SDG 13 Climate Action Transcription

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**Introduction**

Good day, good afternoon or good morning wherever you are. Today is another section for the introductory lectures for youth engagement on 2030 Development Agenda and Sustainable Development Goals. And today's speaker will be Mr. Robert Stefanski and he's the Chief of Applied Climate Services at the World Meteorological Organization and me, my name is Lichia Yu, company in this interviewing process.

**Speaker**

Let me say a few words to introduce Bob. Bob is I'm already mentioned is the head of the Applied Climate Service of the WMO in Geneva and he has been working with the organization since 2005. And he's the also the co-lead of Integrated Drought Management Programme (IDMP) which is a very large program, it's very important especially in light of the ongoing climate change and global warming which is close to sponsored with the Global Water Partnership. And he has a master's degree in agriculture climatology from Iowa State University and the B.S. in agriculture Meteorology from Purdue University.

**World Meteorological Organization**

And let me say a few words about the WMO as an organization. If you watch TV every day and you see the weather forecast that's probably it's based on the data and research and also observation from WMO and shared throughout the world. So it is a UN Organization for weather, climate, hydrology and water resources and related environmental issues. It has 193 members from National Meteorological and Hydrological Services and consists of 10 major scientific and technical programs at the secretariat and host two Technical Commissions advice and guides activities or programs through different experts. Throughout the world there are six regional associations involved in the implementation of the process. And today of course in terms of the concern about climate change, WMO basically is our eyes and our brain on this matter.

**Lecture Overview**

So today's topic we'll be looking at the SDG13 which focuses on the climate action and with that I would hand it over to Bob and to clarify explain and why we want to talk about SDG13.

And here is a quick overview of today's lecture and we will follow this in a good sequence.

**Q1a**

**What is SDG 13 on Climate Action and why do we want to be bothered? Why it matters?** And so Bob I think this is a fundamental question for you and to your organization.

**SDG13: Climate Action**

Yes thank you! So we actually there's a short comment or the short statement is to take urgent action to combat climate change and its impacts.

**SDG13: Climate Action**

And as you can see here, this is something that many of the partners and Weather Services of the world. look at the average all the temperatures, weather temperatures, air temperatures, this is from the UK Met office which is the Weather Service from the UK from the United Kingdom. And this is the issue.

So this is climate change so you can see the record started in 1850 and things were basically on average until about maybe the 1920s we had sort of a hiccup and maybe flattened out until the 70s but then here's the issue students and colleagues is that since the mid-70s you can see this upper trend of temperatures. And as scientists it's very crucial to have multiple data sets to compare to make sure that we're looking at the same thing. So right here you can see six different traces, six different analyzes looking at the air temperature and even the last one is actually from a group of skeptics who were climate skeptics and said oh these numbers aren't right but as you can see there's no deviation so even the skeptics agree that something's going on in the atmosphere and in the climate.

**Q1b**

This chart is very impressive and it's very important because it shows that there's a convergence between different studies and findings basically it's telling us climate change is real. So **what does SDG13 consist of in terms of targets and indicators,** we know that this is sort of for us to match the progress and also to point the way forward.

**SDG 13: Targets**

So what I did is I just tried to do a quick summary for here, there's five targets and there's many indicators but in a matter of time you'll see when we get to that section I just looked at two, just so you could get an introduction to this. And I do strongly urge and I know at the end of the talk there's things that could be done and I do really urge students to take a look I put some links and some websites on this presentation and I do urge you to look for yourself, look at different websites that are they've been from WMO and in the UN and so I do encourage everybody to do that.

So the Targets, Target 1 strengthen resilience and adaptive capacity to climate related disasters so what can we do to help countries deal with this and so what does this mean? So one of the jobs of the National Weather Services of the world that part of WMO is obviously do forecasting and one thing that we see are tropical cyclones or hurricanes or during summer we have thunderstorms and so we know and think these things are coming and so how do we prepare. So the forecast is actually one part of it but then connecting the forecast to action on the ground or for people to take cover whether it's a hurricane, tropical cyclone it could be a severe thunderstorm it could be flood that's where we need the disaster management agencies as well.

