

ARE COUNTRIES IN THE ASIA-PACIFIC REGION INITIATING A "GREEN RECOVERY"? WHAT MORE CAN BE DONE?

POLICY BRIEF



KEY MESSAGES

THE DIRECT AND INDIRECT IMPACTS OF THE “COVID-19 SHOCK” ON THE ASIA-PACIFIC REGION HAVE UNFOLDED RAPIDLY, VARIED WIDELY BY COUNTRY AND CONTINUE TO AFFECT ECONOMIES. IN SOME COUNTRIES RISES IN POVERTY ARE EXPECTED, WHILE IN OTHERS AN INITIAL FALL IN CARBON EMISSIONS HAS BEEN OBSERVED.

ASIA-PACIFIC COUNTRIES’ FISCAL RESPONSES HAVE BEEN CONSTRAINED BY THEIR GDP, BUT EVEN IN POORER COUNTRIES ASIA-PACIFIC GOVERNMENTS HAVE TAKEN STRONG AND INNOVATIVE COVID-19 RESPONSE MEASURES TO SUPPORT THEIR POOREST, ESPECIALLY IN JOB CREATION.

OVERALL, 111 MEASURES HAVE BEEN INTRODUCED BY ASIA PACIFIC COUNTRIES THAT ARE IN LINE WITH A GREEN RECOVERY.

THE POLICY BRIEF PROVIDES SIX INSPIRATIONAL “SWEET SPOT” CASE STUDIES FROM COUNTRIES AT ALL INCOME LEVELS FROM THE REGION DOING SO.

HOWEVER, 56% OF THESE MEASURES ARE ENTIRELY UNPLANNED, AND THERE ARE A FURTHER 93 MEASURES COUNTRIES IN THE REGION HAVE COMMITTED TO TAKE UNDER THE PARIS AGREEMENT THAT COULD BE IN LINE WITH A GREEN RECOVERY THAT ARE NOT (YET) BEING IMPLEMENTED.

THERE ARE ALSO TO DATE FEW “ROLE MODEL” EXAMPLES OF ASIAN AND PACIFIC COUNTRIES IMPLEMENTING AN ECONOMY-WIDE “BUILD-FORWARD” POLICY, AND THERE ARE MAJOR GAPS IN THE ENERGY, TRANSPORT AND TOURISM AND LAND-USE SECTORS.

YET FINANCIAL RESOURCES ARE LIMITED. ONLY ONE COUNTRY IN THE REGION - SINGAPORE - ESTIMATES ITS CLIMATE CHANGE COSTS AS SIMILAR TO ITS COVID19 RESPONSE COST TO DATE.

THERE IS THEREFORE AN URGENT, SIGNIFICANT NEED TO ALIGN ASIA-PACIFIC COUNTRIES’ COVID-19 RESPONSES NOW TO STIMULATE BOTH POVERTY REDUCTION AND SUSTAINABLE DEVELOPMENT, ESPECIALLY TO AVOID “SPENDING TWICE” ON THE COVID19 AND CLIMATE CHANGE “GREY RHINO’S”.

TABLE OF CONTENTS

01	INTRODUCTION
02	COVID19'S IMPACT ON ASIAN AND PACIFIC ECONOMIES
05	ASIAN AND PACIFIC COUNTRIES' DIRECT RESPONSES TO COVID19
06	ASIAN AND PACIFIC COUNTRIES' ECONOMIC AND SOCIAL RESPONSES TO COVID19
09	HOW ARE ASIAN AND PACIFIC COUNTRIES RESPONDING TO CLIMATE CHANGE?
13	HOW DOES COVID19 FINANCING COMPARE TO NDC FINANCING FOR ASIAN AND PACIFIC COUNTRIES?
15	HAVE COVID19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?
16	ENERGY SECTOR
21	SURFACE TRANSPORT SECTOR
24	AIR TRAVEL AND TOURISM SECTOR
28	LAND USE SECTOR (INCLUDING FORESTRY AND AGRICULTURE)
31	WATER AND WASTE SECTOR
35	DISASTER RISK MANAGEMENT
38	CONCLUDING ANALYSIS - IS THE REGION DOING ENOUGH?
42	RECOMMENDATIONS - A GREEN NEW DEAL FOR ALL?
I	REFERENCES
VII	ACKNOWLEDGEMENTS/DISCLAIMER

INTRODUCTION

The COVID-19 and climate change "sweet spot", and why it matters

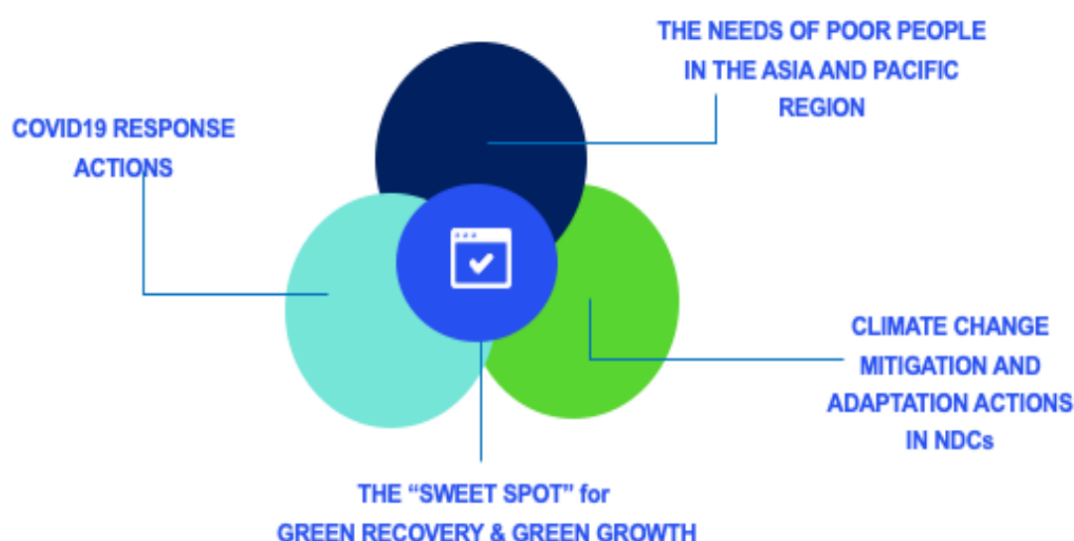
On 31st December 2019, the World Health Organisation observed a media statement by the Wuhan Municipal Health Commission on cases of 'viral pneumonia' in Wuhan, People's Republic of China.¹ This virus, known as COVID-19 has now spread to almost all countries in the world bar 9 countries, 8 of whom are in the Asian and Pacific region,* so far directly affecting over 44 million people and leading to the death of over 1.1 million people, with no signs of retreat as yet.

As cases have been detected, the majority of the governments across the Asia and Pacific region have responded – both in terms of increasing health expenditure and shutting down parts of the economy in order to slow the spread, as well as providing new socio-economic measures to protect businesses and citizens from “direct” impacts of social distancing or lockdowns and “indirect” impacts of economic closure outside of the region.

This brief, intended for the Asia-Pacific policymakers as well as development practitioners seeking to support Asia-Pacific countries, provides an overview of these effects and responses, analysis of whether and how these measures overlap with climate change mitigation and adaptation plans of Asia-Pacific countries, and recommendations to stimulate further poverty reduction and sustainable development across the region through the COVID-19 response.

In particular, this brief seeks to provide insights on the achievement so far as well as the potential for further achievement of a “sweet spot” for green recovery – where COVID-19 responses, climate change action and poverty reduction can converge – in the Asia-Pacific region.

Figure 1: The “sweet spot” for tackling COVID-19, the SDGs and Climate Change



* These figures are correct as of 20th of November 2020

COVID-19'S IMPACT ON ASIAN AND PACIFIC COUNTRIES

Distinguishing direct and indirect effects

A survey of over 28,000 adults in 14 countries conducted online by Ipsos Mori in April 2020² suggested strong public support for doing so in some of the most populated, high emitting and wealthy countries in the Asia-Pacific region, as shown in Table 1.

ECONOMIC AND POVERTY EFFECTS OF COVID-19 ON ASIAN AND PACIFIC COUNTRIES

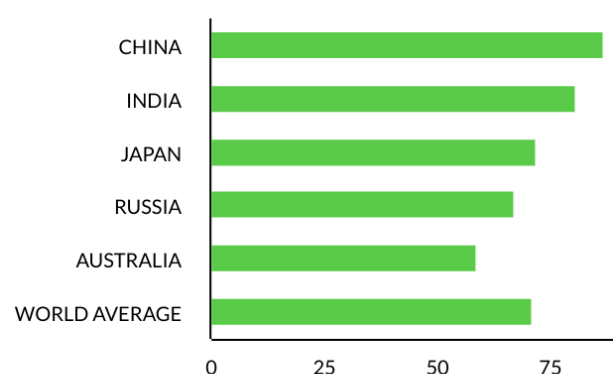
Prior to the COVID-19 outbreak, economic growth in the Asia-Pacific region in 2019 had been positive but relatively weak at 3.3 per cent, a slowdown from 4.0 per cent in 2018. Within the region, countries had hugely varying growth rates. For instance, Bangladesh, Armenia, Tajikistan, Nepal, Cambodia and Vietnam all grew by 7% or more, while Iran, Nauru, Palau saw economic contractions, and Japan, Singapore and Turkey saw growth of less than 1%.³

Then came COVID-19.

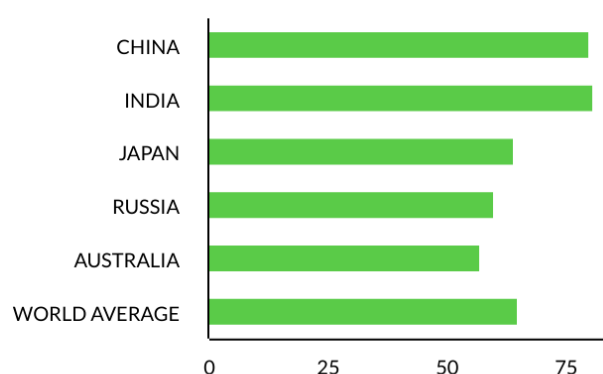
From an analytical point of view, the effects of COVID-19 on economies worldwide to date can be divided into two types – indirect and direct. The distinction between the two is effects that governments could control and determine domestically (direct) – such as their own health expenses and their own shutdowns – and effects that were determined by the international community's response to COVID-19 and would have taken place even if the countries themselves had “done nothing” (indirect). This is illustrated in Figure 2.

Table 1: Public Support for the climate change and COVID19 sweet spot in Asian and Pacific countries

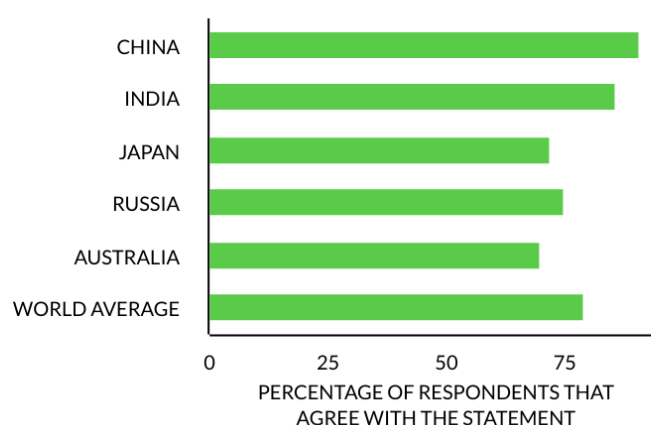
Q1. IN THE LONG TERM, CLIMATE CHANGE IS AS SERIOUS A CRISIS AS COVID19



Q2. IN THE ECONOMIC RECOVERY AFTER COVID-19, IT'S IMPORTANT THAT GOVERNMENT ACTIONS PRIORITIZE CLIMATE CHANGE



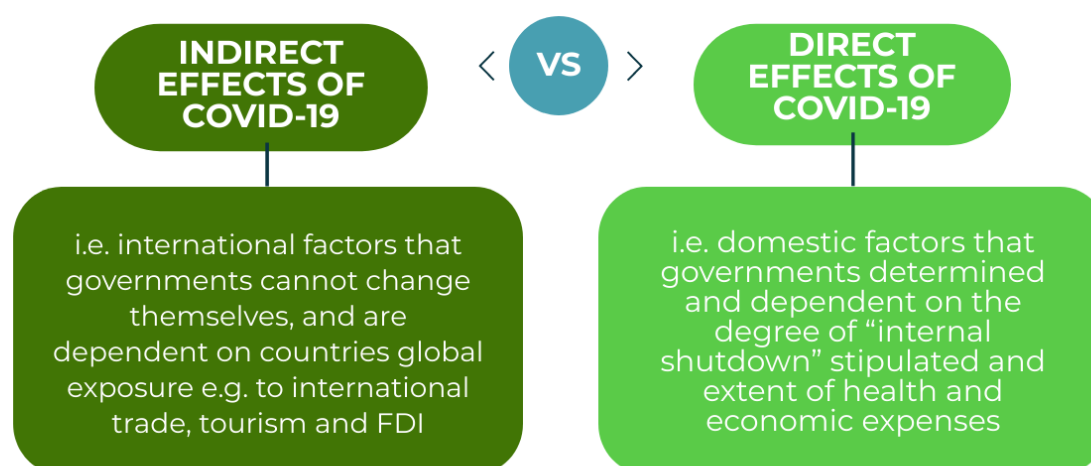
Q3. I WILL SEEK OUT PRODUCTS THAT ARE HEALTHIER AND BETTER FOR THE ENVIRONMENT



COVID19'S IMPACT ON ASIA AND PACIFIC COUNTRIES

Distinguishing direct and indirect effects

Figure 2: The Difference between direct and indirect effects of COVID-19



A number of organisations – including the UN - have been tracking and forecasting the overall economic impact of these effects, as shown in Table 2 below, with any rebounds in 2021 highly dependent on both global and internal COVID-19 management and vaccine development.

Table 2: Summary of Estimated Impacts Of COVID-19 on Asian and Pacific economies

ASIAN DEVELOPMENT BANK, APRIL 2020 ⁴	UNDESA, MAY 2020 ⁵	OECD, JULY 2020 ⁶
<ul style="list-style-type: none"> Expecting growth of 2.0% for Asian countries in 2020 - lower compared with the forecast of 5.5% in September 2019. Expects the region to rebound to 6.2% in 2021 if pandemic is resolved within 2020. East Asia is expected to bounce back when COVID-19 is under control. The Pacific faces immense hit by the pandemic with falls in tourism and commodity exports. Steepest decline is expected in Fiji with a contraction of GDP by 4.9%; The Cook Islands, Pau, Samoa, and Vanuatu are also expected to shrink this year. 	<ul style="list-style-type: none"> Forecasts growth of developing countries in East and South Asia of -0.8% in 2020 (a 4.4% reduction compared to the prior forecast), and 6.4% in 2021. Consumer spending and investment activity are largely influenced by ongoing restrictions and quarantine measures. With COVID-19 and existing trade tensions between China and the U.S., exports in East Asian economies are likely to contract substantially. Tourism-dependent economies in East Asia and the Pacific region such as Cambodia and Thailand are expected to be hampered the most by international travel restrictions. 	<ul style="list-style-type: none"> Economic growth of Emerging Asian countries to decline by 2.9% in 2020, which is expected to climb up to 6.8% in 2021; Southeast Asian countries are expected to contract by 2.8% in 2020, while growth is anticipated in 2021. Unemployment in the hospitality industry to be highly affected. Slow recovery in aviation sector is also anticipated. In Asian countries, especially in East Asian countries with poor-established unemployment protections, informal labor is likely to suffer the most.

COVID19'S IMPACT ON ASIAN AND PACIFIC COUNTRIES

Distinguishing direct and indirect effects

Overall, the economic scenarios are dire.

Forecasts based on metrics aside from economic growth are equally dismal. For example, according to the World Bank, and based on \$1.90 poverty lines, COVID-19 is likely to impoverish around 71-100 million people globally, with a total 42-46% of this “new” extreme poverty being located in South Asia, and 8.5-10% in the East Asian and Pacific region.⁷ This will offset (to some degree, and also dependent on government support) the numbers of people that had been forecast to lift themselves out of poverty in 2020, prior to COVID-19. Job losses are also being seen. The ILO has estimated that shutdown will lead working hours in formal jobs in Asia and the Pacific to decline by 7.2% in 2020 - equivalent to 125 million full-time workers within a 48-hour working week.⁸ UNICEF suggests that school closures have affected the learning of around 325 million children in East Asia and the Pacific⁹ and 430 million children in South Asia.¹⁰ Studies have shown that global carbon dioxide emission fell by 17% by early April 2020.¹¹ IEA estimates that global CO2 emissions will overall decline by 8% over 2020, their lowest level since 2010.¹²

In terms of specific regions, CO2 emissions have declined the most in countries that were hit by COVID-19 earlier.¹³

In East Asia and the Pacific, an 8% drop of carbon emission was already estimated for China alone.



These are just the immediate effects, but some effects may be longer-term. For example, impacts on educational outcomes may be seen 10-15 years in future, especially if there are drop-outs.

However, none of these scenarios and forecasts take into account Asian and Pacific countries' actual responses to counter the direct and indirect COVID-19 effects, to which this brief now turns.

