

June_18_409_004

So this is the futuristic session. And we're going to be talking about using future climate projections to inform action now. And this is work that the Met Office is doing with partners in various regions around the world, looking at climate projections of 2050s, 2080s.

And we're going to have a chance to speak with some of those partners today to understand their expertise in this area, and how we can also hopefully learn from all of you in the audience as to some of the challenges or interesting ideas or opportunities you think there may be.

Thank you for this work moving forward. So my name is Nairi Pinder. I work at the Met Office. I'm the Global Partnerships Manager there in the international team. And I'm here with my colleagues, Helen Coffey, who's kindly assisting today with lots of the technology.

So bear with her. She's one of our international meteorologists. And I'll introduce you to our panel now, who we will come back to later after a miniature media event as well. So over to you, Rachel Allen, if you wouldn't mind standing up and just saying a quick hello.

Welcome to come over here. We're going to.

Or just, I can use my voice. You can use your voice here. Just stand up with your friend and then we'll come here. Okay. Hi everybody, excuse my voice. I have a little bit of laryngitis, but I'm gonna get through this today with your help.

Rachel Allen, I am the regional advisor for climate and DRR in Asia Pacific, and this is for the World Food Programme. I think that's enough. We have time. Countries.

Thank you so much, Rachel Allen. Temli Baker.

Thank you, Mayor Nairi. My name is Temeli Baker, representing the Economic and Social Commission for Asia Pacific, which is one of the regional commissions of the UN, but we have a disaster risk reduction section because it's so important in this part of the world.

Very pleased to be here at your Town Hall today.

Ah, she gave the game away ever so slightly earlier. We're coming back to the town hall later. We're in official capacity right now. I'm gonna come back to my moonlighting job later. No worries, no worries at all.

Lisa, if you'd like to come up, thank you. Thank you.

Hi, everyone. Good afternoon. My name is Lisa Lang. I'm a climate change specialist at the World Bank based in Pakistan. My work is focused on hydromet programs in Afghanistan. I'm also supporting flood recovery projects in Pakistan.

So it's a pleasure to be here. Look forward to the discussion.

Thank you, Lisa and Laura.

Hello everyone, I'm Laura Bergen, I am the Manager of the Climate Analysis for Adaptation and Resilience Group at the Met Office, and I'm also a moonlight as a forecaster on Lumbazzo TV.

So that segues nicely to what we'll come back to later, which is my moonlighting job as mayor of Magaloo District. So bear with me a moment. I'm just going to share with you a film which is gonna set the scene nicely for our session moving forward.

Hello, it's Christmas Eve 2054 and welcome to this global weather round up for the big day tomorrow. Now let's start with Europe, where we find low pressure to the north of Scotland. We can expect a wild rather than a white Christmas for the UK.

Wet and windy in the north and west, 8 Celsius in Edinburgh, 12 in London. It's also unsettled in the Alps but really not great ski conditions. Heavy rain on lower slopes of the Alps, snow confined to the higher resorts.

Very mild westerlies extend across much of northern Europe, which means very few places will see freezing conditions during the daytime. In fact, below zero temperatures are only really likely in the far north of Norway and Finland and much further east across Russia, despite the time of year.

Of course, further south across the globe, it's mid -summer and mid -summer heat can be found in western parts of South Africa as well as Namibia. With heavy rain expected further east to the north of Durban, drier and sunnier conditions are expected in the west.

Widely temperatures will peak into the low to mid 30s with a high of 39 degrees in Namibia. The heatwave intensifies further south after Christmas Day, with temperatures reaching 40 Celsius in the south of South Africa by the 28th.

This could have serious impacts on health. And if the heatwave becomes prolonged, could also threaten crop yields. But the hottest weather this Christmas is expected in Australia. With heavy rain expected in eastern parts of Queensland, across much of the interior it's the very high temperatures that are the main concern.

Temperatures will widely exceed 40 degrees and it will be unusually hot in South Australia and Victoria. The hotspots will be 48 Celsius in northern parts of South Australia. Authorities have issued health alerts for parts of Victoria and fire warnings are in place for several other states including Western Australia and South Australia.

Extra doctors, paramedics, nurses and call centre staff will be working throughout Christmas because of the forecast conditions. Thankfully, this isn't a real forecast. But it is one possible scenario for the type of weather we could see at Christmas around the world in about 30 years' time.

Now possible and could our words that express uncertainty, but don't let that lull you into a false sense of security. There is a range of potential weather we could experience in 2054. This partly depends on natural variations in climate year to year.

But beyond 2050, the amount we reduce greenhouse gases today will have an increasing effect on global warming. Greenhouse gases such as carbon dioxide have been rising in our atmosphere since the Industrial Revolution.

And in that time, the world has warmed by more than a degree Celsius. This forecast was based on a high -emission scenario, but at this time horizon there isn't so much difference between scenarios. The big differences occur during the second half of the century.

It's a useful way to illustrate how global weather patterns may change and what they could look like if we don't curb emissions. In this particular year, an El Nino happens to emerge in the computer model simulation we looked at here.

Other simulations produce El Ninos in different years. The dates of specific events can't be predicted this far in advance. But we can still expect El Ninos to happen every few years. This climate phenomenon can lead to warmer weather across parts of South America, as well as warmer and drier weather in South Africa and parts of Australia.

