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## Holding on to Trust in the Face of Disasters

Today we're gonna talk about holding onto trust in the face of floods and focus specifically on the Japanese context.

And we have a great lineup of speakers who are gonna present some of the latest research as well as some of their direct experience as an expert working with communities and also their direct experience working in the government.

We're here from Nagano City Government. Normally I'd begin my presentation with a cute kogi or another puppy or dog because I know that that gives everybody a nice fluffy feeling in the morning. But I used that yesterday, so I can't do it again today.

So instead, we'll just jump straight in to the action and I will introduce a little bit the topic. So our contention is the trust matters. And the trust matters because it allows for critical, at critical times when time is very short for people to take the action that's necessary.

And without it, people may spend too long precious time with the result that lives are lost on trying to work out for themselves what's best to do. So how is it that those who are in the position to take decisions and to advise can not be trusted, but be trustworthy because that's the thing that's within our control.

And sometimes we make the mistake of thinking that what we should aim to be is trusted and we're looking at the person we want to trust us and thinking about how to change them. But what is it about ourselves as individuals, as organizations, as governments, as decision makers that we can do to be more trustworthy?

That's it from me. Today I want to listen to others speak. And our first speaker is going to be Dr. Anne Kao or Annie. She's regional director Southeast Asia of the Practitioner

Exchange for effective response to sea level rise, a global community of practice that addresses the sea level rise and coastal hazards.

She's been working on adaptation in Asian Delta cities, especially in Ho Chi Minh City in Tokyo. And currently she's working as a project researcher at the Institute for Industrial Science at the University of Tokyo.

And her research is that she's going to present today as really breaking stuff. And I know that she was getting a new results just yesterday which she's going to be presenting to us. Our second speaker will be Dr.

Nobuyuki Tsuchiya. He's the deputy director of the Japan Riverfront Research Center and a lecturer at Monozukuri University. We have to bow to his expertise. He's spent 43 years working in this sector and on these issues.

He has extensive experience in urban planning and engineering in river restoration and transportation. He's the person in charge of Erukawa City Crisis Management. Dr. Tsuchiya has also worked with the Japan International Cooperation Agency, JICA, and he's taken his expertise outside of Japan to Thailand and to Indonesia.

He's also a member of the Community Development Committee for Recovery from the Great East Japan Earthquake. And in that capacity, he's worked on the reconstruction of Onagawa Town in Miyagi Prefecture.

Our third speaker is Mr. Katuhito Araki. He's a member of the DX, or Digital Transformation Promotion Division of Nagano Prefecture's Planning and Promotion Department. So he's a real government official really taking decisions.

Previously, he worked with the Aoi General Insurance Company and he's currently, and this is how our connection is established, participating in a joint research project with the University of Tokyo and other institutions, which is about the utilization of advanced flood early warning technology in order to enhance flood risk management.

So we're very much looking forward to his presentation too. So this did, let me hand over to Annie.

Good morning, everyone. Sorry, I'm a bit short, so I'm going to stand on this stage. So, thank you, Olivia, for a very kind introduction. Today, I would like to introduce some of our latest results on the survey that we conducted, which this one doesn't work, so could you please go to the next slide, please?

Our survey was conducted with the residents in the Tokyo Lowlands areas. So, yes, thank you. And as you can see in this map, many of you may not be aware that the Eastern Tokyo has very low -lying areas, which the area is actually lower than the water levels, and currently 1.6 million people are living in this area.

The area is being protected by dike, floodgates and pumping stations, but in case of dike failures, flooding can happen for two weeks, and there are insufficient evacuation centers for people in this area.

So, we conducted a survey with people who are living along the lowest area in this Tokyo Lowlands. We got more than 200 responses so far, and this is still going on. I'm going to share with you the result, the most updated one, until just yesterday.

