually be serious or perhaps even more serious. And that's an area where I think more work is needed.

Another comment is that disasters hit both developed and developing countries. This year has been a terrible year for developed countries: flooding in Australia in January that killed several dozen people and caused close to $10 billion in damages; the earthquake in Christchurch -- remember that in February? -- where 181 people were killed and $12 billion in damages; then the Japanese earthquake and tsunami where the total casualty figures will probably be over 20,000 dead. As of last month it was about 14,000 confirmed dead and another 10- or 11,000 missing; $309 billion in damages, some estimates put that at twice that figure.

And then finally, we have the spring storms here in the U.S., with tornadoes, flooding, and perhaps more to come. The tornadoes alone did -- up until this point this year, have caused twice as many deaths as the corresponding period for last year.

Disasters in rich countries tend to kill fewer people and sustain higher economic damages. If you look at the tsunami, which is kind of the measure which a lot of us working on disasters use as a standard, there were tremendous casualties, some 229,000 deaths reported, but only about $14 billion

in damages, compared to Christchurch: 181 dead, $12 billion in damages.

Turning now to what is called the Great East Japan Earthquake -- at least in Japan -- which struck offshore of Sendai on March 11. Extraordinarily powerful earthquake. I mean, you've seen the photos of the level of destruction: 125,000 buildings destroyed, industrial centers, factories, homes, public buildings galore were moved. It was an earthquake which moved Japan almost 8 feet closer to North America, changed slightly the axis of the Earth. And I think a testament to Japan's careful attention to disaster risk reduction, and the pioneering role it's played in developing earthquake-resistant technologies that only 100 people or so died in the earthquake. One hundred people died in that massive earthquake. The remaining fatalities were all caused by this terrible tsunami where the waves were an incredible 120 feet high.

Profound economic consequences. Japan this week reported that its economy shrank by almost 4 percent in the first quarter. Four hundred thousand people were made homeless, about 100,000 remain in temporary shelter evacuation centers of one kind or another.

The big issue now, as it always is in disasters, is transitional shelter. Will homes be built quickly enough? What kind of transitional shelter for people before they can begin rebuilding their homes? There are very detailed plans in process for building the transitional shelter. And I was moved in talking with the Japanese Red Cross a couple of weeks ago about the plans to provide appliance packages to all of those who lost their homes.

And I think it's an indication of how different things are in a

developed country that the appliance packages include a refrigerator, a microwave, a washing machine, a rice cooker, a television, an electric thermos. You know, most of the time when we're responding to disasters in developing countries, the idea of providing people who lost their homes with a washing machine just seems like pie in the sky. I mean, you're trying the best you can to think about recreating livelihoods and keeping people alive so that -- until they can restart their lives.

In spite of the devastation, I think the Japanese government and the Japanese people respond quickly, effectively; the capacity of Japan, the training that goes on, the number of volunteers that can be mobilized, the outpouring of public support, the donations that poured in. The fact that there was no looting in Japan after the earthquake certainly sets it apart from most of the disasters that we work with.

I was particularly impressed with the Japanese Red Cross, which has 59,000 employees, 2 million volunteers, within a matter of hours began deploying the first of 600 medical teams to respond to the disaster in the country.

But it's the nuclear dimension that sets Japan apart from all other natural disasters we've encountered. On May 9, the government reversed itself and said it would build no more nuclear power plants in the country. I was only in Tokyo a few weeks ago. I didn't go to the disaster area and you don't see many signs of the earthquake, you know. The streets are full, the metros are working, people are going to work. And yet, you see the impact of the power question. Japan depends for -- on nuclear power for 30 percent of its energy. You know,

the halls in office buildings are dark. The escalators and people movers in the airport are turned off. The air conditioning in the metro was turned off, and it was only May. But the impact of that diminished power, particularly as other plants are shut down for further testing, is something that the Japanese will live with, and perhaps others of us will as well. Germany announced this week it would build no more nuclear power plants, and this opens new questions.

I met with a number of officials in a very unsystematic, unreliable sample about the relief effort. And by and large, most people were proud of the response of the Japanese government and Japanese NGOs and civil society. But when it came to the nuclear issue, there was a kind of skepticism or a concern that they didn't really know what was going on; concern that TEPCO, the electric power company, or the government perhaps weren't telling the full story.

One senior government official said, "We don't really know what's going on. Maybe TEPCO doesn't know what's going on in those reactors. Or maybe they know and aren't telling the public. Or maybe they know and aren't telling the government. Or maybe they are telling the government, but the government isn't telling us. I'm not sure which is worse," she said. "But I know we're not getting the full story."

You know, natural disasters and the way in which a government responds to them can affect the relationship between government and the people for years, as I think we've seen here in the U.S. after Hurricane Katrina.

When I asked another senior Japanese official, what's the biggest headache you faced in disaster relief? He rolled his eyes and he said how to

deal with all the international offers of assistance. As of this week, the Japanese government reported receiving offers of assistance from 159 countries, 43 international organizations. Like the U.S. and Hurricane Katrina, the issue of dealing with these spontaneous, generous offers of assistance is a big headache. And the absence of systems to vet, to know which organizations to allow in, which kind of response is needed, it's very difficult for governments and NGOs to figure out.

Here I refer often to Anne Richard's little study on role reversal that looked at the international offers of assistance that came in after Hurricane Katrina, which shows some of the difficulties and how the U.S. Government could respond to offers of planeloads of medical supplies coming in, or food, or technical expertise.

But there are other issues as well. Japan, like the U.S., sees itself as a donor. It is a large, major humanitarian development donor. How do you respond when those you are assisting are offering you aid? This week, the Kenyan government announced $1 million contribution for Japanese earthquake relief. Kenya is the largest recipient of Japanese overseas development assistance. In Samoa and Antigua and Uganda, people are organizing collections to help the victims of the Japanese earthquake.

And maybe just to give a very personal story, about 10 or 12 years ago our house burned down. We lost everything, but nobody was hurt. And it was fine. But we didn't know how to deal with offers of assistance. We were a middle-class family, my husband and I had good jobs. We had good house

insurance. And people began taking up collections to help us. And there -- we were grateful for the money, because there are some things insurance doesn't cover. But there was something kind of uneasy. It was like, we can take care of our family. Do you think we can't? Is that why you're giving me a check for $25? I mean, there's something about that slight embarrassment at being on the receiving end of assistance after a natural disaster that I think characterize both the U.S. response after Katrina and the Japanese response now.

