



## Briefing Paper

# A Post-Covid19 Recovery That Makes Sense

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As Covid-19 ravages the world and turns the global economy upside down, countries are struggling to reopen their economies without proper blueprints on how to reverse the disruption to the social and economic lives of billions of people. Learning from the crisis, however, governments should aim for an economic rejuvenation that makes sense – a recovery that makes society safer and more resilient.

It is unfortunate that it took a pandemic for people around the world to question the fundamental worth of our development model, and whether we are paying too high a price for the unsustainable growth that has so far caused severe deterioration of our natural world, which has now come back to bite us. This coronavirus pandemic is not a “black swan” event<sup>1</sup> as many people and health experts have been warning governments of the probability of a pandemic.<sup>2</sup> Scientists have warned that destruction of habitats had brought close proximity between wild animals and humans that made it easier for diseases to cross species, as was the case with Covid-19. The vulnerability of human society exposed by this pandemic proves that economic growth does not exist in a bubble and to be sustainable, must be conducive to a safe and healthy environment.

In short, this mean tackling head-on the greatest threat to human civilisation in the near future – climate change.

The disruption caused by Covid-19 offers a glimpse to the future of unabated climate change where almost all aspects of our economic, social and natural systems are under threat. Irregular weather events, sea level rise and hotter days will cause displacement of people, food and water shortage, the spread of vector-borne diseases and severe loss of biodiversity, all at the same time. Like the current pandemic, climate change will have the greatest impacts on vulnerable communities such as poor households, the sick and elderly, who do not have many options and safeguards to fall back on to start with. Also like the current pandemic, global efforts to tackle the problems are likely to be uncoordinated and each nation will scramble to protect its own border and people. Nonetheless, given the interconnectedness of our world, upheaval in one part of the world will cause disruption in another and the impact on the global economy will be uncertain. Furthermore, climate change will also cause permanent change in lifestyles, most likely for the worse.

Going forward, it is imperative for governments to resist the urge to patch things up the way they were as the pandemic has exposed the fundamental flaws in our growth strategies. Governments need to move towards a better economic model that incorporates the risks of environmental damage as internal costs with an urgency to abate threats posed by climate change. The new growth model also needs to be driven by investments in social infrastructures with the improvement of the wellbeing of the people and our planet as the ultimate goal instead of maximisation of profits. This will increase the resilience of communities and the environment in dealing with climate change impact.

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<sup>1</sup> “Black swan” refers to an unpredictable, rare and catastrophic event that was coined by Nassim Nicholas Taleb in 2007.

<sup>2</sup> “Coronavirus Is Significant, But Is It A True Black Swan Event?”, *The Conversation*, 1 May 2020.  
<https://theconversation.com/coronavirus-is-significant-but-is-it-a-true-black-swan-event-136675>

For the advancement of human and planetary welfare, governments need to do the following – Mitigate, Build Resilience and Contingency Planning.<sup>3</sup> “Mitigate” refers to the need to strive for an ambitious GHG reduction scenario (e.g. below 2°C increase in global temperature) through large-scale mitigation efforts. “Build Resilience” refers to the need to build for and adapt to a more dangerous climate change scenario (e.g. 3-4°C increase). “Contingency Planning” means the need to build capability to respond to extreme climate change scenarios (5-7°C increase). Below is a list of priority actions governments in both developed and developing worlds should take to revive their economies post pandemic that will also minimise the risk of a ‘runaway’ climate.

#### **A. Reduce Greenhouse Gases (GHGs) Emission of Vital Socio-Economic Infrastructures**

Modern societies are nothing without the fundamental infrastructures that power and support them such as electricity, transportation and buildings. However, the construction and use of these infrastructures also emit a large volume of GHGs (in fact, these three sectors account for nearly half of the global GHG emissions<sup>4</sup>), which cause global warming and climate change. This is because so far these infrastructures rely on conventional fossil fuels and materials such as cement and steels that are polluting from the point of fuel/mineral extraction to use and then end-product disposal. As societies will always need these infrastructures to function and grow, it is pertinent that governments, which provide a large portion of these infrastructures as public goods, make a conscious decision to shift away from polluting sources and materials and adopt cleaner technologies.

