Hypot-enthuse_ Carina Fearnley on warnings and alert systems...

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entire talk for us in about 30 seconds?

Carina Fearnley

volcanic explosion or some significant hazard, or, you know, we're in a big catastrophic blowout, you need to really be aware of this. And so we have that with our weather forecasting, as well, you know, warnings about rain and storm, and we'll think about do we want to go on holiday or take an umbrella with us that that day, and, and so, you know, these alerts help give a heads up as to what's going on, so we can prepare for it. And in many ways, the, the the work that I'm doing is really about how could we potentially apply such a low level system to infectious diseases, or to COVID, for example, and we've seen an example, t systems here in the UK, and we see systems in places like New Zealand, South Africa, Vietnam, Vietnam, South Korea, have been incredibly successful. And so you may also consider why is someone who studies volcano alert level systems interested in COVID alert level systems? Well, this year, I've actually come to reflect on the fact that volcano alert level systems are actually some of the most diverse alert level systems in practice in the whole world. They take a huge range of designs, and they've been operating for many, many years. And they deal with vast amounts of uncertainty, unlike weather, which is a little bit more certain, not always, but most of them are certain. And they also have been evolving. So many countries or nations have improved their systems over the years have gone, this hasn't worked, this has worked, we need to adapt to it. And so because in many ways, these systems have evolved organically in these different nations around the world. We can learn an awful lot about alert level systems generically, and then apply that to COVID. And so I think volcanoes can provide some very important lessons learned and observations to take on board.

Malcolm Chalmers   09:11

That's really fascinating. I mean, there's always three or four fascinating things that you raise there. One thing which came to mind, with regards to warning systems for things like volcanoes, obviously, there are huge cultural differences throughout the world. I mean, if you live 50 meters from a volcano, the warning system is going to be much more important than if you live 300 kilometers away from one. So I would assume that countries like New Zealand, which have had natural disasters, fairly recently have got a much closer working relationship with these warning systems than say, the UK does. It makes sense that different countries would have different systems, then something like COVID comes along, which is less affected by geographical boundaries. I'm wondering is there any any difference in how countries have adapted their existing systems to deal with this threat and whether you can see any connection between how the existing systems of a country like New Zealand have worked in comparison to something like the UK,

Carina Fearnley

system. And that was very advantageous. And it may well have been that New Zealand had already prepared a draft alert level system for infectious d

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informed, and they are aware. And you know, that's no easy thing. It's no easy thing, it's certainly easy for government is easier. So I should say, for governments, and for emergency managers and civil protection to develop these plans, they're doing it all the time, for all sorts of hazards. It's not so easy to say, hey, public, you need to be aware that an asteroid might fall on your head, or that a supervolcano might happen and change the climate and we will have famine for, you know, hundreds of years, maybe 1000s. Or, you know, you're going to get this virus that's going to ruin your year. And you're going to spend your time in your four walls this year, you know, so when the public already concerned in many countries about health, education, security, more importantly, food, clean water. And so actually, you know, there is a pecking order here. And you do have to have some, some pity for the poor politici ia pec

complex systems, we don't, in my view, the only way we can deal with complexity is by keeping it simple. And by expecting the alert level purely to go to raise awareness, and then issuing alerts, information broadcasts that provides more specific guidance. And actually, more importantly, as well as just having everything on a website that's really easy to navigate. The UK Governm

on the the R values, and the the R value is, of course, a very tricky thing to identify. At the time, we weren't testing a lot of people

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Maymana Arefin 37:31

Yeah, no, off the back of that. And I guess I was just wondering how, because the situation has gotten so confusing and mistakes were made early on. I'm wondering where do we go from here? Like is, is it too late to kind of, especially with the public, this is kind of an issue of trust. At this point, I think, when so many, sort of the alarm systems were so confusing for such a long time, maybe people don't have the faith now to kind of look into the systems in detail, because they kind of think, Oh, well, it would change anyway. Or, oh, it was kind of arbitrary in the first place. So what do you do in that situation? Is it better to kind of try and rectify something or switch completely? Or like, what what do you think is the best way to go forward after that trust maybe has been lost?

Carina Fearnley 38:17

It's a very good point. And I think the credibility and the accountability of the system has been undermined, and in a way it's undermined by the establishment of the new system, rather than establishing a system to begin with preparing it and then rolling out as a successful system that doesn't need to be modified very much. What to do going forward, it's very difficult, you know, the National alert level system seems to have just fallen off the radar or people talk about is the local system now, trust is so important when it comes to warnings and hazards. And, you know, now nations where there's not a huge amount of trust between the population and the government can have very unsuccessful warning programs, and which can result in significant deaths. But equally those nations can set up their own sort of bottom up grass roots, warning services and functions that they then believe and trust in sort of kind of the power is then turned to to the people. I think in the UK, I think with the correct expertise of which we of course have a lot of in science and technology studies in terms of public policy, communication, public engagement, fostering and building credibility. I think it is possible to turn it around. There are no specific examples I can think of at this point where that has happened. But it does happen, of course, when governments change, but that's a bit more of a clean slate. But I think that if the government was honest and said you were having a review of our system, we want to clarify things for the public. And we've Got the expertise in. And therefore, we would like to present this slightly adapted system, preferably across the whole of   our cross

agenda on whatever's going on that at that time, and they're able to just focus on the critical element of the disaster. And so they're responsible for designing, developing, implementing and changing it. So we can't just go, oh, Boris Johnson did this, you know, well, the government did this is that actually, this the head of civil protection or emergency management has implemented this, and we should respect them, and their profession protect