So, river floods and earthquakes are the top of the concern for the residents in this area, comparing to other hazards like storm surge, sea level rise, land subsidence or heat wave. And when comparing to different types of flood measures, whether it is building dike, using dams or reservoirs upstream, or building protective structures like dike, floodgates, or soft measures like evacuation or awareness program,

the residents are more inclined to believe that the protective structures and also soft measures like evacuation are more effective, and they are supportive of these measures. And residents in this area also show a high level of preparedness and intentional response to flooding, in terms that many of them have already checked the hazard map and confirmed the risk level in their residential areas,

and also they are aware of the evacuation centers. They also indicate that they are willing to follow the evacuation orders in these areas. Looking specifically at trust, it is quite interesting that residents show a relatively low trust in the information provided by the government and the media.

They have relatively higher trust in the information provided by the scientists, and they also have relatively lower trust in the ability of the government to cope with flooding, and also the community in the surrounding area.

So we were looking at the relationship between different factors, trust, and how it influenced people's behaviors, and the result indicated that people who checked the hazard map and confirmed the risk level, they are more willing to follow evacuation orders, and people who believe in the community -based initiative and also the effectiveness of evacuation, they are also more inclined to follow evacuation orders.

Risk perceptions show a little bit of relationship with this factor, but underlying all of this were trust. People who trust the government or trust the surrounding people and the community, they are more willing to engage into evacuation behaviors.

So that is the only message from our latest result. Trust is significant in predicting evacuation behaviors. Thank you.

Ali, thank you so much. That was a huge amount of research and work that was compressed into an incredibly efficient presentation. So let me just pull out and reiterate kind of a couple of messages from that.

So one, I think interesting that in a country that's beset by, that's faced with so many natural hazards, that floods are right up there as a top concern for the residents and the respondents in this survey.

So that suggests that despite perhaps the very advanced work that's been done on earthquake awareness and earthquake preparedness in Japan isn't matched yet by the same level of awareness and confidence in the disastrous management process for floods.

Second thing is, we've been claiming that trust is important so it's a real relief to see that that's what Annie actually finds when she does the research. So what we're finding is two things. We're finding that trust in government is important for people to follow the government but we're finding this other channel, right, which is trust in the community is also important for people to be inclined to follow the advice that they are given.

So with that, I'm gonna hand you over to Tia Sensei. Sensei, please.

Good morning, everybody. My name is Nobuyuki Tsuchiya. I'm a great honor to, uh, opportunity to speak, uh, here to, uh, this morning. Thank you very much. I will, uh, now take about, uh, how ROKED, uh, residents in the institution or ROKED organization can build restoration of the trust in the events of the flood.

Uh, 2018, June rainfall exists 1,000 millimeters many place, with some place recording over 1,000, uh, 1,800 millimeters. In Mabichokrashiki City, which you can see in this portal, in the area, 51 people died.

Uh, displayed risky work. As soon as the heavy rain stopped, uh, Ministry of Land Infrastructure, uh, transport to the tourism will come close to the river's bridge point with a temporary coffee dump of the began, draining water using pump trucks.

All these pump trucks are operated by the urban, uh, response, uh, personal cord, take force from the MRIT by the directly dispatching, uh, MRIT official in this way. Trust is built. A flood inundation area map showed advanced simulation of MRIT.

Please look at the, uh, number, the inundation, uh, percentage. Evacuation rate was so very low that most people did not escape during the heavy rains in Japan. Over 100

victims in Hiroshima prefecture who died and whose identities are known 67 people, which was more than 60% were killed in their homes or on the premises.

During the heavy rain in Western Japan or during 2018, there was one area where all 350 residents were evacuated to the middle of the night and no casualties were reported. Despite flooding up to the three meters and the factory explosion, this is the Simohara district of the Sojo City.

Why was everyone's Simohara area ever evacuated to safety? I will introduce the activities of local voluntary disaster prevention organization that have the key to the evacuation action. They found that the voluntary disaster prevention organization had been formed with every houses.

The press way then evacuated all 350 people, conducted the advance even during really days, rainy days and at night, created a list of people who needed special care and provide administrative support of the evacuation.

We understand that local community are very important. I believe this is the basis of the trust. In 2019, in Typhoon Haviz, 108 people were died and missing. The Chikuma River was the longest river in Japan, based on the banks.

were engulfed by the muddy waters. During the typhoon havoc in October 2019, 80% of residents in the Nagaruma area, where the laughter occurred, evacuated at the banks. This is an extremely high evacuation rate compared to the average evacuation rate of 4.6% during 2018.