Investment in renewable energy has increased steadily over the years globally, with renewables growth now outpaces fossil fuels.<sup>5</sup> This is because the cost of renewables like solar and wind energy has reached parity with conventional energy, even cheap fuels like coals in some places. However, an acceptable climate change scenario requires more fossil fuel generation to be replaced by renewables in a relatively short timeframe. The urgency of this shift has not been reflected in government policies especially in developing countries. In particular, only a few countries globally have adopted CO<sub>2</sub> emission trading systems or imposed a carbon tax, which could facilitate an effective shift to renewable energy sources. Coupled with renewable energy, governments should also invest in smart grids that can accommodate more flexible energy sources and encourage distributed energy systems that allow cities and communities to be more energy independent. And as regional integration accelerates (especially in a post-Covid world where globalisation has taken a hit), regional grids can also play an important role in delivering cheap and secure energy across nations.

The transport sector is also a big GHG emitter. This is because of our over-reliance on personal vehicles and the sprawling cities that are not designed for non-motorised

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<sup>3</sup> This is taken from the “ABC” Risk Management Framework proposed by E3G in “Degrees of Risk: Defining a Risk Management Framework for Climate Security”, 2011. <https://www.e3g.org/showcase/degrees-of-risk/>

<sup>4</sup> Global Greenhouse Gas Emissions Data, United States Environmental Protection Agency. <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>

<sup>5</sup> *Renewables 2019 Global Status Report*, REN21 (2019). <https://www.ren21.net/gsr-2019/>

transport modes. While emissions from air travel have plunged abruptly due to the pandemic, ridership of public transportation may take a hit after the pandemic due to health concerns, which may translate into an increase in travel by cars. The shift to electric or alternative fuel vehicles has been slow globally due to the cost of technologies and the need to build new charging/fuelling stations. Despite this, governments need to recognise that investments in better (with better hygiene and sanitation) public transport systems and infrastructure for non-motorised transport modes (e.g. cycling, pedestrian walkways) are crucial in cutting GHG emissions as well as improving air quality in the long term. Also, remote working and learning may become the “new normal” post pandemic so governments should seriously consider switching the funds set aside for roads to building broadband and other IT infrastructure instead.

Buildings are another high GHG emitting sector that need to be overhauled. Although new buildings are becoming more energy efficient and building codes are being tightened, there are immense challenges in transforming old housing stocks. Concerted effort by the governments and other stakeholders are required to facilitate large-scale retrofitting of existing buildings due to the high upfront cost and disruption to people’s lives. Governments should also facilitate the adoption of green building designs and technologies, and public housing bodies or associations should work with industry actors to become leading market players in creating and scaling up affordable green social housing. Going forward, perhaps more important than thinking about individual buildings is the need to promote green townships. Buildings are more than just shelters. They also shape social interactions between and within communities. A well-design township that emphasises not only green buildings but also easy access to amenities and workplace, pedestrian friendly and universal design, public spaces for social activities and a safe environment will increase social wellbeing and reduce environmental pollution. Just like for buildings, governments should also look for innovative ways to retrofit existing townships post-Covid to make them more sustainable socially and environmentally.

## **B. Protect Carbon Sinks and Natural Habitats**

In addition to reducing GHG emissions, governments should also step up protection of natural carbon sinks such as forests, mangroves, grasslands, oceans and soil. In the absence of effective technologies to extract CO<sub>2</sub> directly from the atmosphere, these are our hedge against a runaway climate scenario. Coincidentally, protecting these carbon sinks will also make sure that they retain as much of the carbon trapped as possible and avoid becoming emission sources. Another huge co-benefit of protecting these natural ecosystems is the preservation of habitats and biodiversity; this can slow or even reverse the mass species extinction that the planet is experiencing. Presently, more than 1 million species under threat.<sup>6</sup> Halting the relentless encroachment of natural habitats and biodiversity will also reduce the chance of future pandemics. According to research, in a “diverse ecosystems well separated from human

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<sup>6</sup> “Extinction: A Million Species At Risk, So What Is Saved?” *BBC*, 28 December 2019. <https://www.bbc.com/news/science-environment-50788571>

habitations, viruses ebb and flow without ever having a chance to make it to the big time”<sup>7</sup>. Also, “virus spillover risk” from wildlife to people increases through close proximity between wildlife and people when natural habitats are encroached on.