ASIAN AND PACIFIC COUNTRIES' DIRECT RESPONSES TO COVID-19

The regions' track record in halting the spread of COVID19

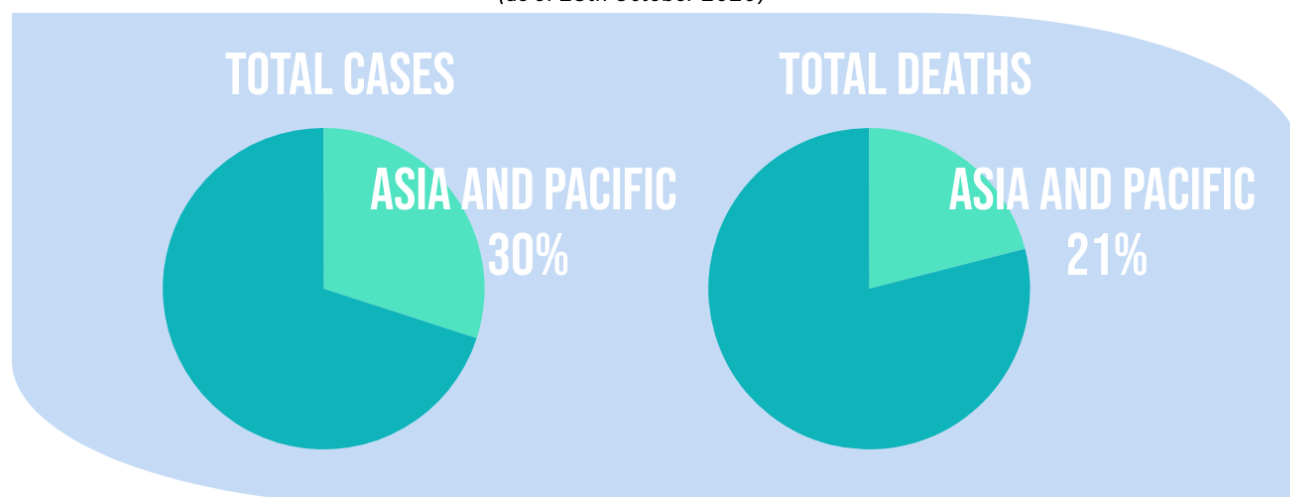
Of the 9 countries worldwide that have still not recorded any cases of COVID-19, 8 are in the Asia and Pacific region.

There is no doubt that the majority of Asian and Pacific countries have acted decisively to avoid overwhelmed health systems and huge numbers of deaths due to COVID-19. For instance, 28 out of the 49 Asia-Pacific countries closed down their international borders and mandated some degree of social distancing before they had recorded one death. Of these, half had not recorded any cases.

Of the 9 countries worldwide that have still not recorded any cases of COVID-19, 8 are in the Asia and Pacific region.

Thus, overall to date, the Asia-Pacific region – 49 countries representing 25 percent of the world's countries and regions and 60 percent of the world's population – has made up 30 percent of worldwide cases, and 21 percent of worldwide deaths, as shown in Figure 3.

Figure 3: Incidence of and Deaths from COVID-19 in Asia and the Pacific region relative to the rest of the world (as of 25th October 2020) ¹⁴



However, some Asian and Pacific countries are now facing second and third waves of COVID-19 cases, so this remains a dynamic situation.

Furthermore, such decisive action has required economic and social response measures to compensate for the direct and indirect effects of COVID-19 - to which we now turn.

ASIAN AND PACIFIC COUNTRIES' ECONOMIC AND SOCIAL RESPONSES TO COVID-19

Economic and social responses and spending

As well as movement restrictions, most Asia-Pacific countries have introduced various types of compensation and support policies for citizens as well as businesses in their economies, to respond to both the indirect and direct effects of COVID-19. Only 3 countries have not yet instituted any such measures - DPRK, Kiribati and Tuvalu.

By the end of October 2020 Asian and Pacific countries have introduced a total of 329 policies and measures to support people and workers - including the poorest/most vulnerable - in their countries. According to UN Women and UNDP, 36 specific measures have been introduced by 19 countries in the region to target women's economic security.¹⁵

***In total, Asian and Pacific
329 new measures to help
citizens and
businesses manage the
impact of COVID-19***

***Only 3 out of the 49 Asian
and Pacific countries have
not yet introduced specific
economic and social
measures to respond to
COVID-19.***

Overall, the policies and measures fall into three categories, as shown in **Figure 4**. The majority are classified as “social safety nets”, with [5] Asian and Pacific countries (Armenia, Australia, Japan, South Korea and Timor-Leste) having introduced a “universal” cash transfer scheme (i.e. a uniform or differentiated cash-or mobile-transfer-based-handout for all citizens).

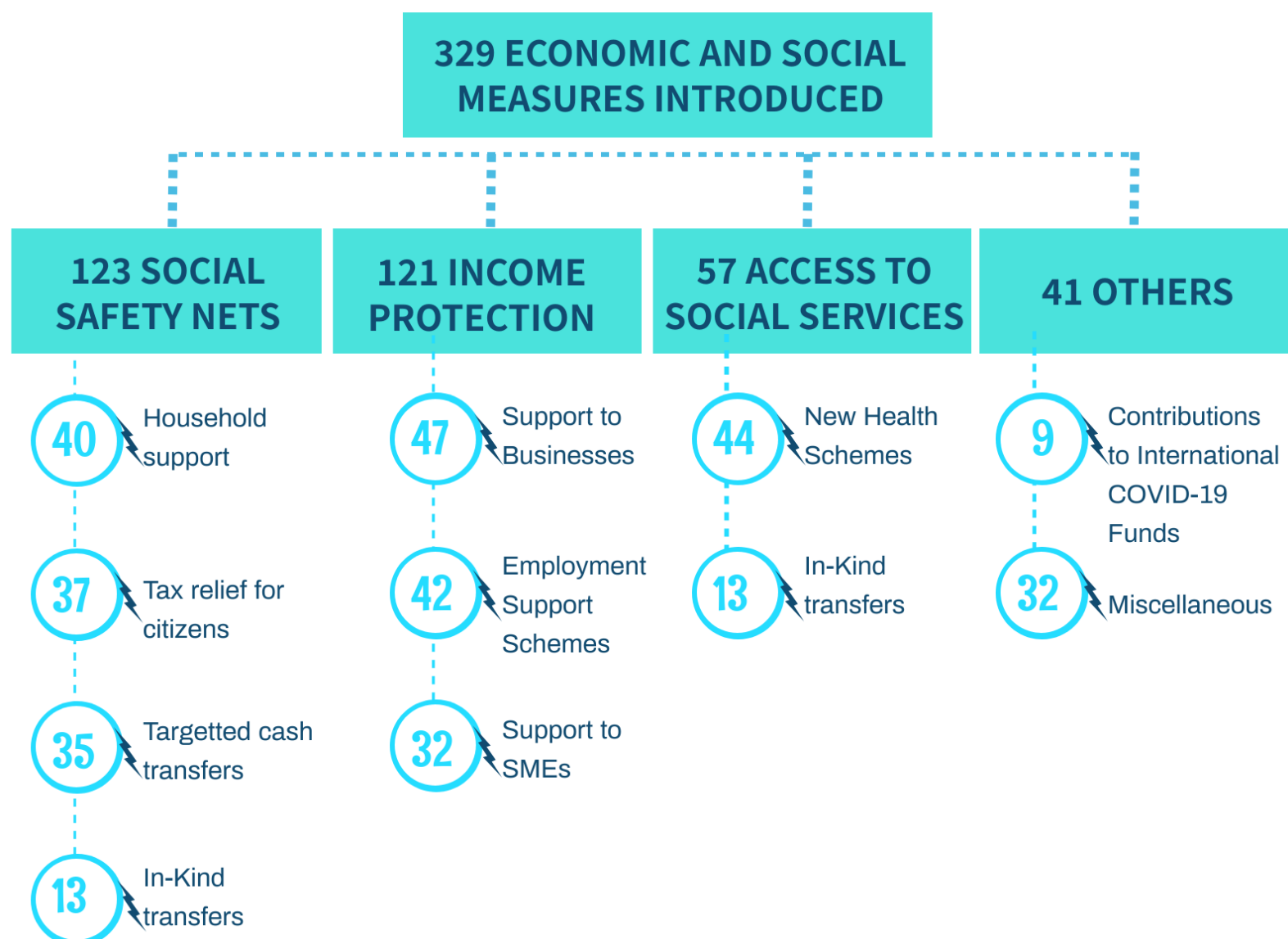
¹⁶
In contrast to other regions (e.g. Africa) Asian and Pacific countries appear to have prioritised protecting worker incomes, but provided fewer measures to improve access to services.

ASIAN AND PACIFIC COUNTRIES' ECONOMIC AND SOCIAL RESPONSES TO COVID-19

Economic and social responses and spending

Figure 4: Measures by Asian and Pacific countries to help people and workers manage COVID-19 economic impacts

17



Overall, the policies and measures fall into three categories, as shown in **Figure 4**. The majority are classified as “social safety nets”, with [5] Asian and Pacific countries (Armenia, Australia, Japan, South Korea and Timor-Leste) having introduced a “universal” cash transfer scheme (i.e. a uniform or differentiated cash-or mobile-transfer-based-handout for all citizens).

In contrast to other regions (e.g. Africa) Asian and Pacific countries appear to have prioritised protecting worker incomes, but provided fewer measures to improve access to services.

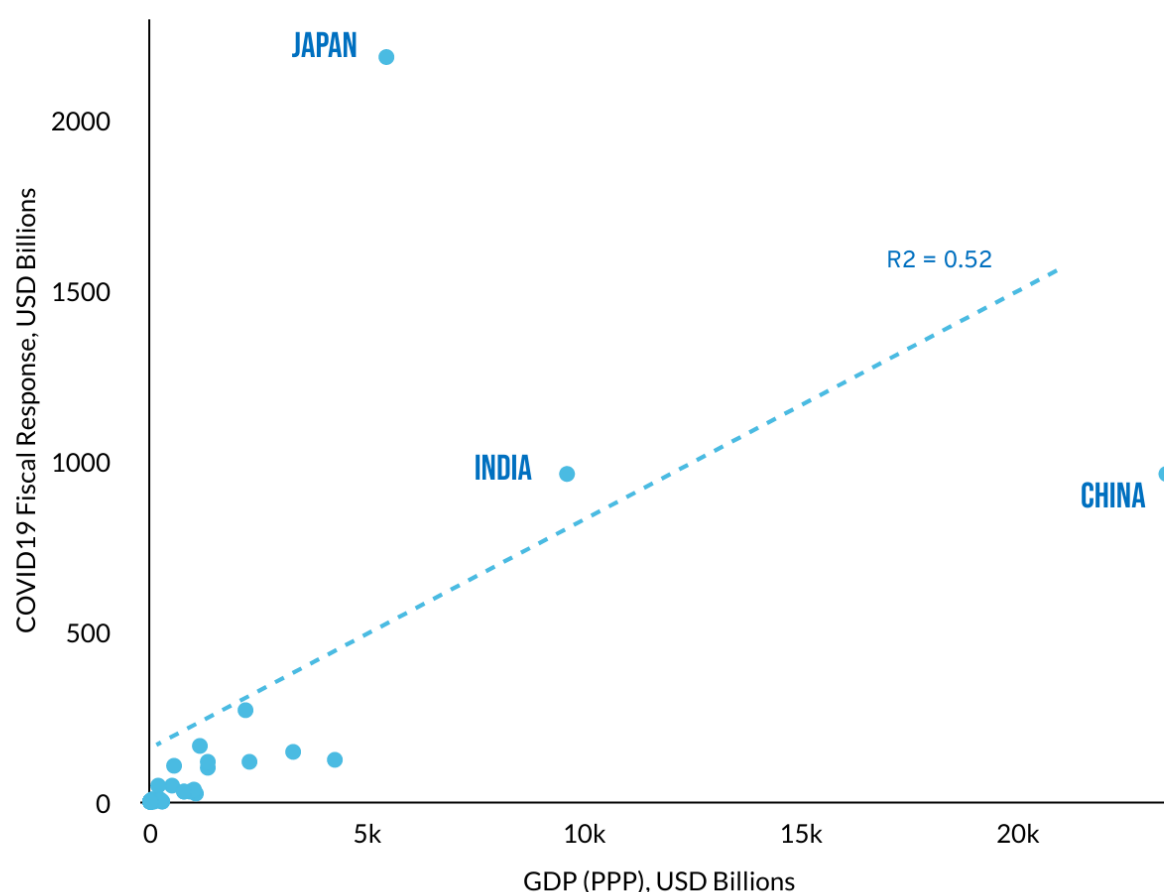
ASIAN AND PACIFIC COUNTRIES' ECONOMIC AND SOCIAL RESPONSES TO COVID-19

Economic and social responses and spending

These actions are imposing significant costs on Asian-Pacific economies. Estimates for this briefing suggest that overall, the COVID-19 response by Asia-Pacific countries will cost an average of 7% of GDP of each country. However, almost 40% of the total spend in the region will be by Japan, and 17% by China and India each – meaning the rest of the 46 Asian and Pacific countries account for just 25% of the total spend.

Overall, **Figure 5** shows that the higher-income countries in the Asia and Pacific region tend to have a higher fiscal response.

Figure 5: COVID19 fiscal responses compared to GDP in the ESCAP region¹⁸



At the same time, it is crucial that the Asian-Pacific governments continue to implement and expand economic and social response measures, especially if movement restriction measures continue, in advance of a COVID-19 vaccine.

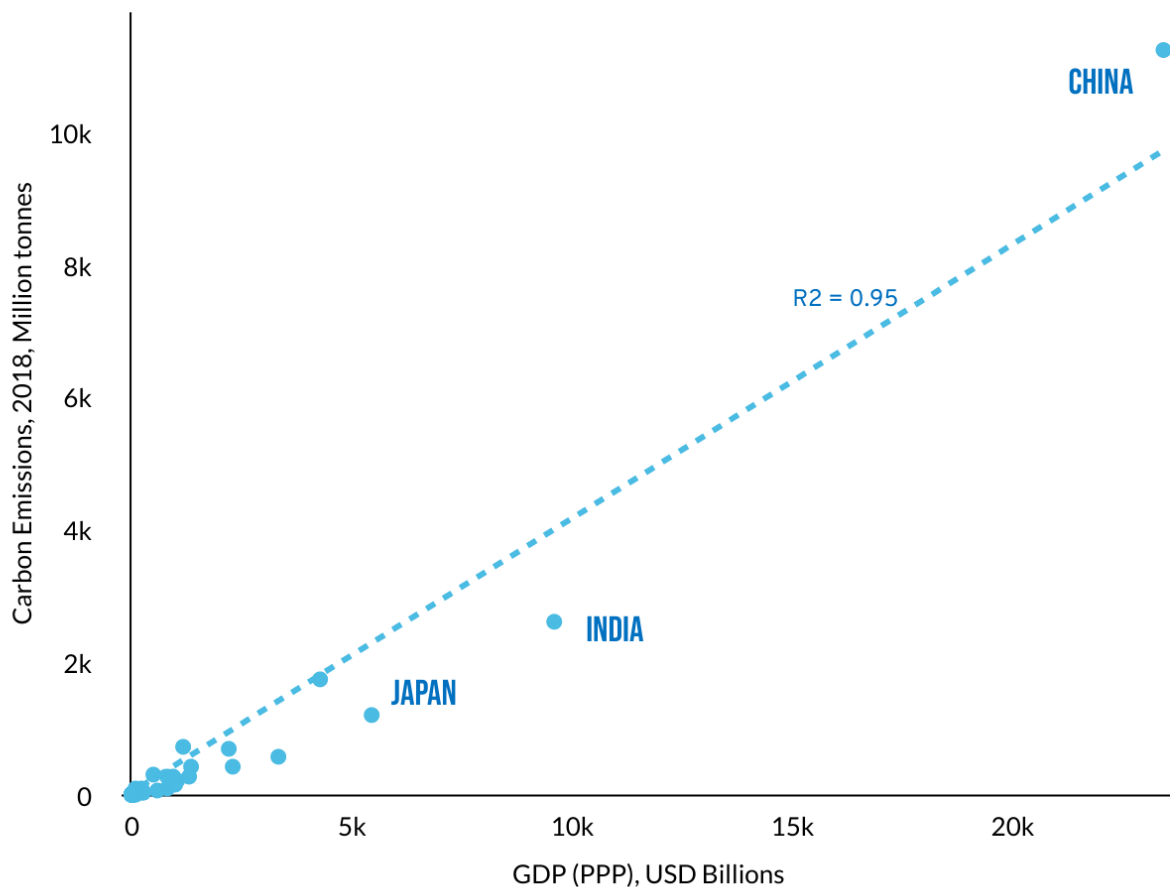
But how do these COVID-19 responses and actions align with climate change responses? Are they complementary, pointing in opposite directions or just not overlapping at all?

HOW ARE ASIAN AND PACIFIC COUNTRIES RESPONDING TO CLIMATE CHANGE?

What are the basics on climate action in Asian and Pacific Countries?

Before exploring this question, it is important to recognise that for Asian and Pacific countries as a whole, GDP and carbon emissions are highly correlated. This is not the case for all regions of the world – e.g. Africa. This correlation is shown in **Figure 6**.

Figure 6: Carbon emissions compared to income in the Asia and Pacific region¹⁹



Furthermore, the vast majority of Asian and Pacific countries - especially from the upper two thirds section when ranked by size of their economy - , derive most of their emissions from the energy sector, as shown in **Figure 7**. The nine countries with Land Use Change and Forestry (LULUCF) as their top sector have far smaller economies for the most part - and thus contribute far less to the region in carbon emissions terms.

HOW ARE ASIAN AND PACIFIC COUNTRIES RESPONDING TO CLIMATE CHANGE?

What are the basics on climate action in Asian and Pacific Countries?

Figure 7: Top sources of carbon emissions for Asian and Pacific economies



HOW ARE ASIAN AND PACIFIC COUNTRIES RESPONDING TO CLIMATE CHANGE?

What are the basics on climate action in Asian and Pacific Countries?

This correlation between economic size, primary emitting sector and carbon emissions explains why, as Asian and Pacific economies have “shutdown” – e.g. reducing manufacturing, energy use, transport, etc – positive effects have been seen in terms of carbon emissions reductions.

However, the more that Asian and Pacific countries resume “normal” activities, the more that emissions could go back to previous levels.

But is this resumption to “normal” necessary, or is an alternative, carbon-friendly route possible?