Western Japan, heavy rains. There are five factors contributing to this high evacuation rate. One, there was a major flood. This area in 1742, the water level storm monument, was installed to show the depth of the flood at that time, and they learned about the history of the flood.

Two, the heavy rain is occurred to Western Japan in 2018, which killed more than 200 people who have become new memories. Three, at that time, it was widely reported in the media and only 4.6% of the people evacuated.

Four, that extensive of TV reports of MRITs, rebar disaster prevention information, and the Japan Meteorological Agency real-time information become known during the previous year flood disaster. Five, and the biggest factor to the power of the local community, disaster prevention, the one held on the community every year, neighborhood association officer called out of the local legend and the ages then evacuated earlier.

Furthermore, personnel from the five-year department repeatedly struck the bell called Hansho to the harsh evacuation. This bell only rings the extremely rare emergencies and the repeated ringing of the bell of the rapid pace that made a recent realize to the seriousness of the situation and the legend to evacuate.

For example, kang kang kang, kang kang kang, everybody hurry up, kang kang kang, this bell. Flood disaster requires awareness of cooperation from the entire basin, from upstream to downstream for 400 years now the Alakawa River, which follows though Tokyo has been community activity connecting the Chichibu area to the Saitan prefecture, which is 170 kilometer upstream and Tokyo, which is the most downstream.

The community at the bottom of the mountain called the Shinagawa Co, located the Mitsumine Shrine, donated found for the people of the top of the take care of the mountain. We find the mountain forest health has been known to 400 years to reduce rainfall, run off coefficient across the water shade.

Great damage caused the storm surge of August of the September of 1782. Recognizing this as a serious matter to the government of the time, they decided to purchase the entire 225 hectares of the affected area and turn into vacant area.

Thus, this is the Namioka Monument Storm. That's Ukiwa pictures. solve the victim area, vacant area, sorry, vacant area. I think the citizens of the time of the revolutionary government majors, that five point, it is important to learn to history.

This story, disasters understand the risk, calculations of the region. Two, risk awareness can be linked to sharing the experience of others. Three, safe help, mutual help, and the public help can be achieved with each person doing their best.

Four, by conducting disaster prevention studies as a daily basis of the amazing all kind of the situation. It is possible to improve the adaptive ability of ladies. Last, trust is built of communication between each organization.

I believe, thank you very much.

Thank you very much indeed. I think there was a very beautiful echo yesterday with what we heard from the high school students who were talking about how they can keep the memories of the Kobe earthquake alive.

And we heard many instances in Dr. Suchiya's presentation of these historical elements and artifacts that are relevant to helping people to remember or not to forget in a way that allows them to be more prepared for future disasters.

I'd like to hand over now to Arakisa, please.

Thank you, everyone. I would like to thank the REX -F The At the same time, we used to have a lot of fun with Taiwan. We also used to have fun with Japan. We actually had a lot of fun with Japan. Thank you very much.

The translation is not working. Give us one minute to try to sort it out. Okay. Ah, okay. But it works when I put it, so it works for me, or for, it's working? Yeah, so it's getting the English, but it's not getting the Japanese.



OK, so sorry to interrupt the session. So we've just put the QR code up on the screen. This is for the Interprefy app for the translation. If you scan it and then you have to install the app, and then there's two things will happen.

It will either load the session automatically, or you'll have to open the app again and enter a code. If the latter, the code is UR24RM408, and then you can just see all the captions for the stream.

I think the problem may be that it's captioning the English, but it's not translating the Japanese. So I can see that, I can see your words, but I'm not getting the translation. Okay, so.

I believe that maybe you select Japanese on the English stream and then you select English on the caption

This is going to be relevant for the rest of the conference, so I think it's OK if we spend.

I'll spend a moment on it now.

And then my Japanese is very poor, so if I can ask for a Japanese speaker, maybe Stella, and we can test.

Thank you very much. Thank you very much. Thank you.

Honya kudikitabas deshoka.

Ah, I think it's time to go to the hospital. I'll see you next time.

Thank you very much.

Oh.

Ha, not a whole lot.

