



Climate Health WA Inquiry

Inquiry into the impacts of climate change on health in Western Australia

Inquiry Lead:
Dr Tarun Weeramanthri

Witness:

Professor Petra Tschakert
Climate Change Scholar and IPCC Coordinating Lead Author

Thursday, 3 October 2019, 2.00 pm

HEARING COMMENCED

5 DR WEERAMANTHRI: Professor Tschakert, I would like to
thank you for your interest in the inquiry and for your appearance at today's
hearing. The purpose of this hearing is to assist me in gathering evidence for
the Climate Health WA Inquiry into the impacts of climate change on health in
Western Australia. My name is Tarun Weeramanthri and I've been appointed
10 by the Chief Health Officer to undertake the inquiry. Beside me is Dr Sarah
Joyce, the Inquiry's Project Manager.

15 Could everyone please be aware that the use of mobile phones and other
recording devices is not permitted in this room so please make sure that your
phone is on silent or switched off. This hearing is a formal procedure
convened under section 231 of the *Public Health Act 2016*. While you are
being asked to give your evidence on – sorry, while you are not being asked to
give your evidence under oath or affirmation, it is important you understand
that there are penalties under the Act for knowingly providing a response or
information that is false or misleading.

20 This is a public hearing and a transcript of your evidence will be made for the
public record. If you wish to make a confidential statement during today's
proceedings, you should request that that part of your evidence be taken in
private. You have previously been provided with the Inquiry's terms of
25 reference and information on giving evidence to the Inquiry. Before we begin,
do you have any questions about today's hearing?

PROF TSCHAKERT: No.

30 DR WEERAMANTHRI: I would like to state for the record that I
hold an Adjunct Professorial Appointment in the School of Population and
Global Health at the University of Western Australia. This position is unpaid.
I do have access to a shared office at UWA. I do not have any professional
connection with Dr Tschakert. For the transcript, could I ask you to state your
35 name and capacity in which you are here today.

PROF TSCHAKERT: My name is Petra Tschakert. I'm a
climate change scholar and an IPCC coordinating lead author. IPCC standing
40 for the Intergovernmental Panel on Climate Change.

DR WEERAMANTHRI: Thank you, professor. Would you like
to make a brief opening statement?

45 PROF TSCHAKERT: Yes, please. It has two parts. Climate
change is an issue of inter-generational and international injustice. It means
that future generations will have to live with more severe health impacts than –
than the current generation and poor citizens and communities and countries
who are already suffering greater impacts despite being the least responsible
for emissions. However, we understand that given the fact that our societies
50 are globally connected, through social and ecological systems, nobody is
immune.

5 The second part of my statement is I have some handouts which will be helpful, they're graphics predominantly. They will be helpful in understanding some of my comments and definitions. I would please ask if these handouts could be made available to you.

10 DR WEERAMANTHRI: Thank you. For the record we'll take the handouts and with your permission, make them an attachment to your evidence today and put them in PDF format on the website alongside your evidence. Is that – is that acceptable?

PROF TSCHAKERT: Yes. Thank you.

15 DR WEERAMANTHRI: Thank you. Before I go to my first question, a lot of people talk about the Intergovernmental Panel on Climate Change or the IPCC. It is the UN body for assessing the science related to climate change. It was established by the United Nations Environment Program, UNEP, and the World Meteorological Organisation in 1988 to provide policymakers with regular scientific assessments concerning climate change, its implications and potential future risks, and to put forward adaption and mitigation strategies. It has 195 member states and in the same year, in 20 1988, the UN General Assembly endorsed the action by WMO and UNEP in jointly establishing the IPCC.

25 Professor Tschakert, can you please outline your personal involvement as a coordinating lead author for IPCC reports and provide an overview of the overall IPCC process including the role of scientific peer review.

30 PROF TSCHAKERT: Yes. I was coordinating lead author or CLA twice for the IPCC. The first time on the Fifth Assessment Report, also known as AR5 which was published in 2014 and the second time, in the more recent report which is known as the 1.5 Special Report, 1.5 degree global warming, and it was published in 2018. The first time I was part of Working Group II. We know the IPCC has three working groups, the first one looks at 35 the physical science basis of climate change, Working Group II looks at impact, adaptation and vulnerability and Working Group III looks at the mitigation of climate change.

