

22 September 2020

**IPCC Chair Hoesung Lee**  
**Keynote Speech**  
**City Week London 2020**

I am pleased to have this opportunity to speak to you at the 2020 City Week London Conference.

I participated last year and looked forward to the 2020 conference, but truly I had never expected we would have this format of conference.

Not only the meetings but our entire livelihoods have been disrupted due to public health crisis around the world.

I see a parallel between the Covid-19 pandemic and another crisis the world faces, ie., climate change.

Limiting the spread of the virus has required everyone to act collectively to make life safer for all of us.

This holds true for the climate crisis – the ever-rising greenhouse gas emissions that are already bringing increasingly dangerous consequences. And climate change will have serious impacts on the real sectors of the global economy, with a corresponding spill-over effect on the world financial sectors.

The increasing intensity and frequency of extreme weather events damaging lives and livelihoods around the world are just one aspect of worsening climate change.

The ecosystems, such as coral reef and biodiversity, are already being threatened. The degradation of the ecosystems, ie., the natural capital, will damage ultimately the foundations of the economic and social progress.

The Arctic, dryland regions, and small island regions face disproportionately higher risks under current warming of 1 degree. Their consequences will be felt globally.

The temperature has had a significant effect on outmigration in countries with high dependence on agriculture, contributing to regional socioeconomic instability and national security.

An analysis based upon the international migration database of OECD indicates that 1-degree Celsius increase in average temperature was associated with a 1.9% increase in bilateral migration flows from 142 sending countries and 19 receiving countries. A 1-millimetre increase in precipitation was associated with a 0.5% increase in migration. Warming resulted in economic slowdowns in the tropics and the Southern Hemisphere subtropics as climate change adversely affected crop yields in these regions. 2 Whether limiting the spread of the virus or limiting the rise of global temperature, it requires us the world to take immediate action together.

Our climate challenge is a shared global challenge – and it is largely an energy challenge.

Energy accounts for over two-thirds of global greenhouse gas emissions. This means energy must be at the heart of any solution.

There is no time to lose. The planet's capacity to absorb additional emissions of greenhouse gases without causing severe damage to nature and humans is fixed and the world would soon face the ceiling if emissions rise at the current rate.

Analysis by the Intergovernmental Panel on Climate Change (IPCC) clearly shows us that global emissions need to be reduced to net-zero within the next few decades to avoid a dangerous increase in global temperatures.

Failure in achieving this goal leads to failure in stopping degradation in ecosystem, natural system, economy, human lives and livelihoods. The failure means adaptive capacity being compromised. The failure means the world would have to consider drastic measures for CO<sub>2</sub> removal from the atmosphere. This will have serious implication for land use, biodiversity and food security. The failure also means increasing the risk of crossing the thresholds, ushering in systemic and irreversible impacts.

This year due to Covid-19 the world has seen a tremendous drop in CO<sub>2</sub> emissions, but that came at an enormous human and economic cost: more than 700,000 deaths and economic contraction largest in last 7 decades.

Certainly, this is not a picture of emission reduction we would have expected.

The climate change solution means emissions reduction now toward net zero and economic progress throughout.

That is: We need a decoupling of greenhouse gas emissions from economic development.

But there are already signs that emissions are rebounding as economies reopen.

We recall that the economic recovery following the 2008 global financial crisis brought with it the biggest jump in emissions in history.

The world cannot afford to repeat that history, because there is no time to lose.

We need a sharp structural decline of greenhouse gas emissions. This requires a dramatic acceleration in the transitions to clean, sustainable energy that are already underway in many countries and industries. This will be a new opportunity presented to the financial sectors.

The good news is we already have affordable, reliable technologies that can put the peak in global emissions behind us and start the drive down to net zero.

Deployed quickly and on a major scale, the clean energy technologies we have now can bring about the decline in energy-related emissions that would put the world on track for climate goals.

The governments around the world now pursue to counter the impacts of the Covid-19. It offers a unique momentum to shift the investment from the traditional greenhouse gas intensive technologies to the technologies for sustainable future.

The incremental share of annual mitigation investment which includes investment in efficiency improvement as well as energy decarbonisation is 0.36% of global GDP over the baseline share of 1.96% of global GDP over the period 2015-2030.

According to a recent analysis by the International Energy Agency, together with the International Monetary Fund, a combination of policy actions and targeted investments over the next three years could bring about a sustainable recovery, boosting global economic growth, creating millions of jobs and making 2019 the definitive peak in global emissions.

Ensuring that this near-term initial shift in investment can take us all the way to net-zero in the coming decades presents a further challenge – and one that also needs urgent, ambitious action.

Decarbonising entire economies means tackling sectors where emissions are especially difficult to reduce, such as shipping, trucks, aviation, heavy industries like steel, cement and chemicals, and agriculture.

This will require the rapid development of many technologies that are still in their very early stages today – some of them are barely out of the laboratory.

The net-zero in three decades calls for a step-change in technology innovation in many critical areas such as enhancing energy efficiency, making low-carbon electricity the main source for heating buildings and powering vehicles, capturing, storing and utilizing carbon dioxide before it escapes into the atmosphere, realising the potential of clean hydrogen across many industries, massively expanding the use of sustainable bioenergy, and building the foundation for circular economy.

Today, overall investment in clean energy innovation is increasing, but only gradually – far too slowly to meet our challenges head-on.

Furthermore, the coronavirus pandemic may lead to the risk of myopic decisions, focused on only visible, imminent problems captured by shorttermism.

Governments and the private sector both have critical roles to play in making sure investment in clean and sustainable energy innovation increases rather than declines at this pivotal moment.

They both have critical roles to play in also making sure the energy transition to have minimal impact on workers and their livelihoods related to the industries with potential negative impacts from the transition.

The net-zero in three decades depends upon the societal capability in managing the transformation. A world characterized by inequality, poverty and lack of international cooperation would make the net-zero transition infeasible. The international cooperation for enhancing developing countries' capacities and access to finance and technology is a key enabler for achieving global net-zero.

The IPCC will do its utmost to provide you, policymakers, investors, producers, consumers, and citizens from around the world with evidence-based assessment findings for your decisions and actions.

We will support you with science in this journey together to the net zero-emission world.

Thank you.