

ESSAY

‘WE MUST KEEP LEARNING AND WE MUST KEEP DOING’: SPEECH TO 2021 UN CLIMATE ADAPTATION SUMMIT

Prof Brian Schmidt AC

The Australian National University Vice-Chancellor and winner of the 2011 Nobel Prize in Physics Prof Brian Schmidt AC outlines how using science with urgency, at scale and in collaboration will help prevent catastrophic climate change.

It's a great honour to be asked to speak on behalf of the people of Australia and the global scientific community at this important summit.

As per our traditions here in Australia, I celebrate and pay my respects to the Ngunnawal and Ngambri people of the Canberra region whose cultures are among the oldest continuing cultures in human history – going back a mere 20000 years or so here.

I know that to many, the task we are discussing here today – heading off cataclysmic climate change – appears so huge and so difficult that it sometimes seems futile.

Such people say that our world is so vast and so timeless that any claim that we can influence it for good or ill, is conceited. An act of hubris.

It's this attitude we must combat.

Because by employing science, with the necessary scale, urgency and collaboration, we can and will succeed.

We need to keep learning and we need to keep doing.

The starting point is adopting a different perspective: the perspective of science.

As it's my area of expertise, let me give you the perspective of astronomy.

Why Astronomy? Because when you grasp the true scale of the ever-expanding universe, you realise just how wrong the doubters are when they say the world is too big and too timeless for us to alter its behaviour.

I want you to recall a famous image of our earth - the tiny pale blue dot taken by the Voyager spacecraft as it sped out of our solar system in 1990.

Turning the Voyager camera back towards Earth was a masterstroke - because that image showed like nothing else that our world is smaller and more fragile than we think.

And it has never looked more fragile than right now.

The comfortable, prosperous life we live in the narrow gap between the bottom of its oceans and top of its atmosphere, has never been more at risk.

The danger to the Earth is real and the need to address it is urgent.

...

We are of course becoming more and more accustomed to big and urgent problems.

Our worries this year have been about a disease, but the people of the world may recall that this time last year the east coast of Australia was on fire, its air barely breathable, and its people having to be evacuated from the flames by the Royal Australian Navy.

What happened in my country last year is what the whole world may one day have to face.

In just the last twelve months, my own university has had to cope with extreme bushfire and hail events, in addition to the pandemic.

As someone once said, nothing focuses the mind like the prospect of facing a firing squad. We are focused on climate change like never before.

As a member of the world's scientific community, I'm here to tell you that science, as always, stands ready to serve the people of the world.

Renewing our trust in science and other forms of knowledge is vital.

In recent times, that trust has been undermined.

'Science', 'expertise', 'evidence'... The purveyors of doubt have tried to devalue these powerful weapons in the fight against climate change.

We can't let them succeed.

Things, though, are starting to swing back.

Medical science has brilliantly come to the rescue in the gravest crisis the people of the world have faced for generations.

By tackling COVID-19, science undertaken with urgency, scale and international cooperation has proven its value to humanity.

The goodwill that science has generated must now be harnessed to this next big battle.

What must we do?

Put most simply, we need to keep learning, and we need to keep doing. We need to trust in science and engage all our resources, including our universities.

On becoming a Nobel Laureate, my father said to me: 'You've got a Nobel Prize, you can do anything you want, so why on earth would you take on one of the hardest jobs in the world and run a university?'

My answer was that universities and other places of knowledge and science have a crucial role to play in solving humanity's biggest problems.

Tackling climate change is the clearest and most urgent example.

The things universities teach and research – science, engineering, economics, public policy and others – are providing the answers. We just need to implement them faster, at greater scale and with genuine global cooperation.

With the world on a trajectory to exceed a 1.5 degrees Celsius increase above pre-Industrial levels between 2027 and 2042, there must be no delay.

No half measures. No jurisdictions working against each other.

For Australia – which is such a large per capita contributor to global emissions and which has such abundance of natural renewable resources – the answer lies in scaling up clean energy generation ASAP. This is an urgent moral obligation which Australia must not shirk.

My own university is playing its part. The Australian National University has adopted what we call the ANU Below Zero initiative - a plan to make the university carbon net negative by reducing our own emissions and by using our research assets to help the world pull carbon down from the atmosphere.

Earlier this week, I spoke to 500 future leaders in science about the challenges of addressing climate change at the National Youth Science Forum.

I challenged them to come up with the best idea for using Covid-19 stimulus spending to boost climate adaptation. I intend to share the top five ideas with our Prime Minister because he needs to hear from the people who are going to inherit our planet.

I'll share one idea with you now.

Each year, the methane burps of beef and buffalo produce two Gigatonnes equivalent of Co2. Young science students, Phoebe and Wen have suggested a great investment is to use an Australian discovery. That by adding a small amount of seaweed – *Asparagopsis taxiformis* – to the feed of bovine reduces their methane emissions by about 90 per cent, with a corresponding increase in livestock productivity.

Investing in the research and capital for farming the seaweed at scale around the tropics (which has the potential to improve water quality), provides an alternate sustainable source of jobs and income for developing countries whilst increasing livestock production and dramatically cutting greenhouse gas emission. A great idea - and just one that our global leaders need to consider.

This is learning and doing in action. This is the way forward.

...

As an astronomer, I want to leave you with one additional thought.

Our little world... our home... will survive global warming.

Take it from me, the universe is littered with billions of uninhabitable planets.

We humans will most likely survive too.

But unless we head off catastrophic global warming, our lives on this planet will be more difficult, more dangerous and less pleasant.

We have all seen the tragedies COVID-19 has caused and witnessed the pressures it has placed on our societies and our political systems.

This will be nothing compared to the stress that is likely to follow uncontrolled global warming, with its floods, fires, droughts, famines, unbearable heatwaves and other human calamities.

As in the pandemic, science employed with the necessary scale, urgency and global collaboration is the only answer.

Keeping on learning and acting is the only answer.

The scientific world stands ready to act. Our universities stand ready to act. Let's get started.

Note from the Editor: On 20 May 2021, ANU became the first university in Australia to act on climate change. As part of its Below Zero Initiative, it has pledged to become carbon neutral by 2025 and achieve below zero emissions by 2030.

JOURNAL OF BEHAVIOURAL ECONOMICS AND SOCIAL SYSTEMS

Volume 3, Number 1, 2021

