

- Zoe Haseman: The urgent need for us to tackle the climate crisis.
- Jens Nielsen: Yeah, so it's really a crucial [inaudible].
- Zoe Haseman: Impacts of climate change and the risks that these pose to our society.
- Jens Nielsen: We need specific plans and excellence to drive the CO2 in the down in the short term.
- Zoe Haseman: The climate crisis is the world's most critical challenge right now. Hello and welcome to the Sparks Podcast Series, I'm Zoe Haseman.
- Jens Nielsen: And I'm Jens Nielsen.
- Zoe Haseman: And we'll be your host throughout the special edition podcast series brought to you by the World Climate Foundation and Jacobs. Come with us as we take you on a journey around the world to explore how different countries are tackling their climate challenges, sparking ideas and inspiration. From clean energy innovations in Scotland to sustainable buildings in Dubai, we'll be interviewing global green leaders financiers and entrepreneurs about the policies, investments, and innovations that are accelerating our progress towards a resilient and sustainable world. Our podcast hopes to educate and inspire, sparking real conversations with the intention to collaborate, act, commit to real change.
- Jens Nielsen: The Asia Pacific region is home to over half of the world's population, consumes over 60% of the world's energy and consists of some of the fastest growing economies internationally. The region is also defined by its diverse spectrum of socioeconomic and geographic conditions along with similarly varied, national priorities and policies. This complexity brings unique challenges to the region's energy transition efforts, especially in relation to balancing energy equity, security, and sustainability.
- Zoe Haseman: In this episode, we'll explore how Asia Pacific diversity could also as a catalyst for the net zero agenda and accelerate the transition through trade knowledge sharing and collaboration opportunities. And we have the privilege to be joined today by on and only United Nations under Secretary General, Executive Secretary of the United Nations Economic and Social Commission for Asian Pacific or ESCAP, Ms. Armida Salsiah Alisjahbana, and we are really honored to have her here and she's going to help discuss the actions necessary to achieve a clean energy future. So, Mrs. Alisjahbana, welcome. And thanks so much for being with us here today. Really excited to hear from you.
- Alisjahbana: My great pleasure.

Zoe Haseman: If you can go ahead and set the scene for our listeners today by providing an overview of the Asia Pacific region and its progress towards net zero emissions outlining some of the biggest challenges and opportunities you're facing.

Alisjahbana: Thank you very much. It is my pleasure to be here, to join this conversation. To set the scene, Asia Pacific region, emits the largest volume of greenhouse gas or CO2 reducing about 50% or half or a little bit more half actually of the world's or global CO2 emissions and it's growing annually. So for example, a record, this was pre-COVID of before COVID pandemic hit a record of 36.7 gigatons of CO2 emissions was emitted from our region, as everybody understands the economy or GDP and CO2 emissions are highly correlated.

Why? Asia Pacific is the largest contributor. Again, because the region is still the engine of global growth. Global GDP let's say in 2020 slightly before COVID was 85 trillion U.S. dollars yet just to put the perspective here and that Asia Pacific GDP overall GDP is about one third of that. So Asia Pacific economy is about one third of the world economy and the region has been engine of global growth pre-pandemic because of the many emerging countries or emerging economies where we have many, many emerging economies in our regions.

So therefore also this economy dynamics is there. Likewise population, the region is home to over half of the global population. And in terms of the emission, 50% of the emission are driven by the energy sector. Also more than half of the energy makes comprises of fossil fuel, including coal. So therefore this is why energy is major source CO2 emission.

So in terms of CO2 emission in our region, as well as globally, 60% contributed by the energy sector and moreover industries, of course manufacturing and transport aside from sources of CO2 emissions from forest fire, waste management, well as the agriculture sector. So there are certainly challenges in terms of this energy sector. If I can just refer as a reference using SDG Sustainable Development Goals 7, which relates to energy. So challenges in terms of universal access is quite high, more than 90%, but still more than 150 million people still remain without electricity access across the region.

Second is in terms of the share of renewable energy and overall energy mix is still quite low, significantly low, although there is improvement, but way short of 30% renewable energy in the renewable engine mix for 2030, you know this challenge, the largest gains for renewables are found in the region's power sector for power sector generation.