I'm next to Japanese, okay?

Okay, right, right, right, okay. Thank you very much. Thank you very much.

Thank you for watching!

That's why I'm here. That's why I'm here.

Thank you.

I think this, I'm sorry, that's a bit frustrating, but given that we might not be able to sort it out straight away, I'm gonna ask Ani if you wouldn't mind just to help us out. If anybody's ever tried to do this, it's extremely hard.

If you're, oh, but the English is fine, it's the Japanese -ness. So Ani is gonna try and do a bit of interpretation for us. All the rest. Okay, good luck.

Thanks.

I'm okay. I'm very happy to be here. I'm very happy to be here. I'm very happy to be here.

Okay, so this is about the damage from the typhoon hagibis 2019. We have death toll of 24 people. The amount of houses that was collapsed and infected was more than 2 ,000 and plus 900 of the houses were completely destroyed.

And also the economic loss of, the economic loss is around, what is this? 2 ,700 billion, trillion Japanese yen.

I will start with this one. I think that the first part of the Dx -3D part of the Dx -3D is the same as the other part of the Dx -3D. It is a very interesting part of the Dx -3D, and the Dx -3D is a very interesting part of the Dx -3D.

It is a very interesting part of the Dx -3D part of the Dx -3D.

So, due to this typhoon in 2019, we started this collaboration between Nagano Prefecture, the University of Tokyo, and also other stakeholders such as JAXA, and also the instruments company. And the purpose is to utilize the data available to produce flood early warning system.

If you have any questions, please feel free to ask in the comments below. If you have any questions, please feel free to ask in the comments below.

So the mission of Nagano Prefecture will be the first place to implement this early warning system called Today's Earth, and it will serve as a best practice that can be transferred to other local governments in Japan.

All new tonight at 6... A new look at your A new look at your forecast this morning...

Today's Ask Japan. Today was the first time Japanese -style simulation. And it was brought back in 2011. My name is

So today Japan is a system established by the University of Tokyo and JAXA and it will produce more than 30 hours in advance. The long lead time, early winnings and Nagano prefecture is also implementing this system.

As I mentioned in the opening session, we want to make general decision for the key users. As I said in the opening session, I am very proud to introduce the real -time Future and business situation.

The real -time Future is also very important. So, in the beginning of the session, the real -time Future is available in real -time.

Okay, CMAP is a map that's supported by an insurance company, Aoi Niste, and then that will kind of show information about their early winnings, also the real -time simulation of the, yeah, the real -time information of the early winnings.

I will explain this in a minute. I am looking at the Japan CPACs. I think the Japan CPACs are very good. I think Japan is a very good place for a lot of people. I think that the Japan CPACs are very good.

I think that the Japan CPACs are very good. I think that the Japan CPACs are very good. I think that the Japan CPACs are very good.

This is the CMAT that we were just talking about.

the first thing I wanted to say was, I wanted to know what you have to do to make your job better. I wanted to talk about how I use it. I wanted to hear what you've done and give me some advice. I also wanted to know how you have a job.

I've been through the last 4 years, I won the event again. Thank you very much for your help and I'm happy to serve. I think I have been very proud of you and I am one of those new producers. I am happy to be sitting in your office and talking to people who are interested in this event and they will support and share their ideas with us.

Okay, so to summarize, there's three challenges in implementing a long lead time early warning system. The first one is, you know, we have this long lead time, so how are we gonna utilize this time into the disaster risk management?

The second one is the accuracy of the system. The long lead time, lower accuracy. So how do we deal with this? It's play an important role in decision making. And the third one is how to incorporate it with existing early warning system and kind of, you know, different institution and producing early warnings and how it will be incorporated with the government actions.

Thank you very much.

Yes, so in relation to this and also the topic of this, of today's session, they're not going to prefecture also organize a workshop under the scope of this project.

Can I have a quick morning's talk? Before the break, I want to thank the president of Hong Kong, and the president of Hong Kong, Dr. Hio -I mean the president of Hong Kong, and their director of the United States.

I want to say a quick thanks to Mr. Hio -I mean Dr. King and Dr. Kyouama, and Dr. Kim. Thank you very much.