And finally, just to point out that for developed countries, as for developing countries, it works much better if systems are in place. After Hurricane Katrina, for example, it was military cooperation between military forces, say, in Canada or Mexico and other places that seemed to work the most smoothly. Because the relationship had been built before, people knew what to expect. There were standard ways of operating that seemed to function much more smoothly than the attention given to these many, many offers of assistance.

The need to think about international disaster response law, of putting into place legal frameworks that can function automatically when a disaster occurs. And in fact, no government in the world has gotten it completely right. Norway is the first, and I believe the only, country in the world, for example, to have in place a humanitarian worker visa program. If a disaster happens in Norway and medical personnel are needed, for example, it's clear under what category they will come in.

Laws or policies about what kind of goods to accept and when customs procedures should be circumvented or expedited -- these are things that

are much easier to work out in the calm before the storm then after a disaster. Given the fact that we're pretty sure that climate change is going to increase both the severity and frequency of natural disasters it's time for all of us, rich and poor countries alike, to get our systems in place.

Thanks.

MS. BUZARD: Thank you very much, Elizabeth. Alice.

MS. THOMAS: Great. Well thanks, Nan. And thank you, Elizabeth, for inviting me today and to Brookings for organizing this event. And, in fact, it really is very timely right now.

And I'm really glad for the opportunity to share with you some of our observations with respect to the situation in Colombia, which over the past year -- as some of you may know, but some of you may not know -- has experienced the worst flooding on record. In the short time I have, I wanted to briefly describe the disaster and impacts as well as challenges in the response. I also wanted to outline some recommendations going forward. And then finally, just share some implications about what this means in the broader context of Colombia's development.

According to the World Meteorological Organization, 2010 -- the 2010 to 2011 La Niña season was one of the strongest in the last century. And we saw the effects of this from Australia to Brazil.

In Colombia, it's essentially been raining for a year. Heavy rains started last June and persisted through normally dry months. By December, there was ongoing flooding in 28 of 32 of the country's regional departments. At

that point, President Santos declared a state of emergency.

In early March, communities and soils were completely exhausted, and the second rainy season got underway. And the second rainy season is expected to last through June. Needless to say, the result has been one of the worst natural disasters in the country's history, if not the worst natural disaster in the country's history, which is what President Santos is stating as the case.

As of late May, close to 3.5 million people were affected. And it's interesting to note that during the 6-week period from April 1 to May 19, an additional 500,000 people were affected by the floods. More than 1,000 people have died or been injured, and most of that is related to mudslides, which the country is very susceptible to.

There are no official figures on the numbers of displaced people. However, we do know that 13,000 homes were reportedly completely destroyed and more than 470,000 homes damaged. The floods have destroyed more than a million acres of agricultural lands, more than 370,000 heads of livestock have perished. And there were reportedly thousands of miles of roads that have been damaged or destroyed.

The damages as of January were expected to exceed $5 billion. So, given that the flooding has continued since then, the damages are likely to be far higher.

In early March, I traveled to Colombia with two of my colleagues from Refugees International to assess the impacts of the floods. We spent a few days in Bogotá where we met with government officials, UN agencies, and local

and international NGOs. And then we spent about two and a half weeks traveling to flood-affected areas, largely in the Caribbean and Atlantic regions of the country.

At the time of our visit, it had been more than three months since the disaster had been declared. And we were there for concern to encounter a humanitarian crisis on the ground in many areas. We met with dozens of communities that were still not receiving basic humanitarian assistance, including food, water, sanitation, and shelter.

In general, it was many of the poorest and most vulnerable who were affected the most and had the least access to aid. Problematically, the floods affected many of the same areas that had been affected by Colombia's decades-long internal conflict. And we met with many conflict IDPs who were -- had been displaced a second time by flooding. We also traveled to some of the more remote areas, where poor rural communities were -- hadn't really been receiving any aid at all.

One of the things I wanted to highlight -- and Beth mentioned this -- was the pressing problem around the lack of shelter. And that's both emergency shelter and transitional shelter. In normal years, Colombia -- the rainy season overlaps with the breaks in the school year. So people who are affected by flooding are able to use schools as emergency or temporary shelter.

This year, however, far more people were affected by the floods and the floods lasted for a much longer period of time. And as a result, you had just terrible conditions in the shelters. There was severe overcrowding, there was

lack of, you know, water, food, sanitation. No provisions of mattresses or any of the things people would need to live in these places. No stoves. And there really appeared to be very little shelter -- you know, responsible management of shelter. And I should mention, under these situations a lot of NGOs we met with were very concerned about the risks, particularly to women and children.

So, given the terrible conditions in shelters, many people went home as fast as they could. And this also was the situation in Pakistan, where after a natural disaster like this, unlike conflict, people are not constrained from returning. They want to get home as soon as possible. And here, the fact of the terrible conditions in shelters, many people went home right away. But there, they were confronted with damaged or destroyed homes, lost of personal belongings, lack of services, mold and infestation. And so, there was a real problem for those people who had returned early.

A second problem was that many children hadn't been back to school because so many shelters were being used to house flood victims. So, we met with some children that hadn't been back to school since June.

In addition, there was pressure on local governments to reopen schools. So this resulted in forced secondary displacement. And particularly in areas of Atlántico Department where floodwaters still remain, we encountered dozens of people living along the side of the road in makeshift shelters who had been evicted from the local school.

So, what were, you know, some of the main challenges for the response? Well, first of all, obviously was the extent of the disaster. It was a

huge flood and, you know, hundreds of thousands of people -- millions of people were affected. And I should say that tremendous efforts were made by many people -- many government officials, NGOs, many UN agencies -- to respond to the emergency.

Nonetheless, there were some shortcomings that are worth noting. The first was a very apparent lack of capacity to respond to disasters, and this was especially true at the local level. And the reason this is really surprising is that actually Colombia has spent several decades building up a very comprehensive disaster risk response and management framework, given its high exposure to natural hazards. And while the framework is quite comprehensive, unfortunately, it's been very challenging implementing on a local level.