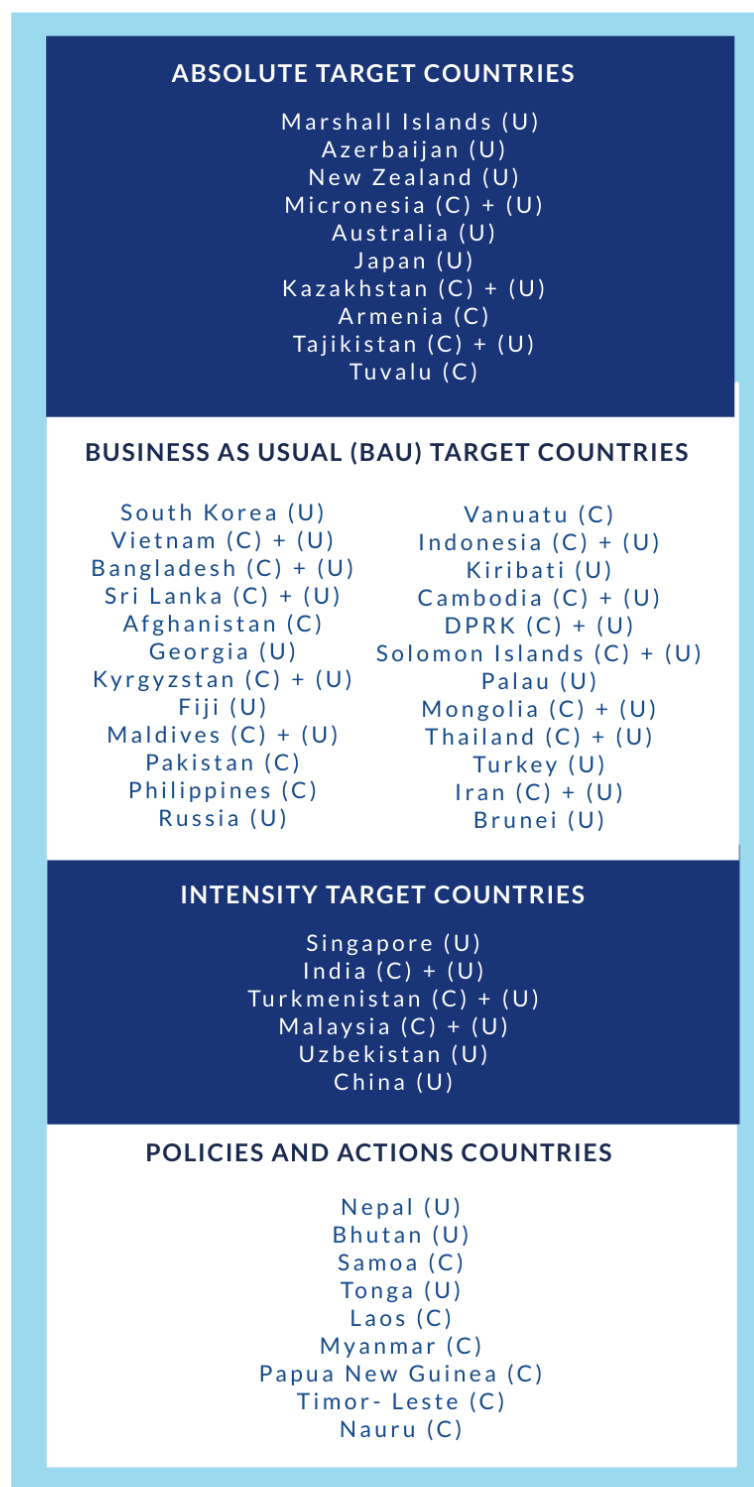
To explore this we need to understand the ambition of Asian and Pacific countries in terms of climate change action – in particular by analysing their “Nationally Determined Contributions” (NDCs) which were agreed as a result of the Paris Agreement in 2015.

To date, all countries from the region have submitted Intended NDCs (INDCs), most of which have evolved into NDCs. However, Turkey and Iran have not yet ratified the Paris Agreement. By October 2020, 7 Asian and Pacific countries had also submitted revised 2020 NDCs.

Within these NDCs (or INDCs where applicable) most have different types of targets, which can be classified into four different categories, as shown in Figure 8.

7 out of the 49 Asian and Pacific countries submitted revised Nationally Determined Contributions (NDCs) in 2020.

Figure 8: Asian and Pacific's countries' NDC mitigation categories



* (C) = Conditional Targets
(U) = Unconditional Targets

HOW ARE ASIAN AND PACIFIC COUNTRIES RESPONDING TO CLIMATE CHANGE?

What are the basics on climate action in Asian and Pacific Countries?

Figure 8 implies that ambition in the Asian and Pacific region is not correlated with income or type of economy. While it is not accurate to assume that non-absolute targets mean lower ambition, absolute targets are more challenging to meet, as they do not allow for any flexibility in growth patterns.

Indeed, there are some relatively small, low-income economies that have chosen to use absolute emissions targets - expected to be the most binding domestically and internationally.

On the other hand, of the largest COVID-19 Asia-Pacific “spenders” analysed in the previous section – only one has an absolute emissions target - Japan.²¹ India and China both have intensity targets, alongside a number of specific policies and measures in place to achieve and go beyond the target.

But to what degree are these various targets influencing COVID-19 action? Have governments taken the opportunity of COVID-19 spending to also spend on climate change action, where it makes sense to? To find out, first, we compare climate spending and COVID-19 spending, and then explore potential and actual actions to date at a sectoral level.



HOW DOES COVID-19 FINANCING COMPARE TO NDC FINANCING FOR ASIAN AND PACIFIC COUNTRIES?

Is there evidence of a sweet spot in reality?

For most Asian and Pacific countries, COVID-19 spending cannot cover the expected costs of adaptation or mitigation actions.

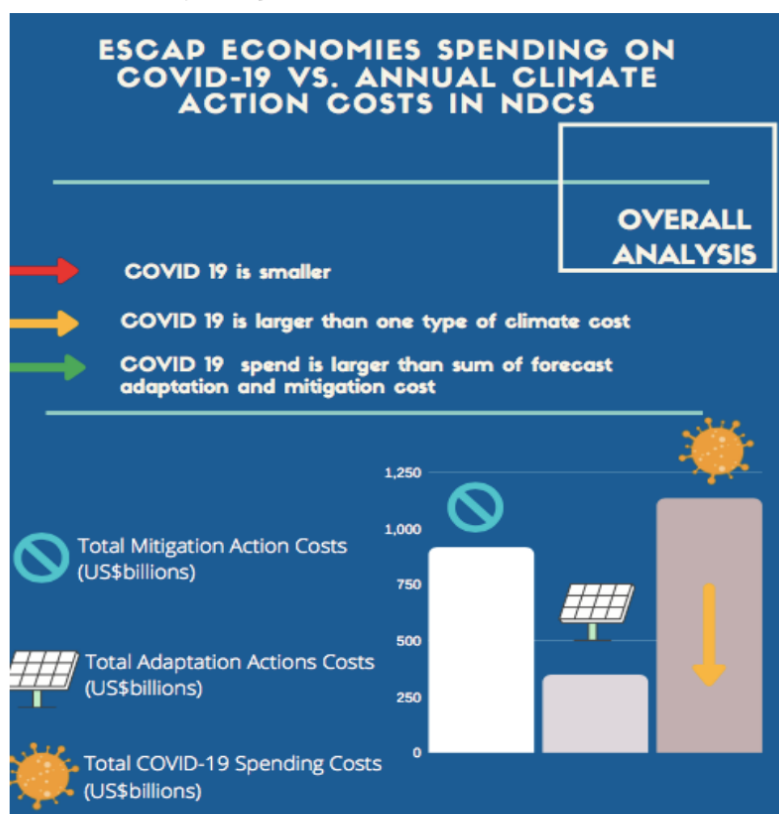
It is revealing to compare the amounts of spending that Asian and Pacific countries have budgeted for COVID-19 with the costs estimated in (I)NDCs for addressing climate change costs (both mitigation and adaptation). The entire region is expected to spend a total of **US \$5521bn** to address COVID-19.

However, only 15 Asia-Pacific countries have provided financing estimates for mitigation and/or adaptation actions in their NDCs. For these countries, as shown in **Figures 9 and 10**, total climate action costs sum to \$1261bn – fairly comparable to the COVID-19 costs of \$1133bn for 13 of these countries.

This implies that the financial ambition Asian and Pacific countries need to generate for COVID-19 action could be similar to the financial ambition for climate action.

However, while the total figure is comparable, **Figures 9 and 10** also shows that for only one of the Asia-Pacific countries – Singapore – is COVID-19 spend larger than the forecasts costs of total climate change action. For six of the other 13 Asia-Pacific countries, COVID-19 spending cannot cover either adaptation OR mitigation costs.

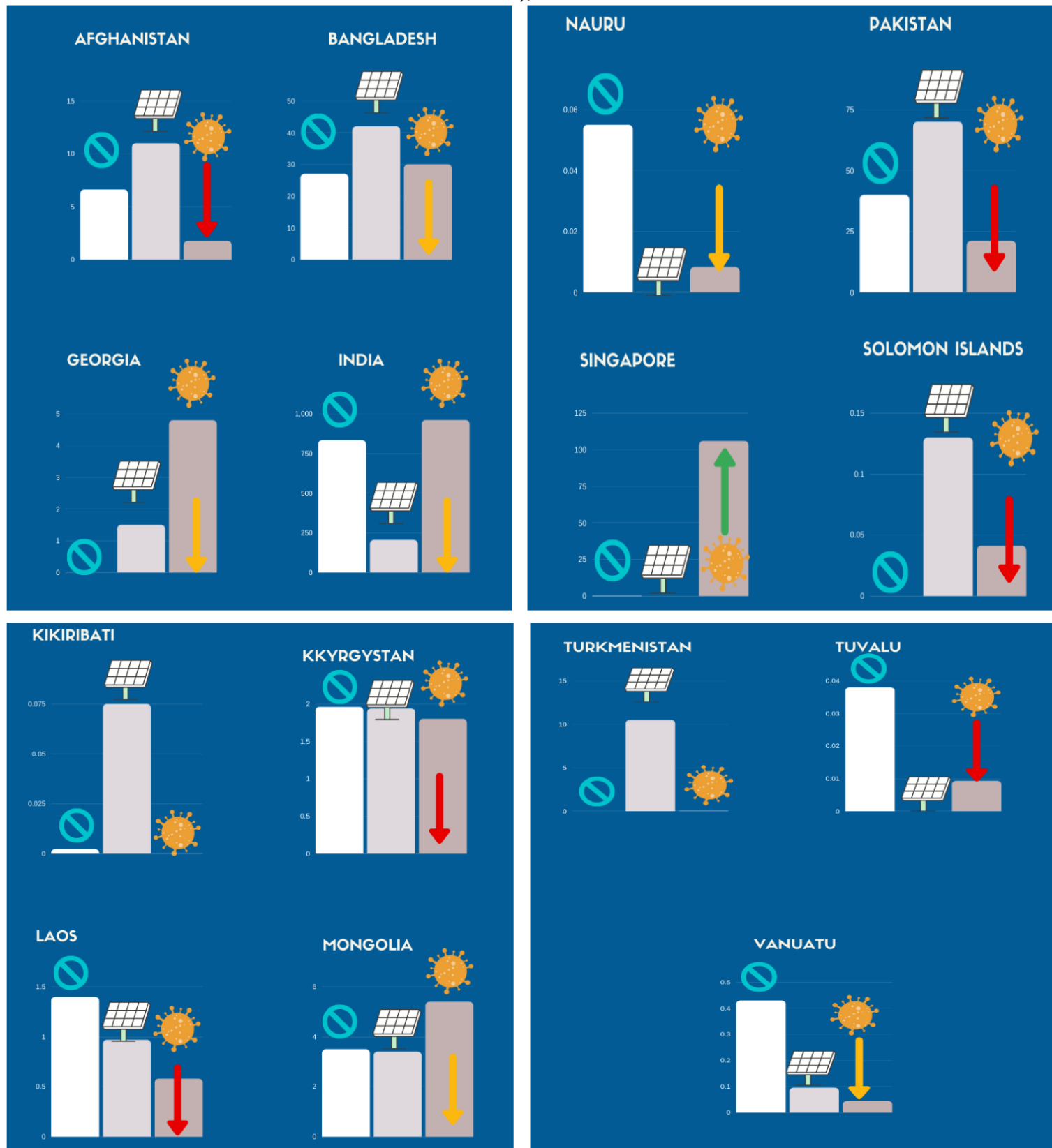
Figure 9: Asian and Pacific economies spending on COVID-19 vs annual climate action costs in NDCs (aggregate)



HOW DOES COVID-19 FINANCING COMPARE TO NDC FINANCING FOR ASIAN AND PACIFIC COUNTRIES?

Is there evidence of a sweet spot in reality?

Figure 10: Asian and Pacific economies spending on COVID-19 vs annual climate action costs in NDCs (country by country)



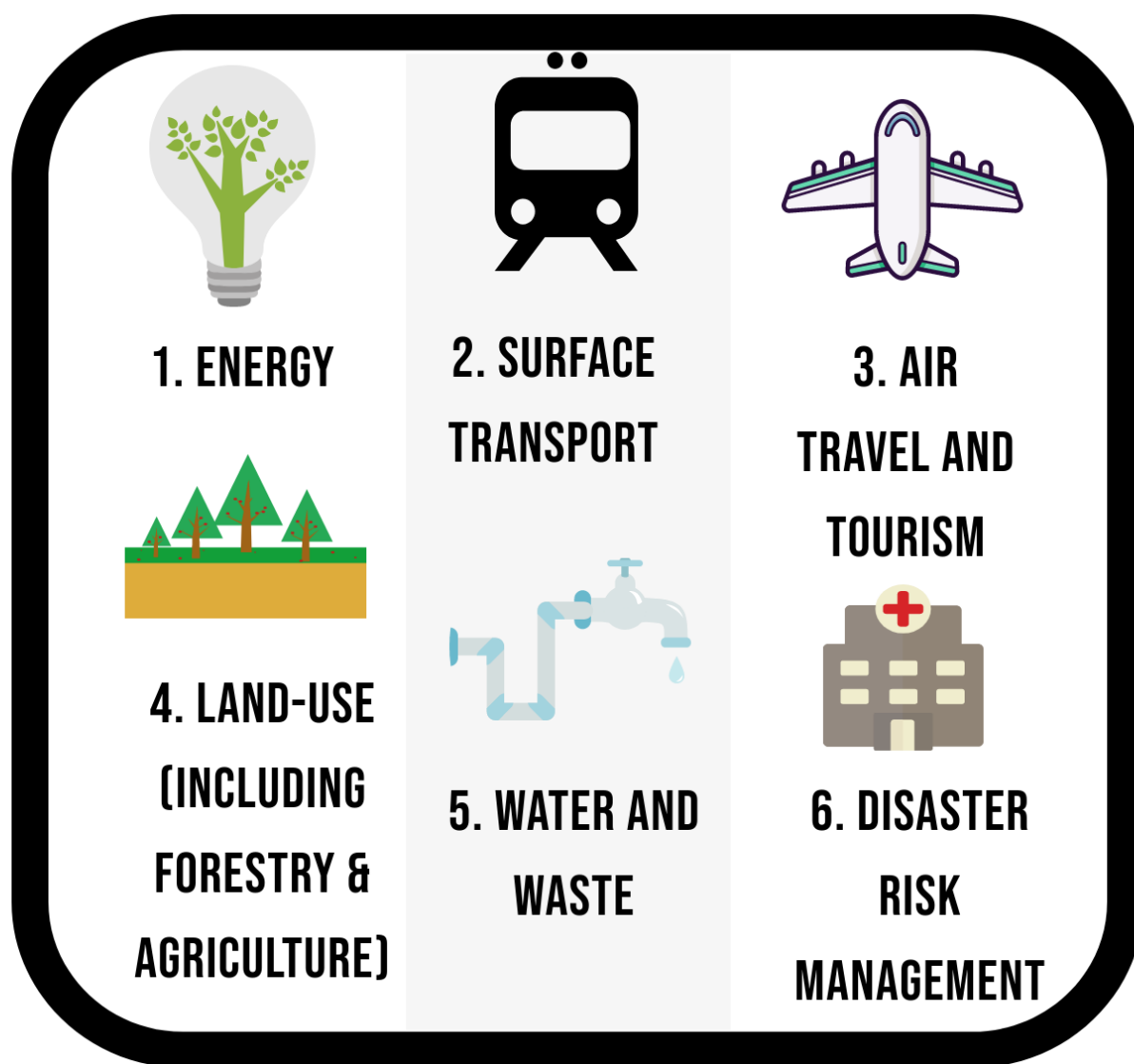
HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?

If there is a significant mismatch between finance available for COVID-19 and anticipated required finance to address climate change action, the next question must be whether there is any overlap in policy terms between COVID-19 actions and climate change action, and if so, what and why?

In the following sections, we review a few key sectors typically included in NDCs, both in relation to mitigation or adaptation: energy, transport, tourism, land-use (including forestry and agriculture), water and waste, and disaster risk management. In each section, an innovative case study from UNESCAP is provided that is worth examining and learning from. The case studies are drawn from some of the poorest countries in the world, as well as from others with more resources and higher emissions.

Figure 11: Sectors typically covered in NDCs



HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?



1. THE ENERGY SECTOR

The rationale for linking COVID-19 and energy responses

There are several reasons to expect commitments to action on energy that are already included in NDCs – for instance commitments to “clean”, “green” or renewable energy, fossil-fuel sector reform or energy efficiency – to be included in the COVID-19 response.

First, fossil-fuel reform is a key practical policy area for overlap between COVID-19 policy and climate change action, especially since fossil fuel subsidies take up a great deal of budgetary space. UNESCAP has estimated that in 2018, fossil fuel subsidies in the region amounted to US \$240 billion, while investment²² in renewable energy amounted to \$150 billion. That said, due to a combination of production target disagreements as well as the pandemic itself which drastically cut energy demand – especially from sectors such as transport (including aviation) and manufacturing – oil and other energy prices are currently at historic lows. This means savings from fossil fuel subsidies are lower than they would be. But as COVID-19 recovery occurs the projected savings will rise.

Second, renewable energy for power generation has gradually become cheaper than fossil-fuel alternatives. This means governments can make budgetary savings by investing in renewables instead of fossil fuels, not even taking into account the longer-term issue of avoiding ‘stranded assets’ of fossil-fuels. As with subsidies, these savings can be devoted to other key needs.

Third, renewable energy can be deployed to help improve health systems in rural areas and for low-income communities in particular, where grid extension is largely impossible.