So we organized a workshop that involved all relevant department in Nagano Prefecture that's relevant to disaster risk management and the two themes of the workshop is if we have one day extra in the early warnings, what are we going to do?

What all kind of action does the list out, all the things that it could have done and also arrange it in the timeline, what could be done first and next?

Thank you very much. I would like to thank you for the opportunity to be here. I was very happy to be here. I think it is a very good opportunity to be here. I am happy to be here. I have been here for so long.

Please come and join us.

Okay, so the participants, the majority are the practitioners, like government officers, and first of all, they play their own role in their own departments, but then there's also role - playing that they change into a residence or like the mayor or some other roles to kind of think of what they can do with this long lead time warnings.

In the last few years, we have been experiencing a lot of new work in the past. We have been experiencing a lot of new work. And now, I will be discussing the other step plans. For the last few years, I have been experiencing a lot of new work.

In the end, we will be working on the same project as last year's market. The market has much increased since we signed the US government policy and support. Now we are working on a different competition.

talk about the future of the market. Of course, the market can be better in the future of the market, and the market is Thank you very much.

So, they're both positive and negative side of the result when we have a longer lead time and on this slide we're showing some of the key findings on the positive side. Obviously there was a lot of actions that can be done to prepare it and respond to flood and also it can enhance the engagement and collaboration within the community.

and negative I can touch much back so you know Joho hash in New York then what I go where giga Ngal get when you're not so die streaming ah well so it a cut out or get a little bit what I yo got a to colon so you know the sighs all right

Yes, the interesting part is some of the negative effect that we didn't expect when we have a long early time. So the first one is we have a lot of extra phone calls that might be coming during all of this long time and they have to confirm the information.

And the second point is regarding this kind of anxiety when people have a long early time and they're not quite sure when this is coming. So it's kind of creating this anxiety in the community.

And so, for the first time, I think that I can make more sense, and I think that I can make more sense as a result of the world. But I think that I can make more sense in the future.

And when we have a longer time, it's also the pupil behavior is more unpredictable. So we need to have more research and a better understanding of how our society behaves. Our residents behave with a longer lead time.

The transistor, something that is passed through the NCP, and the NCP was passed over to the NTP. It was passed through the NCP, and it was passed through the NCP. The NCP was passed by the NCP, and the NCP ran on the NCP back then.

Then I put it back in the next slide. First, I'm going to take a look at cheating and make sure all the rules aren't figured. And then I'm going to talk about basketball. which I'll talk about in a few minutes.

I'll talk about the situation next time.

Okay, so the key point is from this workshop is we're very important for Nagano Prefecture that we imagine we have a long early time warnings and we list out all the things that we could do. This is also kind of increased ability of the government and also contributing to building trust between the residents and the government.

Thank you very much.

However, when we're implementing a longer lead time, with lower accuracy, it's also kind of influential on the transmission residents and the government as well, when we have a lower accuracy and that might influence people behaviors and perception of evacuation measures.

Thank you very much.

Another point is that we have more time and we're going to also kind of produce more chances opportunity for business to support for evacuation measures or actions among the residents.

Thank you very much.

Like I said, thank you, thank you so much, President de la Raza. I mean, you didn't seem to find that difficult at all. It's obviously got a second profession there.

I think

this is an absolutely sort of essential case to think about when we're thinking about introducing new technologies or how new technology is particularly more longer lead time, many warning systems. And we think, yay, that's great, that just makes our lives easier and we're gonna get better at, say, evacuating people.

And I think what's really such an essential kind of learning from the very careful work that Nagano Prefecture has done in looking at how these warnings might actually be used is it introduces and highlights for us that it creates its own sorts of uncertainties about how people are gonna react and both decision makers as well as the public.



I don't know what to do. We're very low on time and we had a lot of fun making this interactive thing, so I kind of wanna do it with you, but I think we may overrun horribly if we do. We've got eight minutes.

Okay, can we do like a kind of a super accelerated version of our interactive, okay. And I'm gonna introduce more technological uncertainty because we're gonna use something called Mentimeter, which you might have used before for a sort of online polling.