So what happened during the floods was that on the regional level, the regional disaster response authorities were -- lacked capacity to primarily gather information on the needs and then coordinate a response. And the municipal governments and the municipalities really -- the disaster response authorities were largely ineffective. And many municipalities we visited, they were either nonexistent or, according to the local people, you know, didn't know what they were doing. So this was a real challenge.

So, in light of this, the Colombian government decided to step in. And I should note that they were very successful in raising flood response funds. And by -- they launched a multimedia campaign; they appealed to corporations and citizens. And as of January, they were able to raise $500 million in flood

response.

So, money was not the main problem. What became a problem was the government was mistrustful of the local governments and decided to set up a new system for distributing the relief. And this created a lot of challenges. It was -- they brought in a new set of actors, these operators that were supposed to distribute relief. And they were trying to essentially go through different actors rather than going through the existing disaster response authorities. So essentially, rather than use the money to bolster the existing capacity, they largely sought to replace it.

So what are some of the recommendations? There's a report outside, a report from our trip. And if you're interested in reading more about it, we go into more recommendations both for the Colombian government, but also for the UN, which I really don't have time to discuss now. And then also, for major donors like the U.S.

So, a couple of recommendations I want to highlight. The first was the need to adopt a rights-based approach to disaster response. And I'm sure we'll talk more about this. Notably absent from Colombia's disaster management framework is a recognition of the rights of people who are affected by natural disasters. And this was pointed out and particularly notable because Colombia has developed a system for protecting rights of people who have been affected by conflict. So while there are systems, mechanisms, and procedures in place for protecting the rights of conflict IDPs, these natural disaster victims or those who are displaced by natural disasters were entitled to, you know, no such

rights. And they were not treated as rights-holders in the response.

Therefore, the floods in some way create an opportunity to institute those procedures and mechanisms that would better protect the rights of protected -- of affected individuals. And some people have even suggested that Colombia's IDP law -- conflict IDP law be revised in order to extend the definition of IDPs to those who are affected by natural disasters. Now, I think that that requires further discussion, but there are mechanisms there. There's, you know, the ombudsman's office and other procedures that could have been called upon during the floods that would have injected more accountability, more transparency, and again, overall better protection.

The second recommendation, of course, is, again, just the need to build disaster risk response, particularly at the local level. And one of the things -- two things I want to point out because we did a similar report on the Pakistan floods last -- late last year.

The local communities were the first responders. And in both Pakistan and Colombia, there were programs in some communities that were inexpensive programs to just help communities organize and prepare for disasters. And they proved incredibly effective during the emergency. And so, while a lot of the focus around DRRs on big infrastructure and, you know, retrofitting and very costly mitigation measures, there's a lot that can be done on -- for much less money and that's more effective and just better preparing communities to be more resilient to the shocks of natural disasters.

The third recommendation also reiterating what Beth pointed out

is just the need to improve procedures and systems for building quickly, providing emergency shelter, and then building transitional shelter. In Colombia, you know, by three months into the disaster, none of the transitional shelters in Atlántico Department had even been started. So, people had been displaced for three to four months, and the government hadn't even started to build transitional shelters. So -- and this was the case in many other countries. And this is a problem we've seen again and again, and I encourage those people to think about how we can better address shelter needs.

One final thing is also the need to start early recovery efforts more quickly. People need to get back on their feet as fast as possible. And although there may be an ongoing humanitarian emergency which certainly is the case with flooding because it's a more protracted disaster and unfolds over time, at the same time people really are -- who are left vulnerable are much more likely to be subject of human rights abuses. And really, there's a need to start getting early recovery programs in place.

So, what are the implications of the disasters for Colombia? Again, first is the likelihood that climate change is going to make these events more frequent and more severe. A recent report ranked Colombia as among the top most vulnerable countries to climate change-related disasters in 2015. And this includes not only stream events, like massive flooding, but also -- again, as Beth mentioned -- smaller-scale events that just tend to chip away at people's, you know, livelihoods and resilience.

These events -- the second implications that these events are

really having a much bigger impact on Colombia's economy and its people. Severe flooding in 2008 affected 1.5 million people and flooding this year affected twice that amount. The recent ISDR global assessment report for disaster risk reduction found that economic losses from natural disasters in Colombia -- and discounting climate change impacts -- will increase over time as more infrastructure and industries and people are concentrated in cities and in coastal areas that are particularly at risk from disasters.

I just wanted to mention that problematically, it's many of the same industries that are sort of the future of Colombia that are contributing to environmental degradation that increase the vulnerability in the case of the floods. So, significant deforestation, mining impacts, and a lot of the changes in land use related to cattle rearing. A lot of people told us that this severely exacerbated the flooding. So it's important for national governments to consider, you know, the impacts of the disasters to undermine other development priorities.

The second, you know, implication of this are the political ramifications. I think it's too early to tell whether a somewhat, you know, weak response from the new administration is going to be a problem over the long-term. Certainly here in the United States, in the aftermath of Katrina the lack of the government -- the inability of the government to effectively respond became a political issue. So, I think that this is something to consider in Colombia as well.

And finally, a more complicated question is what is the relationship between these events and the ongoing conflict? And here, there really are just three observations I can share with you. I don't know that I really fully know the

answer to that question.

But first is the fact that IDPs are more vulnerable to these events. In Colombia, they already severely lack access to basic necessities. They also live in marginal areas and in marginal lands that are highly susceptible to natural disasters.

Second was the fact that the -- because the floods affected some of the same areas that have been affected by conflict in the presence of a legal armed groups, the government didn't have good access and humanitarian actors didn't have access to a lot of these areas. So, the -- again, the conflict and the presence of illegal armed groups was hindering the distribution of relief.

So -- and finally there's, you know, the possibility that these natural disasters overall render people more vulnerable. And this makes them more susceptible to intimidation and victimization by, again, illegal armed groups in Colombia. So these are some of the things that I think are broader questions. And time will tell, but are worth giving some thought to.

Thanks.

MS. BUZARD: Thank you. Great in-depth look at Colombia. And now Donna for our final speaker.

MS. DERR: Thank you. Good morning.