This is apparent in the global temperature anomaly map for Christmas Day 2054. It compares maximum temperatures on this particular day in 2054 with the 30 -year global average from 1981 to 2010. The red areas show that many parts of the world are warmer than the long -term average in recent decades.

There are still some cold spots, and that's because it's one computer simulation of the weather on a single day. Just the same as our current weather forecast you see online and in television. The main difference being the composition of the atmosphere.

But as you can see, there is much more red on the map than blue. As we saw in the forecast, South Australia and Victoria were much hotter than we would expect to see today. But the most extreme warming was found in North America, Northern Europe and Northern Russia.

Some places within the Arctic Circle were more than 20 degrees above the present -day average. These are cold places anyway, and it's the middle of winter. But this extreme warming can have serious consequences on snow cover, permafrost and Arctic sea ice extent.

The climate is already changing, so we already have an idea of what these types of conditions will feel like. The extraordinary Siberian heatwave during the first half of 2020 which resulted in wildfires, loss of permafrost and an invasion of pests.

The Australian wildfires of 2019 -2020 and the Cape Town drowned between 2015 and 2017. Anthropogenic climate change played a role in all of these events, along with other factors. Decision makers now face the dual challenge of reducing emissions and managing risks associated with the transition to a low -carbon economy, whilst also adapting to changes in our climate now and in the future.

Okay, so thank you for coming to my town hall today. I am the mayor of Magalu, which is a district in the country Lombazu. And you, if you can, stretch your imaginations to feel like you're in a town hall with the rest of us.

And I as the mayor and inviting my experts to come on stage and explain a little bit more about what we can anticipate of the future in Magalu. But I'll set the scene first for you. My country is Lombazu.

It is considered a least developed country located in a subtropical monsoon climate region. It has a population of around 1.2 million and 70% of the population are considered vulnerable and living on under two dollars a day.

Politically, Lombazu is a fragile state. At the moment, there's a lot of unrest and tensions are high with lack of trust and conviction in the government. So Magalu is a very fertile district. It's beautiful.

It surrounds a river basin, which is fed from the key water source in the country, the Tallah River. The population is around 122,000 at the moment, but due to tensions across the country, we've noticed internal immigration.

So we are facing increased population. The main livelihoods that we have in Magalu district are corn, rice production, livestock, fishing, river and trawling, and small businesses. Now, what I would like to do is invite on stage our climate advisor, because she knows much more than I do about our local climate, current climate now, and what we can anticipate in the future.

Thank you, Laura.

Thank you, Mayor. So Lombazu has a humid, warm climate dominated by a monsoon or a rainy season. And rainfall is very variable. Seasonal rains typically occur between April and September and peak in July, but that's not always the case every year.

And tropical cyclones are not uncommon. And. But they're most likely to occur between May and June and October and November. We have more intense rainfall over the past five years and flooding has become a significant issue for the country.

And some of the key impacts that we see from these from our climate is livelihood destruction and fatalities from waterborne diseases such as dengue, diarrhea and cholera. We have problems with transport, communication and energy such as hydropower supply.

And these can be disrupted when we have periods of extreme weather. And so while I'm talking, you might want to log in to Menti for our discussion session. So please go ahead and do that while I talk.

And in the future or how are we? I'll just do that in the future, we're expecting annual mean temperatures of around one and a half degrees and up to three and a half degrees of increase. Daily minimums and maximums are also projected to increase.

So that will mean we have much hotter nights as well as hotter days. There's no particular decisive trend about whether we'll be getting wetter or drier, although we are predicting a delay to the start of the rainy season.

Year to year variability in rainfall amounts is expected to increase. So we have a variable climate just now, but it's going to become even more variable. We're projecting sea levels to rise, sea surface temperatures are projected to increase and tropical wind, tropical cyclone wind speeds are also projected to increase.

Thank you, Laura. If you wouldn't mind going up onto the stage now and having a seat. And I threw Laura a bit of a loop because I thought there was another slide before then. So sorry. Thanks for managing that.

And I'd also like to welcome Rachel from the World Food Programme up. So she is based in the district with me in the town hall, working alongside. And we're very grateful to have the assistance of the International Development Community.

Thank you very much, Excellency. We're very happy to be here, and we want to say congrats to you on your forward -thinking approach to deal with climate change. As you know, World Food Programme has always stood by you in the last 10 years, with your six cyclones that you've had, and in your northeastern region, where you have two refugee camps and your conflict zones where you continue to provide relief and will continue to do so.

But World Food Programme is more than just saving lives. We're actually about changing lives as well. And with that, we have a number of climate tools that we work with governments to help build their capacity to early warning systems, as well as doing climate livelihood analyses, which the UK met, is always there to help us with doing the analysis of those.

So that being said, World Food Programme has, and this is what I would propose to you, Excellency, what we have is an integrated risk management approach, which has three prongs. And the three prongs are understanding your risk, anticipating your risk, and adapting to your risk.

With understanding your risk, we would suggest then that you look at the, do you want me to discuss this up there?

I was gonna say, can you answer the questions when I'm up there in a little bit of detail. It would be brilliant, and then I'll introduce the rest of them. Perfect.

