

ScienceTalk

# Why Singapore's climate policies are likely to be durable and effective

**Benjamin Cashore**

I have been studying global environmental governance for over three decades.

What struck me when I moved here four years ago was the dizzying array of domestic and global climate and sustainability initiatives that the Singapore Government was in the middle of unleashing.

Many of these efforts have been shepherded through the Singapore Green Plan 2030, which details the country's path towards meeting its Paris Agreement commitments.

This journey includes a progressive carbon tax – the first of its kind in South-east Asia – as well as climate adaptation through coastal protection and flood resilience.

Singapore also announced in February that it will be making climate-related information reporting mandatory for listed and non-listed companies, which

is expected to help lay the groundwork for transition-oriented climate finance.

Mr Ravi Menon, former managing director of the Monetary Authority of Singapore (MAS), was also recently appointed as the island-state's first "ambassador for climate action".

**POLICY EFFECTIVENESS**

As a student of sustainability governance, I often joke it would be great if the Government could slow down to allow me and my colleagues time to study these policy pathways.

On a serious note, there is an elephant in the room.

For over three decades, well-intended inter-governmental and private governance systems have unleashed numerous policy innovations designed to ameliorate climate and biodiversity governance, only to be frustrated with the pace and scale of desired outcomes,

highlighted by accelerating global warming.

My collaborators and I have characterised this phenomenon as the "policy creation euphoria, implementation depression" cycle of global environmental governance.

Averting these outcomes has not been for a lack of trying.

For over three decades, governments around the world have experimented with various policy design innovations,

including the Kyoto Protocol – the precursor to the 2015 Paris Agreement. The Kyoto Protocol contained binding commitments for developed countries, whose cumulative emissions have been estimated to be as high as 92 per cent of the global total.

The Kyoto Protocol's Clean Development Mechanism, which allows developed countries to buy carbon credits from developing countries as a way to offset their own footprint, also inspired a number of market-based innovations.

These included the Chicago Climate Exchange – an effort championed by former US vice-president Al Gore to create efficient mitigation projects between the United States and Brazil. Though well-intended and well-funded, it ultimately failed to live up to designer expectations and closed in 2010.

Recognition of these trends led to the Paris Agreement's consensus for greater innovations and bottom-up climate pathways that would incorporate public and private finance to spur climate-friendly markets and technological innovations.

Each country meets its Paris commitments through "nationally determined contributions", which include setting domestic emissions reduction targets, and a shared pledge to limit emissions to "well below" 2 deg C above pre-industrial levels, with aspirations of 1.5 deg C.

The agreement allows for countries and the private sector to transfer carbon credits in order to accelerate decarbonisation

pathways.

This spurred DBS Bank, Singapore Exchange and Standard Chartered Bank to launch Singapore's Climate Impact X – which was designed with a mission to create credible carbon markets while incorporating broader environmental, social and governance concerns, including biodiversity and social outcomes.

**THE SINGAPORE CASE STUDY**

The question emerges then: Can we expect Singapore's climate policy efforts to buck historical trends elsewhere to be both durable and effective?

There is a very good reason to believe the answer is yes.

Why? Because Singapore is quite unique in its quest, and ability, to design policies for the long term.

Let us consider three illustrative examples.

Over 60 years ago, Singapore introduced its Housing and Development Board flat system as a means to provide housing

security not only to its existing population, but for future generations.

While many see this approach as an example of infrastructure-led development, the first step was an innovative policy design mix to achieve its highly durable objectives.

Great attention was given to the nitty-gritty of policy specifications, including anticipating future effects of decisions regarding applicants' age of eligibility, the kinds of loans available, and an ability to tap into Singapore's equally unique Central Provident Fund.

The long-term implications of this policy today are profound: The ability of local citizens to buy a house is much higher today in Singapore than in other major cities around the world – greatly reducing economic anxiety than it otherwise would have been.

Turning to more recent times, Singapore's Covid-19 management, when measured by per capita lives lost, was one of the most successful examples of

any country around the world.

While some saw this as a technological and epidemiological success story, what preceded was a longstanding policy and governance design, including plans for an inter-agency committee that could be invoked for any future pandemic.

It was the design and governance of this system – including its legitimacy to make swift decisions – that explains why Singapore was able to deploy technology to limit the spread of the disease when so many other countries, which had access to the same technology, were unable to do so.