One of the things that Church World Service does is an occasional interpretation piece called *Facts Have Faces*. And one of the things that I think we would all acknowledge is in recent days and weeks, we have seen a lot of faces behind the disasters that have been happening here in the U.S. And so as

I give you a few facts, I'd like you to think about those faces because they drive, then, the response behind some of those facts.

Fact one is that since mid-March, 16 states in the U.S. have had federally-declared disasters. Fact two is that to date this year, 1,151 tornadoes have occurred in the U.S., causing over $9 billion in damage. Now, I would invite you to compare that to 2010, where during the entire year there were 1,282 tornadoes in the U.S.

Fact three is that the Midwestern U.S. experienced the wettest April in over 100 years. And much of the flooding that we've seen along the Missouri River alone has caused the loss of thousands of square miles of agricultural land.

Fact four. Conversely, in April, we saw Texas experiencing the driest month they'd had in a century, which only exacerbated the wildfires and the damage caused by them during that month. Those are just a few of the facts of what we've seen since January of this year in the U.S.

What I'd like to offer now are just a few of the implications as we look at those facts. One implication is certainly that we've seen, particularly throughout the central U.S., agricultural land that has been completely lost for the foreseeable future. And what that will mean for U.S. consumers is, of course, on some food commodities much increased food prices.

We've already heard the reports from the U.S. insurance companies that say that 2011 will show record losses in the industry and we're now only just past May. What will that mean for the American consumer? It will

mean that most U.S. homeowners will see greatly increasing insurance premiums.

And finally, we've seen the implication of housing demand, or lack thereof, in terms of housing availability. I think as we look at just what's happened in Joplin, Missouri, this past week, it would be a case in point in that we see right now, across the U.S. in many disaster-impacted areas, that rental temporary housing cannot begin to keep up with the demand. And that means that families who are disaster-impacted are in many cases living 50 miles or more from their home communities.

I mention Joplin, and we're already seeing that for those families that are not able to live with relatives or friends, in a best-case scenario some of them are able to find rental or temporary housing within about 30 miles of Joplin. The majority will be living at least 55 miles away from their homes. And this is as we're asking them and working with them to journey through the recovery and rebuilding process.

I talk a lot about domestic disaster response with the faith community here given that that's, of course, a part of the Church World Service constituency. And we talk about the facts and we talk about some of the implications. But we always get to the point that people ask, so what? So what is it that that we can be doing? So, what do you want us to do in response to what we've just heard from you relative to the increasing number of disasters here in the U.S.?

I'm going to answer that question from the context of someone

who does work for a faith-based agency in domestic disaster response, and say that we need to begin to respond more fully to the so-what question by saying this: that while we have for years said that education and awareness in communities is important in terms of how people understand preparedness and risk mitigation, we have done far too little. And so part of what we need to do is aggressively and intensively look at all of our constituencies and find ways to more actively ask the question and work with them through the process of addressing it. The question being, are we prepared?

And if we're not -- and I would suggest to you that many families and many communities in the U.S. will often respond by saying when they see disasters, I am so sorry for those people. I am really sad about what happened to them. Our response to that needs to be that we are them. This isn't about them; this is about all of us being prepared for disasters.

We listen here in the U.S. to meteorologists and others who say much of what we've heard from other colleagues here. That we in the current time and foreseeable future are going to see not only more severe weather events, but happening with much more frequency here in the U.S. It would be true to say that many other communities, both urban and rural, continue to perhaps deceive themselves a bit into thinking that the stability of climate is not going to impact them. In fact, it will. And it's beginning as we've already seen just in the course of the five months of this year, impacting larger and larger swaths of communities throughout the U.S.

And so, we need to circle back, do more education, do more

awareness training, and really help people to understand how individually and as communities they can be prepared.

Toward that end, I would also say that from a faith-based context, we see that part of our role is frankly to work with local governments, state governments, and the federal government in the areas of advocacy and accompaniment. In what way? I would say to you this: that it is, I think, abysmal that we know that only 14 states in the U.S. have actual substantive disaster adaptation plans. Fourteen states in the U.S.

We have some states that we know are in the process of discussion or planning or talking about what the cost will be, but only 14 states actually have substantive plans in place. We have to be advocates as domestic disaster responders with our governments to put into place adaptation plans that will help our communities and our families be more risk-averse.

One of the questions that always arises is how can you have that conversation when we're in a moment of talking about our financial realities here in the U.S. and the need for debt reduction? And how can we spend more money? And so the question is always, how can we look at this now? How can we as states, how can we as local governments do this now?

I would reverse that question and say that we should be asking how can we not do it now? Because if we don't pay the cost of putting into place plans that will make our communities more risk-averse, we will be seeing greater and greater loss of life and infrastructure throughout the U.S., even with all of the response mechanisms that we've put into place.

I listened to what I was going to say in terms of facts and implications and just one or two things that we see as implications and ways forward. And I feel like that's all pretty discouraging. I listened to myself, and I think, what am I supposed to be doing as an individual in a community that will probably be disaster affected in some way in the coming years? And I want to say to you that as discouraging as it may sound, the good news is, we do have 14 states that have disaster adaptation plans in place. We do have disaster response agencies here in the U.S. who have tried to look carefully at how to help individuals and communities address their risk and become more risk-averse.

And I want to leave you with perhaps one example of small ways that our organizations and our communities can address disaster risk reduction into the future. We do have some great practices in the disaster response community. And one of those, for many of us in the faith-based agencies who work on long-term disaster recovery is an effort to more consistently and with some constancy actually work toward what we call rebuilding smarter. And for us, rebuilding smarter means that in every recovery process where we are engaged in shelter, rehabilitation, or construction, that we actually go beyond the local government requirements.

And so if we're in an area that we know because of changing climate patterns is going to be more at risk into the future, we don't just elevate homes to the level of local regulation. But we actually go two feet or more beyond the requirements, to help make those families more risk-averse in the future. We

actually are looking now in rebuilding smarter in places like Missouri, and particularly in the central U.S., where, frankly, most homes don't have basement levels. We're looking at developing safe rooms in all of the houses that we reconstruct to help those families be more risk-averse.