Third challenge is improvement in energy efficiency because that is also one of the goal. So the global rate of improvement in energy efficiency by 2030 has to be doubled. So far, our region, there is significant improvement yeah in terms of this energy efficiency. But again, there still room for improvement further in terms of energy efficiency leading towards 2030, or what is required in 2030. And in terms of opportunities, because you also mentioned about the

opportunities. There are certainly significant opportunities because again, the region is the center of renewable energy development and deployment.

With several countries in our region, demonstrating leadership in investment in its net capacity addition, as well as production in terms of renewable energy. So therefore if I can just relate that to the three areas here, again, in terms of opportunities and access, especially the opportunities and further homework's not so much an energy or electricity access because we're getting there, but more on the access to clean cooking fuel, especially in rural areas. In terms of renewable, how to bridge between the demand and supply. Whereas the supply is in abundance, but it's quite geographic specific in terms of location like solar wind, hydro bioenergy is quite geographic specific unit price has come down, but investment needs to be gear up, needs to be accelerated.

So therefore, how to match this between the supply in abundance, the demand is increasing, especially post pandemic, but now maybe not yet, but post pandemic, we will see demand increasing. So how we can match the increase in demand later on with more renewable and one area which offer promise is a power generation.

Jens Nielsen:

Yes. On one hand, it's clear that different countries across Asia Pacific are quite varied in regard to the access to renewable resources and their energy consumption needs. And on the other hand, it's also clear that we are seeing rapid change in the energy sector, such given these factors. Do you think there is now a stronger case for the development of an integrated energy system between countries within the region? And if you think so, can you elaborate a bit more, what you think are the main obstacles and opportunities for increasing the integration?

Alisjahbana:

The last decade has seen a traumatic shift or significant shift in this case decline in the cost of renewable energy, particular, wind, and solar, for example. Cost of solar PV dropped by 82% globally in the last decade, the past 10 years. Another example is concentrated solar power, also seeing a drop of 47%. Likewise onshore wind costs fell by 40% and offshore wind costs fell by 29%. So again, yeah significant drop in costs of this renewable energy by way, example of solar, as well as wind.

The adoption of these technologies at a large scale is key to at the so-called energy transition. But on the other hand, renewable energy resources are not evenly distributed because they are quite specific yet geographically location wise, several example in terms of countries in our region, Australia, China, India, Mongolia, Pakistan. These are countries that have fast land resources.

They have impressive wind and solar resources as well. On the other hand, another example, countries such as Nepal Pyuthan and Lao PDR have ample hydro power to meet their own needs and even more. They can even export their electricity, which is generated by hydro. But then the question is, what

about countries such as Bangladesh or Singapore, which have limited land areas, but at the same time, they also have ample demand for electricity?

Let me also give a few more specific examples. Mongolia, this is a country with vast land areas and with the right infrastructure in place, right investment of course, infrastructure by establishing these solar power generation could yield a series of benefit than the excess electricity produce could also be exported to its neighboring countries in East Asia, its low cost electricity generated by solar could potentially be exported to its neighboring country in East Asia. And same time also could contribute to climate change mitigation.

Another example, this is on a subregion basis several countries in subregion in this context is Asia ASEAN in which ASEAN has this intra ASEAN Power Grid connectivity. The countries of Lao PDR, Thailand, Malaysia, Singapore have been trading power through this intra ASEAN Power Grid connectivity. So therefore at the same time help increase the share of this renewable in this case is from solar and wind energy sources. And also at the same time, is also mitigate contribute to climate change mitigation.

So therefore what regional cooperation offers, what we see from several of these examples, this cross border energy connectivity offering the potential of increasing the uptake of renewable energy for each respective country and contribute to climate change mitigation. But at the same time, this cross border energy connectivity requires the creation of technical legal standardization and so on regulatory cooperation alongside the physical infrastructure investments, such as power lines across the countries and great extensions have been the primary enabling factor for increased electrification and integration of renewable energy across the countries within the particular sub region.