Governments should establish clear redlines on reduction of carbon sinks and create an inventory of areas that are used as large carbon sinks. These areas should be protected and their value for reducing CO<sub>2</sub> should be formally recognised. There should be programmes to explore land-efficient ways of creating large-scale carbon sinks, one option of which is algae sequestration. Reforestation efforts also need to be planned properly to make sure it does not take over land suitable for agriculture and threaten food production. Reforestation and other biosequestration efforts need to aim to achieve various co-benefits including enhancing biodiversity and protection of critical habitats. At the same time, governments should monitor closely the state of the carbon sinks to assess their storage capacity. In particular, oceans absorb almost a third of global CO<sub>2</sub> emissions<sup>8</sup>, with the capacity changing depending on the temperature, currents and so on. However, the increasing amount of CO<sub>2</sub> uptake means oceans will suffer from accelerated acidification that threatens many base-level components of the food chain.<sup>9</sup> The warming and acidification of oceans may also create positive feedback loop that changes regional weathers and accelerate global warming. This is a huge unknown that could be a ticking time bomb.

### C. Increase Food Security

The current pandemic has caused food shortages in some places due to disruption in supply chain, panic buying and tighter border control. Climate change poses an even greater threat to our food security as extreme weathers, excessive warming and sea level rise will affect food production at a large scale. Plant diseases and pest will be more prevalent with the changing climate and their impact on food yield will potentially be huge. In dealing with these threats, governments should evaluate the current food production and supply chain to identify areas most susceptible to the threats of climate change. Governments may need to move production areas, develop more drought or seawater resistant plant species, identify substitute crops and strengthen cross-border cooperation in research and development. Although nations need to increase food self-sufficiency, it is unrealistic to completely close the border to food import. Hence, governments should work together to devise plans to increase regional food security.

Increasing food security does not only mean raising food production but also focusing on food safety, affordability and accessibility as well as nutritional intake of consumers. Governments should put in place comprehensive plans that safeguard food access

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<sup>7</sup> “Want To Stop the Next Pandemic? Start Protecting Wildlife Habitats”, *Time*, 8 April 2020.

<https://time.com/5817363/wildlife-habitats-disease-pandemics/>

<sup>8</sup> “Oceans Absorb Almost 1/3 of Global CO<sub>2</sub> Emissions, But At What Cost?” World Economic Forum, 19 March 2019. <https://www.weforum.org/agenda/2019/03/oceans-do-us-a-huge-service-by-absorbing-nearly-a-third-of-global-co2-emissions-but-at-what-cost>

<sup>9</sup> “Scientists Study Ocean Absorption of Human Carbon Pollution”, *The Guardian*, 16 February 2017.

<https://www.theguardian.com/environment/climate-consensus-97-per-cent/2017/feb/16/scientists-study-ocean-absorption-of-human-carbon-pollution>

especially of vulnerable communities particularly during disasters. The current market-based system may not work during a prolonged period of disruption in food production, distribution and accessibility/affordability. Increasing the welfare and income stability of farmers as well as innovation in the agriculture sector will also go a long way in building a resilient food production system.

#### **D. Better Water Management**

According to the United Nations, water is the ‘primary medium through which we will feel the effects of climate change’<sup>10</sup>. This is manifested in the increased unpredictability of water availability (e.g. due to prolonged drought and sea level rise), destruction of water points and increased water contamination caused by flooding and storms. In anticipation of water shortage due to changing weather patterns, governments need to identify and utilise all possible water sources including building more infrastructure to capture rainwater and store stormwater. Rainwater harvesting facilities should become mandatory for new construction projects. Governments may also need to clean up rivers to increase the supply of safe drinking water. Water desalination may not be a viable option for many governments now as it is expensive and energy intensive but going forward, better and cheaper technologies will help provide a lifeline to many.

Equally important to finding new water sources is the need to find ways to reduce water consumption. In many places, ultra-low water prices send out the wrong signal regarding the scarcity of the water. Pricing water correctly while mandating the adoption of water saving devices or practices will make sure that the taps can flow for a bit longer as governments look for alternative water sources. Governments should also make sure that water treatment facilities and distribution infrastructure are stress-tested against disasters, which are to become more frequent as a result of climate change. Access to clean water should be one of the top public health priorities of governments. Lastly, governments also need to pay attention to water threats beyond their borders especially the issue of cross-border water subsidisation through food export. Countries or regions that will suffer from severe water shortage in the future will not be able to produce and export the same amount of food, which will cause food security issue for importing countries.