Tillie, I've now joined you.

I'm asking, you're answering the questions before I ask them. I'm so sorry, that's wonderful, thank you. You can tell we've, yes, I've unhinged our panelists a little bit with lots of different questions.

Apologies, over to you. So Lisa Ling, if you wouldn't mind coming up and just, this is also Lisa from the World Bank and she's also part of our international Denonian community within the district. Thank you very much.

And also over to you, Timothy, who is with UNESCO, as mentioned before, I'm part of our international community. So you as the audience in the, who are our town hall and our people in the district have been welcomed here so that we can all discuss together what we think some of the challenges are at the moment in terms of climate extremes with the flooding and also the impacts on society and our economic prosperity.

And also with regards to then what we think would be the impact of the future climate and are there elements that we can do now to make sure that our community is more resilient? So what I will do now is ask questions to the international organizations I've invited here today so that we can get a better understanding of their expertise in the area.

And then I hope that you will join us in terms of contributing your expertise and knowledge in these areas. So my first question, which is going out to you, Rachel Allen, so thank you very much for starting us off.

This is really gonna be asking about what we can do at the moment for the people of Magalu to help them to be more resilient to drought and to tropical cyclones.

Well, I can just pick up where I left off. Thank you. Thank you. Yes, I was at the part where I was suggesting excellency that we look at understanding your risks first of all, and then secondly, anticipating your risks and then adapting to your risks.

Our first recommendation to you would be to look about strengthening your early warning systems, specifically what we've done in the past. And I'll give you an example quickly at the end, is to target the met services where we have been really working on building capacities in some of the countries that we work in.

In doing so, we want to enable them, and we have in some cases actually enabled them to be able to provide and generate reliable data, and the part that we're at now is being able to translate that data down to the community level.

As well as, I would just jump then and give you the case quickly, if you don't mind, quickly, Bangladesh. As we all know, Bangladesh was just hit by a pretty rough cyclone in May, and what it showed us was that almost over six years of working with the government to build climate resilience through specific activities, which we're happy to have a bilateral with you on.

We were able to set up an anticipatory action process framework, and what we saw was that within 72 hours of knowing that the cyclone was going to hit, working with the met services and partners, we were able to disburse quickly \$1 .29 million to 150 ,000 people across five districts, and these are very vulnerable areas.

We have targeted, of course, breastfeeding mothers, children under five, as well as persons with disabilities. So that is actually for us, we're very proud of that, but it goes to show when you actually start to work with the government in building the capacities at the early warning systems and met services level, that you can actually reap benefits like this.

I would just throw it to you, Mary, when you look at some of the scenarios, you're looking at a low -lying delta like Bangladesh, for example, that you can learn from, because by the year 2100, it's projected that over 100 million hectare will be affected by sea level rise.

We are happy to propose and to support you in a knowledge exchange and take you and whoever you want, not that we have a lot of money at World Food Programme, but we are very happy to take you on a knowledge exchange to visit Bangladesh to see how the anticipatory action process has been successful, and we would like to invite you on October 10th to an impact evaluation of the anticipatory action process that we've set up in Nepal,

specifically to look at part of the process that's not usually considered, which is the psychological benefit of anticipating. When you help vulnerable people before the impact, there's a psychological benefit that we don't talk about often, but we're very proud to, again, take you on a knowledge exchange and share information with you on that.

you. Thank you so much and that would be fantastic. I think Laura and myself would love to join that exchange and I will definitely find hopefully a representative from the community as well to be able to join us.

Wonderful opportunity and a really good example again of how by giving people the information they need to take action you can help to reduce maybe some of the like you say psychological anxiety around a lot of this.

So over to you Laura the same question if that's okay with regards to so the question again was what can I do to help the people of Magalu be more resilient to drought and tropical cyclones. If you just push it up and then I think you leave out.

Sorry. So Madam Mayor, I would say don't let uncertainty put you off and the climate models aren't certain but they definitely show some trends. The world is getting warmer and sea levels are rising.

There are things that we can do based on that information and so please don't wait to find out for the perfect the perfect piece of data before you take action. I'd say we need to get a really good handle on what our current climate is and perhaps investing in a good network of observations and sustainable practices to make sure that equipment is maintained so that we have we can't predict and we can't build models without the data so funding really good supply of observations that we can build models and understanding on is vital but don't just buy the equipment by the means to support that for a long period of time.

I think a lot of your current plans are based on very old data and the climate has been changing and so I think you need to update some of your risk assessments and your capacity, not your capacity, your adaptation plans based on more recent data not based on data that's 30 years old now because the climate has already changed since then and don't just think about the mean climate remember about extremes our current climate is very variable and due to things like El Niño so please be prepared now for the extreme events that we're seeing.

You might want to invest in some attribution studies so it would be helpful to understand for that last tropical cyclone that we had, Storm Swiftie, how much of that the impact that she caused was due to climate change and that might help you to have a stronger voice to say we know that climate change is having this impact already based on our attribution studies that the intensity of that storm was ten times more than it would have been without climate change for example and any investments you do make make sure that you're not investing in something that will be maladaptive so please don't install

loads of air conditioning units in Magooloo Town because that will further contribute to emissions in our in our country and further amplify climate change.