But however for small and remote communities in areas. For example, in rural areas, with poor grid reliability or connectivity and renewable of grid solutions play a significant role, for example, microhydro in villages, as well as biomass in villages in remote areas. And another example is solar VP out the islands.

Zoe Haseman: Thanks for that Alisjahbana I mean, clearly lots of challenges on every level, but like you've pointed out lots of opportunity there as well. And I want to probe more into the sort of like the balancing between social prosperity and social equity, aligning that with economic growth, knowing that one of the key challenges is the hugely growing population and what that means. And obviously the UNESCAP is really focused on promoting inclusive and sustainable economic and social development. So just interest in your thoughts on how can we balance that drive for economic growth with the rapidly grow populations against the need to reduce our impact on climate change?

Alisjahbana: Certainly a more balanced approach to economic growth, social inclusion and environmental sustainability is an imperative is a must, learning from COVID-19 pandemic. The pandemic has exacerbated the vulnerabilities especially for the

poor, the near poor, the vulnerable and other marginalized groups. If we see pre-COVID-19 situation, climate change challenges related to limiting global temperature rise to well below the two degrees centigrade, and as close as possible to 1.5 degrees centigrade above the preindustrial levels in line with Paris Agreement has been a real challenge. With a view, of course, the long term view of target of net zero carbon emission by 2050. So this is the target that all countries have to commit if we want to achieve the Paris Climate Agreement, target of global temperature increase not to exceed two degrees centigrade.

During COVID-19 since last year, we have seen some respite in CO2 emissions because the pandemic has restricted activities and movements. So therefore also economy is slowing down and in some instances last year, even contracted. But now with the economy started to recover slowly but surely we also see CO2 emissions have started to come back again, although not yet to its pre-pandemic level. At the same time, millions of people in the region remain exposed to a higher frequency and intensity of natural hazards from locust swarms, and earthquakes to cyclones and other exceptional events.

Natural hazard is threatening a systemic global collapse, creating risk that often interconnect with one triggering another in a cascading of devastating events. These underlying pressure of climate change coupled with pandemic in use socioeconomic crisis has further transport the whole risk escape, including in our regions. So therefore the challenge of, again, exacerbated [inaudible] the challenge of this economy growth with the population pressure, especially as the region is organizing rapidly. Now at the current situation, more than 50% of the population of our region, Asia Pacific already live in cities and urban areas and this number steadily increasingly.

So therefore we need a balance development paradigm as well as at the same time to be able yet to mitigate the climate change impact as well as this three nexus, not only climate change now that we see climate change disaster, as well as the health or the pandemic. So in terms of opportunities now for the recovery post COVID-19. So definitely this is the momentum for us to recover better together. So let's seize this momentum. In terms of recovery better resiliency, inclusiveness, as well as sustainability, especially leading towards the green and blue economy or green and blue recovery. In terms of resiliency, how we can better prepare for this, again, this nexus of climate disaster and health care, or health emergencies we need also because we talk not only country level, but as a region, how we can create a more efficient and effective and resilient regional supply chain.

Because again, our region is the hub of a value chain supply chain, the hub of manufacturing. So how to prepare or create a more efficient, more robust, more resilient regional supply chain. How also to promote trade and investment conditions for recovery, the so-called employment left, recovery. So you need trade to be moving. You need investment also to provide employment

opportunities. How to strengthen resilient, transport and transit condition. For the goods and the people to start flowing and moving again. In terms of inclusiveness, how also to ensure continuity in fiscal and financial support for the vulnerable people that have been impacted really by the pandemic, by the crisis, including the hardest hit businesses. Especially the SMEs, the small and medium enterprise, informal sector worker, informal sector business, and also the importance of scaling up the social protection coverage. Because again, this is not something taken for granted, especially in our region.

Many countries in our region have not have the social protection system in place. So therefore when a crisis struck such as the pandemic, some countries do not have even one element of a social protection system in place before they have to really put up in ad hoc manner, social assistance and so on and so forth. So we should take the opportunity to scale it up and to set up social protection system in place. And in terms of sustainability, the green and blue recovery or green and blue economy. So this is the direction that, where we need yet to go as a region, as well as the country level, how we can embed long term sustainability, starting with the COVID-19 policy response.