Beyond that, we're looking at additional strapping measures, and particularly tornado-prone areas beyond what's required by regulation. Is that enough? Lord no. Is that a beginning? Absolutely yes. And part of what we acknowledge is that as we look at a U.S., developed country that it is, and all of the resources that we have to bring to bear in times of disaster, we yet acknowledge that we are a country at huge risk and very ill-prepared, in many parts of the U.S. for the disasters that we expect to be occurring in coming years. And so it is those small steps, like rebuilding smarter to help communities be more risk-averse in the future, that are some of our small step recommendations for the future.

Thank you.

MS. BUZARD: Thank you, Donna. Well, thank you, team. That was great and quite rich. I'm going to do an extremely brief summary for what mattered to me, and then we'll open up to questions from all of you.

What really struck me listening to everyone was a couple of big things. One, shelter. It comes up in everyone's talk. And I think we can't focus enough on it, regardless of the economy. Regardless of the state of a country, land is valuable. And land that's been affected by a disaster is going to become even more of an issue.

In Japan, one of the issues of building back was the government can't decide should they build to the old tsunami line or the new tsunami line? If it's the new tsunami line, they've lost 10 miles in on 400 kilometers of coastline. I mean, it's just profound. So the issue of where you build back is incredibly critical. And building back better, certainly.

For the humanitarian and development communities, we have to engage with the private sector: construction firms, engineers, architects. This is definitely the new horizon for many, many emergency and development agencies. And it's one of the skill sets for those of you who are looking for a career in the humanitarian world. It's about being an engineer, an urban planner, an architect. Those are going to be the new skills like public health was 10 years ago.

Another issue is, how do agencies and how do countries deal with international support? It's complex enough to manage it domestically with all of the competing needs and priorities, but internationally how do we bring -- deal with it? A shout out to the U.S. Government, and particularly OFDA, the Office of Foreign Disaster Assistance, post-Katrina, actually have worked on policies of what the U.S. Government is willing and able to bring in. And that work is actually fairly available and worth a look at.

You know, we took in British beef, and then no one realized that there was mad cow disease, so there were huge amounts of MREs from the British Army sitting in warehouses all around the United States. You know? We had to take it. Britain was a big ally, and yet -- so I think there is quite a lot of work that's

being done.

And the Red Cross is working on international disaster response law and guidance. And there's going to be a -- every four years the Red Cross and all of the governments that are party to the Geneva Conventions meet in Geneva to discuss issues and the strengthening of international disaster response law is high on that agenda, which is about 150 states coming together to talk about it.

We've heard about the profound disruption on livelihoods, on economies, on schools. And of course, the most vulnerable continue to be made even more vulnerable. And I would urge all of use who have been working in this field for many, many years to look back at the work and the analysis that's been done on vulnerable populations and what has worked. Because a lot has worked with handicapped, with elderly, with children, with women. We know a lot, we don't have to reinvent all of the wheels.

And of course, the critical need to focus more on disaster mitigation, disaster reduction, and disaster preparedness. The Red Cross is working with local communities everywhere. It's where it has to happen, whether it's first-aid, light search and rescue, emergency evacuation plans. Communities, whether they're urban, peri-urban, or rural are going to need more and more skill sets and inputs, and linking those communities into their local and national authorities.

And finally, Donna, I really appreciate the actions and practices suggested. There are opportunities inside every single disaster, and we have to seize those opportunities, whether it's about strengthening codes, revising laws,

building back better. But we really need to do that in our preparedness to say what would we do better when something happens?

So, thank you all. And let's open it up for some questions. I think we have microphones. And when you ask your question, try to keep it brief. Your name, and if you have an affiliation, please share it.

So, gentleman here on the corner. Two, three -- let's take four questions and then we'll stop.

MR. YEAGER: Hi. I'm Brooks Yeager with Clean Air-Cool Planet. We're an organization that works on climate, but mostly in the Northeast and here in Washington. And I wanted to say thanks for, I thought, terrific presentations. Really very rich.

One of the programs that we do -- I want to go back to something Donna was saying -- is an effort to work with communities in the Northeast on adaptation. Although we've learned to call it climate preparedness now, and -- with exactly the framework that you were looking at because most communities have not thought about it.

And in fact, in the Northeast of the United States, it's interesting. In the last 10 years there's been an increase in precipitation, as noted in the 100-year record, and an increase in flooding because the water tables have risen. So your prediction anecdotally that we're going to see more problems is absolutely true.

My question really, though, is for Alice and Elizabeth. And the question is, in the major report ---- which I looked at, which seems very valuable

in terms of looking at number of people affected and comparisons of various disaster events and responses -- is statistically in the material underneath the report, can you distinguish between the climate-related disasters and the geologic disasters?

Because in their consequences, they may be indistinguishable. I mean, the flood from the tsunami is just like any other flood. But in terms of preparation and thinking about what to do to reduce the -- and increase resilience, you'll see climate events are more -- can be managed in front of more than geologic events at some level.

And the second question for Alice is a similar one. But in Colombia, were you able to tell with any precision how much of the flooding was due to human land disturbance of the topography? Their deforestation or farming on steep slopes, that kind of thing. Thanks.

MS. BUZARD: Thank you.

MR. WATSANG: Good morning. My name is Patrick Watsang from the State Department.

I wanted to ask what were the different challenges you see between developed and developing nations in long-term crisis management, both in building back infrastructure that had been washed away, in rebuilding economic systems to create economic wealth, and things like that. What are some of the different challenges that you saw, and how does that affect international regimes that can be used to deal with crises?

MS. BUZARD: Easy questions from the audience. Good. Yes,

ma'am.

MS. ROBERTS: Hi, good morning. Thank you for your presentation. My name is Michele Roberts. I'm with Advocates for Environmental Human Rights. We're headquartered in New Orleans and here in Washington, D.C.

We work with many displaced people -- still internally displaced from Hurricane Katrina and all the other subsequent storms.

My question to all of you -- I hear about your need for adaptation. But there was a crying need over five years ago asking for us in this country to incorporate the UN *Guiding Principles on Internal Displacement* into that, our disaster policy. We in the Gulf Region over 300 groups organized and said, we agreed with the UN on their recommendations to the Bush Administration.

We appealed to our U.S. colleagues and we appealed to the Red Cross and others, please, join us. And we're still appealing and we're still asking. Until we have that policy, we can't continue with the systemic change. We must be able to do that. I believe that will then influence the Colombian enhancement, if you will, of a policy and all others and we can have more of a humanitarian effort.

