

# How to green the post-COVID-19 recovery process?

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## Introduction

COVID-19 has undoubtedly changed our lives in a matter of months. The pandemic has exposed the fragilities of our economies and deepened existing inequalities whilst highlighting the need for resilience, innovation and cooperation in our societies. With hundreds of thousands of casualties worldwide, and climbing, and annual global costs in the range of \$2.0 trillion to \$4.1 trillion (2.3% to 4.8% of global GDP)<sup>1</sup>, the pandemic has completely altered the landscape of our economies, and perhaps the underlying architecture, for the coming generation. As countries begin injecting resources into their economies to revive them after COVID-19 impact, this presents both opportunities and threats to enhancing nations' resilience to climate change and reaping multiple benefits that would advance sustainable development goals (SDGs). Decisions made now and in the coming months will be some of the most important made in generations. They will affect people all around the world for years to come. Therefore, we need to ensure that the recovery investments help us to build back in a way that not only stimulates the economy but also ensures greater resilience to the disruptions and crises we will inevitably face in the future.

This brief describes a set of principles and recommendations to drive recovery efforts in the global transition to a post-COVID-19 scenario.

## The impact of COVID-19

The impact of the pandemic on the global economy is likely to exceed both the 2008-09 Great Financial Crisis (GFC) and the Great Depression in the 1930s<sup>2</sup>. This includes a 9% year-on-year fall in global production and manufacturing output, and a decline in global merchandise trade of almost 27% in Q2 2020 - the largest fall in global commodity prices on record (-20.4% between February and March 2020). On the social side, a decline in employment of almost 10.5% of total working hours - the equivalent of 305 million full-time workers<sup>3</sup> is predicted. In the USA alone, more than 20 million jobs were lost in April<sup>4</sup> and the World Bank estimates that the pandemic will result in 24 million people remaining trapped in poverty across East Asian and Pacific regions in 2020<sup>5</sup>.

The COVID-19 and the climate crises are closely interlinked, in that the former affects economies and therefore greenhouse gas (GHG) emissions, making future developments and the resulting emissions gap very uncertain. Like climate change, COVID-19 disproportionately affects those lacking the capacity to cope with its impacts (e.g. St Lucia lost 13,000 jobs in one day: approximately 16% of its total labour force). It may also well-exacerbate climate change impacts as governments divert some of the resources earmarked for climate change to address the pandemic<sup>6</sup>. The economic damage caused by the COVID-19 pandemic will undoubtedly cause global CO<sub>2</sub> emissions from fossil fuels and industry to fall in 2020 by at least 4–11% and possibly also in 2021 by 1% above to 9% below 2019 levels<sup>7</sup>. However, if low carbon development strategies and policies are not rolled out in the economic stimulus packages, emissions could rebound and even overshoot previously projected levels by 2030, despite lower economic growth<sup>8</sup>. The question of how the economic recovery should be designed remains crucial in shaping the long-term pathways for GHG emissions and determining whether the Paris Agreement's 1.5°C target can be achieved.

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<sup>1</sup> Green Growth Knowledge Platform, 2020.

<sup>2</sup> Gopinath, 2020.

<sup>3</sup> CCSA, 2020.

<sup>4</sup> New York Times. 2020 .

<sup>5</sup> World Bank, 2020c.

<sup>6</sup> Gumbs et al., 2020.

<sup>7</sup> The impact on 2020 annual emissions depends on the duration of the confinement, with a low estimate of -4% (-2 to -7%) if pre-pandemic conditions return by mid-June, and a high estimate of -7% (-3 to -13%) if some restrictions remain worldwide until the end of 2020. Source: Quéré, et al., 2020.

<sup>8</sup> An analysis by Carbon Tracker estimated that global emissions would need to fall by some 7.6% every year this decade – nearly 2,800 Mt CO<sub>2</sub> in 2020 – in order to limit warming to less than 1.5C above pre-industrial temperatures<sup>8</sup>.

## The opportunity

The planet is facing a deeper and longer-term crisis, rooted in several interconnected global challenges. Like COVID-19, climate change, biodiversity loss, and financial collapse do not observe national or even physical borders. These problems can be managed only through collective action that starts long before they become full-blown crises and must be acted upon not as singular threats but as a potential series of shocks. Therefore, we must do more than simply rebuild an economy that is just as vulnerable to shocks like the one that preceded this crisis. If we fail to use this opportunity to prepare for future crises, we will exacerbate current stressors and make ourselves less resilient in the face of future challenges.

The pandemic is a generational opportunity to rethink critical infrastructure, raise standards and develop innovative solutions. As policymakers prepare economic recovery packages, they must avoid a narrow focus on the “quick wins” that favour business-as-usual approaches that will lock in countries to decades of high-carbon and unsustainable development<sup>9</sup>. Since public spending will drive the recovery, public funds should be used wisely. These are good investments because they provide benefits in three areas: to the economy, the environment, and communities. If done skilfully, green recovery plans can create a wealth of benefits, including energy security, just transition opportunities for displaced workers, enhanced health, equitable resource access, and help for developing economies to “leapfrog” to new technologies<sup>10</sup>.

## Principles for a green recovery

Several solutions allow us to address both the economic downturn and climate crises while rebuilding more resilient systems. The most effective efforts should take into account the following principles articulated in more detail below.

Table 1. Principles for greening economic recovery efforts.