I think you could be encouraging climate service providers in the region to sign up to the Global Framework for Climate Services as part of the World Meteorological Organization so that we know which climate service providers to trust and there's a whole fleet of them out there doing lots of different things so I think you should invest in those ones that are bought into the mandated protocols and processes and as a climate scientist I think we need to start thinking more about the the decision context so instead of we always think about hazard to decision making but that linear process is doesn't work we need to think about the decision context first and then work back to find out what the the climate information is that's needed to address that problem and finally I would really like you to involve many more voices in the conversations don't just talk to your normal advisors get out there and meet everybody and you know bring more people into the conversation and they will have better buy -in and trust in any decisions that you take.

Thank You Mayor.

Thank you, but you are my trusted advisor, so why do I need to go elsewhere? Good point. But thank you so much, Dawn. And I think it's a really good point, because I think I'm gonna have to find a lot more investment and apply to my government and make sure I'm connecting to my Met service and understanding how we can help strengthen those observations.

And also, over to the community. Did anyone else have any responses to that question? Over to you, Helen, you've got one. Excellent.

So there's a couple on Mentimeter, so I think the one now to pick up on is following on from Laura's point. So Madam Mayor, how are you going to build trust in the government so that people are willing to act now?

Are you going to look at agencies mandates and how will they be fit for a future purpose?

So I think what I'm going to do is I'm going to start with my community and understand what their needs are. And then I'm going to bring that information together and then work with my government to make sure they understand our needs in the region, but also potentially in the wider context.

I'm not entirely sure. I'm the best person to answer that question. So I'd like to pass that on to any of my panelists and your experience of engaging with government and creating trust. Did anyone want to respond the one about building the trust with governments first?

I'm happy to respond and just commend you, Mayor. I see here, gathered in our town hall, if we're gonna play the role, that we have our colleagues from irrigation department, we have our electricity service providers here, we have our roads authority, national disaster management.

I think it's so important that we build the connections between our climate advisors with key sectors that engage directly with the public as well. For us at SCAP, we have what's called the Trust Fund for Tsunami Disaster Climate Preparedness and that really helps to share some good practices between countries.

One such good practice we've been supporting rhymes with is holding what's called monsoon forums or climate outlook forums. So just like this town hall here today, helping the climate advisors, the national hydromet services to bring together all sorts of stakeholders from a range of the country just to understand what that outlook might be.

And then together working on, well, what will we do? Where are the key communities or the sectors at risk? What are some of those early actions we can take? So really co-producing what those actions might be and working together.

So I just commend you, Mayor, for bringing in all the right people here today. So let's figure out something together so we can plan each season, like we say, to foster a culture of preparedness each season.

Well done. Thank you so much my colleague Ina Neskap for identifying all the multiple sectors that are relevant to weather and climate as well. Sometimes it is hard to imagine that there are so many different stakeholders you need to engage with and it's something that you've also raised my awareness around just right now.

Is there anyone else from the room who wanted to ask Arti? Yes, Madam Mayor. Sorry you don't have to keep it up if you don't want to. Well I'm quite enjoying it.

Madam Mayor, I'll stick with the illusion for a second. You clearly are illusory because you're a mayor who knows about med services. So let's start with that. And you know what they do so that's even more illusory and how you're gonna keep your job for the next election, I don't know but dark humor aside.

The question is how does a country or state or city or whatever with the description that you have, say no to things because it's not just about saying yes to all the support that they get. It's also how you say no because that can lead you to say yes to the right things.

And that's what I want to sort of push this panel a bit more because we're all friends here. We all muck around and do the same things and we are all guilty of coming with too many solutions. We've been to too many med services where we can literally say this was from this partner and that was from that partner and that was from that third partner.

None of the systems talk to each other. But the poor country needs all of them and really they're being trained in capacity for decades. And yet service delivery is weak. So I'm gonna push us all in this room to think really hard on how we can listen to the no because even if countries are saying no, maybe we are not doing a good job listening about it.

So I'll stop here.

Thank you, Artine. I think it makes a really good point on the confidence levels of the agencies that you're working with as well, and recognizing that in the face of international funding, a lot of national agencies, as a mayor myself, I've been approached a lot by lots of big funders to offer opportunities, but sometimes I find it difficult to say no, because I'm worried then the funding will go away.

And actually what I want to do is make sure it works for me and my district. But I think that I lack confidence in doing that. I'm totally in it. So I think it's maybe a good opportunity, actually. We will have questions throughout.

It might be a good opportunity for me to bring Lisa into this discussion, because I suspect you've probably had quite a bit of experience around this in Pakistan. So please continue. And maybe include, if you can, a reference around anything that you've found that's innovative or new that's helped you with that program design moving forward for disaster resilience.

Thank you.

Thank you so much, Madam Mayor. Such a great opportunity to be here. First of all, just building on the discussion before, how do we build trust? I think the fact that we are all here together to discuss this issue about climate risks and how different sectors need to work together across the donors, development partners, government officials, and civil society, I think it's already a very good starting point.

Because the first thing that we will need to understand is what are the risks that we need to address? And what are the essential pillars of the economy and for development and for livelihoods that are really relevant when we talk about climate risks?