Fourth, renewable energy and energy efficiency can improve resilience. High dependency on unstable imported energy – whether coal or gas – can be a serious national energy security weakness.

Fifth, energy efficiency can help cut costs for industry, businesses and citizens, raising their ability to deal with, for instance, job losses due to COVID-19 restrictions, or the costs of working from home.

Reducing fossil-fuel spending, and directing such spending towards clean energy or energy efficient upgrades is a clear regional ambition. 18 of the 49 Asian and Pacific countries have specific renewable energy targets in their NDCs, and most others have commitments to increase investment in renewable energy, without specific targets.²³ Fossil fuel subsidy reform is mentioned by 3 countries – Afghanistan, South Korea and Singapore as part of their mitigation packages.

HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?

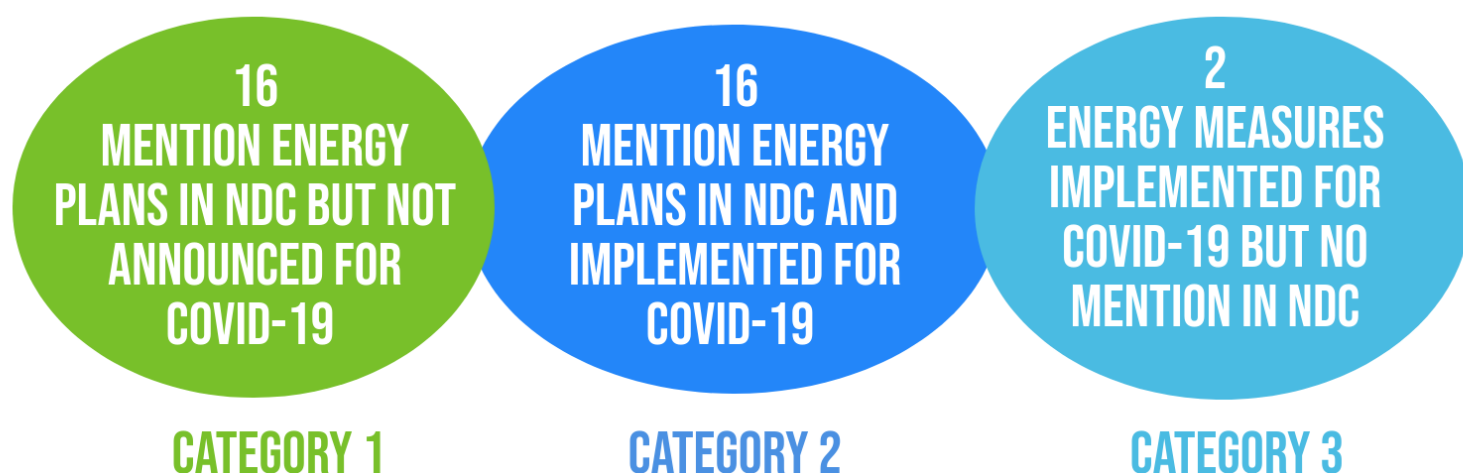


1. THE ENERGY SECTOR

The linkages to date

Despite these rationales, as shown in **Figure 12**, a deep dive into actions on energy (in particular renewable energy and energy efficiency policies) indicates that Asian and Pacific NDC policies are not necessarily driving the COVID-19 response. 13 of the 18 countries with targets have not yet introduced renewable energy related policies as part of their COVID-19 response. However, 5 countries within the Asia-Pacific did not mention specific renewable energy targets or policies in their NDCs but have brought in such policies as part of their stimulus packages in any case. But most alarmingly, 21 Asian and Pacific countries have not proposed specific renewable policies in NDCs or stimulus packages. There is therefore clearly more work to do to uplift and link the NDC and COVID-19 policy responses in this sector.

Figure 12: How far are Asia-Pacific NDC energy commitments shaping COVID-19 stimulus packages?



HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?

Figure 12: How far are Asian and Pacific NDC energy commitments shaping COVID-19 stimulus packages?

CATEGORY 1

AFGHANISTAN

EE policies (ANREP, NVNRMPP, ERD)

BANGLADESH

Target of 10% RE by 2020. EE policies include labelling, building measures, 15% increase in vehicle efficiency.

BHUTAN

EE policies in manufacturing, buildings and society

BRUNEI

7 EE policies.

CAMBODIA

Aim of 155 CO₂e reduction from EE policies.

FIJI

Target of 100% RE by 2030.

KHAZAKISTAN

Law on 'energy saving and energy efficiency'

KIRIBATI

Kiribati National Energy Policy'

LAOS

Target of 30% RE by 2025

MARSHALL ISLANDS

Reduce losses from electricity from 30% to 20% by 2050

NAURU

Energy Road Map 2014-2020'

NEPAL

Target of 20% RE by 2020'

PAPUA NEW GUINEA

Target of 100% RE by 2030

SAMOA

Target of 100% RE by 2030, draft EE AcT

SOUTH KOREA

Green Buildings Standards Code and home performance evaluations
CV19: funds to green SMEs, Green New Deal (green tech & investment) & construction of zero carbon buildings

SRI LANKA

EE plans in Transport Sector. CV19: investment in energy for healthcare

CATEGORY 2

AUSTRALIA

Target of 23% RE electricity by 2020 (or, 5% RE total energy) - CV19: (lower RE prices) & A\$36.9bn stimulus, partly for green investments, new solar farm construction

AZERBAIJIAN

Enviro-friendly tech to oil/gas industry for EE. CV19: new commitment to reduce oil production by 18% and to increase to increase share of RE to 30% by 2030

China

Target of 20% RE - CV19 - making smart grid investments

FIJI

Aim for 10% CO₂ reduction through EE improvements. CV19: part of FJ\$100 million for renewable energy businesses at concessional rate

GEORGIA

NEEAP for EE measures. CV19: additional grants of GEL 30,000 for businesses to improve EE. concessional rate

INDIA

Target of 105GW RE, numerous EE policies CV19: introduced free solar/thermal electricity for certain communities

JAPAN

Target of 24% RE by 2030, EE emission reduction target of 50 M kl. CV19: renewable energy factories and ventilation systems

MALAYSIA

Renewable Energy Policy and Action Plan CV19: solar investment

MONGOLIA

Target of 30% RE by 2030. CV19: UNDP support for sustainable cashmere production

MYANMAR

Target of 9.4GW by 2030, 3 energy policies. CV19: RE & infrastructure projects: 30 solar projects

PALAU

Target of 45% RE by 2025, numerous EE policies. CV19: Carbon Neutral Destination Initiative

SOLOMON ISLANDS

RE mitigation through HPP and Solar. EE mitigation 1.54% for 2025 CV19: \$34mill World Bank Tina River Hydropower Project

SOUTH KOREA

Green Buildings Standards Code and home performance evaluations CV19: funds to green SMEs, Green New Deal (green tech & investment) & construction of zero carbon buildings

SRI LANKA

EE plans in Transport Sector. CV19: investment in energy for healthcare

TURKEY

National Strategy and Action Plan on EE, EE buildings r regulation. CV19: green tariff (NB: has not submitted NDC)

UZBEKISTAN

Aim to reduce emission GDP pu by 10% with EE policies. CV19: Low-Carbon Energy Strategy with EBRD to reduce GHG by 10%

CATEGORY 3

NEW ZEALAND

Targeted at low-income families - Support for energy efficiency retrofits of existing buildings. NZ\$56 million for insulation/heating to improve EE.

INDONESIA

Solar investment and support to renewable businesses

HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?

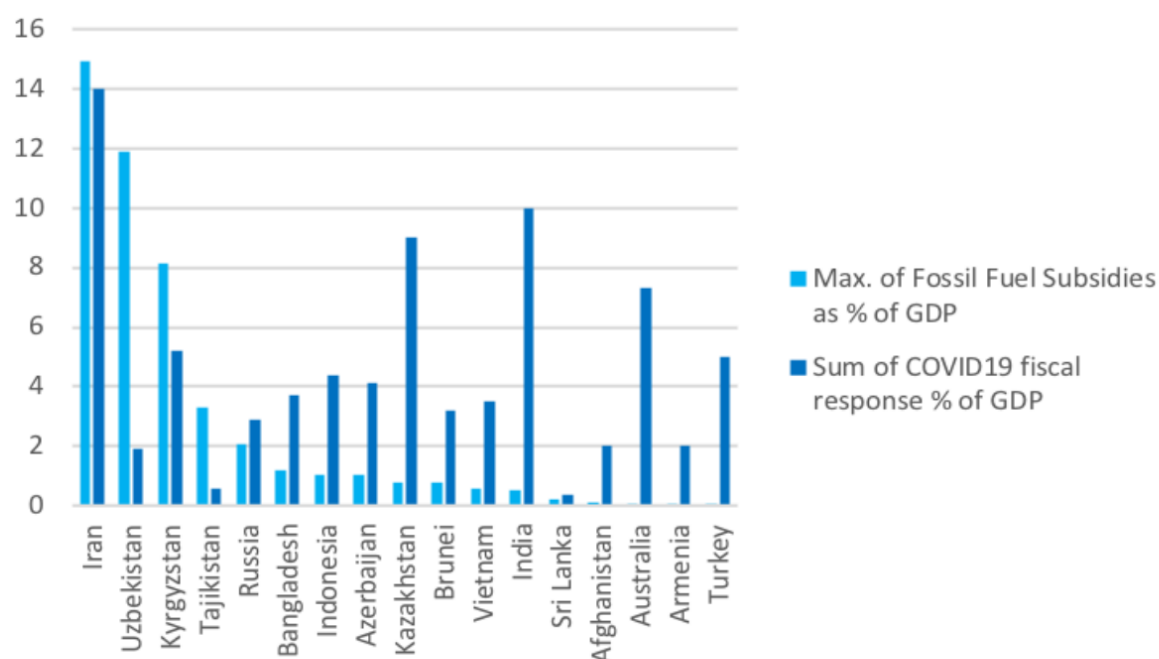


1. THE ENERGY SECTOR

Figure 13 similarly illustrates the comparison between COVID-19 responses and subsidies for Asia-Pacific countries, where estimates are available. It shows that the highest savings from subsidy reform are likely in Iran and Central Asian countries (in particular Iran, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan).

While in response to COVID-19, within the Asian and Pacific region so far only India has moved in this direction with higher duties on petrol and diesel.²⁴

Figure 13: How do Asia's and Pacific's largest fossil fuel subsidies compare to COVID-19 responses?²⁵



There is therefore considerable distance to align and optimise NDCs and COVID-19 responses in the energy sector.

That said, from the above examples, there are several inspiring and innovative case studies from within the Asia-Pacific region worth examining and learning from. Below is the example of China, Asia-Pacific's largest CO₂ emitter, that has started to align its COVID-19 response with its NDC ambitions in the energy sector.

INSPIRING EXAMPLE 1 - BOOSTING GREEN ENERGY CHINA



China is the Asia and Pacific region's largest greenhouse gas emitter, and has an emissions intensity target in its NDC, mostly focused on reducing coal use, including due to the need to avoid domestic air pollution. Prior to COVID-19, gas had been seen as a good energy alternative as well as renewable energy. China usually relies on the global market to provide gas. In 2019, 72% of gasoline was imported, while 43% of natural gas was imported, mainly from Saudi Arabia, Russia, Iraq, and Brazil.

While China has been one of the lesser COVID-19-affected Asian and Pacific countries in terms of cases and deaths to date (close to 86,000 and over 4,600 respectively by the end of October 2020), being one of the first countries to shutdown, the economic challenges have been unprecedented and protracted as the pandemic spread around the world. One of the realisations China made was that its high dependency on unstable imported energy posed a potentially serious national energy security weakness.

Therefore, this year, the department of national energy suggested accelerating renewable energy infrastructure and goals. Several hydro and nuclear power stations in progress will aim to be completed earlier, and China may even – by 2050 – export renewable energy to e.g. Hong Kong.

As China began to emerge from the crisis, China's President, Xi Jinping, announced to launch a green economic recovery plan, and pledge to achieve carbon neutrality by 2060. This profound commitment will lower the global warming projections by around 0.2 to 0.3°C and will place China at a leading position towards tackling climate change.

The goal will certainly necessitate a new paradigm shift in the energy sector. Carbon neutrality implies that China will reduce its dependency on energy imports. Furthermore, carbon neutrality will increase the share of renewable energy resources (reaching 50% in 2050) and will further strengthen China's manufacturing of green energy technologies. Finally, carbon neutrality will also accelerate the electrification of the Chinese economy ("electrostate" ambition) ²⁶ which, after COVID-19, has been on the top of the Chinese agenda. It is therefore evident that China's decision to become carbon neutral will enhance its energy self-efficiency and will address its energy security concerns.

On a global level, China's commitment to shift away from carbon and fossil fuels will bring severe economic ramifications to the fuel exporting countries. Additionally, the carbon neutrality goal could also change the energy sector as a whole. Fossil fuels will be eventually replaced by investments in renewable energy resources, nuclear power stations and even carbon capture technologies in which China will be the leading manufacturer. ²⁷ It is thus apparent that China's carbon neutrality commitment will tackle – to a certain extent – global warming and will create a new era for the global energy sector.

HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?



2. THE SUFACE TRANSPORT SECTOR

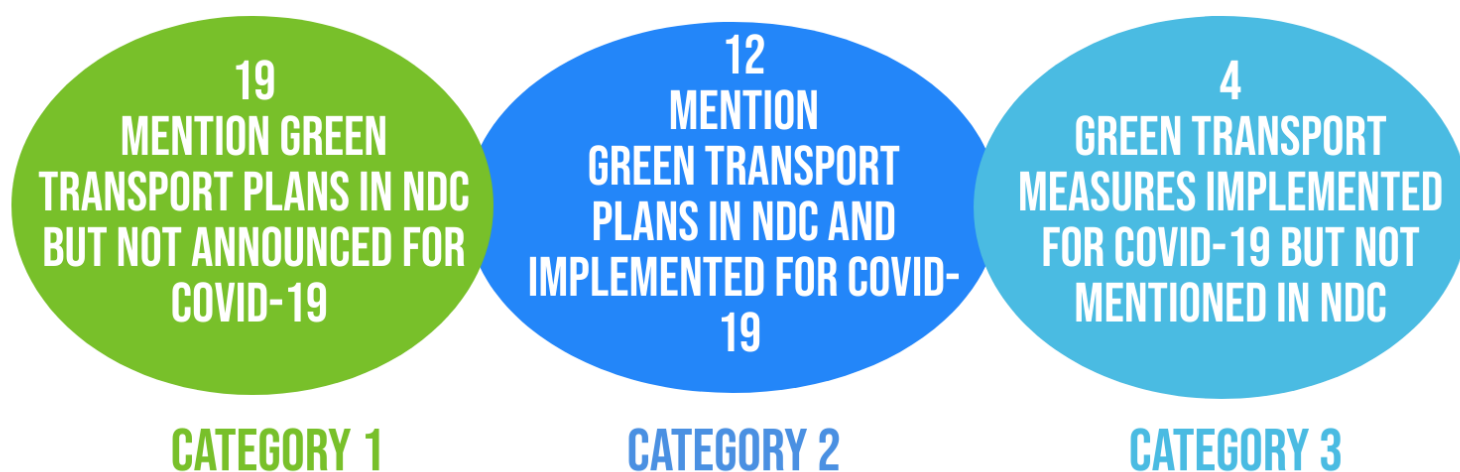
The linkages to date

Ten Asian-Pacific countries both mention green transport policies in their NDCs and have introduced such policies in their COVID-19 response. However, 27 Asian and Pacific countries that mention green transport-related actions in their NDCs have not yet introduced any such policies as part of their COVID-19 response. There are 10 countries within the Asia and Pacific region that did not mention transport in their NDCs or their stimulus packages, and 2 that did not mention transport in their NDCs yet did introduce new transport-related policies for COVID-19.

There is therefore clearly more work to do to uplift and link the NDC and COVID-19 policy responses in this sector. There is also likely more that can be done to make the policy responses more “pro-poor”.

However, there are several inspiring and innovative examples from the list above that can be drawn on by others. The case study below is selected as particularly interesting – Philippines, in the South East Asian sub-region of Asia-Pacific.

Figure 14: How far are Asia-Pacific NDC transport commitments shaping COVID-19 stimulus packages?



HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?

Figure 14: How far are Asian and Pacific NDC surface transport commitments shaping COVID-19 stimulus packages?

CATEGORY 1

AFGHANISTAN

Increase efficient vehicles, clean fuels, and alternative fuels.

ARMENIA

Developing electrical transport. Invest in public transport efficiency

AZERBAIJAN

Electric vehicles, rail electrification, increase metro stations etc.

CAMBODIA

3% cut in transport emissions by 2030

DPRK

Encourage public transport, minimise private car usage.

JAPAN

Cut transport emissions to 163 (from 225 in 2005) by 2030 – esp. via electric vehicles, fuel efficiency

LAOS

Public transport increase, target of 158 kt CO₂e/yr reduction in transport emissions by 2025

MONGOLIA

Hybrid vehicles share from 6.5 to 13% by 2030

MYANMAR

Will develop transport policy

PAKISTAN

Invest in BRT and MRT

PALAU

Reduce emissions from engines and fuel

PAPUA NEW GUINEA

Increase green public transport

SAMOA

Vehicle emission standards

SINGAPORE

Encourage public transport and electric vehicles

SRI LANKA

Fuel quality improvement, remove old vehicles; invest in efficiency of public transport (incl. aviation)

TIMOR LESTE

Invest in public transport

TONGA

Fuel emissions improvement & solar vehicles

UZBEKISTAN

Invest in transport management and logistics; hybrid fuel or electric vehicles increase

VIETNAM

Invest in public transport, fuel emissions standards

CATEGORY 2

AUSTRALIA

NDC – aim to improve vehicle efficiency – COVID19 – Government backed CEFC investment in electric car charging units, walking and cycling infrastructure

BANGLADESH

NDC: 5% reduction vs BAU by 2030. COVID: electric rickshaws for public transport.