40 So my involvement in the AR5 was in Working Group II. I was co-leading a CLA Chapter 13 'Livelihoods and Poverty'. I was also involved in the production of the technical summary for Working Group II as well as the Summary for Policymakers and finally also involved in the writing of the Synthesis Report. Synthesis Report summarises the main findings across all three working groups and constitutes the ultimate product of an IPCC 45 assessment cycle. In the 1.5 Special Report, I was CLA on chapter 5, 'Sustainable Development, Poverty Eradication and Reducing Inequalities', and also again part of the Summary for Policymakers.

Now, the process is quite complicated. The IPCC takes on requests from the UNFCCC, which is the United Nations Framework Convention on Climate Change, to undertake assessments. These assessments are of – they’re always a review of the literature. In these assessments we are not meant to conduct our own research. The assessment of available literature—both peer reviewed as well as grey literature—and the process starts with a scoping meeting where authors as well as governmental representatives who are part or are party to the UNFCCC decide what should be covered in each report, how many chapters there should be, what the title of these chapters should be, what the main bullet points or items underneath each chapter ought to be, as well as the overarching title of the report.

I was also part of the scoping meeting for the 1.5 Special Report, and these scoping meetings that produce an outline are then subsequently reviewed and most often approved by the UNFCCC, and as soon as this happens the review process can start. Individuals like myself apply through national focal points, in our case that’s DFAT in Canberra, so we submit our applications to be part of an IPCC process. The focal point then reviews these applications and submits those in the most competent... they cover various areas to the Bureau in Geneva.

The Bureau in Geneva has only a dozen permanent staff members and it’s the Bureau that reviews and ultimately selects the final authors. And there should always be an author balance between the global north, the global south, gender balance as well as across various disciplines. As soon as the chapters are established with their authors, coordinating lead authors and the authors, the process can begin. For large assessments, the process takes three and a half years. For special assessments or special reports, it’s 18 months.

The chapters or the authors of each chapter produce various drafts. In both cases, full report and special report, there’s four drafts. The first goes out to internal reviewers, so these are the ones that we identify as understanding and helping us to shape the first – we call it also Zero Order Draft. The second one goes out to scientific experts, those who sign up through the IPCC portal to review, so it's open to anybody and the third and the fourth draft go both to scientific experts and governments and both provide comments.

The teams meet four times during this process. These are called LAMs or Lead Author Meetings during which progress, gaps, inconsistencies, complications are discussed. The process also has review editors. Each chapter has review editors – editors who ensure that the reviews that a chapter receives are taken seriously and are adequately addressed. To give an example of how many reviews one may get the 1.5 Special Report over the four drafts, our chapter, Chapter 5, received 3,500 comments and the Summary for Policymakers 7,560 comments. All comments need to be read and need to be addressed in written.

In the handouts I gave you, on page 2, you see an example of how this looks like. You see from page to page you see a comment and you see a response. What is taken out is who submitted a question. So this is no longer visible but you can see that this is an enormously detailed process. In this case, as I said, this is our chapter. This is a response for the Second Order Draft—that goes over 111 pages—to address thousands of comments, and these are made public in the end so they need to be taken seriously.

Ultimately, the Summary for Policymakers draws upon the main insights and findings from all chapters. There are all the CLAs as well as other handpicked people who, at the same time as they write their chapters, also write the Summary for Policymakers. And, ultimately, this also goes through review and will then be presented to the governments, the parties to the UNFCCC; it goes to an approval session and the approval session usually lasts for five days.

It's very common that the first day is very slow and ultimately we do not make enough progress. So usually on Day 3 we start with evening sessions. Usually on Day 4 we go into night sessions and Day 5 is usually the one that goes around the clock—like last time when we had the approval session in South Korea—we started Friday 10 o'clock, we went around and finally the report was approved on Saturday at 3 o'clock in the afternoon. So it's an enormously detailed process.