So all these stimulus packages and so on, as well as how to incorporate environmental sustainability into the private sector, into the investment processes, the business investment processes, as well as the investment itself, the green and blue investment, whether public investment as well as private investment. Several examples is investment in clean energy. So directly related to our topic, which is the renewable clean energy, as well as another example is investment in climate resilient infrastructure. Therefore, we need to evolve from, let's say the so-called BAU or business as usual towards sustainable investment and business opportunities as well yet.

So it's not only the government led recovery, but also how the private sector led recovery or contribution. Therefore, we need to have this whole government, whole society holistic their approach, including for us to match towards the sustainable development models. But aside from that, let me add you one more aspect perspective, which is equally important, which is the need for us as individual, as society community to change our habit, our behavior, especially in consumption lifestyle, to be more environmentally friendly, not to be excessive in our consumption, how to also promote and not only promote but implement the 3R, recycle, reduce and reuse as well as scale up solutions such as nature based solution circular economy with its practical solution. I think those are great, good solution for us to lead us towards a more sustainable lifestyle.

Zoe Haseman: I couldn't agree more with that last comment as well. And I think what you've highlighted there is the vast opportunities, ideas, and solutions for all levels, starting with government at a regional level, at a country level, down to the private sector that really everybody has a role in making change in this space as well. Do you see progress happening like at the government level are things,

what's are things emotional already, what's kind of like the rate of change that's happening now already in terms of the action being taken?

Alisjahbana: What I see is evolving and starting to pick up is actually progress starting with awareness because progress is not possible without the awareness. So the awareness and progress and the push actually comes from the community NGOs, the youth, the younger generation, because of their awareness, they would like to see a better world, right? A more sustainable world. They understand the impact of climate change. Although we do not feel it immediately.

Maybe we reveal it when disasters struck more intensified and more severe and so on, but once in while. But they understand this in the longer term, longer horizon, this will impact, especially the youth. So they are the one that actually galvanizing the support, the voice and so on, including pressuring the private sector, pressuring the government and including at the global level. So in that sense, there is tremendous progress, but how government responds.

I think many governments also have been responding one indication or several indication for that matter. We've seen that several countries have renewed their climate change commitment, several countries if I can just mention such as Japan, Korea, the pledge share the commitment to achieve net zero carbon emission by 2050, right? Which is also the global commitment China 2060. China commit to have peak of their CO2 emission by 2030 and of 2030 started that decline until net zero CO2 emission by 2060, and many countries follow suit. This is our homework here. All countries have this commitment already, I think, is in the world. So let's see at the upcoming COP26, we'll see our progresses countries have taken up their commitment on this climate change.

Zoe Haseman: Yeah, indeed. Thank you.

Jens Nielsen: With the contributors. So it's as air pollution and the greenhouse gas emissions being the root drivers of climate change. Alisjahbana, can you tell us how ESCAP are tackling this to help protect both the population and the planet from the negative impacts?

Alisjahbana: ESCAP is working closely with governments, our member states to promote transformation action in our region, including on air pollution. So our support with member state is in the areas of first is raising public awareness. This is very important because without public awareness and without understanding at all levels, then it will be very difficult to promote and facilitate actions again in the issue of the urgency of climate change.

Likewise, in the issue of pollution or air quality. Second ESCAP also enhanced corporation among the member states or among countries in our region. In 2019, so two years ago, member states request ESCAP through ESCAP Resolution on strengthening regional corporation to tackle air pollution

challenges in Asia and the Pacific. So key issues of that resolution. Why is it important? Why I take this up? Yeah, because this is member states that ask ESCAP to support them by facilitating the voluntary exchange of experiences or share of experiences among the countries, including promotion of voluntary scientific, and technological corporation to tackle air pollution in our region, as well as to facilitate the collection and dissemination of information and study related to air pollution in the region.

So therefore it can support policies, policies of the countries as appropriate. Of course, taking county of the expertise that ESCAP has. So in this regard, let me share one concrete example by way of project that we are doing to support member state or countries in our region, we have this so-called GEMS project. GEMS, is a geo stationary environment monitoring spectrum meter project. Yes, it is a little bit technical, but basically this project is to mitigate air pollution by monitoring air quality data from space and ground network.

