

Singaporean climate scientist reflects on his work at UN bureau

He describes his emotions after he was elected to co-chair IPCC group

Cheryl Tan

First it was joy, then relief, followed by fear, and now, a steady sense of determination that went through Associate Professor Winston Chow, after he was recently elected as co-chair of the Intergovernmental Panel on Climate Change (IPCC) Working Group II.

The IPCC, the United Nations' top climate science body, distils the latest available climate science to guide policymakers and help them contribute to global climate action.

"I feel like I've gone through a wide range of emotions in such a short span of time," said Prof Chow in an interview with The Straits Times following his win at the IPCC elections in Nairobi, Kenya, on July 27.

"While I'm glad that many countries had faith in me to take on this leadership role, there was this sudden realisation, after all the congratulations and handshaking, that the role is going to be a demanding one," he added.

"There's a lot of responsibility, a lot of work to do, and there's literally no time left for a delay in climate action."

"But a mentor once told me that if you're not scared when you're doing something, then you don't want it enough. So I guess (this fear) is a good thing," said the 45-year-old scientist, who is the first Singaporean to take up the role.

As a developing country co-chair for Working Group II, Prof Chow will be working alongside fellow co-chair Bart van den Hurk from the Netherlands – the only candidate for the role from a developed country – to lead a group of top climate scientists in updating the latest science on climate change impacts and adaptation.

The IPCC is divided into three working groups and a task force, and publishes reports every six to seven years to ensure that the scientific aspects of climate change are continually updated according to the latest available data.

It is now in the seventh assessment cycle, and Prof Chow's ap-



Built-up areas generally experience higher temperatures. Cities have to invest in more expertise as heat stress could become more complicated with an ageing population, says Prof Winston Chow. PHOTOS: LIANHE ZAOBAO, DESMOND WEE

HARD WORK OF CAMPAIGNING PAYS OFF

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ASSOCIATE PROFESSOR WINSTON CHOW (right), who was recently elected as co-chair of the Intergovernmental Panel on Climate Change (IPCC) Working Group II.



pointment will be for its entire duration.

Professor van den Hurk, who is a scientific adviser at Dutch university Deltare, has contributed to its research in sea-level rise and coastal flooding.

This is an area where both Singapore and the Netherlands have existing partnerships, and a collaboration together on the global stage would be beneficial for the countries, both low-lying coastal nations, said Prof Chow.

Prof Chow, who specialises in ur-

ban climate at the Singapore Management University's College of Integrative Studies, beat four other candidates from the Bahamas, Gambia, Iran and Mexico to the co-chair role.

A lot of work went into preparing for his new role, said the climate scientist, who is in his 10th year of working with the IPCC, likening it to a presidential run in the climate change space.

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His credentials at the IPCC had been earned through countless nights of ploughing through thousands of research papers, and writing chapters for its report – all of it unpaid labour.

Prof Chow began as an expert reviewer for the IPCC, providing feed-

back and suggestions for certain chapters in the IPCC reports.

He was later a lead author for the chapters on "Cities, Settlements and Key Infrastructure" and "Cities and Settlements by the Sea" as part of the IPCC Working Group II's sixth assessment reports (AR6) from 2017, which looked into the impact of climate change on urban infrastructure and coastal cities.

As co-chair, Prof Chow's role is to identify research areas in climate impacts and adaptation which could benefit from greater scientific expertise, and encourage climate scientists to delve into these areas.

One potential area could be more focused assessments on how climate change affects the financial and tourism sectors, he said.

Reflecting on his election in a post on LinkedIn last week, Prof Chow said he felt "humbled" that a boy from Bedok – where he has lived all his life – can be Singapore's first elected member of the IPCC Bureau.

He said he is taking on the role in order to do his part in a way he finds most meaningful, to create a more sustainable world for his two daughters.

The world is careening towards new climate extremes as the 1.5 deg C warming threshold comes closer into view.

Parts of Europe and China are now grappling with devastating floods and torrential rain, while rivers are drying up in drought-stricken Spain. Punishing heatwaves in the United States have set new temperature records, and catastrophic wildfires are ravaging Hawaii.

To do his part to live sustainably, Prof Chow often opts for batik shirts instead of a suit, as they have an "air of formality" but are more comfortable.

This allows him to set his air-conditioning at 25 deg C, compared with the usual 22 deg C at events or conferences, which would, in turn, help to reduce energy use for cooling, and hence reduce carbon emissions from electricity use.

This is particularly important as 95 per cent of Singapore's electricity use is powered by natural gas, he added.

In addition, the multi-institute Cooling Singapore initiative – which Prof Chow helms as its co-principal investigator – will look into local heat adaptation and mitigation measures for sizzling Singapore, such as reducing the waste heat expelled from air-condition-

ing. The research project will also look at developing a digital urban climate twin to assess urban cooling scenarios for Singapore.

The initiative also has synergies with the IPCC's upcoming Special Report on Cities and Climate Change – a key priority of governments around the world, said Prof Chow.

The report is extremely timely as cities are consistently becoming larger, and about 70 per cent of the world's population will be living in cities by the middle of the century, he noted.

About 65 per cent to 70 per cent of current global greenhouse gas emissions come from these urban areas, and coastal cities in particular are incredibly vulnerable to a wide range of climate impacts, such as rising sea levels.

As those in densely built-up areas generally experience higher air temperatures, a larger segment of the population could experience heat stress during a heatwave, for instance.

While cities generally have the infrastructure to cope with this, they would need to invest in more expertise as heat stress could become more complicated with an ageing population, he added.

Likewise, with their immense knowledge base, and financial and social capital, cities are also well equipped to effectively mitigate climate change, said Prof Chow.

The special report hopes to bring together all these different aspects of climate change and its links to urban cities, which would help governments take the necessary action, he added.

"Then, half my battle would already be won," said Prof Chow.

Singapore's Ministry of Sustainability and the Environment said in April that it had nominated Prof Chow as he is well-qualified to contribute to advancing the science of climate change, particularly in relation to cities.

Supporting Prof Chow in Nairobi, Mr Hazri Hassan, divisional director of the Ministry of Sustainability and the Environment's International Policy Division, recalled that the atmosphere was "tense with anticipation" during the series of elections from July 25 to July 28 for numerous positions in the IPCC Bureau.

"Despite the tension, I was quietly confident that Winston stood a good chance of being elected, given his credentials and the extensive preparatory work done ahead of the elections. However, we knew we could never take anything for granted."

"That was why we continued to campaign for him right up to the elections for the Working Group II co-chair position. I was elated when he was successfully elected, and the first thing I did was to release a huge sigh of relief," said Mr Hazri.

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