The [approval of the] Summary for Policymakers goes line by line, word by word and by consensus. It's not majority. So, every single party has to agree and, as you can imagine, there are a lot of disagreements and these need to be handled, sometimes in 'huddles' where concerned countries and authors come together, or contact groups which are more formal. So, this is the process. The review is enormously stringent and, for good reasons, we cannot afford a single missed decimal anywhere.

What is important—and this is where I want to draw your attention to again in the handout—is how the IPCC from the Fifth Assessment Report onwards has dealt with definitions. And this is indeed the scientific insight that we take forward in our work as academics and scholars and it's relevant for the Climate Change and Health Inquiry. On page 3 you see a blue graphic. This graphic illustrates risks, risks from climate change.

The way the IPCC since the Fifth Assessment Report 2014 understands risk is at the intersection of hazards, exposure and vulnerability. So, hazards are slow onset or rapid onset events. Exposure is people, animals, systems, infrastructure being in the way of a hazard. And vulnerability—and this is important because it differs from the previous definition in the IPCC that came out in 2007—vulnerability is understood as the propensity or predisposition to be adversely affected.

So, since 2014 the IPCC no longer understands vulnerability as a function of exposure, sensitivity and adaptive capacity but understands vulnerability as

independent of a hazard—meaning entrenched poverty, disenfranchised populations, marginalisation, conflict, tension are aspects of vulnerability, independent of a heatwave or a flood. So, the job in the Fifth Assessment Report was to understand where risk emerges and when risk materialises and causes impacts, and that is fundamental because it has shifted how we do impact assessments and how we do vulnerability assessments.

The next slide shows in more detail how the IPCC since the AR5 thinks about vulnerability. This is page 4. It thinks about vulnerability as multidimensional emerging, left of the graphic, from intersecting dimensions of inequality, these are gender, class, ethnicity, age, race, disability and they're intersecting, they're intertwined and they coincide with climate change but also climate change responses, the actions we take, the policies we put in place as well as socioeconomic development pathways each community, each country has. And out of that intersection emerges the fact that many people are very marginalised, face high multidimensional vulnerability and low capacities and opportunities, and a very small number of privileged people who are more resilient with low vulnerability and high capacities.

So, this is how we think about multidimensional vulnerability, always at the intersection of inequality. Then I have four more – and they're quick. Slide number 5 shows that vulnerability and resilience are not static, they're dynamic and you can see two examples of graphics how vulnerability and resilience in livelihoods can go up and down as a result of stressors and shocks. And we know that most people, as I said earlier, are in the marginalised front and their trajectory will go down over time.

The next graphic, number 6, came out of the AR5. That was the chapter on health, Chapter 12, and it shows how risk as we have just defined it can be reduced with current adaptation or additional adaptation—which is the red. However, risk would remain when limits to adaptation are reached and you can see that in the context of various health dimensions. And you can clearly see how the risk would increase over time from current, present, to 2030–2040, which is roughly equivalent with a 1.5 degree global warming, to the end of the century, which is roughly equivalent to 4 degrees, and that is very worrisome.

And then two more and they go quick; slide 7 shows that communities, and this will become important later in the process, and countries start from different levels of vulnerability and different levels of development; hence the options they have and the pathways they can take will differ. The ultimate goal is to reach climate-resilient societies with equity and wellbeing for all but it would require societal and systems transformation that would address all the SDGs, the Sustainable Development Goals, meeting net zero greenhouse gas emissions, and limiting warming to 1.5 degrees. So that's the challenge we face.

And the last one, number 8, is we talk about pathways, we talk about development pathways, adaptation pathways and we understand that these

pathways need to be deliberated and negotiated. They cannot be imposed and hence the necessity for consultation at every single important decision point.

5 DR WEERAMANTHRI: Thank you. Can you – and this is a big ask, can you provide an overview of your work in climate change adaptation, vulnerable groups and community resilience?