So kind of linking to the previous question, my recommendation from the bank side to you, Madam, is that we need to first take a very systematic view on climate risk for the whole society. And I think the issue is that we quickly jump into solutions.

We quickly think, okay, we need to invest, we need to put fancy machines, and we need to generate more data. But sometimes we forget that maybe the first thing to think about is to understand the issue and looking at what we have on hand in terms of resources and what can we do best to support the resources.

So the first lesson I would like to share is about, innovation is not always about doing something new, but it could just be using the resources that you have and make better information decisions through that.

And I wanted to share a story, right? You might know that recently Afghanistan, so on the hydromet side I'm working more in Afghanistan, and recently we have been experiencing a very severe flash flood in the northern and northern eastern part of the country.

And this event was actually forecasted by the Mad Department. Despite of that information being shared, we still observed thousands of deaths and over 60 ,000 people impacted, and lots of houses and infrastructures assets being affected because of the flood.

Then that begs the question, what went wrong? Was it because we didn't have the forecast? Was it because the forecast didn't reach the people that really required this information? Was it because the Disaster Risk Management Authority at the central level, provincial level, district level didn't take action?

Or maybe they didn't have resources to take action? And this is not a single story. I'm sure you have heard this elsewhere. So this is one thing that we really need to think about together, hardly. Are we doing the right projects?

Are we really using the best resources that we have to support governments, like this country, right? So that's the first thing I want us to, I don't have an answer to that. We're currently running an assessment to better understand what happened during this past event.

The idea is that this can help us to inform our program design. We need to understand the history to design a better future. So that's the first thing I wanted to talk about. Now, the second thing I would like to suggest us to think about is when we talk about hydromet services, we have this whole value chain approach.

And I see many experts sitting in the room that have created this framework. So we now wanted to look at this from the opposite way. We call it the reversed hydromet value chain. Before we start thinking about how many observation networks to be added, let's first look at what are the problems we need to solve.

So looking at this country specifically, they have a lot of floods and cyclones which will potentially impact the agriculture sector. Now, what is the essential tools that they require to protect the agriculture sector?

Is it better advisory services that are tailored to farmers? Is it disaster information, early warning information that needs to reach to the communities? So by understanding first the needs, we reverse engineer that, understand, OK, in order to do that, maybe I need more observational network.

Maybe I can use satellite imagery to complement what the network is right now. Maybe I need a better numerical model to predict the weather, to predict extremes. And one thing that often is looked at very little is the dissemination part.

In countries, like listed development on countries, oftentimes the dissemination channel is so critical without a comprehensive dissemination channel, you cannot assume that information will get to the people that's required.

So maybe for a country like this, we need to design a multi -channeled dissemination strategy that uses not only innovative methods like internet, WhatsApp, websites, but we can also use more traditional methods that reaches people with low technologies, like MSS, or even local mosques that have religion leaders.

So let's look at also the dissemination part for developing hydromet services. So by doing so, understanding what are the essential needs, then design a project is really critical. Before we go to the met, let's be honest, if we go to the met, the first thing you hear is I need more observation.

So let's change that story a little bit and then see what's really needed and how can they play a role. Now, I do want to also add one last point. When we talk about climate risk, we often forget about the big players in the government, which is planning, finance, other sectors, other line ministries.

They are so crucial in this whole co-production process that Tamalee alluded to, yet we don't communicate with them enough. If you go to a planning ministry and talk about, okay, we need more money for a meteorology project, they're like, what is that?

Why do you need more money? We already give a budget to them. Why do you need more additional money for operational maintenance? No. So this is the kind of conversation we need to have early on to raise awareness about the value that hydromet services can bring in so that planning, finance and other agriculture or water line ministries also come together to make a case for integrated approach on climate resilience,

bringing hydromet as a key pillar to support that, not as a single standalone project. So those are the three points I would like to share. They are not a technology type of innovation, but in my view, they are very crucial.

It's based on the experience that we have learned so far. Thank you.

Thank you Lisa and I think that makes a really good point that also echoes the other panelists and what they've mentioned so far is the need for co-production. The need also in terms of innovation that reflects traditional needs in a way.

I had a similar experience in Mozambique after TCI where for three days there was no communication. So what do you do when it's entirely down? What are maybe some of

the innovations in technology that can help us to re-establish communications quickly and what other systems, word of mouth, whatever it might be, can remain in place for that resilience if all else fails.

An excellent point around the hydromet community. I think there is also a really big need there in terms of, like you say, that co-production and helping to break through the silos of the financing at a national level.

There are a lot of big funds that go to different agencies that almost encourage working in silos. And actually, let's encourage those agencies to work in partnership to develop those processes based on what actions need to be taken.

So always action first and then let's, like you say, reverse the cycle and figure out what information is needed to take action. So thank you so much. I'm going to whisk through so that we still have questions for what I think is quite a vital question at the end and I will just ask my panelists just to give me a really quick top level on this last question, if that's okay, so that we can also allow a bit of discussion in the room.

And I realize it's sort of, you never feel like you have enough time. So what I really want to know as Mayor, generally, is how can we help people understand that they need to adapt now to what is going to happen in the future?