So the key here that it's a group effort and this is Target one we've had to strengthen resilience.

Number two is to integrate climate change measures into policies and planning, again many countries have various ministries and so how can we measure (excuse me) all these different policies and make sure they're consistent and also help barely drained countries to develop these themselves and compare what other countries are doing so they can learn from each other.

Target 3 build knowledge and capacity to meet climate change. So this is actually part of this course actually to improve education in a word of phrasing and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning. So this is training this is promotional or YouTube videos and courses such as this, you're trying to educate people on what's going on.

Number 4 implement the UN framework convention by climate change. Now some of you will hear in the news every November, December of the year there's something called a COP or a conference of parties, this is the U.N framework convention on climate change. So what this is the countries of the world in 1992 came together and said we need to do something about climate change and other issues as well. So the countries themselves agreed they signed a convention that countries will help support can provide some funds to work on climate change.

So this target here is to follow the implementation of the commitments taken by developed country parties to this climate change convention so this is considered the Kyoto Protocol and things like this. You heard things in the news about the Paris agreement this is all tied back to this convention and who goes to this convention it's basically the ministries and the governments of the world.

Organizations such as WMO and many other organizations such as the Food and Agriculture Organizations also attend as observers and provide information to help the delegates in the countries know what's going on.

And lastly a final target is to promote mechanisms to raise capacity for planning and management. So again this is looking at the mechanisms for climate change related planning and targeting management in least developed in small island developing states. So this is the key is trying to help these countries of maybe they don't have a lot of resources to promote these mechanisms for raising their planning and management to deal with climate change. So those are the five targets.

Within these targets there's actually several other indicators in a matter of so just to save some time, I highlighted two and this first indicator here this is under Target 1.

And again what I tried to do here for this talk is relate things of what we do as an organization such as WMO and our Weather Services around the world in 193 countries. So this indicator are is the number of deaths missing persons and directly affected persons contributed to disasters per 100,000 people per population.

Number 2 is the number of countries that adapt and implement national disaster risk reduction practices. Again we cannot prevent disasters, we can help reduce the risk mitigate the impacts but hazards will happen. Tropical cyclones are going to happen, severe thunderstorms are going to happen droughts and floods are going to happen but how can we prepare societies to integrate these warnings and forecasts to make decisions so they can move to shelter provide electric resources, to move resources inside their countries, to deal with these potential disasters. Again I have a link there to look at the many more indicators on the various this says SDG13. So I'm going to look at some slides now about the progress.

Bob maybe I can interrupt a little bit just here. So you mentioned that the two indicators I think these are very physical it's very visible but what is not clear is what's the difference between earlier it was the mention made about mitigation adaptation and then of the third one which is about impact reduction that is clear and early warning that is also okay. The less clear is the difference between mitigation and adaptation, could you just say a few words to clarify that?

Sure thank you that's a good point. So the context of climate change mitigation and actually we'll talk about this at the end for both of these but basically how do we reduce greenhouse gas emissions so that is what we mean by mitigation it's trying to stop the emissions. So bike to work use less fossil fuels adapt more renewable energies, that's what we mean by mitigation.

Thanks a lot that's good.

So then adaptation is that if we can't stop the climate change how do we adapt to it

and so this is where we get into some of these targets on developing policies and measures to help countries adapt. One adaptation is for example will be sea level rise

so some of you may know that the Netherlands, the Dutch so they have all these series of dikes they've had it for centuries, they're actually already well adapted for future sea level rise at least in general but other countries may not who are along the coast. So this is the issue of adaptation of how do we adapt to the changes that will occur due to climate change.

So if I summary it mitigation basically is to say let's try to stop the crisis, the catastrophe to a greenhouse gas, the adaptation says maybe it's already too late or not in or not fast early enough so that also make some adjustment in terms of how we live, how we work and how our environment is set up. So it has a different sort of an angle to these two type of perception or action, thank you.