10 PROF TSCHAKERT: Yes. I want to split it into two parts. The first part concerns the work I have done before I moved to Perth. I worked out of – I worked in the US and through my involvement there I had the opportunity to be part of the – to be part of two very large research projects, one entitled Anticipatory Learning for Climate Change Adaptation and Resilience. It was a large research-funded project that allowed collaboration between American researchers and practitioners and those in Ghana and
15 Tanzania, so it's an African focus.

The research partners were rural populations, so rural communities both in Ghana and Tanzania. And the project focussed predominantly on those who were most disadvantaged in society, so reliant on rainfall, rainfall for rain-fed
20 agriculture, which of course increases sensitivity and exposure to events, but also people who were not part of decision-making processes. So, these are people who are not consulted for climate change projects, people who had no voice in designing their own trajectory. So, we worked with rural populations to understand what adaption strategies are already in place, what works and for
25 whom, why and why not and what people do differently now than before.

It also involved understanding possible climate futures and we call this anticipating climate futures, and we used participatory scenario building, which is different from scenario building that we use in an academic setting. It's
30 participatory. It works through narratives and graphics and storytelling and theatre to imagine how the future could be for the next generation, for the next two generations, to understand what is desirable and for whom, what is equitable and what is not, and then put together community plans that the rural communities could take to their districts, because districts were required to
35 have adaptation planning incorporated but didn't know how. So that's one example.

And the other example is from Asia through a project—a project called HICAP, the Himalayan Climate Adaptation Project—and I collaborated with
40 colleagues in Nepal to address gender in climate change adaptation and limits to adaptation, overlay it – and this is how it relates to intersecting dimensions of inequality with caste, which is an incredibly destructive element in Nepal. And another component in Assam, India to understand the politics of
45 adaptation in exposed flood-prone areas to the Brahmaputra tributaries where poverty intersects with ethnicity, so disadvantaged ethnic groups. And the purpose there was to understand limits to community adaptation and resilience building through planning and negotiation with district-level emergency management planners.

And the third example, which is from Australia, I can address right now, if you wish, or I can come back to it later.

5 DR WEERAMANTHRI: No, please go ahead.

PROF TSCHAKERT: So, the third example is more recent, it's current, and this is a funded project through the Australian Research Council. It's entitled Locating Loss from Climate Change in Everyday Places, and the project has its focus on Western Australia, eight communities, roughly a 400 kilometre transect from Perth into the Eastern Wheatbelt. Eight communities are structured as pairs: one is always socioeconomically slightly better off, the other slightly worse off. And if you want to go to slide number 13, it shows you those eight communities as well—or later. Go to 13 nonetheless.

So it's called Locating Loss from Climate Change, and I have to explain this. So, when we think about loss, we often think about loss as something that has monetary value, you know, we lose a bridge in a flooding event. This is not what we have in mind here. We're thinking about what is known in the literature as nonmarket, noneconomic or intangible losses, and these are elements that are often overlooked in vulnerability assessments. And what we mean here is, for example, mental, emotional impacts, distress. We also mean loss of sense of place, loss of belonging, loss of dignity, loss of decision-making, power, loss of knowledge. So, we're looking at intangible losses.

And we're interested in understanding these losses through not impacts, not projections, but through what people value, what they value in their lives and what they wish to protect. And we understand and our research participants know this as well, that not everything we value today could be preserved. So, our task is to understand what people consider as acceptable losses, things they would let go of, and what they consider as intolerable losses, losses that would be absolutely detrimental. And behind that is what is known in the literature—and I've contributed to this—a science of loss and it's a social science of loss.

The reason why this is important is we have an overabundance of impact assessments and we have an overabundance of vulnerability assessments but they often don't capture what people really value and what decisions they are making during emergencies, whether that's a fast- or slow-onset emergency. So, our task is to understand what people value, care about in their families, in their environment, what they wish to protect, and how their trade-offs between the many things they value may differ when we look into the future.

45 With new climate information, with new adaptation strategies being available, what would people do differently? And the example we often use is the options farmers have in Western Australia. Farmers have been severely impacted by drought, have experienced that drought. Well, what trade-offs do

they make? And what we see—and what you see on slide 13—and we see that across case studies, is that individuals, and in this case it's predominantly true for male farmers, for men, have a tendency to value their identity as a farmer and a breadwinner much more, because it's their status, it's their recognition within the family and the – and the recognition within their community and with their neighbours. They value the identity and their land and their sense of place and belonging much more than their health.