Carina Fearnley 43:49

Absolutely. You've asked me to question there. So I'm going to ask the first question. And then I asked the first question, the second question, because even though you didn't formulate it as a question, you did actually ask me a question. So one of the c   c

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able to do that. And I think the government's got a long way to go in terms of engaging with good scientific expertise in terms of communicating this and integrating it into a program, there is an additional issue as well, which we're going to see a lot of in 2020, which are those not conspiracies, but those who are anti Vax. And so the, the vaccine is going to raise a lot of issues, everybody's asking whether you're going to have the vaccine, or didn't take 10 years to develop. So therefore, we're a bit concerned, when actually, it's just the time scales have been compressed because of the urgency, not necessarily anything else. And so we're going to see a lot of challenges around those people who are, you know, rightly concerned, everyone should, you know, has a right to be concerned about the vaccine, you know, like they've already said, for example, pregnant women can't have these vaccine because that hasn't been tested as to how it would affect a child in utero. So. So you know, there's, there's a lot of important things that need to come out there. Because if we don't get everyone vaccinated, we're going to be in this situation for a long time. This is all the things that we cover in sts around science, communication, policy and trust. And we know a lot about vaccines and anti vaccine vaccination campaigns. And we should be drawing on the experience and the knowledge that we've got from those to help us build a robust program for this this coming year,

M **Maymana Arefin** 52:20

or maybe perhaps a bit of a lightener. Actually, you mentioned that, that there are some good disaster movies out there. Do you have any recommendations if we want to really be

C **Carina Fearnley** 52:30

disaster movies are very popular, and they can very successfully convey some of the complexities involved in disasters, and the films that do that particularly well, or those that have really engaged with people involved in that hazard and crisis. So, you know, Dante's peak was a volcano film that was very much research with the United States Geological Survey based on a couple of real stories that were merged. And, you know, films like Twister, for example, were fantastic films really gave you an insight into tornadoes. And, indeed, pandemic is a very good film that, you know, fighting in a quiet sort of frightening level has predicted what has happened. And, again, that was done with consultation. And I think, what's interesting, we were talking a little bit about prediction earlier. Thing is like, we all knew this was gonna happen. And so it's kind of a bit crazy that we're all surprised about it when you watch a film like pandemic and you see how much that's played out. In reality, you kind of think Well, yeah, I mean, they are they are important, as are documentaries on television. And not just documentaries about the science, but documentaries on how it impacts people. And I think, towards the early part

of the Coronavirus, we had a lot of horizon specials and documentary specials around what is this virus? What can it do? Let's get this health visit this health expert in the actually what we also needed to be seeing was what how do these how is this going to play out? How is this going to impact our society? And sort of get some sort of imaginary futures if you like so that people can measure their expectations? I mean, we were all talking about how long is this going to last? Should we cancel our summer holiday? Should we be canceling or summer holiday next year? You know, should we booking? Should we be booking our ski holidays and things like that? You know, and what are we going to do for Christmas? You know, and I think one of the one of the ways that an alert level system like that used in New Zealand was very, was very use ? kewalat?m

the alert levels are being adhere to. And that means having penalties, and actually following up with breaking the rules. And we have seen some of that. But you know, it needs to be enforced. Otherwise, people might not necessarily actually act on it. So these are the kinds of things that I feel would help strengthen the UK alert level systems. And I think ultimately, for an f l wfuly,   ople midro bewfultim

more in the new year.

C   Carina Fearnley   1:03:23

I also wish everyone a very Happy New Year and hope that 2021 will help us return to some kind of normality. And I really hope above all things that we can learn from what we've experienced to help make sure that next time because there will be a next time, we are better prepared. And again, that's what the center is about. That's what a lot of research is about is to make sure we can identify lessons from crises and accidents and mistakes. But if we don't learn from them, and make sure that we don't make them again, then then that's that's a wasted opportunity. So let's hope that 2021 is a good leap forward for us.

M   Malcolm Chalmers   1:04:06

Fantastic. All that leaves us time for us to say thank you very much Dr. Carina Fearnley for your time. Anyone who wants to find out more about the warning Research Center can visit www.ucl.ac.uk/sts/wrc