BHUTAN

NDC – Promote, research, and develop low carbon transport. CV19: WB \$975,000 grant for Bhutan Green Transport Project

CHINA

NDC: 30% share of urban public transport by 2020 – COVID19 – invest in high speed rail & extend electric vehicle subsidy & tax exemptions until 2022, increase the number of charging stations.

GEORGIA

NDC – actions for urban transport. CV19: EBRD + Green Climate Fund: 75 mill euro investment in modernisation of Tbilisi metro under Tbilisi Green City Action Plan

INDIA

RNDC – rail share increase from 36% to 45%, solar panels for public transport, 20% biodiesel/ bioethanol target – COVID19 – rail electrification and investment

KAZAKHSTAN

NDC – sustainable transport policy planned. CV19 – modernisation of transport infrastructure

KIRIBATI

NDC – coconut oil for biodiesel. CV19: WB \$30million grant for improving safety/resilience of transport infrastructure for outer islands connectivity.

MARSHALL ISLANDS

Aim for 100% electric vehicles, 20% fuel efficiency increase by 2050. CV19: part of \$71.6M grant for Micronesia Maritime Investment Project – upgrading maritime infrastructure

NEPAL

Electric vehicles share to 20% by 2020. CV19: \$450M WB financing agreement for transport infrastructure, emphasis on sustainability

SOUTH KOREA

Public transport infrastructure & fuel efficiency – COVID19 – electric vehicle subsidy extended & green investment in electric/hydro cars

THAILAND

NDC – rail improvement and vehicle tax CV19: launched 5 year plan to become electric vehicle hub

CATEGORY 3

INDONESIA

Subsidies on biofuels

NEW ZEALAND

COVID19 – invest in ferry and rail service improvements and bike lanes

PHILIPPINES

Invest in bike pathways

MICRONESIA

CV19: receives part of \$71.6M grant for Micronesia Maritime Investment Project – upgrading maritime infrastructure

INSPIRING EXAMPLE 2 - GREENING URBAN TRANSPORT PHILIPPINES



The Philippines is an archipelagic country in Southeast Asia made up of over 7,000 islands. It has the 8th highest population of the Asian and Pacific region and is classified by the World Bank as a middle-income country in terms of GDP. The country has relatively high access to water and electricity (both above 90%) but falls behind in access to internet/digital services, with 60% of the population.²⁸

Philippines may, at first sight, appear to have a lower climate ambition as it has not yet submitted an official NDC. However, its INDC covers several ambitious policies, such as a 70% reduction in emissions compared to its BAU scenario of 2000-2030. These cuts would stem from reductions in the energy, transport, waste, forestry and industry sectors.



The Philippines has also suffered due to COVID-19. By the end of October 2020, the country had experienced 7,147 deaths amidst over 376,000 cases, a case fatality rate of around 1.9%. The government has implemented several protections in response, including cash transfers for vulnerable groups, protections for informal workers, and wage subsidies.²⁹

The government's response is also notable as it pertains to transportation. The government banned car transport due to COVID-19, leading many to utilize bikes for transport instead. Nearly 30% of the Philippines' emissions stem from transportation, and bikes are a far healthier and more sustainable alternative. Due to this, the government is now working to create more bike-friendly policies alongside their COVID-19 stimulus. Transport advocates had been pushing for policies like the installation of formal bicycle lanes and improvements to roads to remove potholes since 2011, but these now seem more necessary with the recent surge in bike riders.

HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?



3. THE AIR TRAVEL AND TOURISM SECTOR

The rationale for linking COVID-19 and "green" travel and tourism responses

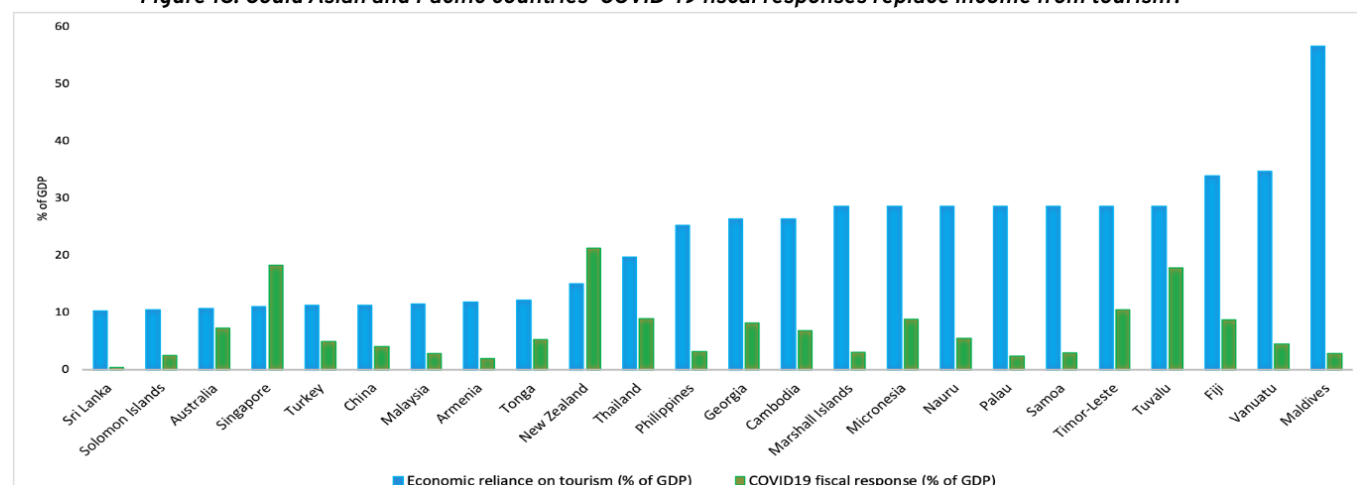
According to UNDESA and ICAO estimates, the aviation industry in the Asia and Pacific has been hurt the most so far during this global pandemic, as has the sector that relies most heavily on aviation - tourism. ICAO scenarios for the region forecast a possible total drop of 67-75% in capacity (seats offered), a fall of 389-428 million in passengers flown, and US\$81-89bn loss in revenues in 2020 compared to former baseline (business-as-usual) projections.³⁰ The International Air Transport Association (IATA) has suggested recovery of passenger numbers will not occur until 2024.³¹ Air cargo traffic volumes have also dropped, however, not by as much as passengers, with global falls around 17% on 2019 levels (Asia-Pacific has the largest share of the air cargo market globally).³²

For tourism-dependent countries this is turning into an economic crisis. Tourism accounts for between 20-30% of GDP (PPP) in ten Asian and Pacific countries, and over 30% in three Asian and Pacific countries (Fiji, Maldives, Vanuatu).³³

This is why several Asian and Pacific countries have announced COVID-19 economic and support measures that are targeted at the aviation and tourism sector.

However, this is not enough. **Figure 15** illustrates that for those Asian and Pacific countries reliant on tourism for over 10% of GDP, only for New Zealand and Singapore could their fiscal COVID-19 response allocated compensate adequately for the potential economic losses from the tourism sector that countries are experiencing.

Figure 15: Could Asian and Pacific countries' COVID-19 fiscal responses replace income from tourism?



HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?



3. THE AIR TRAVEL AND TOURISM SECTOR

Not only this, while aviation energy demand currently only accounts for 5% of total global energy demand and 2% of global emissions, this could soon change. There are questions around the sustainability of both the aviation and tourism sectors, especially if they continue to grow while other sectors improve in their emissions intensity.

40% of global CO₂ emissions from the aviation sector are associated with travel within and to/from the Asia-Pacific region. China on its own accounts for 13% of global emissions from the sector (both domestic and international). A 2019 study suggested that CO₂ emissions from international aviation will triple under business-as-usual by 2050.³⁴

There are, however, some reasons to expect commitments to action to stimulate and shift towards green travel methods and eco-tourism that are already included in NDCs to be included in the COVID-19 response.

First, forecast reduced demand and profitability mean airlines and the tourism sector have incentives to shift away from business-as-usual models and take steps to increase efficiency – e.g. of fuel use, of hotels, etc – to cut costs. This has already been seen in the aviation sector with a shift towards cargo rather than passengers. However, air freight is estimated to be at least 44³⁵ times more carbon-intensive than container ships, so these disparities must also be borne in mind.

Second, there are carbon-friendly alternative models that can be invested in. For example, biofuels for aviation, and eco-tourism models for the tourism sector. While these may not be cheaper at the moment than business-as-usual alternatives, depending on how demand shifts, they may become comparably cheaper, especially when taking into account the longer-term issue of avoiding ‘stranded assets’ of high-carbon methods.

Third, domestic aviation and tourism can improve resilience. High dependency on unstable global markets can be a weakness.

The linkages to date

Despite these rationales, a deep dive into COVID-19 actions by Asian and Pacific governments on aviation and tourism indicates that their NDC policies are not necessarily driving the COVID-19 response. Partly this is because only 9 NDCs by Asian and Pacific countries mention the tourism and aviation sector. But even for the two countries that have both implemented tourism or aviation-based COVID-19 responses, the link to efficiency or to eco-tourism is hardly made.

Of the 13 countries relying on tourism for more than 20% of their GDP (in PPP terms) (see Figure 15), only three have explicitly allocated COVID-19 funds to support their tourism sectors (Georgia, Micronesia, Philippines).

HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?

Figure 16: How far are Asian and Pacific NDC air transport and tourism commitments shaping COVID-19 stimulus packages?

8
MENTION AIR TRANSPORT
OR TOURISM PLANS IN NDC
BUT NOT ANNOUNCED FOR
COVID-19

CATEGORY 1

ARMENIA
Tourism identified for needing adaptation

BRUNEI
NDC- eco-tourism to prioritise biodiversity for adaptation

CHINA
Will promote low-carbon tourism (no specifics)

MONGOLIA
Tourism is managed within the environment/ development ministry

NEPAL
Identifies tourism as a sector for becoming cleaner/greener

SRI LANKA
Aims for EE and ecosystems strengthening for tourism

TONGA
Reference to Tonga Tourism Act 2012 and Tonga Tourism Roadmap 2013-17, & solar water pumps/transport in the sector

VANUATU
Sustainable tourism development one of five priorities, incl. ecosystem-based approach

4
MENTION AIR TRANSPORT
OR TOURISM PLANS IN
NDC AND IMPLEMENTED
FOR COVID-19

CATEGORY 2

THAILAND
NDC seeks to promote nature-based/ sustainable tourism and increase understanding of risk/ vulnerability of the tourism sector. CV19: subsidies worth US\$718m to boost domestic tourism – incl. aviation (but no specific eco-tourism focus)

MALDIVES
NDC – Green Tax on tourism to finance environmental management CV19: UN Maldives Joint Programme – outlines tools for sustainable tourism development

PALAU
Ecotourism in NDC & new COVID19 “carbon neutral tourism” initiative

VIENTIANE
NDC – tourism identified for requiring adaptation measures. CV19: Vietnam National Administration of Tourism and Vietnam Tourism Advisory Board and Swiss Sustainable Tourism Programme – launched new Green Travel section on national tourism board website

11
AIR TRANSPORT AND
TOURISM MEASURES
IMPLEMENTED FOR COVID-
19 BUT NO MENTION IN
NDC

CATEGORY 3

AUSTRALIA
CV19: ecotourism fiscal support and future focus in Western Australia

BHUTAN
CV19: Promoting Bhutan as sustainable tourism destination (in Economic Contingency Plan). Introduction of Sustainable Development Fee for regional tourists for ecological management

CAMBODIA
Gov, UNESCO and private sector partnership local ecotourism and ecological restoration. Gov and WB Cambodia Sustainable Landscape and Ecotourism project – predates CV19 but new strategic recommendations for response

GEORGIA
CV19 - Tbilisi Declaration: Actions for a Sustainable Recovery of Tourism

INDONESIA
CV19 - Ministry of Tourism – announced CHS policy for tourism, which includes sustainable tourism initiatives under environmental quality

JAPAN
‘Go to Travel’ Domestic travel initiative

MALAYSIA
CV19 Ministry of Tourism – new strategies for tourism (includes sustainability)

MYANMAR
CV19: 3 stage tourism recovery plan – includes ‘reinventing tourism’

NEW ZEALAND
Ministry of Tourism emphasizes sustainability in recovery plan

PAKISTAN
Ecotourism in COVID19 recovery policy – incl. organising seminars/ training workshops to incorporate sustainability in tourism/ hospitality

PHILIPPINES
CV19 - hosting first international ecotourism travel mart. Other initiatives include FAO promotion of farm tourism

INSPIRING EXAMPLE 3 - ECOTOURISM PALAU



Palau is a small island developing state, famed for its marine beauty. It has an estimated population of 18,000.³⁶ Palau welcomed 94,051 tourists in 2019, over 5 times its population.³⁷ Tourism is at the heart of Palau's economy, with over 80% of export revenues coming from tourism receipts.³⁸

As a small island nation, Palau is especially vulnerable to climate change. Palau's NDC, therefore, centres around mitigation through reducing emissions in the energy, waste and transport sectors. Currently, Palau has achieved a 30% reduction in energy usage, however, renewable energy stands at 8% of the planned 22%.³⁹

Palau is one of the 9 countries in the world to report no COVID-19 cases.⁴⁰ In March, rigorous controls were enforced for returnees, with a minimum of six weeks quarantine spread across arrival in Guam, a Palau hotel and home self-isolation, alongside five COVID-19 tests.⁴¹ However, these border closures, alongside global economic shocks, have drastically impacted Palau's tourism sector. The government response to mitigate the impact on tourism include financial assistance through loan extensions, consolidations and deferrals alongside short-term funding packages.⁴² Nonetheless, Palau is projected to see a 51% decrease in tourist numbers in 2020, alongside a 9.5% contraction of GDP. An 89% reduction in tourism is also expected in 2021, to just 4,800 visitors.⁴³

Before COVID-19, significant initiatives were taken to promote environmental awareness and eco-tourism. Initiatives include the 2015 Palau National Marine Sanctuary Act, a law which protects the world's largest protected ocean area. Alongside this, the Palau Pledge, launched in 2017, directly ties environmental protection to immigration laws, through tourists pledging to abide with sustainability policies or risk a fine.



Palau's COVID-19 response embodies its previous commitment to sustainable tourism and climate change mitigation. In August 2020, a new initiative was launched, with Palau aiming to become a global pioneer as a 'Carbon Neutral Tourism Destination', through two projects. Firstly, the promotion of local food production aims to cut carbon emissions, whilst fostering the development of the domestic tourism value chain. The second project is a carbon management programme for tourists to calculate and offset their carbon footprint through sustainable tourism activities. Estimates state this could generate over USD 1 million annually towards carbon neutral initiatives.⁴⁴

HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?



4. LAND-USE - INCLUDING FORESTRY AND AGRICULTURE

The rationale for linking COVID-19 responses and climate-friendly land-use policies

Emissions from land-use - including the forestry and agriculture sectors - account for the majority of emissions for 9 Asian and Pacific countries. In addition, the sectors are expected to be hard hit by climate change impacts. This is a challenge because the sectors play a distinct role in many of the other economies - in particular in terms of providing jobs for significant parts of the population. Hence, policies to tackle emissions from this sector as well as introduce means to adapt to and build resilience to climate change in the sector can be found in almost all of the regions' NDCs.

In many countries, the land-use sector has been affected by COVID-19 - for example some movement restrictions between cities and rural areas have affected the ability of farmers to produce as much as before, as well as get to market and meet demand for their products themselves, meaning potential falls in farmer incomes.

The linkages to date

Despite these rationales, a deep dive into COVID-19 actions by Asian and Pacific governments on land use policy reveals significant challenges.

As shown in **Figure 17**, there are just three countries in the region that both mention forestry policies in their NDCs and have introduced such policies in their COVID-19 response. In contrast, 29 Asian and Pacific countries mention land-use-related actions in their NDCs.

There, therefore, remains a great deal of potential overlaps to be explored for this sector, particularly if COVID-19 spreads beyond urban areas and movement restrictions need to remain in place for significant periods of time. Driving up the resilience of those that depend on land for their livelihoods will become more urgent.

Drawing on proactive examples- such as the case study below from Kazakhstan - can help inspire more action.

HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?

Figure 17: How far are Asian and Pacific NDC land-use policy commitments shaping COVID-19 stimulus packages?



INSPIRING EXAMPLE 4 - STIMULATING RESILIENT AGRICULTURE KAZAKHSTAN



Located in Central Eurasia, Kazakhstan is the heartland of trade between European and Asian markets. It has a population of 18.5 million,⁴⁵ with a low population density due to its extensive size. In less than 20 years, Kazakhstan has undergone drastic poverty alleviation, transitioning from a lower-middle-income to an upper-middle-income country, reflected in its GDP per capita of \$9,244.⁴⁶

Kazakhstan's NDC includes an unconditional target of a 15% GHG reduction by 2030 compared to 1990 levels. A conditional target of 25% reduction outlines requirements of international investments and green climate funds alongside access to low carbon technologies and technological transfers.⁴⁷ Kazakhstan's commitment is evident within new climate laws surrounding energy saving and efficiency and renewable energy sources, alongside the promotion of a government-led 'Green Economy' Concept.

To date, Kazakhstan has endured economic and social COVID-19 shocks. By the end of October 2020, Kazakhstan had recorded over 111,000 cases, with 1,825 deaths.⁴⁸ The domestic lockdown began on March 16th until May 11th, although a two-week lockdown was re-imposed on July 5th due to rising cases.⁴⁹ In 2019, Kazakhstan experienced strong economic growth, with GDP growth at 4.5%, wage increases of 8.9% and a poverty rate declining to 8.5%.⁵⁰ Due to COVID-19, GDP growth is expected to decline to -3%, with the poverty rate expected to surge to 12.7%.⁵¹ Government protection policies include social protection for vulnerable groups, alongside tax exemptions and loan deferrals for SMEs.⁵²



Notable in the government response is its focus on the agricultural sector. Farmers will get access to loans with the total amount of KZT70 bn at 5% available through National Holding Kazagrar and KZT100 bn at 6% through "Economy of Common Goods" programme. In addition, farmers will be able to finance their operations through forward contracts (under its future harvest). Also, diesel and other fuel types will be subsidized for the next sowing season. This support is critical as 15.8% of the employed population resides within the agricultural sector.⁵³

HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?