So, they make sacrifices on their health front, and as we know, the most detrimental sacrifices are letting go of our lives, and this is the case of suicide, right. Now, would people make different trade-offs with better climate information, with better adaptation options? Would they trade-off differently their health against their place of belonging, their identity, their land, their income?

This is what this project tries to do, to understand whether or not farmers in envisioning their loss space, would leave the farm and engage in emotional place detachment, moving to a city, doing something completely different; staying in place and what is known in the – in the literature as gearing up to endure more, being tougher, even if it is costly, cost to their personal wellbeing and family relations; or would they be able to engage in globally savvy entrepreneurial farming communities and businesses or would the consequences be unbearable and would we indeed have to deal with suicide again. So, these are the options we have.

If you look at slide number 14, which is not part of the project but it influences the project, as we've done a literature review of over 100 case studies, and the intensity of intangible losses—loss identified as irreversible, most damage is reversible—is overwhelming. An overwhelming number of evident – pieces of evidence from floods, droughts, higher temperatures, some from storm, less literature on sea level rise and fires. But what we can see is that these often ignore the overlooked aspects of health, overlooked because they're harder to measure – dignity, identity, mental, emotional wellbeing, order in the world, also physical health, social fabric, sense of place, sovereignty – are incredibly important. So, our project tries to assess those with participants.

Page 17 gives an example of how we do this. So, we have had a survey with over 400 people. We have talked and interviewed over a hundred. So, we use participatory mapping to allow people to indicate where they value, what they value in the environment, where and why they value, what matters to them in their social fabric, what potential threats that exist to the many things they value and to which extent they feel they have control and responsibility to protect what they value. Ultimately, what we want is, we want to, in year 4 of the project—we're now in year 2—to co-design adaptation pathways that take into consideration what is of meaning and of value to people and to highlight those elements that people would find as intolerable if they lost them, and then incorporate these community-driven and grounded adaptation pathways into State-level policymaking on adaptation to fill the gaps that currently exist.

DR WEERAMANTHRI: In our consultations in regional areas, we were obviously told about some of the impacts in farming regions of the drought and part of what the feedback was that it doesn't just affect the farmers themselves, it affects the whole community because that business underlines the whole economy of the whole region so it's everyone in the town is affected by a farming downturn. Have you looked at any of these intangible affects beyond the directly affected if you – if you know what I mean, in – in those other groups apart from farmers?

PROF TSCHAKERT: So, what you have heard is absolutely correct. There's evidence in the literature and I want to give one example to illustrate that point that this is indeed pervasive and widespread. So the example is, in this case not from Western Australia but from the Mallee, and farming communities – what really breaks communities apart, what really breaks communities and makes them crumble is often not the damage to yield or agricultural production or even as depressing and—and sad and—and horrible it is, the death of people's animals, it is often when the social fabric breaks, falls apart.

When people say it's too dry, it's too dusty, it's too hot, we can actually no longer play ball on the soccer field or the cricket field or whatever it may be because it's just too hot and too dusty. And as soon as we can no longer play our sports, the community doesn't come together anymore and so we lose insight into who does well, who needs help because people become more – more isolated. So, we do know that. In our project, we will have our first community workshop next month and we very much are prepared to hear some of those stories.

DR WEERAMANTHRI: You made – you've made two comments which I'll just tie together. One is around the importance of negotiating pathways - - -

PROF TSCHAKERT: Yes.

DR WEERAMANTHRI: - - - not imposing them, and you also talked a little later about vulnerability and part of that vulnerability being people who are not part of the decision-making process. So, do you want to just kind of just expand on that a bit?