Because sometimes that might mean changing their livelihoods, moving from livestock to another crop that's more viable for their future climate. It might mean impacting some of their traditions, et cetera.

So I know that myself and my community, we're quite scared, we're quite worried about what is to come. I really welcome your views on how we can start to have those discussions in a way that's not going to help make us feel a bit panicky and maybe switch off altogether.

Over to you.

Emily? Sure. Thank you for the question. It's a really difficult one and it's multi-pronged and I'm excited to hear some of the thoughts from our community members here on how best we should do it, how best the mayor should tackle this.

But, you know, from ESCAP's perspective is we often have this conversation with these planning ministries, these finance ministries, and they frame in the investments in terms of the cable, how can we progress against our indicators on the sustainable development goals.

You know, I said ESCAP have to say the sad truth that, you know, 90% of the 118 measurable indicators of the SDGs we will miss by 2030. Climate action is a very, very critical pathway to accelerate these SDGs.

But what's your question is, well, how does this relate to people? How does this relate to actually seeing some adaptation? You know, when we do discuss with different planning ministries, we talk about transformative adaptation and from a systems approach.

When you can look at these climate projections, and we've been doing this with many countries, as well you look at where the future investments might be. For example, when I see my wonderful colleague from UNDP who supported us and worked with us on this initiative in Bhutan recently, when you look at 2100, a country that relies 99% of their energy on hydropower.

When you look at some of those critical basins, they look like the flow will decrease by 35%. But what does that mean? It means that 69% of the planned investments in hydropower, new hydropower units will be at risk and they won't perform as we've planned.

So how do you translate this climate information to these planning ministries I think is important to then downscale? And hopefully that trickles as well to some of the community members that you can do see that this climate information does lead to sustainable development protection as well.

I've got a couple more thoughts, but I'll leave it to some of my other panellists and I'm excited to hear some more questions too. Thank you, Tim Lee.

Go to Lisa.

So, actually, on this one, I'd like to share another example in Afghanistan. We have piloted community -based DRM approach in very limited communities through, as part of our social adaptive program.

And some of the lessons learned, I think, might be useful for you is that one, you have to really bring the community together in the whole process to have a very participatory and inclusive approach to it.

Because when you do that, one, you raise awareness about the type of risk that they are facing. And we're often surprised, you know, they have much more knowledge than those hazard maps that we have.

They have a lot of indigenous knowledge about the risk that they are facing and how they can adapt and what type of adaptation capacities that they can leverage that are within their resources. So, I definitely think you need to bring them together when you're developing any risk management plans or when you're developing community -level infrastructures.

Because they can often contribute by bringing information about what should be done and what are the key areas. So when we piloted the CBDRM approach, we also recognized that women have a very significant role to play.

Because they have, oftentimes in some of the developing countries, a slightly different role than men in terms of the social life. So they have a unique view of, you know, how they can contribute to adaptation.

So it's very crucial that you make sure that female members are also taking into this journey so that they can better understand within their resources how they can adapt their livelihoods. When they are part of the process, they are more willing to, you know, take any actions together with the government.

So I think it's really important to take that approach.

That's great, Lisa, thank you. And I suspect Rachel would agree with you given her experience of working within gender inclusivity and also vulnerable groups, if you'd like to add. Yeah.

Definitely, I saw earlier the Minister of Women and Youth in your group here, so I was very proud of that. I'm happy to see that. One of the things WFP does is we look at, we analyze socioeconomic data in order to do our targeting and other variables as well.

I've noticed that your country is also one that is a matriarchal society, so then we definitely would want to target the woman. Of course, a lot of our beneficiaries in the example I provided earlier, anticipatory action, we target breastfeeding moms, women, and children under five.

There's a vested interest for WFP to target women and to have women carry the message. One of the things we've also done is we have mainstreamed resilience activities into our anticipatory action program.

It's not just a matter of getting a handout before an impact, but it's also while waiting on an impact to hit, you actually are adapting and making smart choices that will affect your food security, nutrition, resilience activities.

I just wanted to jump to the question now specifically to the behavioral change. I want to ride on the Bhutan example also, because it's one where we've been collecting a lot of data on climate and livelihoods, and again, grateful to UK Met for doing a lot of the climate analysis that provided climate maps.

That helps WFP to understand where the vulnerable communities are and where we need to start. Having vulnerable parts of society, especially agrarian part of society, start to change their behavior. It's very steeped in traditional farming practices, so when you look at the climate scenarios and how that's going to affect food security and nutrition, it's critical.

That's just one element. We have just received the go-ahead for the Adaptation Fund Project in Bhutan, which is five million, and we're hoping that there's a component in it that actually addresses behavioral change, and we're hoping that this particular project, Adaptation Fund Project, will help to advance that type of behavioral change.

Mayor, it would be remiss of me not to mention also that sometimes we do need to do the not so typical things to get behavioral change, especially again when they're steeped in tradition. I noticed that your famous singer from Lumbazu won a Grammy Award, and I would suggest also engaging them in singing and actively engaging with your society to affect change, because it does sometimes work through engaging the non-typical actors,

such as your Grammy Award-winning artists.

That's fantastic. Thank you. Yes, I met her at a government party the other night. She's really enjoyed her singing. Thank you very much. No, but it's a really good point in terms of also potentially use of media.