So in this regard, you mentioned these a level rising and the Dutch well we all know the Dutch story but in many other countries I think if I'm not wrong it's almost about 150 countries have coastlines. So what is happening in terms of SDG13, in terms of their future are there sufficient progress being made?

There has been in somewhat now I'll try to get to that in a little bit again, it's a very broad topic and then we can spend actually a whole day seminar looking at that.

**SDG 13: Targets**

So again this Target 13.3 again is building knowledge and capacity, and then this is connected to really number 5 if you will is promoting these mechanisms of developing the planning and management that's needed. So we need to make people aware of what's going on and then what action should they take, so again if you have a coastal country let's call it country X just not to point to any country and they have a lot of coastline what should they do? So one of the planning policies could be to restrict development along the coast, don't build high rises right on the beach and maybe put the midland, depending on the slope of the land things like this.

**Number of Reported Disasters**

Likewise we'll let's stay with the sea level rise issue, likewise you might want to plant if you have a natural coastline of mangroves, …

…(16:05-16:40 noises)

So we can try to get some reduction…

…(16:45-16:55 noises)

that's going to happen that's going to cause a disaster if you will or lead to a disaster.

In the last decade is maybe better planning to say okay we need to protect our infrastructure so things should not be on the coast so again that's very hard to detect and that's one thing that the Sustainable Development Goals are trying to do to try to measure that. So again here's a lot of other indicators that are looking at the number of policies and such as well that has been on the increase as well so there has been progress made and many of these fronts but I'll stop there for now.

Well thanks for your explanation because itis really in a way it's a little bit to sort of a counter-intuitive to see a little dip so basically I think the just the reporting and then the impact of the different events in terms of leading to the severe that in damage we will call disasters probably are reducing these activities.

I will talk more about that actually so this just be clear, this is just a number of discrete disasters so this is not saying the amount of damage or the amount of depth that they're caused so that's I have other slides in that (no) that we can get into this issue quite more deeply.

**Number of Reported Deaths**

So if I continue, here is a reported number of deaths, again I have the link to the WMO publication below and I think this has been the success story if I can say. So again I talk about this disaster risk reduction strategies, so again what we try to do is link the forecasts and the warnings to action on the ground. So again you have the National Weather Service in country X they provide a warning, let's say a tropical cyclone is coming and then they’ve the civil defense, part of the government then says okay we heard from the Weather Service you should move to a shelter, you should move the higher ground and this is what we see. So again over time we can see that this integration of the weather forecasts, civil defense and disaster management organization has reduced the number of deaths.

Impressive.

So sorry lot of things going at the same time. Yeah so one example of this and I'll pick a country actually is Bangladesh, back in the 70s there was a tropical cyclone that hit Bangladesh and it caused approximately and I don't know exact number 300,000 deaths or a number of deaths let's say I don't have exact number. A similar cyclone happened in 1980 and in 1990, and each time the number of deaths were reduced by a factor of 10. So up until Cyclone hitting now is only maybe causing 1,000 to 3,000 deaths. So again this is the success of integrating these forecasts with the disaster management authorities and we know in Bangladesh what they've done is they built these little shelters concrete shelters on higher ground so when there is a forecast of a tropical cyclone hitting the area and please remember Bangladesh is very flat it's a big river delta so there's not a lot of elevation but this has been a success story. So this is one factor that we can see is positive

Yeah well that's a really good to know because of course once you start thinking you mentioned Bangladesh one of the least developed countries but at the same time one has to highlight they have been growing steadily and growing very well. But how about the other less developed countries you might not have to blow my face with already natural disasters but also Civil Wars and other conflicts and very fragile, are they are they doing anything which might help them to get out of a climate change related disasters?

So a key point you mentioned and I do have a slide on that actually to talk about that later on. So and I should have said this in the beginning. So again with the work of WMO, we're only looking at what we call the weather and water related events right?