5. WATER AND WASTE SECTOR

The rationale for linking COVID-19 responses and water and waste sector policies

An accessible and well functioning water and waste sector in Asian and Pacific countries is essential to dealing with both climate change and COVID-19. As of 2015, only 65 percent of the population has access to basic sanitation. 277 million people in the region lacked access to safe drinking water sources; approximately half of them, 138 million, living in South and South-West Asia.⁵⁴ Yet, both COVID-19 management (e.g. hand-washing), and adaptation to climate change requires adequate water supply in both urban and rural areas. Some renewable energy options (hydropower) depend on reliable water supply. Yet, drought remains and could intensify as a major risk in the region, as well as floods and storms. A May 2020 report by UNESCAP noted that fisheries provide food and income to more than 200 million people in the region, with 34 million engaged in commercial fishing. More than 80 percent of international trade is transported by shipping with two thirds of these operations concentrated in Asia. However, countries in the Asia-Pacific are among the world's top plastic polluters – plastic which itself is created often using fossil fuel energy.⁵⁵

Eight of the ten rivers responsible for up to 95 percent of plastic waste leaked globally into oceans are in Asia. 90 per cent of wastewater in the region is discharged untreated.⁵⁶ This exacerbates costs for governments as well as environmental damage. Increased municipal solid waste is particularly noticeable in low- and middle-income countries, where consumption has previously been relatively low. Indeed, when it comes to waste, COVID-19 has created additional challenges. Medical waste has increased rapidly, while lockdowns have meant that in many countries, tens of thousands of people involved in waste picking activities and recycled goods have lost their jobs. Therefore, both the water and waste sectors need special attention because of COVID-19.

The richer countries in the region have been starting to shift towards smart water grids, and increased levels of recycling – improving efficiency of the sector, while relatively poorer nations have been focused on building infrastructure to provide access to water and sanitation, which can help with adaptation. There are also further opportunities – for instance, often over 50% of municipal solid waste in low- and middle-income countries is organic and can be turned into compost for use in agriculture or into biogas for energy, which can also support resilience.⁵⁷

But has more been done since COVID-19 to accelerate these trends?

HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?



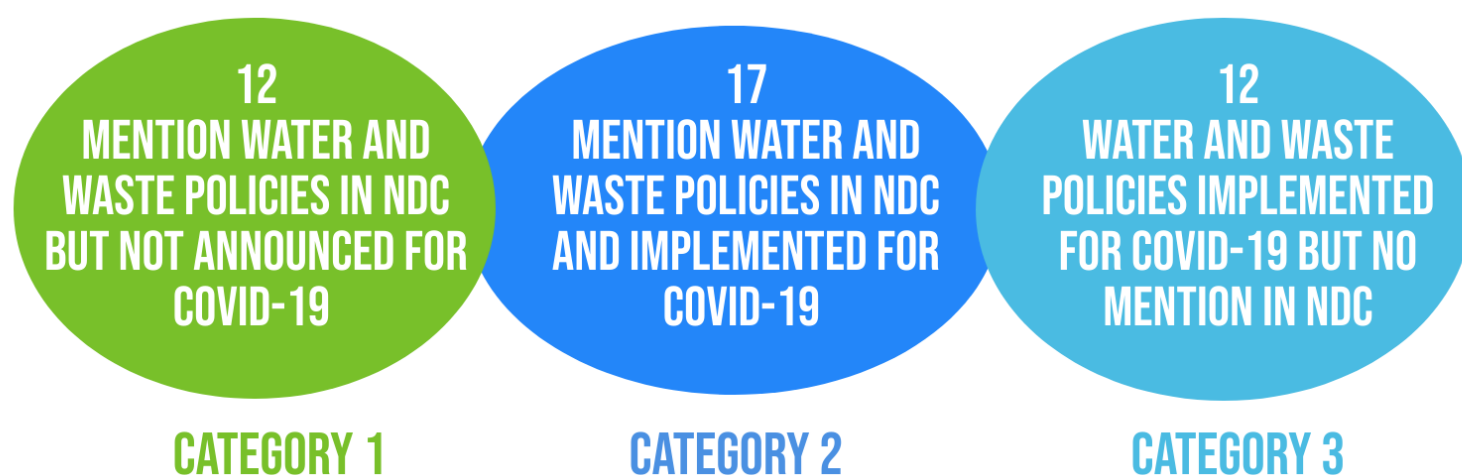
5. WATER AND WASTE SECTOR

The linkages to date

This sector stands out amongst the others for the fact that a significant proportion of Asian and Pacific governments have seen the links between climate change action and COVID-19 action and sought to make the most of it. Some of the new policies introduced are fairly short-term – especially waste collection and disposal, however, there are others which are more focused on seeing wastewater, stormwater and rainwater as a resource, as well as integrated solutions and leapfrogging opportunities.

That said, more Asian and Pacific countries do need to explore actions in this sector in their NDCs. There is also likely more that can be done to make the policy responses more “pro-poor”. Drawing from innovative examples - such as the interesting case study of Philippines, in the South-East Asian sub-region of Asia-Pacific.

Figure 18: How far are ESCAP NDC water and waste commitments shaping COVID19 stimulus packages?



HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?

Figure 18: How far are Asian and Pacific NDC water and waste commitments shaping COVID-19 stimulus packages?

CATEGORY 1

DPRK

Law on Waste Disposal.

INDIA

Waste management in ZED Model of Made in India, Clean India Mission and Smart Cities Mission. AMRUT mission: targets 500 cities for basic services (water supply). NWM aim for enhancing water use efficiency by 20%. NBWUE: promotion/regulation of water

JAPAN

Waterpower utilised in commercial and residential sector e.g. water heaters.

LAOS

Waste-to-energy through Renewable Energy Strategy. Several objectives for water management

MALAYSIA

National Strategic Plan for Solid Waste Management, National Water Resources Policy.

MARSHALL ISLANDS

increase waste collection. Replacing A/C with cooling towers/seawater-source pumps for 50% EE improvement

MONGOLIA

Water saving tech and regulation for farming, 25-30% increase in protected areas to preserve water resources

MYANMAR

National Waste Management Strategy. NAPA includes water resource management

SINGAPORE

Four National Traps for water supply

SRI LANKA

Designing solid waste management for 40-60% of local authorities. Several NDCs identified for both water and waste sectors

TONGA

National Water Policy and Water Resources Bill

VIETNAM

Detailed waste management and treatment, Law on Water Resources, National Water Resource Master Plan 2021-2030

CATEGORY 2

AFGHANISTAN: National Water and Natural Resource Management, and waste management. CV19- RC support for waste management. WHO WASH partnership waste management, environmental cleaning, sanitation facilities

AZERBAIJAN: Construction of HPP on water basins. CV19 - Partnership talks EBRD-Ganja city to finance upgrades in water/waste management

BANGLADESH: Targets: 50% of landfill waste from to compost. 70% of LFG for electricity. CV19: Gov-WaterAid partnership: disinfecting household/public and community clinics water points

BHUTAN: Comprehensive Integrated Water Resource Management Approach Plan CV19: WB investment: Medical Waste Management Plan, alongside the Bhutan's National Environment Commission

BRUNEI: National Housing Programme green buildings, savings in water consumption CV19: -50% tax discount for water transportation sector, -15% on water bills for targeted sectors.

CAMBODIA: 1% aim GHG reduction from waste emissions. Implementation of Climate Change Action Plan for Water Resources. CV19: UNESCO partnership to pass on knowledge/scientific tools and skills for water resource management to stakeholders

INDONESIA – LGR, 3R scheme. Law 37/2014 (Soil and Water Conservation). Government Regulation on Watershed Management. CV19: WB National Slum Upgrading Program resources re-allocated to WASH.

KAZAKHSTAN: Waste management in 'Green Economy' concept. CV19: purchase of irrigation system and working to reduce water-intensive crops. BAT Environmental Code – includes water consumption. UNDP & ADB \$128,000 support for medical waste management. Also working with UNDP on environmentally-friendly, non-incineration, safe collection & disposal of medical waste from COVID19 hospitals.

KIRIBATI: Proposed 19 desalination systems. CV19: UNICEF partnership construction of 49 handwashing stations

MALDIVES: Desalination tech and Integrated Water Resource Management Schemes. CV19: gov 30% subsidy of water bills. WHO support waste management. Ban on single use plastic imports.

NEPAL: Low Carbon Economic Development Strategy (waste management via environmentally friendly tech and W2E). CV19: WaterAid Nepal support for WASHPakistan – National Water Policy, WAPDA. Waste into biogas/fertilizer. CV19: WaterAid 16 permanent hand-washing stations

Pakistan – National Water Policy, WAPDA. Waste into biogas/fertilizer. CV19: WaterAid 16 permanent handwashing stations

PALAU: National Solid Waste Framework. CV19: subsidies for utility bills

PHILIPPINES: Ecological Solid Waste Management Act. CV19: gov push for production of abaca-made facemasks

THAILAND: Waste Management Roadmap. CV19: lowered water bills, 2020 Plastic Waste Management Road Map: ban on single use. Recycling fishing nets into protection gear

TIMOR LESTE: Waste management plan. CV19: waiving water bill three months (for low-income households)

UZBEKISTAN: Program for Further Irrigated Lands Improvement and Rational Use of Water Resources for 2013-2017. CV19: 500 billion for water supply/sewage facilities, 502 billion soums water supply/irrigation

CATEGORY 3

AUSTRALIA

CV19: Northern Territory 50% cut water/sewage bills for 6 months. Investment into Recycling Modernisation Fund to increase waste management capacity, creation 10,000 jobs. Waste export ban by 2024 for domestic recycling industry.

CHINA

CV19: Wuhan gov deployed mobile incinerators for PPE. New waste management separate mask bins and increasing waste collection

FIJI

CV19: WHO/UNICEF WASH partnership for sanitation systems

GEORGIA

CV19: gov support package for water bills for poorer population. ADB \$20 million investment upgrade water supply system and sanitation

IRAN

CV19: postponed utility payments for 3 months

REPUBLIC OF KOREA

CV19: investigating banning waste plastic imports: promote domestic waste recycling industry. investment into smart water supply

KYRGYZSTAN

CV19: loan and grant to improve water infrastructure in Cholpon-Ata. No penalties for non-payment of utility bills

NAURU

CV19: UNDP support for waste management

NEW ZEALAND

CV19: Waste Minimisation Act, investing \$124 million in recycling infrastructure

SAMOA

CV19: 6 month reduction of water bills

TAJIKISTAN

CV19: tariff increases on water postponed

TUVALU

CV19: gov financing return boat fares to home islands (ease water pressures in capital)

INSPIRING EXAMPLE 5 - GREEN INFRASTRUCTURE JOBS AFGHANISTAN



Afghanistan is one of Asia-Pacific's LDCs. It has the lowest GDP per capita of all the Asia-Pacific countries, in part due to decades of conflict in the country. This conflict has also worsened infrastructure and basic access across the country. Afghanistan suffers from low access to drinking water (67%) and internet/digital services (13.5%).⁵⁸

Afghanistan has a high climate focus towards renewable sources of energy. Its NDC highlights hydropower, solar power, wind power, and biomass as key energy investments for the future. The NDC also considers investments to shift fuel in industry and utilize clean/alternative fuels in transportation.

Afghanistan has been hit hard by COVID-19, with [36,542] cases and [1,271] deaths to date, an approximately [3%] fatality rate. The country, however, responded seriously to the pandemic. Afghanistan was one of the first Asia-Pacific countries to lockdown, beginning on February 24th. Its lockdown was also one of the longest, continuing for 3 months until May 28th. The government has responded with several measures, including improvements in access to basic electricity and water services, tax relief for citizens, and protections for manufacturing and SMEs.

Part of Afghanistan's response has been through green infrastructure projects which tackle two problems at once: climate change and keeping the economy and jobs afloat. Currently, they are running a project to boost Kabul's water supply, by building new irrigation and water systems around the city. Kabul's current water infrastructure is severely under-equipped and is rapidly deteriorating. The project is using green stimulus to hire nearly 40,000 jobless workers. The project will run for a year.



HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?



6. DISASTER RISK MANAGEMENT

The rationale for linking COVID-19 responses and disaster risk management planning

There are several reasons to expect commitments to disaster risk management that were included in NDCs for the Asian and Pacific region to be included in the COVID-19 response.

Two particular reasons stand out. First, like climate change disasters and impacts such as floods and droughts, COVID-19 is like a “grey rhino” – as in, an obvious and known danger that is anticipated but are in reality mostly neglected. The work governments have done to respond to COVID-19 provides a template to build on, and strengthen DRM systems to avoid more “grey rhinos” – for example by improving data systems, digital network infrastructure, and so on.

Second, with COVID-19, a vast majority of Asian and Pacific countries in particular – as outlined in earlier parts of this policy brief – made a quick determination that the costs of acting NOW to stop COVID-19 would be lower than the costs of allowing it to ravage through their economies. Climate change action has the same rationale, and as such governments can take this opportunity to both make that case and take it more seriously. Adjusting understanding of costs of action and inaction is a key part of stronger DRM going forward, and thus for example adjusting DRM plans or strategies can be a key overlap for this sector.

The linkages to date

This sector stands out amongst the others for the fact that a large number of Asian and Pacific governments have implemented new COVID-19 measures related to DRM, but have not included these measures in their NDCs, as shown in Figure 19.

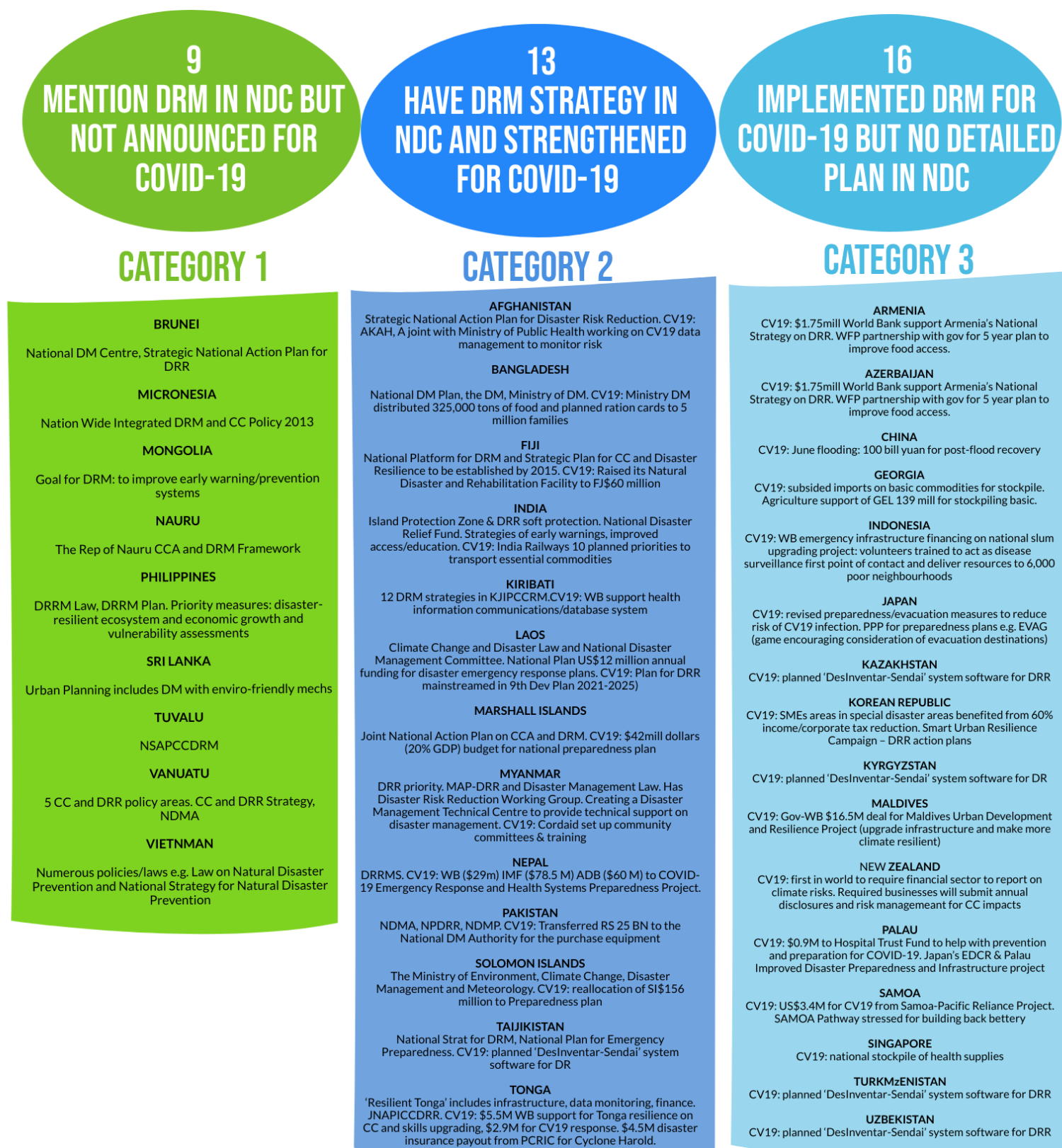
This suggests that COVID-19 itself has made Asian and Pacific governments (as well as citizens) more aware of the need for strengthening DRM – whether in response to pandemics or climate change crises, and as such can be seen as a positive impact for the long-term.

Exploring examples of low-income countries such as Myanmar can also provide some inspiration for other Asian and Pacific countries in this regard.

HAVE COVID-19 ACTIONS BY ASIAN AND PACIFIC COUNTRIES BEEN ALIGNED WITH NDC ACTIONS?

Is there evidence of a sweet spot in reality?

Figure 19: How far are Asian and Pacific NDC DRM commitments shaping COVID-19 stimulus packages?



INSPIRING EXAMPLE 6 - COMMUNITY-BASED DRM MYANMAR



Myanmar is a Southeast Asian nation with a population of 53.71 million.⁵⁹

In 2018, its GDP growth was 6.75% and poverty declined from 48% to 25% from 2005 to 2017.⁶⁰

Myanmar is heavily reliant on agriculture and industry, which contribute 21% and 38% to GDP respectively.