And the one thing that we haven't mentioned yet so far is the value of media in this conversation as well. So I think it would be, again, remiss of us not to make sure that part of the trust element and all of that, and potentially some of the entertainment value to help familiarize people with the ideas of what might happen, like EastEnders in the future, might help us to actually also make the information around the future climate slightly more accessible and manageable.

So I think that would be something that would be quite interesting to explore. And I really do want to go over to, I'm sorry, Laura. I'm going to head over to the audience, because I can speak to you anytime as my climate advisor.

And just see, I can't see the questions on the screen. So David, go for it. You've got your hand up.

It's a response, in a way, to what was said, but it's about your last question. And it's, you need to diversify your economy. If you stick to agriculture and you have everybody, you need food, you need food security, but you don't need so many people working in agriculture.

And if you do, you don't have a future. And the other thing you need to really put a lot more effort in is your education system. It's not good enough. You've got a really, you've got a few years left.

You need to put the effort in education and diversifying the economy. And if you can give us some better jobs, we'd all be better off. And I take that from, and I just put it in context. So there's a major bank study for South Asia, which is looked at where the real risks are.

And the risks are not just around temperature. They're around the lack of diversity in the economy. So if you have a very narrow economy and you have the temperature scenarios that you project, you're in real trouble.

If you have a diverse economy, less dependence on, particularly on agriculture, because that's one of the main drivers of, it's kind of a driver of poverty in a way, in a sense, in this environment of a very hot climate.

You need to manage your food security, do all the things you need to do that through the World Food Programme at the same time, getting more and more people out of that into other economic activity.

Thank you, David. And I was hoping one of my people would hold me to account on a couple of elements moving forward. So I will definitely take that under advisory and realize the responsibility is made to deliver to and have conversations with my people around the changing of their approach to agricultural and livelihoods is going to be a very big task whilst recognizing the value of that.

Thank you. Anyone else in the room was to put the hand out? Should I be going to mentor me? So we've got loads of millions of questions everywhere. Go for Anna. Oh, sorry, in the back.

Okay, thank you very much, Madam Mayor. You remind me of another mayor who is a climate scientist and has now become a president. So I'll vote for you if we run for president. I had lunch with smart people, just outside.

They are from IIED, International Institute for Environment and Development and UNDP, less smart. But they enlighten me as a member of the local community that the reason why I'm poor is not only because of climate drivers, right?

So if I recall, they talk about three factors that I have to look at if I have to get out of this vulnerability from current risk and also future risk. One is that even before we talk about climate change, I already have some predisposing factor where I am most at risk.

There are many people who are at risk. Those who are employed, some are unemployed. But some of my predisposing factor actually made me the most vulnerable. So that's one important aspect. The other one, which is the topic today, is the climate drivers.

But it's not only the climate drivers. There are, in fact, multiple hazards that we are confronted with. You know, we have been recovered from COVID. We have been recovered from the fiscal and economic shocks.

I understand now from IIED, what are those shocks? But climate driver is just one of those. And in fact, climate driver may happen in the future. But in my case, they are happening now. So when they were talking about IPCC, I said, you know, I thought IPCC said this would be by 2050.

No, no, no, no. They said, no, IPCC's model is correct. But they're happening faster than what we have modeled. They're happening today rather than in the future. And the third point, which is my point, is that regardless of these climate drivers or precipitating factors or predisposing, the most important aspect is whether I'm protected, you know, whether I'm part of social safety nets, whether I'm part of mechanisms that allow me to exist,

but also to resist and withstand shocks. So I thought I should bring this out because my view is that, you know, we cannot address one solution fits all, no? We cannot do that. It looks like it will require development interventions.

I came to know it now by talking with them. Development interventions, risk and resilience, risk to, resilience to risk interventions. But also we're hoping that our politicians such as yourself just not looking at, you know, the demands today, but also the demands in the future.

So I thought I should bring up those three factors that will help me cope and withstand these disasters.

Thank you. And there's excellent points in terms of compound risk, but also the potential for maladaptation. So even though you're looking at now and what you need to manage now and become more resilient to, you want to make sure that you're not buying the air conditioners so that people can withstand the heat and go to work, et cetera.

But you are also looking at the longer impacts of your actions now. And this really brings us a nice loop back to how everything we are doing now, we really want to start looking at how that's also going to impact the future.

But as you say, the COVID was the real eye opener in terms of the multiple risks as well. And what do you do when you need to evacuate a whole load of people and they are also infectious. So yeah. So again, I think we'd probably all agree that the multi sectoral co -production approach, you know, that consistent engagement across all of the sectors to understand what those needs are.

And at the same time, how can we still also look to the future throughout all of that planning? Was there something else?

And just one that was online, and I just wondered that removing it from this, but the advice from the panel on how you would prioritize the perception of climate change amongst bigger risks or the perception of those.

So how do we encourage people to put this front and center might be nice to have a takeaway to. But yeah, that was a question that's been there from the beginning.

Excellent, anyone on the panel want to take that one? On prioritization, we can maybe come back to you if you want to have a think about it, sure. Oceana.

