

## **Ravi Menon: Climate action through partnership, innovation, and finance**

Speech by Mr Ravi Menon, Managing Director of the Monetary Authority of Singapore, at the Climate Leaders' Assembly, Singapore, 30 November 2023.

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Ladies and gentlemen, good afternoon. Welcome to the inaugural Climate Leaders' Assembly.

On behalf of the COP28 Singapore Pavilion team, I would like to express our gratitude for the opportunity to co-host this event with Bain & Co. Please also join me in thanking our organiser Carbonless, catalyst sponsor AWS, and co-conveners Conservation International, GAEA, and Temasek for their contributions.

Let me begin by briefly reflecting on the state of the planet. It is not in a good place.

### ***First, the world is not on track to limit global warming to 1.5 degrees Celsius.***

- To achieve the 1.5 degrees Celsius target, we need to reduce global greenhouse gas emissions by 43% by 2030, compared to 2019 levels, and get to net zero by 2050.
- But as of this year, global emissions are still rising, not falling.
- At this rate, even if all current pledges under the Paris Agreement are met by 2030, global warming will reach between 2.1 to 2.8 degrees Celsius by the end of the century.

### ***Second, climate change is already happening.***

- Lives and livelihoods continue to be lost and impacted through climate disasters.
- We are seeing increased frequency of extreme storms, floods, wildfires, and heat waves.
- According to the World Meteorological Organisation, half of the planet has seen a rise in floods, and one third saw a surge in drought events.

### ***These are uncomfortable facts - they remind us of the gravity of the situation and the urgency of the task.***

- That is why your presence today and at COP28 is so important.
- Climate change is a global problem, and as global leaders, we must confront these issues with honesty and respond with solidarity.

### ***Each of us here today comes to Dubai with something to offer.***

- We bring scientific knowledge, decarbonisation solutions, funding for a purpose, or a commitment to transition existing business models to more sustainable ones.

- We represent governments, businesses, financial institutions, technology companies, and philanthropies looking to build partnerships, accelerate innovation, and finance the transition.

Let me highlight three key themes for the Climate Leaders Assembly, which will guide our discussions today:

- partnerships
- innovation
- finance

***First, building effective partnerships.***

Overcoming the climate challenge will require not just individual stakeholders chipping away at the problem, but effective partnerships *across domains and across borders*.

***To achieve a credible yet just transition, we need partnerships across domains.***

- Governments, to put in place the necessary policies – imposing a price on carbon and setting emissions standards and regulations.
- Banks, to direct financing to green and transition projects.
- Scientists and technologists, to improve the economics and scalability of clean energy solutions.
- Industry, to deploy cleaner technologies and work processes and prepare their workers for the green transition.
- People, to adjust their consumption choices to support a less carbon-intensive or energy-intensive lifestyle.

***Take for example, Singapore's approach to preparing the workforce for a low-carbon future.***

- A critical aspect of ensuring a just transition is to manage the impact on livelihoods and workers in a decarbonising world.
- In Singapore, we are forging partnerships to help prepare our workforce for a low-carbon future.
- The *Green Skills Committee* brings together representatives from trade unions, businesses, trade associations and industry chambers, institutes of higher learning, professional bodies, and government agencies.
- The Committee will identify the green skills that will be in demand in the future and support workers develop these skills so that they can take on new and transformed jobs in a very different type of economy: less carbon-intensive, more energy-efficient, more sustainable.

***Partnerships also need to straddle across borders.*** Singapore feels this acutely, both as a *beneficiary* of such cross-border collaborations and as a *contributor* to regional and global efforts.

***As a small city-state with very little access to renewable energy, Singapore relies on regional and international co-operation.***

- We have one of the highest urban densities in the world. We have very limited land and sea spaces, low wind speeds, and a lack of hydrothermal resources. Even if we maximised solar energy deployment, it would cover less than 10% of our electricity needs.
- We rely on international cooperation in areas like the import of low-carbon energy through regional power grids; enabling supply chains for low-carbon fuels such as hydrogen and ammonia to meet our climate goals.

***As a global maritime and aviation hub, Singapore plays a larger role to advance climate action beyond its borders.***

- As a maritime hub, we are promoting decarbonisation partnerships through Green and Digital Shipping Corridors that support the transition to low- and zero-carbon fuels.
- As an aviation hub, we are reviewing measures to promote the offtake of Sustainable Aviation Fuel at Changi Airport.

Throughout today's discussions, let us ground our discussions on collaborative actions that we might take to address the climate crisis, across domains and across borders.

***Second, fostering greater innovation.***

It is unlikely there will be a 'miracle invention' that will save us from climate change. But to solve the climate crisis, we will need much more innovation that we have seen thus far.

***Singapore knows from its own experience that necessity is the mother of invention.***

- We took birth as a vulnerable, water-stressed nation. We conducted research, invested in technology, and innovated new processes - to be able to now treat, recycle, and supply water as part of an integrated and effective water system.
- Today, we need to summon that same spirit of innovation to decarbonise our energy system despite being an alternative-energy-disadvantaged island nation.

***Singapore has allocated \$1.2 billion of R&D funding for sustainability initiatives and low-carbon energy technologies such as solar, smart grids, and low-carbon hydrogen.***

- One key initiative is the S\$184 million Low Carbon Energy Research Programme, which aims to improve the techno-economic feasibility of technologies such as hydrogen and carbon capture and storage.
- Earlier this year, we launched the second phase of the programme, which aims to improve the economics of the import and utilisation of low-carbon hydrogen and its carriers.

***Third, financing as a key enabler for the net zero transition.***

***Much has been said about the role of the financial sector to channel capital for transition. Equally much has been said about why this capital is not flowing.***

- Take for example the managed phase-out of coal in Asia.
- With coal fired power plants accounting for a third of Asia's greenhouse gas emissions, the imperative for their early decommissioning is clear.
- But the economics of doing so are challenging. Asia's energy demand is growing rapidly and the region's coal plants are relatively young.
- Retiring these coal plants well before the end of their economic lives and replacing them with renewable energy with high capital investments does not meet the risk-return expectations of private capital.

This is why we need to link financing to the two earlier themes of partnerships and innovation.

***We need public-private partnerships and innovative solutions to get financing to flow to where it is needed.***

- Public-private partnerships such as blended finance can bring together various partners to contribute in different and synergistic ways to potentially make difficult transition projects like coal phase-out work.
  - Concessionary capital, coupled with technical assistance and regulatory certainty, can help to reduce the risks in such projects and crowd-in multiples of commercial capital.
- Likewise, we need to develop innovative solutions - such as transition credits - to increase the economic viability of coal phase-out.
  - The MAS has published a working paper with McKinsey which lays out how such transition credits can improve the economic case for coal-fired power plants to retire early, by providing additional revenue to make up for the lost income that coal plant owners would face from the plants' early retirement.
  - MAS is now convening a coalition of ecosystem players that will help to identify barriers and potential solutions to develop transition credits as a viable market mechanism – back to partnerships!

So, these three themes will keep recurring in a reinforcing loop in today's Climate Leaders' Assembly – partnerships, innovation, finance.

Of course, our work will not be done in a day. We hope that we can each be a *firestarter*, sparking ideas in the right places with the right partners to set off initiatives that are larger than ourselves. We hope these initiatives will in turn grow into multi-year efforts, lending impetus to an effective and inclusive transition to net zero and a more sustainable planet.

I wish everyone a fruitful day ahead.