So therefore we can and map out, so all this air quality across the region, across Asia Pacific, and then we can identify what are the sources of air pollution in each specific, let's say areas or particular areas of a subregion of a Sub-country again, bearing in mind that air pollution is trans boundary in nature. So some areas of a particular subregion, for example, South Asia, a lot of air pollution in the particular area comes from agriculture residue burning Southeast Asia, for example, until a few years ago.

A lot of the CO2 emission or air pollution, including air pollution comes from forest fires, fires in Poland and so on in other areas, a lot of the air pollution also the CO2 emission comes from industrial sources manufacturing or from transportation in urban areas. So there is different sources depending on the areas. And so on so forth. So therefore these stems map out all this to enable also to have very comprehensive information, real time. So therefore we can feed the latest information to respective government, including and not only government in the sense of national government, including to cities in our region. So for the cities, you want for the government to be able to come up with a specific targeted policy to address this air pollution and at the same time also of course, CO2 emission.

Zoe Haseman: Thank you. And so one question thinking about the future. So Asia Pacific countries, there's a real spectrum of challenge when developing a clean energy future and policy and progress has been ramping up in recent times with clean forms of electrical power generation at the top of that list. But how, if you are looking into your crystal ball, how do you see the next 10 years of the energy transition panning out?

Alisjahbana: Acceleration in the energy transition reflects an alignment of clean energy economics. And at the same time, also with the global commitments on decarbonization and sustainability. So definitely we need breakthrough not only on the technology landscape and in new policies, but also in what concrete



projects that can be financed to support this energy transition. So in this regard, I think there is a good progress in the sense or good development in the sense we see that appetite or funding of new coal-fired power plant project is declining, which is good news, but at the same time, how we can have more investment in this renewable or clean energy.

So therefore the key elements of this energy transition is, again, we need this accelerated shift as well as in investment in energy technology and respective infrastructure. Again, reiterate the points of renewable energy, how to also achieve energy efficiency and the importance, if you talk about renewable energy, the importance of energy storage, because we will not be able to scale up renewable energy, be of their nature. We need also to develop and to have the technology, the capacity, the infrastructure in place for this energy storage and equally important is the integration of digital technology into the energy infrastructure.

Another element here for this energy transition is the transition from fossil fuel, including coal as the backbone of the energy system to one dominated more and more by cleaner energy, including of course, in this case, renewable energy and the development of the industry that goes with that. Which again, now we see is picking up, for example, the industry of electric vehicle, also the industry that supports the development of hydrogen entity, the industry that support the development of smart grid. This is for renewable energy, the use of blockchain technology and so on and so forth.

So therefore we hope going forward, long term towards the net zero emission of 2050, that's the eventual ultimate target. We could have this energy transition. Eventually leading to energy transformation, hopefully by 2030 leading to 2050. So therefore, definitely this needs to be undertaken by countries in our region and for each respective countries to also have the key milestone of this energy transition for its eventual energy transformation. So our milestone is of course, 2030 SDG in which the targeted global target is we have to have 30% of renewable energy in our energy mix. And 2050, the ultimate target is for all countries globally to have reach net zero carbon emission, by that time.

Zoe Haseman: So on a personal level, Ms. Alisjahbana it is okay to ask how do you personally feel as a global citizen? And that we as society as a whole globally, be able to successfully address the climate emergency and sticks that 1.5 degree pathway that we know is so important. How are you feeling about that?

Alisjahbana: Well, now not that optimistic to be Frank.

Zoe Haseman: I'm really, personally, very interesting. I'm sure our listeners would be genuinely as well. And you know your personal view on this.

Alisjahbana: My personal opinion, I'm not yet that optimistic at this point in time. Why? Because we are still far sure not to mention target of 2050, this net zero carbon mission by 2050, even the 2030 target. The 2030 target in terms of SDG, renewable energy target. Again, I mentioned earlier, right? 30% of the total renewable energy mix, some countries I think a little bit ahead because of their commitment, investment innovation and so forth. Already a gearing towards that end. But at the same time for this country, the big countries, yeah. The energy needs is also immense, right? Because population, because economic activism on so little bit of a challenge to catch up with that particular commitment or target. And then we have also a tier of countries again, in our region, many middle income countries, many emerging countries. Because they are at upward trend.