#### **E. Expand Green and Circular Economy**

It is clear that going forward, governments need to build a new type of economy that is kinder and more nurturing to the natural world. Ever since the magnitude of climate change impact on human civilisation has become clear, some countries have tried to identify a pathway towards a greener and more sustainable economy. The European Union (EU) is leading the way in transitioning towards a better growth model through the new Green Deal.<sup>11</sup> Essentially, this is a new growth strategy that aims to transform

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<sup>10</sup> *Water and Climate Change*, UN Water. <https://www.unwater.org/water-facts/climate-change/>

<sup>11</sup> *A European Green Deal*, European Commission. <https://ec.europa.eu/info/strategy/priorities-2019->

the region into a modern, resource- efficient and competitive economy that, inter alia, allows no net emissions of GHG by 2050 and is decoupled from resource use.<sup>12</sup>The Green Deal Roadmap can provide a useful guidance to other countries on how to transform their economies in the post-Covid recovery. Furthermore, the Green Deal may also have a more “forceful” impact on other countries through the introduction of a border tax on carbon, which will penalise economies that continue the high-emission economic model.

Green economy means more than just having greener vital socio-economic infrastructures (e.g. energy, transport); it is essentially about transforming the whole value creation process from production to enjoyment (of good and services) and subsequently disposal of the waste. This applies to all sectors of economic activities including manufacturing, mining and agriculture and even services such as tourism and finance. Essentially, governments need to apply a ‘climate friendly’ development filter to all spectrum of economy and introduce both “carrots and sticks” to shift production and behavioural changes. For example, governments can introduce a “carbon budget”, emissions trading scheme and carbon tax, invest in research and development or provide incentives for the uptake of low carbon technologies. Governments can also introduce minimum standards (e.g. of energy and water usage) for both the production process and products, and mandate the recovery of materials to achieve a ‘closed-loop’ or circular economy.

The transition towards a green economy requires the governments to play an active role as market forces alone is not going to be enough. This is due to the following reasons: a) Markets are dominated by incumbents whose survival is tied to the status quo (e.g. oil or coal companies) so there is little incentive to “shift gear” at a speed that is needed; b) Investment in new technologies usually have higher capital requirements due to the risks involved, which can be better afforded by governments (government actions can also reduce the risks through policy/regulations and acting as guarantors); c) Governments can also better facilitate and pay for concerted effort on the research and development of critical new technologies; and d) Large-scale adoption of new technologies also require some kind of governmental intervention such as monetary incentives (e.g. Feed-In-Tariff for renewable energy) or standard setting (e.g. fuel efficiency of vehicles).

## **F. Promote Sustainable Financing**

The financial sector plays an important role in making sure that post-Covid recovery continues on the pathway of sustainability. Before the coronavirus pandemic, there has been a movement within the global financial sector to channel money and investments into green and sustainable companies or projects. Examples are the Corporate Forum on Sustainable Finance, The Global Green Finance Council, Climate Bond Initiative and the Green Bond Pledge.<sup>13</sup> In addition, stock exchanges around the

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[2024/european-green-deal\\_en](#)

<sup>12</sup> Ibid.

<sup>13</sup> Sustainable Finance Initiatives, International Capital Market Association (ICMA)

world have started to require publicly listed companies to report on climate change risks and strategies as these risks are capable of causing widespread destruction of value and harm to the public interest.<sup>14</sup> Going forward, it is important to accelerate this trend to divert funds away from harmful investments that will cause financial and market instability in the long run (e.g. through stranded assets).

Governments can introduce a series of measures to support the shift in the financial sector towards green finance. Firstly, governments can promote green finance by providing more clarity on what it means, which will reduce the risk of greenwashing and market manipulation. The EU recently published its Taxonomy for Sustainable Finance, which is a “classification instrument to help financial players and companies determine which activities qualify as sustainable”.<sup>15</sup> Secondly, governments can also mandate public or state-owned banks or funds to channel certain percentage of its investments to green activities with the ultimate aim of diverting hundred percent of its investments into “climate-friendly” activities. Furthermore, the central banks can play a powerful role in supporting the development of green financing models and enforcing adequate pricing of environmental risks by financial institutions through green micro-<sup>16</sup> and macro-prudential<sup>17</sup> regulations, green financial market development<sup>18</sup> and green credit allocation<sup>19</sup>.