Right now Cordova, Alabama, it's my understanding the mayor is now allowing for FEMA trailers or any such temporary structures to be there because they don't want that to be an ongoing look, as they say. How do we address that?

Thank you.

MS. BUZARD: Let's take one more and then we'll -- yes, sir.

MR. MARELO: Hello. My name is Javier Marelo.

My question is actually about was this -- up to what point can a government tell people do not live in certain areas because that is an area that's going to be flooded or subject to a natural disaster? You know, if people from Japan want to go back and then it happens again, and in Colombia, people want to go back to their old land, and you can tell them not to.

MS. BUZARD: I'm going to let my panelists take a deep breath. I'm glad they're answering them.

Beth, quite a few were in your direction? Do you want to start?

MS. FERRIS: Let me start with a question about how to determine to what extent these disasters are caused by climate change. It's really difficult because, in fact, the decision of people to leave is usually multi-causal in nature. And particularly difficult with droughts. I think droughts is the issue where looking at the effects of climate change is the most difficult to measure.

It's easier in looking at these sudden impacts -- sudden-onset natural disasters, particularly with flooding. You can see a relationship between the science of warmer air temperatures, increased precipitation, flooding, and certainly you see the biggest increases in natural disasters precisely in that field of hydro, meteorological disasters.

MR. YEAGER: I'm sorry; I actually meant something even simpler. Within your set of statistics of your report, do you know which floods

were geologically caused? I mean by earthquakes and which ones had to do with climate events. Not were caused by climate change, but just had a non-geologic cause.

MS. FERRIS: Yeah. I think that's pretty clear. The geologic causes versus the weather-related --

MR. YEAGER: Because there are trends in the number of people affected by disasters versus --

MS. FERRIS: Absolutely.

MR. YEAGER: The climate trend is actually going to be important to sift out from the geologic trend.

MS. FERRIS: Yeah, and I think that we can see that when it comes to weather events, that -- that's not the hard part in terms of drawing the analysis of what are the impacts of climate change.

I mean, if you look at the number of people who are displaced by these sudden onset natural disasters, the figure is something like 38 million, 40 million, perhaps in the last year, which is many more than those displaced by conflict.

In terms of the question about the incorporation of the *Guiding Principles on Internal Displacement* and to U.S. law. I mean, this is something that we've advocated for a long time. Last year we did a study, worked very closely with State Department, USAID, and others in terms of incorporating some of those international standards into U.S. laws. Yet it hasn't happened. But hopefully -- well, that's a terrible thing to say. But as natural disasters become

more severe, perhaps there will be a greater outcry for those principles to be incorporated into domestic legislation.

In terms of the question about what governments can do in terms of prohibiting people from living in certain areas. You know, there are -- in basic international human rights law there are certain principles as to when a government can displace people: when their lives are in jeopardy, when it's sanctioned by law, when a decision is made by a competent authority, when the affected populations receive the necessary information. You know, there are a set of criteria that are actually quite difficult to apply in practice, in part because understanding of the risk may be in doubt.

You know, in some countries people may believe their governments when they say you can't live there anymore, it's too dangerous. And in some countries, they don't believe their governments. They suspect that you want to displace us so that land can be used for other purposes and so on. So it's a question of trust in the government, as well as in the processes by which such decisions are made.

I mean, we do a whole bunch of workshops on natural disasters and human rights in different regions. And I was really struck last year in Central America talking with an official from the Salvadorian Civil Protection -- military response unit. And said, well, all these human rights standards are all well and good, but what do you do when it's 3 a.m., the rains are pouring down, the mudslide is fixing to happen, you're trying to get people onto trucks to move them to a safe place, and they say, we don't want to go? I mean, what does human

rights mean in that context? I mean, are you protecting somebody's life by forcing them to leave? Or do you let them stay there and let the mudslide come down? I think we need more precise guidance to give to governments beyond saying, respect human rights in these situations.

MS. BUZARD: Thanks. Alice.

MS. THOMAS: Okay, I'll address just a few of the questions. Specifically with respect to Colombia, what -- how much of a role did manmade factors play? The answer is that I don't know. And I asked several environmental experts when I was there. And they were not really sure, either.

But I -- this -- a similar thing happened in Pakistan with the floods. And they are -- government officials were much more willing to, you know, contribute a percentage of the disaster to manmade factors. And in Pakistan, they believed about 30 percent of the flooding was the result of manmade factors.

And so in Colombia, I would say -- I mean, a lot of the flooding happened because some of the water management infrastructure -- that the canals, levies broke, and that led to a lot of flooding. So I would say, probably confidently, it was a -- you know, a considerable factor in the extent of flooding.

And then I'll just hop to the last question about moving people away from at-risk areas. I wanted to, you know -- Beth addressed that, but one of the things I wanted to share was what we saw in the field. And in many places, in both Pakistan and Colombia, there were communities that the government had been trying to move away from areas that had experienced

recurring disasters. And in every single one of those situations, these efforts had been unsuccessful because the government had not allowed the community to lead the response.

And there's been a lot of discussion now that, you know, climate change implications mean that potentially, you know, whole island nations will have to be relocated away from, you know -- due to rising sea level. So this issue has been discussed. And I just wanted to share with you the fact that there's a lot of thought that's been put into this, and people have started to develop case studies that show that you need the community to decide to go. You need the community to decide where to go. Because government efforts to move them usually, you know, fail because they move them to -- really places that are too far away, they don't have access to jobs. And this, of course, we've seen in the case of dams and other large-scale infrastructure projects where those relocation projects have been horrendous. So, just wanted to share that.

MS. BUZARD: Donna, you want to take particularly the IDP one?

MS. DERR: Well, and actually I wanted to follow on just to both Beth and Alice's response on the last question, which is displacement and movement of people. Because I actually think it's an issue that frequently confronts us here in the U.S. as well is states or local governments perhaps making the choice to not allow people to build back in certain areas or to relocate whole communities.