PROF TSCHAKERT: Yes, very often, and this is speaking from the perspective of a scholar and a researcher, we of course are interested and tempted to produce vulnerability assessments that capture vulnerability across the board, whether that's at a regional level or the national or global level. Often these vulnerability assessments, and there are thousands of them, thousands—and I have some examples for you in the handout—very often they rely on obviously data that are available at a unit of analysis, whether that's a

region or a district or a country level, and they very often fall back to former definitions of vulnerability, as we said earlier, that include exposure.

5 It's fairly easy – easy to measure exposure of who lives in a flood-prone area, can be easily assessed through a GIS analysis. Who is exposed to heat stress —this can be easily measured, can be monitored, can be modelled, and so there's an overabundance of maps, vulnerability maps and indices. It is much more difficult to get to the aspects of vulnerability as we understand them now if we think about them as systemic, baked into every single society, inequality.
10 And we don't have data for inequality at the household level. We don't have data on who makes decisions in a household to adopt adaptation strategy A versus adaptation strategy B.

15 There's an overabundance of literature that points to gender inequalities in decision-making in households and these gender inequalities translate obviously also to adaptation decision-making. We don't have the data but we know having a voice, having the power to articulate what individuals want and need, is lacking currently. And so these elements often get dropped in vulnerability assessments simply because we don't have the data. And the same of – obviously goes beyond gender, the same is true for age. The same is true for race, indigeneity, all of the above.

20 So, what we see is a disconnect between obviously well-intentioned adaptation planning at the regional and at the federal level but what people then ultimately do is in contrast to what the adaptational plan has laid out. So often people don't give up their homes when there is an early warning announcement. If there's a flood announcement, elderly people, for example, will stick it out because they're worried that, if they leave their house, they may not have the medication they need, they may not be able to access their neighbours for help
25 so these two are out of touch.
30

35 So, thinking about adaptation as a process—and we define adaptation as a socio-institutional process, a learning process, that allows people to identify adaptation options at different points in time—and the resources required for them is part of a process of deliberation and negotiation. And you can take it from a household between a couple, between parents and children, all the way up to the state level. And this is a complicated process but there's good evidence from around the world actually that these processes work, and I think Western Australia should – has no reason to believe that it wouldn't work here.
40

DR WEERAMANTHRI: Thank you. We've got just under 10 minutes left. I've got just a couple of final questions.

45 PROF TSCHAKERT: Yes.

DR WEERAMANTHRI: You mentioned a process of anticipating climate futures - - -

PROF TSCHAKERT: Yes

DR WEERAMANTHRI: - - - as part of a kind of participatory scenario modelling, is that - - -

5 PROF TSCHAKERT: Yes.

DR WEERAMANTHRI: - - - did I hear you right?

10 PROF TSCHAKERT: Yes.

DR WEERAMANTHRI: Is there any – is there any benefit to people just going through that process, apart from actually giving you more accurate predictions of the future does it actually benefit people to tell their story about it, participate in this process?

15 PROF TSCHAKERT: Yes. There are clear benefits and I would say they're twofold. The first benefit is that participants—people, community members, project members, stakeholders, however you want to define them—

20 have to go through the exercise of understanding trade-offs between options. I think we have to come to realise that there is most likely no win-win option. Every option will have trade-offs, some positive and some negative consequences and without going through the exercise of imagining –

25 imagining, envisioning, anticipating potential futures it remains often unclear what these trade-offs are likely to be and who likely is going to benefit and who likely is going to lose out.

So going through the exercise of either drawing out or acting out these scenarios, these storylines, helps people understand where difficult choices

30 may be awaiting them along the path. So, that's the first one, understanding trade-offs and understanding what options would benefit the majority versus options that would just benefit those who are already better off. So, that's one.

The second one is it clearly enhances ownership of people's lives and adaptation futures. So, right now, we often see that people who are disadvantaged, disenfranchised in societies, who are not part of adaptation

35 planning—in the case of Western Australia this is to a large extent homeless people, refugees, migrants, elderly people, Aboriginal communities—they are not part of adaptation planning. Often, being part of the process, having a voice

40 in deciding their own desirable strategies with the various trade-offs involves – involved, enhances ownership of – of adaption pathways. And as soon as this ownership becomes much more prevalent, the likelihood that people will reject their own adaptation planning priorities is reduced. If the disconnect between a

45 state-level, a federal-level adaption plan that does not in any way or—or marginally includes people's preferences and priorities—as long as we have this disconnect, people will just not act in the way that would be safe and to the benefit of their health and sanity and their lives.