So a QR code will come up. You need to have your fingers ready on the buzzer. Okay, we know this already. Okay, so this is your town. You've got a population of 360,000 people, 165,000 households or so.

And in your town, there was a major flight but 10 years ago, so the memory is maybe a bit hazy for people. Highlight, you've got lots of people over 70, so I was wondering when Chia Sensei was talking about that 80% evacuation rate, who are those 20%?

Because those 20% might also well be the most vulnerable within the community and the most difficult to evacuate. So you can't, 80% is not enough. Okay, it's June, it's the rainy season. You know what it's like?

And it's seven a.m. A severe storm is imminent and there's a maximum flood level warning of four. I'll explain in a second what that implies. So at level four, the mayor must, under Japanese regulations, issue an evacuation order to all the residents in the affected area.

Okay, but that hasn't happened yet. That may happen over the course of the day or the next few days, so you get prepared. You set up your disaster response headquarters room. You've got a media briefing room and you've got a nap room for staff because this could go on for a while.

You call all your disaster response team members into the office a bit early, everybody settled. And you check that the communication hotlines, both for you to receive and to give information and to call for help from the prefecture if you need it, are all working.

And you've secured emergency generators in case of a power outage. This is what the information flow looks like for a Japanese mayor. So they would get a warning from the prefectural or local river office about the height of the river.

So that's associated with a flood level warning. That comes to you, and you as the mayor are the ones who take the decision about evacuation. According to the regulations that have national level regulations, you order the evacuation order and that goes out to residents.

This is a slightly simplified version of what actually happens, but it'll work for now. Okay, it's 3 p.m., the storm begins. This is what you've received in training. This is what's required of a Japanese official.

So you can see that there's, it looks simple, right? You get your warning and you do whatever it is you're meant to do. You order an evacuation, you get prepared. But what we'll find out in just a second is that there's a certain amount of ambiguity in all of that.

And number one, you're on the alert. And number two, that's where you are now. Check your evacuation proceedings. Level three, the elderly and other vulnerable people must evacuate, you must issue that order.

And at level four, everyone must evacuate. So you've got the level two warning from the River Management Authority. Okay, let's just check that. Level two, should check evacuation procedures. But you know that the maximum flood level warning for this storm is level four.

So do you want to do anything right now? Here's a couple of options for you. One would be you send out messages to vulnerable residents, including the elderly and the disabled, that they should prepare themselves in case the level three warning comes in.

Or you check that you've done your preparation, followed the guidelines, but at this moment, you don't communicate anymore with members of the public. Why create anxiety when that might be needless? Okay, so if you want to scan this QR code, you're the mayor, you decide what to do.

Haha. Thank you. Well, it's pretty clear we're at a disaster risk management conference, right? Okay, so everybody thinks...

Everybody here trusts their public. Not everybody. A large majority trust their public. You think if you give people extra information, it's not going to make them panic, it's not going to make them do the wrong thing.

What it is, it's going to make them take the right protective action. So you have confidence in your public. I hope that's deserved. What happens next? The river levels start to rise. Some people are on the sidelines watching.

Your residents are on the sidelines watching and they're seeing something which you are not necessarily getting from the flood level warning that's coming from the river management office. 6 p.m. Flood worsens.

Now you get the level 3 warning. It's straightforward. Level 3 warning comes in. You've got to evacuate the elderly residents. So you issue the order and you send out your teams to assist. But more information is coming in.

So not through that official channel that we showed in our little graphic there. But you've got private agencies and enterprises who are providing you with forecasts. You're getting information that there may be dike breaches in two places.

So you've got the rising water levels and if your dikes don't hold, then very, very quickly large parts of the city are going to become inundated. It's a different kind of a flood from the one where you've got gradually rising river levels.

What are you going to do? Is it time to conduct another media briefing? Do you need the media on your side at this stage? Not now. Maybe. So the information about the possible dike breaches isn't official information.

It doesn't require you under regulations to take a decision. It's incomplete. It's uncertain. And if you do give out this information, for sure there's going to be a panic. So what you could do is we'll get more information.

That's what we do when there's uncertainty. So you could send out your team members to the potential dike breach points to get better information and confirm these private reports. Or you provide this information to the media.