This forward-looking expertise is also illustrated in Singapore's sophisticated policy designs for conducting monetary policy which is managed through adjustments in the "nominal effective exchange rate" of a pre-established currency basket rather than by interest rates.

But it was also designed with foresight to withstand currency speculators that otherwise could

have threatened its viability.

Its monetary policy is also reinforced by constitutional provisions that make it virtually impossible to respond to short-term demands for expenditures that would produce harmful long-term structural deficits.

Singapore policy officials demonstrated a strong ability to design policies in ways that anticipated long-term effects – even when, at the time, the evidence that their expectations were accurate would not show up until far too late to inform their policy mix innovations.

What lessons, then, can we learn from Singapore's approach, and my own collaborative work over the last three decades, about how to design policies that foster durable and effective outcomes?

**LESSONS FOR CLIMATE POLICY**

First, advances in finance, technology, and related infrastructure developments are necessary but insufficient

without innovative policy levers. In each of the Singapore cases above, policy designers unleashed smart policy mixes that fostered long-term effectiveness that otherwise could have gone in an unintended direction.

One has to look no further than the failed experiment with US social housing projects, and infrastructure projects in North America and Europe that led to social dislocation and suburban sprawl. Likewise, Covid-19 morbidity rates in the US and Europe were vastly higher than in Singapore.

Low carbon technologies might look good in isolation, but without innovative policy designs, it is just as possible that simultaneous technological innovations might produce accelerated high carbon outcomes – such as the high energy needs associated with Bitcoin mining – which blindsided sustainability policymakers all around the world.

Second, policy design innovations benefit from swift and widespread knowledge diffusion.

Consider how Singapore learnt from the US' failure in public housing by tweaking policy calibrations and settings, including selling HDB flats directly to individuals, rather than providing rental subsidies. Singapore's ratcheting-up

carbon tax policy reflects similar designs in other jurisdictions, including British Columbia's efforts to foster ratcheting-up that lowers carbon emissions alongside efforts to enhance public support.

Likewise, over 160 jurisdictions around the world – including Singapore – have developed a policy mix first developed in Germany, known as a "feed-in tariff", that was designed to successfully accelerate renewable energy uptake.

The question remains: How is knowledge best integrated given its diversity and complexity?

This is highly challenging as it requires bringing together sophisticated technical knowledge, largely produced within and across the Stem (science, technology, engineering and mathematics) disciplines, with work on legitimacy, trust and good governance, which have been the focus of the social sciences in general, and the policy sciences in particular.

After all, Singapore's success on Covid-19 was not only owing to an ability to adapt to new

epidemiology as the disease unfolded, but also because it enjoys high levels of trust from its citizens that their Government has the society's long-term interests in mind.

The problem is that producers of required knowledge on

technical aspects of a particular problem and its solutions, and producers of knowledge relevant for generating trust and legitimacy to operate in the long run, face all kinds of difficulties in sharing knowledge among themselves.

They speak different languages, apply different methods, and do not fully understand the relevance of the other community.

As a result, there is a tendency to engage with "like-minded" knowledge producers, which undermines integration of all relevant forms of knowledge for generating long-term effectiveness and durability.

Third, great care must be placed on how to best nurture anticipatory policy design exercises.

We know that innovative policy mixes can emerge through multi-stakeholder policy learning dialogues that shift attention from short-term, interest-based compromises to designing policies for durability and effectiveness to solve specified problems.

The trick is how to accelerate these processes given the nature of the climate crisis.

It is well known that Singapore is an innovator when it comes to advancing finance, technology, and infrastructure for the betterment of its people and

welfare.

Its innovative successes have been sources of inspiration for years as other countries seek to understand, and emulate, the Singapore miracle.

What is less known is that Singapore is also an innovator in designing policies to be both durable and effective.

If the world is to avoid the "policy creation euphoria, implementation depression" cycle of global climate governance, it cannot repeat business as usual by turning to climate finance, technology, and infrastructure programmes alone.

It must also draw on, and diffuse, lessons from anticipatory policy analysis capable of producing design innovations for the long term.

Benjamin Cashore is Li Ka Shing professor in public management at the National University of Singapore's (NUS) Lee Kuan Yew School of Public Policy (LKYSPP) and director of LKYSPP's Institute for Environment and Sustainability (IES), which emphasises policy design capacity building through research, training and dialogues. Before coming to NUS, he was a tenured professor at Yale's School of the Environment, where he researched governance innovations and co-created the term "super wicked" problems to characterise the climate and biodiversity crises.