So we're not talking about earthquakes here, we're not talking about in fact you can see the events their at the bottom: droughts, extreme temperatures, flood, landslides, storm and wildfire.

There are other disasters and these are civil wars I mean if you want to call them crisis, we do not get into that per se so we try to separate that out. But I will talk about that actually at the end when we talk about what still needs to be done and it is very much related to what you said so it's a key point.

**Q3 What is the key challenge?**

So in a way we're already sort of move into the next topic about key challenges. So one of the challenges is really some of these conflict wars and sort of man-made disasters which is outside of the preview of WMO.

And I would say possibly we're trying to separate with this SDG Sustainable Development Goals on Climate Change so we're trying to really separate these certain things. However you're actually right these are connected and I'll talk about that about on upcoming slide.

**Recent Headlines**

So actually and here it is actually. So this is something that we've been quite aware of for a few months now, WMO and we have many centers and Weather Service in East Africa looking at a at that issue in in East Africa. So in East Africa they've had we're talking about Kenya, Ethiopia, Somalia, they've had four consecutive below normal rainy seasons and so this is the cause of the problem. And the forecast for the next few months is actually for even up until November of 2022 of still below normal rainfall. However this is where real life comes into this so we know about this climate and weather issue. But you see I talked about the issue of a Ukraine or civil conflict, this is only exacerbated and made the situation much worse due to the conflict in Ukraine. So some of you may not know but Ukraine and parts of Russia are a breadbasket they grow a lot of wheat, they grow a lot of corn and they export that and so what the humanitarian agencies such as the world food program, we'll take that grain from Ukraine and then ship it to East Africa.

Well that's harder to do now so they're really the humanitarian agencies are really, it's a problem because we're trying to help the people there, we had a discussion just the other day with colleagues from UNICEF in the Nairobi office in Kenya and the concern is malnutrition with children because there's not enough food to eat. So the UN is organized and trying to get donor funds to provide more funds to provide responses to this immediate response. Again this is all connected so we have a disaster and so how to respond, a lot of the work that WMO does is to help try to forecast what's going on but also to try to put in preparedness strategies and trying to mitigate the impacts of these events but sometimes it's not possible due to other events such as the civil conflict or this conflict in Ukraine and other areas and there's other conflicts going on in Africa around the world that only exacerbates a drought issue or a climate change issue.

So again the reality on the ground is quite complicated when you actually talk to the people and the farmers and people trying to make a living and make their livelihoods so it's a very complex situation.

So this is where it really comes into where we need to do more work of making sure these countries are more resilient to hazards and disasters but also developing maybe different food chain supplies so maybe we need to get food from someplace else but that's a hard problem to do very quickly it can happen over months or maybe years but in a few weeks it's quite difficult.

**Reported Economic Losses ($US Billions)**

So the last I think major slide I have and this is again the progress needs to make and so again this is another issue is reported economic losses.

So again with as a country sorry, as the world becomes more developed, again we can see that the living standards and the gross national product of countries increase. What does this mean? that means there's more infrastructure, there's more high-rises, the cities are becoming bigger, there's more development and when there's more development there's actually more of a risk of damage happening to those infrastructure and this graph shows them.

So again we have to remember that we saw the number of disasters sort of going up but then coming down but the economic impact is increasing all the time. gain this is a one of our challenges is how to we again continue to reduce the number of deaths due to disasters and hazards but also the economic losses which is also a key issue so this is some of the challenges we face with this standard with this Sustainable Development Goal 13.

Yeah well I could see that the death rate in the previous chart is coming down and the damages in terms of economic losses are going up but also there's also a variation in terms of which fact which type of disasters is causing what and it's very interesting to note from the last period 2010 to 2019 the extreme temperature has not caused any death well much this economic losses at this point so it's very interesting in terms of what your data are actually telling us.