Myanmar's climate ambition is based on policy and actions, instead of implementing BAU, Absolute or Intensity targets. Mitigation revolves around the forestry and energy sector, with targets including a 30% reserved forest and protected public forest area, and rural electrification through 30% renewable energy sources. Disaster risk resilience (DRR) is a core part of Myanmar's NDC, evident in the Myanmar Action Plan for DRR and the Disaster Management Law. Myanmar is disaster-prone and vulnerable to climate change impacts, with its geography making it the 'most at risk' country in the APAC region. From 2006 to 2016, Myanmar experienced two major earthquakes, affecting 18,000 people and three cyclones, impacting 2.6 million people, alongside a myriad of other frequent hazards including storms, floods, landslides and droughts.

So far, by the end of October 2020, Myanmar has recorded 1,199 COVID-19 deaths and over 50,000 cases. Lockdown began in early April, before New Year celebrations, and was relaxed on August 16th.⁶²

Soon after, from August 27th, new lockdown measures were re-imposed due to rising cases. The government response included food distribution to families without incomes, alongside various economic and social support measures through its \$70 million stimulus package. GDP growth is predicted to fall to 2-3%. Whilst this approx. 4% decline will constrain Myanmar's development, it is still forecast to do better than its Southeast Asian neighbours.



DRM had been a central focus of Myanmar's government before the pandemic, evident with its National Framework for Community Disaster Resilience. Following the devastation caused by Cyclone Nargis, a DRR Working Group was formed. The group now encompasses 53 international agencies alongside local NGOs. The group aims to foster community-led resilience, through education, training, and awareness-raising activities on DRM. Focusing on community-based initiatives is critical, as 85% of those in poverty⁶³ live in rural areas and livelihoods are extremely vulnerable to climate change. Communities are provided grants to invest in resilient small-scale infrastructure and services, which brings long and short-term socioeconomic gains alongside a more resilient community structure. One recent DRR project provided information for the fishery industry with management options if the fish culture season is shortened.⁶⁴ In response to COVID-19, Cordaid and KMSS projects ran in 30 villages regarding PPE distribution and establishment of quarantine centres.

CONCLUDING ANALYSIS - IS THE REGION DOING ENOUGH?

Are Asian and the Pacific countries paving the way for a "green recovery" or not?

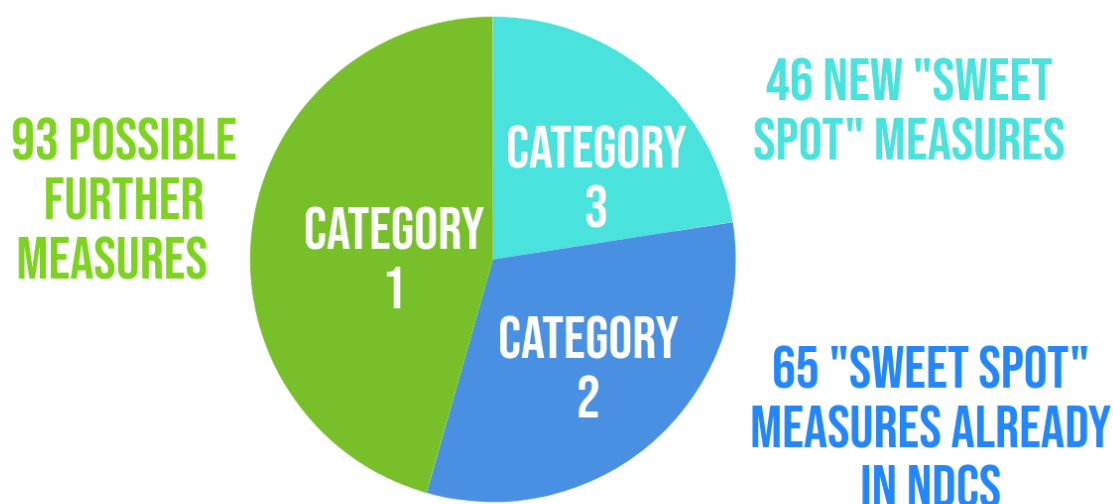
Since COVID-19 began, Asian and Pacific countries have introduced 111 new policies and measures that help counter the pandemic's impacts as well as climate change. But this is not enough...

COVID-19 has been a shock to the global system as well as to Asian and Pacific countries.

This policy brief has shown that most Asian and Pacific governments have and are setting aside budgets to introduce economic and social-safety net related measures to counter the expected negative effects on citizens, especially the most vulnerable. Previous work by UNESCAP has identified over 300 measures undertaken by the region's governments to directly support citizens and businesses. This brief has identified an additional 111 climate change related measures, within 6 sectors covering both adaptation and mitigation, that governments have introduced since the COVID-19 outbreak began, 58% of which were set out in prior NDCs. The introduction of new ideas and policies as a result of COVID-19 that were not previously in NDCs, is especially prominent in the DRM sector (16 new policies), and demonstrates this new drive. Furthermore, the brief has set out some 6 excellent case studies that demonstrate the "sweet spot" thinking in practice. Governments have clearly identified that green recovery makes sense, in all six sectors.

On the other hand, there are a further 93 similar actions or commitments that this brief has identified in Asian and Pacific NDCs which have potential overlaps with COVID-19 action – yet these are not yet being acted upon.

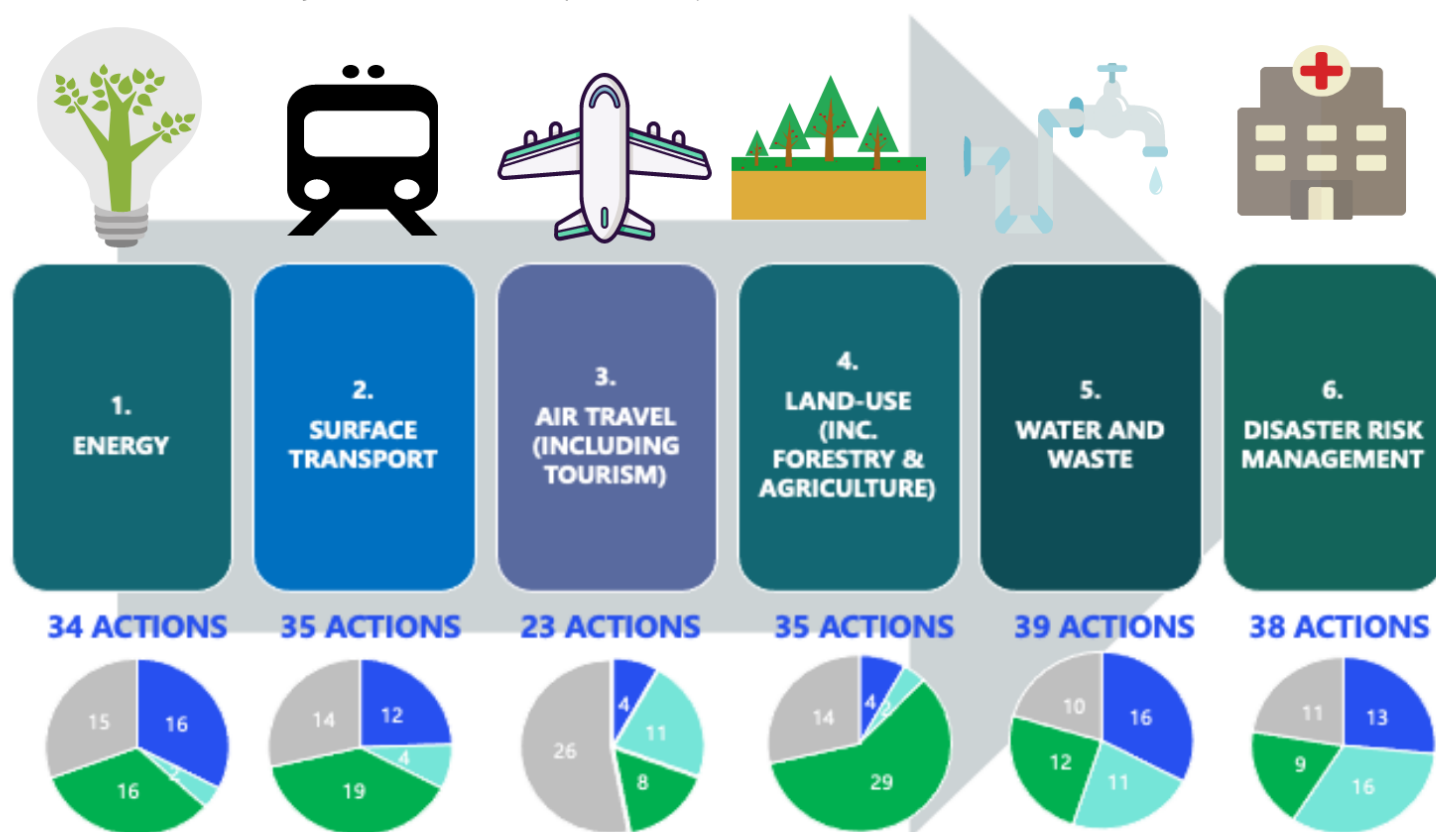
Figure 20: Total "sweet spot" measures for the Asia and Pacific Countries



CONCLUDING ANALYSIS - IS THE REGION DOING ENOUGH?

Are Asian and Pacific countries paving the way for a "green recovery" or not?

Figure 21: Sectoral summary of "sweet spot" measures for the Asia and Pacific Countries



Key:

green = number of countries with actions in NDCs only (not yet implemented – i.e. Category 1); royal blue = number of countries taking "sweet spot actions" (i.e. Category 2); Bright light blue = number of countries with new COVID-19 actions only (i.e. Category 3); grey = no. of countries with no relevant measures

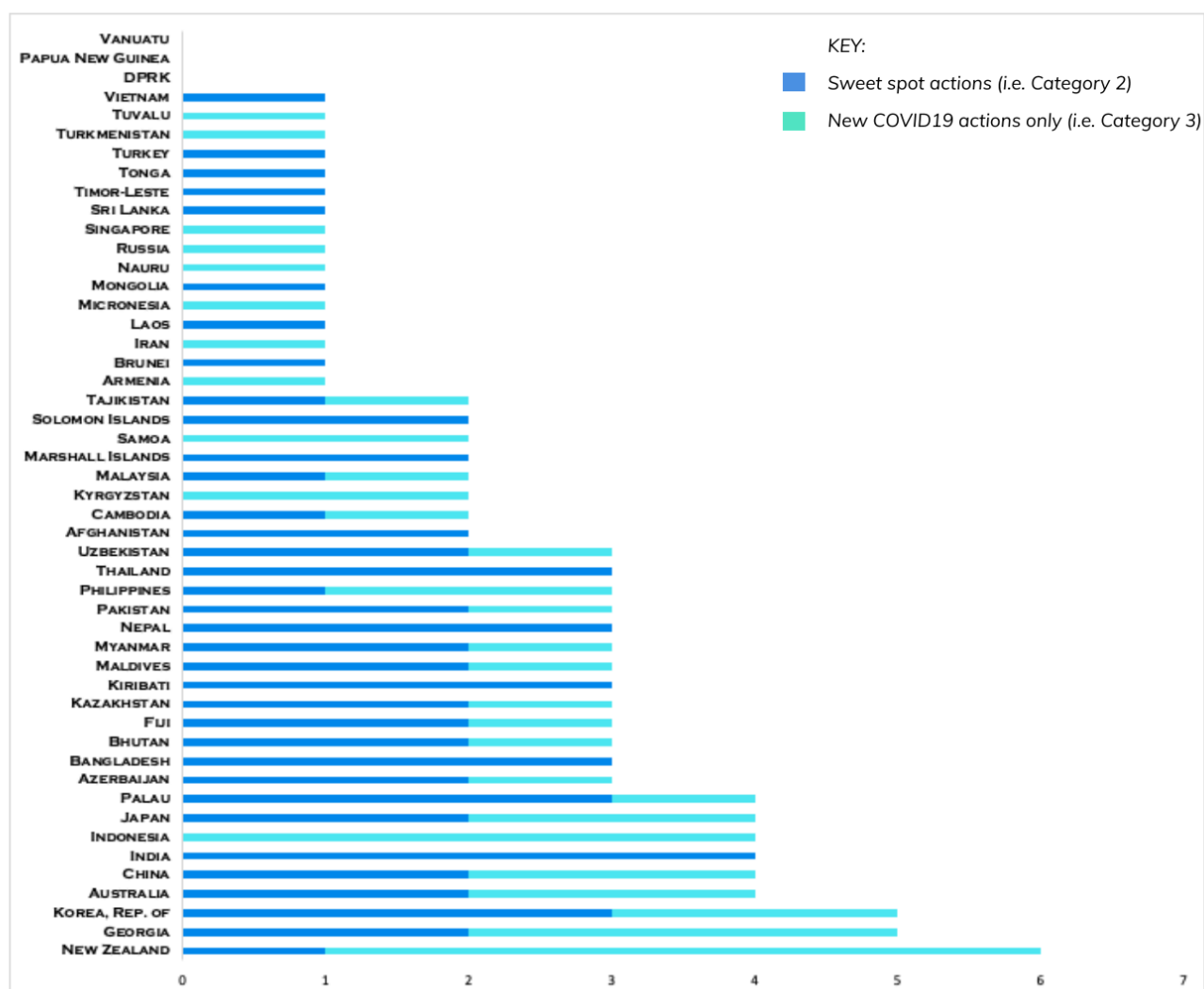
In addition, as shown in **Figure 21**, certain sectors remain behind. 26 Asian and Pacific countries appear not to have developed ideas for climate change action or complementary "green" COVID-19 policies in the air transport and tourism sector. Alarming, 15 Asian and Pacific countries also do not have "green recovery" policies for the energy sector, despite this sector accounting for the majority of carbon emissions for most countries in the region. In addition, 29 countries in the region have potentially relevant policies in their NDCs on land-use and agriculture but are not implementing them.

More specifically, it is possible to identify those countries that appear to be leading the way and those that appear to be behind, and for which sectors those who are acting seem to find easier to identify a "sweet spot".

CONCLUDING ANALYSIS - IS THE REGION DOING ENOUGH?

Are Asian and Pacific countries paving the way for a "green recovery" or not?

Figure 22: Distribution of 111 "sweet spot" measures implemented by Asian and Pacific Countries



As shown in **Figure 22**, there is only one country in the entire region - New Zealand - that has used the COVID-19 opportunity to bring in new policy actions in all 6 sectors. However, 5 of these 6 were new - not aligned with those already in its NDCs. In contrast, 19 countries in the region have introduced just one or less new policies, half of which were not in NDCs. Some, but not all of these 19 countries are low-income or least developed countries, and some have expressed high mitigation or adaptation ambitions broadly or in specific sectors. That said, the largest emitters in the region - India, China and Japan, all seem to be taking action.

This suggests that despite broad public support in the region – in principle – for linking green and COVID-19 recovery policies in order to “build forward”, a significant number of governments are not using these opportunities. There is so far only a limited overlap between COVID-19 spending and climate finance, as well as specific policies implemented and green policies. The question is, why not?

CONCLUDING ANALYSIS - IS THE REGION DOING ENOUGH?

Are Asian and Pacific countries paving the way for a "green recovery" or not?

While it is impossible to categorically set out the reasons why most Asian and Pacific countries are not yet fully aligning green, pro-poor and COVID-19 recovery policies, the analysis provides some possible insights.

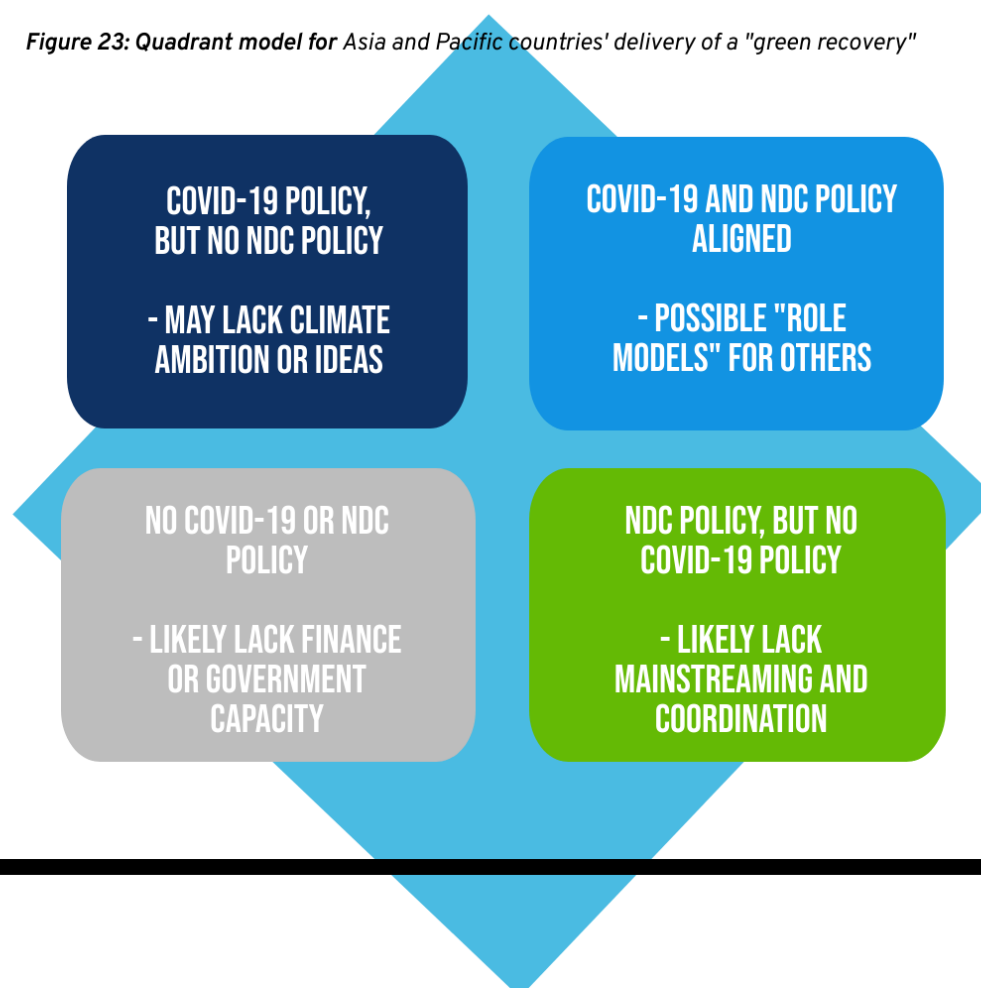
Specifically, four categories of countries can be identified, as shown in **Figure 23**.