Hi, yeah, sort of a reflection, building on what the last person said and also some of the remarks, I think I would maybe reverse that question and say how can you use current day challenges to inspire adaptive actions informed by these climate projections?

And I think that also in a sense goes to your prioritization. I think the problem with these climate projections was very clearly explained in the video that we saw in the beginning, that the real extreme impacts are so far away that it's very easy to keep postponing, taking action, but very often areas very much affected by it are also already facing a lot of current day challenges.

So we need to start making sure that we deal with our current day challenges in an adaptive way. And vice versa, in the moments that we do climate adaptation, we should also make sure that, because we're here with the DRM community, so if we do DRM

actions, risk reduction actions now, make sure that they're adaptive, but if we do climate adaptation, let's please make sure that we're not increasing other risks.

So if you do climate adaptation for floods, please do it in a way that you're not making yourself more vulnerable to earthquakes, for example. And I think for your prioritization, that's a way of getting, I think by linking it to current day challenges is a way to get your prioritizing of climate adaptation.

That's an excellent point. I come from a, I'm a daughter of a journalist and he always said, you know, unfortunately a bad story is always a good story because you can build on the momentum and get a message out through that big event.

I mean, you need to synergize why my reputation is such rich management. You need to stop seeing them as two separate things. Yes.

Also there's an interesting point there as well in terms of Mozambique, I realise we need to wrap up shortly in terms of, you know, there was a, there were big floods of the back of TCAI but actually slightly longer term you're looking at impacts of drought.

So actually then how do you manage those conflicting messages where at the moment people experiencing flooding but longer term they need to start thinking about dry ice spells. So over to you Mark, very last, last word and then I'm sorry I think we're going to have to wrap up.

With the grace of respect, Madam Mayor, I think there might be a conflict between your electoral prospects and the need to take immediate adaptive actions. I happen to be your largest donor. I'm a property developer.

I funded your campaign. I've got a brilliant solution for those IDPs. I can employ them by building a hotel on the coastline. We may have to cut down a few mangroves, but that solves the problem. Now, what do you do?

What does the panel advise you to do with the knowledge you now have about the rising sea levels, increasingly intense storms? But you do need to get elected and funded. Your campaign needs to be funded.

I do although thankfully I've just been voted in so I've got a few years yet but at the same time counting the days but that's it I mean that's a good point as well everything is election cycles how can you look longer term when the governments or anything else from the the panel on that point especially can I just can I just point out

But like I think it's so important that we make decisions, yes, not just for the next election cycle, but we start thinking about this generationally, like the early warning systems we invest in today need to suit our children, our grand children for the climate that they will face.

Otherwise, we're just spending money, we're going to keep on spending money. One thing that we have seen stand the test of time is when countries and neighbours decide to work together, and I see my colleague from WMO here, where are you Jochen?

The WMO ESCAP Typhoon Committee is a great example of that. Over 50 years functioning, all the east, northeast Asian countries, I use the example because Japan is a member right now, but it's really a collective of countries deciding to work together to track typhoons together.

That's been going for over 50 years, and we see the advances for all the countries shared in that. That's just one key example of we should invest into current actions now, seeing countries create institutions into governmental mechanisms to share those lead times now, so that we know in 50 years' time that we'll still be running because they're part of the government system.

an excellent point in terms of also community level there are action communities are taking which are working for them that we then go on kind of we know better and don't worry we'll come in and do it differently but actually let's work with what is working what is brought into and then add value to that absolutely go for it Lisa and then we literally then I'm sorry we will need to wrap up just for a moment.

Just very quickly, responding to Mark's remarks, there's always vested interest in the government and also across nations. Now, I think what's important is we have to keep in mind we all have a responsibility here.

As development partner, as government officials, we all have our differentiated responsibility and comparative advantage. So maybe, for instance, within the bank, now we are trying to see if we can formulate longer country partnership framework, which will play as a vehicle to engage government officials for more than four years, more than five years, which provides some sort of foundation for continuing policy dialogue in the right direction.

But that does not, of course, mitigate that risk completely. But in any case, I think that that's one activity that we are trying to take on to support policy engagement. Now, from the government side, our advice would be, if you would like to get support from the people, nothing says more than actually achieving those national development plans and national determinant contributions that you put together as the government.

So if you're able to align all your programs with those climate commitments and actually achieve the results that you intend to, maybe you'll have a better chance of getting elected next round.

Thank you, I'm going to go and study what an NDC is and then I'll get back to that now. Thank you so much. No, that's been excellent. Thank you so much to the panellists. It's never going to be enough time for this discussion, of course, and I'm sorry we massively underutilized the Laura with her climate science expertise and advisories, but thank you again so much.

And thank you to your audience for your contributions. I just had two further points to make, one of which is please, if you have other experiences that you think contribute to this discussion and we can share in our report or reference in our report at the end of this session, please come and provide that information to us.

More than happy to include that in. And secondly, we have a discussion on Thursday as part of a full focus day hosted by the Risk -Informed Daily Action Partnership and that is going to be looking at people -centered early warning design, use of indigenous traditional knowledge, use of innovative finance.

So please come and join us in that conversation and you'll find that case study has a little bit of a repeat loop on it and gets built on in terms of the context of Magalu and Lombazu and how we can discuss those points in more detail.