The data is so just a comment on that this is data from all the countries of the world and it's aggregated so it's a gross it's a big summary. The actually extreme temperatures probably have a more of an impact on probably deaths but the one concern here though if you look at the wildfire which is on top of these bars that is increasing. So (yeah) again it's you can try to look at some positive aspects there's going to be variations by decade but I think the key here is looking at the big numbers and they're increasing so that's our major concern.

**Q4**

Yeah thank you, so in terms of us promoting a better understanding and also sort of a more better policies in terms of SDG 13 about combating climate change. **Have you seen any good practices and also in terms of young people how could they get engaged what could they do?**

**WMO Project in Papua New Guinea**

Well I have an example and then I have things to do list. So again I focus this on what WMO does and how we help countries, so this is a project that we're working on that I'm involved in in Papua New Guinea and again it's a least developed country and what we've been able to do is develop a drought early warning system in the country and you can see it the color code is there and they produce this every month.

So again the point here is that any country can do this, again there's a lot of partners that can help with this there's many UN agencies that have projects and there is a steady increase as we're trying to help these countries deal with these hazards and hopefully they don't become disasters and that is our that is our aim so this is just a key highlight here.

And one thing that is important and I work on this project is that you work with the Papua New Guinea Weather Service and we also work in the Australian Weather Service and I know from Australia point of view they use a lot of young people as interns to help with the project so this is one way that we can help young scientists get involved in projects that are regional or national, global level.

And then I have a list of other things that young people can do as well for climate change so this is just one small example of all the products we're doing but I thought it was appropriate to depict a country such as Papua New Guinea that maybe doesn't have the resources, they try very hard but as a group effort among the regional countries we can help them do a better job, helping trying to stop these hazards of becoming bad disasters and that's the whole goal.

Of course there are many other small island states so this example is excellent for others to look into.

**Q5**

**Things To Do**

Exactly so again I used a lot of these things especially for the targets and the indicators of looking at how young people can engage and this is from a website this is from the I think the SDG's website. So again the people listening or looking can read these find a charity, recycle, compost, choose reusable products, buy eco-friendly products, bike, walk, take public transport, potentially consume less meats become a vegetarian for one day, reduce your used to paper, affect your carbon emissions. Again there's the link and I really encourage the people listening to this lecture from seminar go ahead and look at that website and take a look at not only SDG13 but the other ones and see what's going on.

And so this is what I would say and also advocate for my point of view is really do some research, look at the websites of credited and known and reputable organizations and look into the websites of the projects the PDS and you can learn a lot. We need to do a better job as scientists and the science scientists of communicating but again this is a part of why this seminar is part of that effort of communicating to see what we can do and also be engaged in your local community or national government as well and trying to do something. So that's what I have is the things to do.

Well Bob thank you for highlighting and pointing out this fact that everybody can do something we don't have to do big things even just small things everyday things we could make a difference and that is very encouraging. And I think it offers a very optimistic view in terms of Climate Change because oftentimes when you think of it seems to be so big so far away and then one tends to give up right but the list of things that like choosing to not to eat meat for one day that's it that can be done, don't take a bus but walk in short distance that can be done so I think it's really a nice mixture that we can look at our own day-to-day activities and try to see what we can do differently that could contribute reduction of greenhouse gas, the carbon emission and so on and so forth and so we can all be climate activists.

I agree wholeheartedly, I think there's people always ask what's the one thing I can do though, there's many things that we can do. I talked about some technical issues on a national, international level, there's many things we need to do and likewise at a personal level there's many things we can do as well so I hope that inspires the our young audience today and looking at this webinar.

Well thank you very much Bob for a very clear concise and very helpful lecture in terms of SDG13 how do we combat the climate change as individuals, as a country as government, as a global system and also one very important thing is to remember to utilize the data from materiality organizations that help us to see the implications of the different natural events and so we do not need to sort of either deny climate exchange exist or over exaggerating but based on science and the findings.

So I want to thank you for giving us your very valuable insights and also your variable time and look forward to our next conversation. Thank you!

Thank you, it's a pleasure.