For some, the fact that they have implemented new COVID-19 policies that were not previously in NDCs fairly decisively indicates that they may have previously lacked climate ambition, or even an understanding of the urgency of climate action. The hope is that these countries can translate this new resolve into revised NDCs, and shared experience to help spur others in the region to also act. This appears to be particularly urgent in the air transport and tourism sector, where ideas for actions in NDCs seemed to be very lacking.

For others, the fact that they have NDC policies that could be used as COVID-19 response measures, but this has not yet happened indicates that those in charge of NDC policies have perhaps designed them in a vacuum – those policies are not yet mainstreamed or subject to deeper consultation with sector leads and/or central strategic planning offices. This appears to be particularly the case for forestry sector NDC commitments, but the surface transport sector also seems to face similar challenges as well.

Last but not least, the category of countries that have not implemented COVID-19 policies or NDC policies in the areas examined indicates a serious lack of financing or governmental will to take action.

Figure 23: Quadrant model for Asia and Pacific countries' delivery of a "green recovery"



RECOMMENDATIONS - A GREEN NEW DEAL FOR ALL?

How can Asian and Pacific economies pave the way for a stronger, greener recovery?

The alignment of green, pro-poor and COVID-19 recovery policies is urgently needed, at the very least from a financial perspective. For the majority of Asian and Pacific countries that have costed their climate change actions, the finance required to address climate change will be much higher than the finance they are using for the COVID-19 response. Many countries cannot afford to spend "twice" in order to tackle climate change separately from COVID-19.

Thus, every effort must be made urgently to align climate change and COVID-19 policy actions. Should countries not find this "sweet spot" overlaps, they will lose a one-time opportunity to develop a "green recovery" plan.

While this policy brief finds several and significant gaps in ensuring a "green recovery" throughout the Asian and Pacific region, it also provides several ideas for how governments can now adjust their behaviours and actions – in particular through the specific rationales provided and the six inspiring examples, which span a wide range of countries and actions within the "sweet spot" and be adjusted and/or replicated by other Asian and Pacific countries.

COVID-19 and climate change are both "grey rhinos", and the costs of combined action now to combat and respond to them will be lower than the costs of inaction.



Recommendation 1

Use scenario analysis to guide responses and planning – second and third waves of COVID-19 are likely, and a vaccine may not be developed;



Recommendation 2

Continue to expand COVID-19 fiscal responses, in particular to badly hit sectors and to support the most vulnerable people in the country;



Recommendation 3

Identify in which of the "four groups" above your country falls into and seek the related need for support from bilateral or international partners (e.g. the "role models" or UNESCAP)



Recommendation 4

Review this brief and NDCs for actions that can contribute to the COVID-19 response, and update in 2021 based on revised ambition.

REFERENCE LIST

- 1 WHO, (2020). Pneumonia Of Unknown Cause – China. [online] World Health Organization. Available at: <<https://www.who.int/csr/don/05-january-2020-pneumonia-of-unkown-cause-china/en/>>
- 2 IPSOS MORI, (2020). Two Thirds Of Citizens Around The World Agree Climate Change Is As Serious A Crisis As Coronavirus. [online] Ipsos. Available at: <https://www.ipsos.com/sites/default/files/ct/news/documents/2020-04/earth-day-2020-ipsos.pdf> -
- 3 UNESCAP, (2020). ECONOMIC AND SOCIAL SURVEY OF ASIA AND THE PACIFIC 2020: Towards Sustainable Economies [Ebook]. UNESCAP. Retrieved from: <https://www.unescap.org/sites/default/files/publications/Economic%20and%20Social%20Survey%20of%20Asia%20and%20the%20Pacific%202020%20Towards%20sustainable%20economies.pdf#page=33>.
- 4 Asian Development Bank, (2020). Asian Development Outlook (ADO) 2020: What Drives Innovation in Asia?. Asian Development Bank. Retrieved from: <https://www.adb.org/publications/asian-development-outlook-2020-innovation-asia>.
- 5 OECD, (2020).Economic Outlook for Southeast Asia, China and India 2020 – Update: Meeting the Challenges of COVID-19, OECD Publishing, Paris, <https://doi.org/10.1787/e8c90b68-en>
- 6 UNDESA, (2020). World Economic Situation and Prospects (WESP) mid-2020 report | Multimedia Library - United Nations Department of Economic and Social Affairs. UNDESA. Retrieved from:<https://www.un.org/development/desa/publications/world-economic-situation-and-prospects-wesp-mid-2020-report.html>.
- 7 WOLRD BANK, (2020). Projected poverty impacts of COVID-19 (coronavirus)[Ebook]. WORLD BANK. Retrieved from: <http://pubdocs.worldbank.org/en/461601591649316722/Projected-poverty-impacts-of-COVID-19.pdf>.
- 8 ILO, (2020). ILO Monitor: COVID-19 and the world of work. Second edition Updated estimates and analysis. ILO. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_740877.pdf.
- 9 UNICEF, (2020). COVID-19 threatens to reverse education gains. Unicef.org. Retrieved from: <https://www.unicef.org/eap/stories/covid-19-threatens-reverse-education-gains>.

REFERENCE LIST

- 10 UNICEF, (2020). Urgent need to secure learning for children across South Asia. Unicef.org. Retrieved from: <https://www.unicef.org/press-releases/urgent-need-secure-learning-children-across-south-asia>.
- 11 Le Quéré, C., Jackson, R.B, and others. (2020). Temporary reduction in daily global CO2 emissions during the COVID-19 forced confinement. Nat. Clim. Chang. 10, 647–653 (2020). <https://doi.org/10.1038/s41558-020-0797-x>
- 12 IEA, (2020). The impact of the Covid-19 crisis on clean energy progress – Analysis - IEA. IEA. Retrieved from: <https://www.iea.org/articles/the-impact-of-the-covid-19-crisis-on-clean-energy-progress>.
- 13 IEA, (2020). Global energy and CO2 emissions in 2020 – Global Energy Review 2020 – Analysis - IEA. IEA. (2020). Retrieved from: <https://www.iea.org/reports/global-energy-review-2020/global-energy-and-co2-emissions-in-2020>.
- 14 Our World In Data, (2020). Coronavirus Pandemic (COVID-19). Our World in Data. Retrieved from: <https://ourworldindata.org/coronavirus>.
- 15 UNDP, (2020). COVID-19 Global Gender Response Tracker. UNDP Covid. Retrieved from: <https://data.undp.org/gendertracker/>.
- 16 Development Reimagined, (2020). Our analysis (Africa’s COVID-19 economic and social response) – Development Reimagined. Developmentreimagined.com. Retrieved from: <https://developmentreimagined.com/our-analysis/>.
- 17 UNESCAP, (2020). COVID19 Policy response tracker. Retrieved from: <https://www.unescap.org/covid19>
- 18 UNESCAP, (2020). COVID19 Policy response tracker. Retrieved from: <https://www.unescap.org/covid19>
- 19 Edgar EU, (2019). Fossil CO2 and GHG emissions of all world countries, 2019 report. Retrieved from <https://edgar.jrc.ec.europa.eu/overview.php?v=booklet2019>.
- 20 UNTC, (2020). UNTC. United Nations Treaty Collection. Retrieved from: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=en.

REFERENCE LIST

- 21 Climate Action Tracker, (2020). Climate Action Tracker: Japan. Climateactiontracker.org. Available at: https://climateactiontracker.org/media/documents/2018/4/CAT_2015-07-22_CountryAssessment_Japan.pdf
- 22 UNESCAP, (2020). Economic And Social Survey Of Asia And The Pacific 2020 Towards Sustainable Economies. Available at: https://www.unescap.org/sites/default/files/ESCAP%20Survey_India%20policy%20dialogue_13May2020.pdf
- 23 Asia Development Bank, (2020). Asia And The Pacific: Renewable Energy Status Report. Available at: <https://www.adb.org/sites/default/files/publication/611911/asia-pacific-renewable-energy-status.pdf>
- 24 Economic Times, (2020). Excise Duty Hike On Petrol, Diesel: Govt To Garner Rs 39,000 Crore - ET Energyworld. [online] ETEnergyworld.com. Available at: <https://energy.economictimes.indiatimes.com/news/oil-and-gas/excise-duty-hike-on-petrol-diesel-govt-to-garner-rs-39000-crore/74633623>
- 25 World Bank, (2020). World Bank Open Data. Retrieved from <https://data.worldbank.org/>.
- 26 Geall, S. (2020). Oxford Energy Forum - China's Energy Policies in the Wake of COVID-19 - Issue 125 - Oxford Institute for Energy Studies. Retrieved from: <https://www.oxfordenergy.org/publications/oxford-energy-forum-chinas-energy-policies-in-the-wake-of-covid-19-issue-125/>
- 27 Tagotra, N. (2020). China's New Carbon Neutrality Commitment Will Affect Global Energy Security. Retrieved from: <https://thediplomat.com/2020/09/chinas-new-carbon-neutrality-commitment-will-affect-global-energy-security>
- 28 GSMA, (2020). The State Of Mobile Internet Connectivity 2019. [online] Gsma.com. Available at: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/07/GSMA-State-of-Mobile-Internet-Connectivity-Report-2019.pdf>
- 29 Our World In Data, (2020). Philippines: Coronavirus Pandemic (COVID-19). [online] Our World in Data. Available at: <https://ourworldindata.org/coronavirus/country/philippines?country=~PHL>
- 30 ICAO, (2020). Economic Impacts Of COVID-19 On Civil Aviation. Available at: <https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx>
- 31 IATA. (2020). Recovery Delayed As International Travel Remains Locked Down. Available at: <https://www.iata.org/en/pressroom/pr/2020-07-28-02/>
- 32 IATA. (2020). Industry Losses To Top \$84 Billion In 2020. [online] Iata.org. Available at: <https://www.iata.org/en/pressroom/pr/2020-06-09-01/>

REFERENCE LIST

- 33 UNDESA, (2020). World Economic Situation and Prospects (WESP) mid-2020 report | Multimedia Library - United Nations Department of Economic and Social Affairs. UNDESA. Retrieved from: <https://www.un.org/development/desa/publications/world-economic-situation-and-prospects-wesp-mid-2020-report.html>.
- 34 ICCT. (2020). CO2 Emissions From Commercial Aviation, 2018. [online] ICCT. Available at: https://theicct.org/sites/default/files/publications/ICCT_CO2-commercl-aviation-2018_20190918.pdf
- 35 AirportWatch, (2018). AirportWatch: Carbon emissions of air freight compared to other modes of transport. Retrieved from: <https://www.airportwatch.org.uk/air-freight/carbon-emissions-of-air-freight-compared-to-other-modes-of-transport/>
- 36 United Nations Data App, (2019) Undata App. [online] Data.un.org. Available at: <http://data.un.org/en/iso/pw.html>
- 37 Republic of Palau, (2019). Bureau of Budget and Planning Ministry of Finance: Statistical Yearbook (2019). Retrieved from: <https://www.palau.gov.pw/wp-content/uploads/2020/07/2019-Statistical-Yearbook.pdf>
- 38 International Monetary Fund, (2019). Republic of Palau. IMF Press Release No. 19/32. IMF Country Report No. 19/43.
- 39 UNFCCC, (2015). Republic of Palau: Intended Nationally Determined Contribution. Retrieved from: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Palau%20First/Palau_INDC.Final%20Copy.pdf
- 40 Palau Ministry of Health, (2020). Coronavirus Disease 2019 (COVID-19) Situation Report Palau Ministry Of Health - External Situation Report. Available at: http://www.palauhealth.org/2019nCoV_SitRep/MOH-COVID-19%20Situation%20Report.pdf
- 41 Carreon, B, (2020). 'Fear will always be there': Covid-free islands prepares to bring home stranded citizens. Retrieved from: <https://www.theguardian.com/world/2020/jun/02/fear-will-always-be-there-covid-free-island-prepares-to-bring-home-stranded-citizens>
- 42 UNESCAP, (2020). Palau Policy Response. Retrieved from: https://www.unescap.org/sites/default/files/Palau_COVID%20Country%20Responses.pdf
- 43 Republic of Palau, (2020). Assessing The Impact Of COVID-19 On The Palauan Economy. [online] EconMAP Technical Note March 31, 2020. Available at: https://pitiviti.org/news/wp-content/uploads/downloads/2020/04/EconFiscImpact_COVID-19_Mar2020_Web.pdf

REFERENCE LIST

- 44 Palau Government, (2020). Project to Make Palau a Carbon Neutral Destination Launched by Palau Bureau of Tourism, Sustainable Travel International, and Slow Food. <https://www.palaugov.pw/project-to-make-palau-a-carbon-neutral-destination-launched-by-palau-bureau-of-tourism-sustainable-travel-international-and-slow-food/>
- 45 World Bank, (2020). World Bank: Population, Total - Kazakhstan | Data. [online] Data.worldbank.org. Available at: <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=KZ>
- 46 World Bank, (2020). The World Bank In Kazakhstan. [online] World Bank. Available at: <https://www.worldbank.org/en/country/kazakhstan/overview>
- 47 UNFCCC, (2020). Intended Nationally Determined Contribution - Submission Of The Republic Of Kazakhstan. Available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Kazakhstan%20First/INDC%20Kz_eng.pdf
- 48 World Meters, (2020). Kazakhstan Coronavirus: 123,097 Cases And 1,945 Deaths - Worldometer. Available at: <https://www.worldometers.info/coronavirus/country/kazakhstan>.
- 49 UNESCAP, (2020). Kazakhstan: COVID Country Responses. Available at: https://www.unescap.org/sites/default/files/Kazakhstan_COVID%20Country%20Responses_updated.pdf
- 50 World Bank, (2020). The World Bank In Kazakhstan. Available at: <https://www.worldbank.org/en/country/kazakhstan/overview>
- 51 World Bank, (2020). Kazakhstan Economic Update – Navigating The Crisis. Available at: <https://www.worldbank.org/en/country/kazakhstan/publication/economic-update-summer-2020>
- 52 UNESCAP, (2020). Kazakhstan: COVID Country Responses. Available at: https://www.unescap.org/sites/default/files/Kazakhstan_COVID%20Country%20Responses_updated.pdf
- 53 World Bank, (2020). Employment In Agriculture (% Of Total Employment) (Modeled ILO Estimate) - Kazakhstan | Data. Available at: <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=KZ>
- 54 SDGs HelpDesk, (2020). Water Markets In Asia And The Pacific: An Overview Of Trends, Opportunities, Risks And Policies | SDG Help Desk. [online] Available at: <https://sdghelpdesk.unescap.org/e-library/water-markets-asia-and-pacific-overview-trends-opportunities-risks-and-policies>

REFERENCE LIST

- 55 UNESCAP, (2020). COVID-19 pandemic may give Asia-Pacific's oceans a chance to recover, highlights new UN report. UNESCAP. Retrieved from: <https://www.unescap.org/news/covid-19-pandemic-may-give-asia-pacific-oceans-chance-recover-highlights-new-un-report>.
- 56 SDGs HelpDesk, (2020). Water Markets In Asia And The Pacific: An Overview Of Trends, Opportunities, Risks And Policies | SDG Help Desk. [online] Available at: <https://sdghelpdesk.unescap.org/e-library/water-markets-asia-and-pacific-overview-trends-opportunities-risks-and-policies>
- 57 UNESCAP, (2020). The waste crisis in Asia and the Pacific and the urgent need for change. UNESCAP. Retrieved from: <https://www.unescap.org/sites/default/files/1.%20The%20waste%20crisis.pdf>.
- 58 Global Waters, (2020). Afghanistan. Afghanistan | Globalwaters.org. Retrieved from: <https://www.globalwaters.org/wherewework/asia/afghanistan>.
- 59 Trading Economics, (2020). Myanmar Population | 1960-2019 Data | 2020-2022 Forecast | Historical | Chart | News. Tradingeconomics.com. Retrieved from: <https://tradingeconomics.com/myanmar/population>.
- 60 World Bank, (2020). The World Bank In Myanmar. World Bank. Retrieved from: <https://www.worldbank.org/en/country/myanmar/overview>.
- 61 UNOCHA, (2020). Myanmar: A country prone to a range of natural disasters. Retrieved from: <https://reliefweb.int/sites/reliefweb.int/files/resources/Myanmar%20A%20Country%20prone%20to%20a%20range%20of%20natural%20disasters.pdf>.
- 62 UNESCAP, (2020). Myanmar: Policy responses. UNESCAP. Retrieved from: https://www.unescap.org/sites/default/files/Myanmar_COVID%20Country%20profile%20280820.pdf.
- 63 Myanmar National Natural Disaster Management Committee, (2020). Myanmar National Framework For Community Disaster Resilience. [online] Available at: https://www.preventionweb.net/files/submissions/52573_myanmarcommunityresilienceframework.pdf
- 64 MYSAP, (2020). Climate Change and options for shortened fish culture seasons. Myanmar Sustainable Aquaculture Programme. Retrieved from: https://themimu.info/sites/themimu.info/files/documents/Leaflet_Climate_Change_Options_for_Shortened_Fish_Culture_Seasons_ENG.pdf.

ACKNOWLEDGEMENTS

This policy brief is produced by the Environment and Development Division (EDD) of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).

The publication was drafted under the overall guidance of Stefanos Fotiou (Director, EDD) and supervision of Katinka Weinberger (Chief, EDPS) and Aneta Nikolova. The research team comprised of ESCAP staff: Aneta Nikolova and consultant: Hannah Ryder and interns: Zhiheng Chi. The team is grateful for data compiled by Zhenqian Huang and Sweta Saxena, and review by Curt Garrigan and Omar Siddique, all ESCAP staff members.

DISCLAIMER

This policy brief is issued without formal editing. Views expressed herein do not necessarily reflect that of ESCAP or any UN agency.