And I would just say to you that in many ways, this is kind of a shared reality across the globe. As that happens no differently here than what

you've heard from Beth and Alice is the fact that unless communities are very much a part of that decision-making process, and they're discerning for themselves that movement is in the interest of that community, you know, we're not seeing it work here in the U.S. either. We're still, what, seven years out from some relocations in the Midwest? And lawsuits abound and people haven't moved and are still in very flood-prone areas.

So I would say that it's kind of a shared reality across the globe, yes.

MS. BUZARD: All right, thank you. Let's take another round of questions. I have one. So, keep your hands up for a moment so I -- one, two, three. So, first one is over here on the left, sorry. Thanks. And if you can, pointed questions. Then more capacity to answer quickly.

MR. GRINDSTAFF: Hi, my name is Hugh Grindstaff. And when I was working at National Geographic, did an article on me and my disaster-prone -- going to different places. I've been to about 35 earthquakes and about 35 to 40 typhoons/hurricanes. I was in Loma Prieta and San Francisco.

But emergency response -- one of the things I've learned is this is a thing called Road ID. It has my name, my address, two phone numbers to call, any disability, you know, like your blood type. Would this be a suggestion for people in places like Missouri and other places to suggest to them they buy something like this? So in case of a natural disaster, body identification or even people who have been stunned or out of it would have this. And you can get it, you know, put it in your shoelaces or whatever. It would be a good suggestion

for them to have something like this.

MS. BUZARD: Thank you. Yeah.

MR. BENDET: My name is -- excuse me. My name is Sam Bendet, Department of Defense. Department of Homeland Security and FEMA just held a national-level exercise which simulated a massive earthquake in the Midwest. I was wondering if you could comment on that, because that was supposed to encompass not just the federal response but the whole of government, whole of community response to a massive, massive earthquake in the United States.

Thank you.

MS. BUZARD: Gentleman down here in the front.

SPEAKER: Hi, I'm (inaudible), Japan International Cooperation Agency. Thank you very much for the very rich discussion about natural disasters.

My question relates to military-civilian collaboration in the context of responding to natural disasters. As you are quite aware, after March 11 earthquake and tsunami in Japan, Japan defense force played a very big role. And also, we are very grateful to the military's response from the U.S. Government as well to Japan.

And I wonder whether some lessons around from the kind of military-civilian collaboration in Japan or in developed countries can be utilized when we assist in developing countries when they are hit by the natural disaster.

MS. BUZARD: Let's take two more. We've got two gentlemen

right here.

MR. JACKSON: Good morning. Thank you very much for that great discussion. My name is Gilbert Jackson from U.S. Agency for International Development.

I'm in the engineering program and our role is to do reconstruction beyond that of the initial temporary housing. And I think that's the question I'd like to ask, is at what point do you start to address the so-called building better and building stronger and building better? There's the chaos of the initial disaster and then there's the temporary housing. And then we, supposedly, come in there to -- we the engineering program at AID, among others -- to build permanent housing. And we're starting to look at how to do this. In other words, renewable materials or build earthquake-proof, and so forth and so on. So you don't have the same problem you had in the past.

So I'd like to hear a little bit about you're your opinions are on that. We decide on a period between 30 days and 120 days as the period at which to start to do this permanent construction.

Thank you.

MR. HERSHEY: I'm Bob Hershey, I'm a consultant.

To what extent have your groups been able to use the Internet to coordinate donors and volunteers and response activities and planning?

MS. BUZARD: Great. I think the first and the last question, actually, both are something we haven't talked about here, which is technology and who is using them and to what. And so Donna, do you want to begin with

either first or second?

MS. DERR: I'd be glad to. Actually, there I think was a question on the recent exercise, the earthquake exercise. And what I would say is I don't have a lot of response to that except to say that there will be lessons learned that will hopefully then inform state plans for preparedness and response. And I have not seen those yet, nor I think have most of us. But part of those, I understand, will be shared with groups throughout the U.S. that are part of the state voluntary organizations active in disaster networks in their given states as part of a lessons learned process to inform planning and response activities for the future. So, I'm not sure I'm fully speaking to your question other than to say that's what I can answer.

I will answer, I think, the technology question at a later point perhaps, but would defer now if there are others that --

MS. BUZARD: Beth, any of these questions in particular?

MS. FERRIS: Sure. Let me take the question from JICA about military-civilian cooperation. I think we've seen in a number of recent disasters, whether it was the Pakistani floods where the Pakistani military played a leading role, or Haiti where the U.S. military played an important role in terms of reestablishing infrastructure, but the military assets are often needed in natural disasters.

Now, military and civilian cooperation, as you know, has often been controversial in conflict situations, particularly when the military that's providing humanitarian assistance is also a party to the conflict. There are a lot

of tension around that. The NGOs and humanitarian actors feel uncomfortable. But in natural disasters, it seems that the use of those military assets is much more accepted, much more appreciated. There's a realization that civilian agencies simply don't have that capacity.

Where it seems to work best is where there are agreements or understandings beforehand. In Pakistan, for example, the NGOs and the UN and the military had worked for months and months to develop an agreement as to who does what in case of a disaster. I think that was signed in March and by July the floodwaters were rising and it was a helpful thing. So I think that sorting out, you know, who does what and how to use the particular assets of military is something that can be worked out.

I think that Japan is really an interesting case to look at the role of the Japan defense forces, which my understanding has been widely appreciated in terms of the work they did, and particularly in a recovery and working together with the U.S. and other military forces to do some of the work that perhaps only they could do in that terrible situation. So I think there are some lessons that can be learned there that would be useful for elsewhere.

You know, this question about when you begin reconstruction or construction of more permanent housing I think goes to the heart of what Nan mentioned about shelter. You know, internationally about half of all disaster relief money goes for housing, you know, temporary shelters, transitional shelters, longer-term, and just a whole host of issues around, you know, where you build and what if people don't have title, and what if they're renting? I mean, it gets so

complex. And you know, I don't think that there's a single answer.

We were talking before this, several of us have been in both Haiti and Japan in the space of a few months, and those are just polar extremes in terms of government capacity and response and how well things are going. And yet some of the same issues around housing and shelter surface in those very disparate -- so I don't think that there's a one-size-fits-all on, you know, day 60 after a disaster you can begin permanent construction. But I'm really glad that you guys are grappling with it.