You provide details on where the dike breach points are and you give out your flood maps which show which areas will be inundated if the dike does breach. You encourage the media to share this information with the public.

What are you gonna do? Over to you. Nobody said it's easy being the man. Thank you. Annie, I think we might need to advance the Mentimeter so that, because people are seeing the original question. Thank you.

No, we don't want another technology problem this morning, it's too early. Is it? Are you still seeing the original question? Okay, show of hands, absolutely. Let's go low -tech. All right. So, not now.

Working with the media is a precarious business. Who says not now? Get more information. Can I have a test?

technical assistant to count, no, five, six, seven, eight.

How many did you get? 13 that side, I think there were about another 6 this side, I can't believe it was only 19. Okay, and who says, okay, no, let's engage the media.

Oh, fewer. Okay. Interesting. But there are a couple of people over here who work on the public understanding of risk who say we should trust the media. Okay. I think we've got only about 10 or 11 on that.

Okay.

Okay, so we're trying to get some more information. Oh no, the crisis is accelerating. Just 30 minutes later, you receive the level four warning. So now it's coming in at level four, you've got no choice, you've got to issue the evacuation order, and you do so, straight away.

But the media demand answers, they're nasty now, you didn't talk to them, you didn't give them the information before, and now they're annoyed, and now they're a bit suspicious about what else you might be holding back.

People didn't have any time to prepare, the journalists say. Why didn't you give them the information that you had when you had it? And calls are pouring in from the public as well. So now your emergency room is inundated, people are extremely busy just answering calls from people who are encountering road blockages, they're not able to get out of their homes.

Two key road junctions are now flooded, and traffic is building up, and there's a sense that people are getting trapped. What are you gonna say to the journalist now? Well, you didn't do anything wrong, you just followed protocol, you followed the regulations, you weren't certain about that Dyke breach information, so you didn't give it out.

And so that's what you can explain. You can say, according to the Delaster Management Regulations, the mayor gives the evacuation order when the level four warning comes in, the local government didn't receive the warning any earlier.

Oh!

You can take some of the blame on yourself. You can explain that there are many uncertainties in forecasting floods. And you can appeal to the media to channel information from the public back to you.

So not now thinking of the media as a channel for getting information out, but rather, recognizing the uncertainty and the gaps in your own information, that they could be a source of information for you.

And they will be able to tell you and your team about the actual conditions around their homes and on the transport networks that are essential for evacuation. What message would you like to give the media?

We can try once more with the Mentimeter if you're still seeing the original question, which is very disappointing. But it's okay, so we go back to low-tech hands. Okay, so explain that you did your job, you followed the protocol, you gave the evacuation order when the order came in.

Who would like to do that?

But wait, what are you people like? Hmm. Nobody. Nobody.

Would you like instead to explain that there are many uncertainties in forecasting floods and that you would like the media to engage with you in channeling information from the public to you?

Well, well done everybody, because this is what could have happened if you had answered the question the other way around.

There could have been rising tensions. There could have been angry and confused residents who would have bombarded you with criticism. But instead, the media

supports you and the community rallies. The media swings into action using their own teams to collect information.

Of course, the media is prepared to receive calls at a volume that you may not be in your emergency management office. And they've got their little tech team on hand who are gonna start mapping it and putting it out on social media so that people can see what the most appropriate evacuation routes are in real time.

And that's taking some of the burden of you and your office to manage that evacuation process. And community groups and social media spread the information further and help to rally support. So we engage the community also in identifying where people are stuck and where they might need extra help to get out.

The panic calls to the emergency room decrease. It's an emergency, but it's one that has pulled the residents of your town together. Congratulations.

That's my quote from yesterday. I like that one. I'm really glad.

everybody chose as they did. Because what we do at the Institute for the Public Understanding of Risk is make over and over again the point that two-way exchange of information between the public, decision-makers, and incorporating the media is surely, in the long run, the most effective way to manage risks.

And recognizing uncertainties, as Arakusan has done, in Nagano prefecture, and articulating those, but keeping those channels of communication open seems to me essential as we face more and more frequent and severe and unknown uncertainties.