Going in their economic development of course COVID-19 put a little bit break. But I mean, if you see the trend it's upward trend. So a little bit also a challenge, right? At the same time, you have to have a reliable energy supply and so on. And the population growing can be growing and how to catch up with renew energy yeah cannot be match immediately.

And third tier is again, several countries are quite a bit lagging behind. Of course. These countries need to also catch up in terms of energy access and all that. Cooking fuel and so on. So we have a different set, different set of countries. And if you want to push the region, and these are rather challenging, but at the same time always, as I mentioned earlier, if there is a challenge, there's always an opportunity, never a challenge without opportunity.

If there is a challenge, if there is a problem, if there is COVID, if there is pandemic always opportunity. It's a matter of how you can see the opportunity and how you can cease the opportunity and how you can bring the respective players together, again this awareness thing, very important. And if your government, how you can create the enabling environment. So it's a matter of depth. I see it, which is not easy, not easy. But then again, what I mentioned also earlier, the push comes from this younger generation. The push comes from the NGO, the push comes from the academia, the thinker and so on. And then the awareness start to step in yet to the private sector still may be in the advanced country. That's fine still with the fund manager. But if the push starts pushing harder and harder and it will permeate yet to, and everybody including other countries, our region, I mean the developing countries and the emerging countries as well.

So if we see this as an opportunity, I think the entry point is if we see, or if we could present this, for example, the need of renewable, right? If we could present this as an opportunity, if we could present this also as an investment opportunity, business opportunity, then government, whether developing, whether emerging, whether the country they would rush into. Second is technology because there are, I'm not expert just referring it to the conversation from the expert. Second is technology. Technology, there are

certain details in the technology that you need also to work on that. It's not something automatic. Oh, we want renewable energy. Okay, fine. We invest. And it's not like that because renewable energy, you have this power grid needs to be quite passive, smart grid yet because of this storage issue and so on so forth. So you need also to solve that and you need maybe a certain transfer of technology arrangement to support, right? The scaling up and all that.

Again, the bottom line is as shown by the cost structure is falling down right significantly and so on. This is an opportunity. One last point is the geographic location. Specificity of the renewables. Renewables is not something okay, I want to buy and create the factory here. And that's it. No renewables is solar that you need a certain in technical term. The sun radiation intensity such that then you can have the solar PV right in place. Wind energy, you have to have a certain wind intensity such that you can have this windmill. The location is quite specific. Likewise energy from wave, current undercurrent and so on is specific location wise. So I think if you can plan that such here is the wind farm here is the solar farm and that kind of thing. And then you interconnect with the grid that is key.

And for these countries, oftentimes the supply and demand does not quite match immediately. The supply is abundance in certain country A, but their demand is for electricity is actually not that much. The demand of electricity is much more in countries with more developed economy, more population that kind of thing. Can we have this mix and match? So therefore this regional electricity power system across country within a sub region, but then you have to have this corporation, you have to have this harmonization, you have to have this standardization. You have to have this electricity market, right? Needs to be developed. But the benefit is that the countries, the respective countries can significantly accelerate their renewable energy intake. And therefore the renewable makes also can be significantly increased if they have to do it on their own within their respective own country, it is not possible. So this is the basic idea of this regional power grid system.

Zoe Haseman: Fantastic. Thank you. That was... Unfortunately, that's all we've got time for on this episode, but I can't thank you enough. It's been such an insightful discussion and I've learned so much.

Jens Nielsen: Super interesting and it's a super important.

Zoe Haseman: You have such an important job and huge challenges ahead, but very exciting. Sp thank you so much.

Alisjahbana: My great pleasure.

Zoe Haseman: And thank you to our listeners who have joined us today. We hope you enjoyed the podcast. If you have any questions or comments or would like to get in touch with us and or our guests, we would love to hear from you. And we've

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included details on our podcast landing page on how to get in touch. Until next week, bye for now.