MS. THOMAS: Can I speak to that as well? I think just in the ideal world -- and we're never there, are we? But in the ideal we have always, I think, here in the U.S. talked about trying to strive for within about -- within that 45-day window beginning, you know, some permanent home construction here in the U.S. But so much of that process is always determined by factors beyond our control -- insurance responses, et cetera -- so very rarely, I think, does the ideal happen. But it would be true to say that that's kind of a window that we all work toward.

MS. FERRIS: I don't know if you want to talk about technology?

MS. BUZARD: I'll just say a few key things, because the Red Cross is working a lot on SMS messaging out to beneficiaries around -- in Haiti, massive campaigns around immunization, hurricane preparedness, cholera response. And I think that's great, and I think technology is not to be underestimated in terms of the power of it.

However, I would also say that if you don't have the back systems

to manage it, it actually is -- there's a lot of focus now in more and more countries, I think close to 85 percent of people in Haiti have mobile phones. That's fantastic in terms of those SMS messages. If we want to use that as beneficiary communication saying, here's what I want, this is the beneficiary voice. Or in a disaster, I am stuck and take me out of it. You've got to have a back system that's capable of actually managing that.

So at the Red Cross, both in Haiti and also in Japan, we had people who were in Japan texting or calling from Japan to New York, to Washington, and then my team in Washington called me. I'm with the Red Cross, the Japanese Red Cross in Japan, about someone who needed rescuing. This was the second day after the tsunami in Japan. Great, but also shows the complexity of who's really thinking who is going to respond. So, we were with the Japanese Red Cross and we actually were able to contact the prefecture and they were able to do it.

But you really need to think through your systems in technology. It's not just a good as a given.

MS. FERRIS: Yeah, and I think the idea of the wristbands or the identification or general preparedness plans at the family-level are just crucial.

My sister lives in Galveston and I talked with her this weekend and she said, oh, hurricane season starts next week. I've got my baggies ready.

MS. BUZARD: That's great.

MS. FERRIS: My plastic bag with my car title and my identification and -- but that level of preparedness has to be felt on the individual

level, the family level, in order to work.

And just one more word on technology. I think that Haiti also showed some of the dangers of the new technology. I'm thinking about the separated children who were advertised on Facebook. We found so and so, anybody claim this person. You know, ICRC, the International Community of the Red Cross, has a long history of tracing, but there are safeguards built in. Nobody can just say, oh, that's my kid. You know, so I think that we need to look at some of the ways of ensuring safeguards in the use of that technology.

MS. BUZARD: Alice, do you want to answer any of these?

MS. THOMAS: I just want to add about the temporary housing, I mean, 90 to 120 days would be -- sounds great. Unfortunately, I haven't seen that happen. And so, there are obviously challenges to having that happen, particularly in developing countries.

But one thing I would add is the plans to build back better, while obviously incredibly important are also often very costly. And in my mind, it was hard to judge the significant need for people just to have some kind of temporary housing that could then be -- maybe become permanent housing. You know, the right materials to rebuild and meeting the needs of more people to building back. For instance, in Pakistan they were doing, you know, solar housing that are retrofitted for earthquakes and flood-proof. And they were just expensive. And so, that's a challenge that I think we need to work on.

MS. BUZARD: Just want to -- I'm sorry, yes, sir.

SPEAKER: (inaudible) has anyone been back to Sichuan since

the disaster? Any of you four?

MS. BUZARD: Sichuan, China?

SPEAKER: Yeah.

MS. BUZARD: Yes. Three-year anniversary was just last week.

SPEAKER: How did you find it? Was it rebuilt?

MS. BUZARD: Significantly so, but there were a lot of issues with the local authorities really controlling most of the rebuilding.

SPEAKER: Okay, thank you.

MS. BUZARD: There was one question we didn't answer, which was about the coordination, I think, of private sector interests and public sector response. I think most of you know there's many different efforts. There's the business roundtable, which tries to link corporations with nonprofits who are doing response.

I think that the simplest answer is to make these relationships before disaster and not during. Most agencies are inundated with offers of volunteers and product and all sorts of things during a disaster. And there's just no way to absorb it in any responsible way. So, make your partnerships and relationships prior to the disaster.

I think we have time for one more question? Yes, sir.

MR. HUSAIN: Good morning. My name is Altaf Husain. I teach at Harvard University in displaced populations.

So this question on, I think the gentleman asked, the right of the government in terms of telling people where to live and whether they can live or

not. So the two concepts that come up is -- especially in social work -- is the right to self-determination. It's basically, you know, let the client have the best, if you will. So I was curious how you handled that challenge.

And then the second one in terms of training and preparedness, how much does cultural and spiritual competence -- these issues -- come into play? Because I think a lot of the empowering institutions such as churches and mosques and synagogues could be places of training. Not to use a faith-based metaphor, but you know, Noah's flood, no one heeded the warning, and then we know the consequences of that. But since the rapid -- I mean, the frequency is increasing of these natural disasters, you would think that these institutions such as schools and faith locations could be possible locations of training.

Thank you.

MS. DERR: To your second question or point, in particular, I think it kind of circles back to the point I was trying to make about many of us in the faith community have kind of a natural audience everywhere to a degree. And we've not used that well enough to educate, to make people aware, to help them plan and prepare.

And so I would absolutely, you know, kind of agree with what's behind your point, which is that we do need to more effectively use that. We need to be reminded that it's not a good time after the disaster happens to take the moment and use those audiences. But rather, proactively. And I think that's where we have been a bit plodding over time.

So, yes, I think that's something we see here in the U.S. most

certainly, is a way forward that we need to be more proactively engaged in.

MS. FERRIS: And on your first question, I mean, there is the right of self-determination. And there's also the basic human right of freedom of movement. Now, in many countries, there's national laws that make -- that provide exceptions for this. You know, you can't live in a house that's condemned because it might be a danger to you or to the community. And the important thing is to make sure that the legal standard is in place and that they're communicated, and that people have trust in the decisions that are made when those necessary restrictions on freedom of movement or right to self-determination are necessary.

MS. BUZARD: Well, it is 10:30. I think we should wind up on time. I urge all of you to take at least one if not two copies of this excellent publication. Share it with friends, family, colleagues.

A big thank you to Brookings for hosting this. And please, a hand to our panelists. (Applause)

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