In addition, governments can reduce the financial risks of green projects or technologies by either acting as guarantors or lenders to leverage larger amount of private funds. Governments can also provide the facilities to aggregate or consolidate green projects to make them more financially viable to private investors. In 2012, the UK Government launched the world’s first Green Investment Bank that used public money to mobilise private finance into the green energy sector and managed to help financed more than £12bn of UK green infrastructure projects between 2012 and 2017.<sup>20</sup> This model can be replicated in other countries to set up special publicly-funded banks focus solely on investing in green projects and technologies.

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<https://www.icmagroup.org/green-social-and-sustainability-bonds/sustainable-finance-initiatives/>

<sup>14</sup> “Climate Resilient Stock Markets: Climate Change Reporting Proposals for Adoption or Support by Stock Exchanges”, Climate Disclosure Standards Board, December 2014

[https://www.cdsb.net/sites/cdsbnet/files/cdsb\\_climate\\_resilient\\_stock\\_markets\\_0.pdf](https://www.cdsb.net/sites/cdsbnet/files/cdsb_climate_resilient_stock_markets_0.pdf)

<sup>15</sup> “What Is the Taxonomy for Sustainable Finance?” BBVA. <https://www.bbva.com/en/what-is-the-taxonomy-for-sustainable-finance/>

<sup>16</sup> This includes introducing disclosure requirements, mandatory environment and social risks standards, differential reserve requirements and green financial regulations. “Central Banking, Climate Change and Green Finance”, Simon Dikau and Ulrich Volz. September 2018 (ADB Institute).

<https://www.adb.org/sites/default/files/publication/452676/adbi-wp867.pdf>

<sup>17</sup> Such as climate-related stress testing, differentiated capital requirements, counter-cyclical capital buffers and large exposure restrictions.

<sup>18</sup> Such as green bond guidelines.

<sup>19</sup> Such as preferred interest rates for priority sectors, targeted refinancing lines and minimum and maximum credit quotas.

<sup>20</sup> Green Investment Group. <https://greeninvestmentgroup.com/about-us/>

## A. Effective Disaster Management

The coronavirus pandemic has exposed the structural problems faced by many countries, not least the common failure in activating an effective disaster management system that deals with the threat in a timely and least disruptive manner. Many countries lack the experience and foresight to deal with climate change related disasters that might be new or at a scale never seen before. Going forward, governments will need to adopt new approaches and technologies to make the society more resilient against climate change impact. Effective disaster management should also be made a core component of the growth strategy as failure to deal with the impact will cause untold damages on the society and economy.

Governments should invest in better science-based forecast modelling and identify major vulnerable points in the socio-economic systems. This should be followed by creating effective cross-departmental coordination. Governments need to allocate adequate money to climate adaptation and resilience; in fact, all governments should see this as a strategic spending on par with spending for national defence. Climate security is one of the most important tools in protecting the stability and safety of a country in the long run. Climate adaptation strategy should also prioritise vulnerable communities – economic and social policy should be introduced to reduce their vulnerability (e.g. poverty, illness, disability) and increase their resilience. Providing adequate social safeguards will give much needed relief to these communities in the short term. Lastly, governments need to stress-test and increase the resilience of their vital infrastructures, and perhaps even designate areas that are not suitable for any type of development due to their vulnerability.

Post-Covid economic recovery is exactly the time and place to fast-track global transition to a much more sustainable development. There is opportunity in every crisis. Governments should use the “pause” in global economy to switch direction and achieve their long-term goal of climate security. In particular, governments should accelerate (instead of delay) the implementation of green transformation such as the Green Deal of the EU, energy transition and greening of the financial sector that many countries have embarked on.

Governments should use every tool available to quicken the move towards a green and circular economy. Post-Covid economic and financial stimuluses should focus on building resilient social infrastructures, and on expanding existing and new sectors that are crucial to the development of an inclusive and climate-friendly future.

This may just be our last chance to reset our growth model.