DR WEERAMANTHRI: A last question – the written submission from the University of Western Australia, which I acknowledge was not your personal submission but did reference some of the work you’ve talked about today, also emphasised the role of the university in terms of the Indian Ocean rim. Given your international experience can you speak to any links between the response to climate change in Western Australia and the response in countries on the Indian Ocean Rim?

PROF TSCHAKERT: Yes. So, when we talk about response to climate change, I think we usually mean mitigation, reducing emissions, investing in renewables. We understand enhancing adaptation or enhancing adapted capacities, particularly among those who are most vulnerable, and building resilience and we also understand response as embarking on a societal transformation that we as a global society understand is needed, and that needs to change what we do, how we live, how we consume, how we commute, all of that.

I put in two slides in my handout, the two graphics in the handout, 18 and 20. 18 – let’s just do 18, that lists the countries that are part of the Indian Ocean rim so that’s roughly 20, and if we look at these countries and the links between what they do in terms of response to climate change, we can see clearly that the starting positions are very different. So, what you see is a ranking of the Indian Ocean Rim countries by what is known as the Global Index Rank in the Sustainable Development Goals, SDGs. This is out of a report from 2019—it has green for the Sustainable Development Goal achieved, yellow for challenges remaining, orange for significant challenges remaining and red, major challenges remaining.

So, without going into the details of every single country it becomes quite clear there’s a large red congregation in the lower left for the basic SDGs. So, this is, you know, poverty, hunger, good health, wellbeing, education, gender equality, clean water, sanitation, affordable energy, decent work and economic growth, particularly for low-income countries. The terminology here is from the World Bank, differentiating low-income countries from lower middle-income countries, upper middle-income countries, and high-income countries.

So, if you take, for example, Mozambique, Mozambique faces major challenges on all basic Sustainable Development Goals and needs. If you compare that to Australia which is listed here as the top in this comparison of Indian Ocean Rim countries, Australia’s doing pretty well given though zero hunger is still a major challenge. The pattern reverses if you look at SDG 12 and 13, 12 being responsible consumption and production and 13 climate action. We’re the least... The low income countries, so at the very bottom, have actually – they’re almost on track with achieving their SDGs. But it’s the high-income countries and the upper middle-income countries that are completely off target when it comes to reducing emissions, climate actions and responsible consumption and production.

5 So this graphic simply illustrates, yes, there are linkages between what the
countries do, but they come from completely different starting positions—
adaptational strategies against heatwaves and against health impacts. We
probably approach them similarly. However, countries that have high
10 income—are high-income countries—and have high emissions will have to put
a much more concentrated effort on reducing emissions, investing in fossil
fuels especially reducing reliance on – well, in our case, coal and LNG –
whereas countries who are struggling to meet their basic needs will need much
15 more support to enhance adaptive capacities, adaptive action, identify
vulnerable groups and work towards resilience.

20 This pattern, if you want, is translatable to the enormous differences we face in
our own state in Western Australia when it comes to responsibilities and
adaptive capacities. It's just a mirror image and to – to advance arguments that
15 the way one country responds to climate change does not have implications for
other countries is simply not true. So, these links have to be much more
coordinated between neighbours and beyond neighbours.

20 DR WEERAMANTHRI: We'll close it there. Thank you very
much, Professor Tschakert, for your attendance at today's hearing. A transcript
of this hearing will be sent to you so that you can correct minor factual errors
before it is placed on the public record. If you could please return the
transcript within 10 working days of the date of covering letter or email
25 otherwise it will be deemed to be correct. You cannot amend your evidence
and you've provided us with supplementary material but if there's anything
further you'd like to submit to the Inquiry please get in touch with us. Once
again thank you very much for your evidence and time today.

30 PROF TSCHAKERT: You're welcome.

HEARING CONCLUDED

Note: Handout document referred to in this transcript is added below.