<b>Create Jobs and Grow the Economy</b>	<p>Job creation and economic growth are key pillars of any economic recovery package. Since the last global economic crisis, the clean energy sector has proven to be a lasting force in the global economy, with significant job creation potential. Today, there are more than 11 million jobs in the clean energy sector globally<sup>11</sup>. Global green industries create more jobs per amount invested than fossil fuel industries, with every US\$1 million shifted from fossil fuels to renewable energy and energy efficiency producing a net increase of five jobs. Shifting to a greener economy could create 24 million new jobs globally by 2030 if the right policies are put in place<sup>12</sup>. Thus, we should prioritize investments with the greatest job creation and economic growth potential.</p>
<b>Support for Public Health and Reduce Air Pollution</b>	<p>Given the clear linkage between COVID-19 impacts and air quality, reducing air pollution should be central in any green recovery plan. Air pollution kills an estimated 7 million people annually, and morbidity and premature mortality associated with air pollution from road transport cost OECD countries alone \$1.7 trillion in 2010<sup>13</sup>. Since cleaner air can also reduce the impact of other infectious diseases, society should prioritize industries and clean technologies with the highest potential to improve public health<sup>14</sup>. This includes measures such as renewable electricity generation, electric vehicle adoption, public transportation, all-electric buildings etc.</p>
<b>Enhance Economic, Energy, and Climate Resilience</b>	<p>This crisis highlights the vulnerability of fossil fuel-powered energy systems: oil markets have plunged to historic lows and begun a period of price volatility, which could harm businesses due to uncertainty regarding future planning. In the electricity sector, centralized, fossil fuel-based systems have vulnerabilities both at the plant level and due to dependence on power lines. By contrast, distributed energy resources can provide greater resilience for communities, by providing continuous power for critical infrastructures like hospitals and fire stations. These are particularly important considerations during a health crisis, or an extreme weather event made worse by climate change. The net benefit of investing in resilient infrastructure over the next decade in developing countries would be \$4.2 trillion over the lifetime of new infrastructure, with a \$4 benefit for each \$1 invested<sup>15</sup>. Therefore, we must prioritise the industries, technologies, and systems that help people adapt to unexpected shocks or crises.</p>

<sup>9</sup> Mountford, 2020.

<sup>10</sup> Holland et al., 2020.

<sup>11</sup> Ibid

<sup>12</sup> United Nations Sustainable Development Goals, 2019.

<sup>13</sup> OECD, 2016.

<sup>14</sup> Lelieveld et. al., 2019.

<sup>15</sup> Global Commission on Adaptation, 2019.

<b>Decarbonise</b>	<p>Policymakers must ensure that decarbonisation plays a central role in their stimulus incentives. In the absence of a strong clean energy component, legacy industries could capture a foothold that maintains or even increases a high emissions trajectory. Recovery planning should prioritise least-cost investments with the greatest potential for enabling world economies to achieve the Paris Agreement's goal of limiting warming to less than 1.5°C.</p>
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Table 2. Synthesis of key green stimulus interventions in five key economic sectors available for policymakers in the very short term.

Type of intervention	Description	Examples across sectors
<b>Direct investments and government purchasing</b>	Direct investments in the deployment of low-carbon technologies and government purchasing of low-carbon goods and services	<ul style="list-style-type: none"> <li>Investment in renewables (e.g. the Nigerian government has powered one of the hospitals dedicated for COVID-19 treatment, with two solar hybrids mini grids<sup>16</sup>)</li> <li>EV purchases for public car fleets</li> </ul>
<b>Economic incentives</b>	Economic incentives that overcome disadvantages to incumbent technologies to accelerate the uptake of low-carbon technologies	<ul style="list-style-type: none"> <li>Tax credits for zero-carbon technologies</li> <li>Low-interest loans for retrofitting residential buildings</li> </ul>
<b>Conditional sector support ("bailouts")</b>	Financial support tied to conditions for low carbon development for companies that would otherwise risk insolvency due to external shock	<ul style="list-style-type: none"> <li>Equity or government guarantees for automobile and/or aviation companies dependent on emission performance standards implemented in predefined timeframe (e.g. The Austrian government announced last April that any state aid to support Austrian Airlines should be tied to specific climate conditions<sup>17</sup> with options including a pledge to reduce short-haul flights, increased cooperation with rail companies, heavier use of eco-friendly fuels and bigger tax contributions)</li> </ul>
<b>Fiscal measures for additional revenue streams</b>	Removal for existing fossil fuel subsidies or the introduction of new taxes on fossil fuel use for generation of additional revenue streams	<ul style="list-style-type: none"> <li>Use the opportunity of very low oil and gas prices to phase-out fossil fuel subsidies or raise taxes</li> </ul>
<b>R&amp;D funding and roll-out of pilot projects of low-carbon technologies</b>	Funding interventions to accelerated R&D and roll-out of low-carbon technology pilot projects, potentially linking to technologies considered for highest plausible ambition pathways	<ul style="list-style-type: none"> <li>Funding for pilot projects in the heavy industry sector such as hydrogen-based steel making</li> </ul>
<b>Scale-up of skill development programs</b>	Scale-up of skill development and educational programs to meet rising unemployment	<ul style="list-style-type: none"> <li>Accelerated funding for skill development and vocational training programmes in the buildings sector to address the need for specific skills for energy-efficient retrofits</li> </ul>

### Direct support for zero-emissions technologies and infrastructure

Direct investments in zero-emissions technologies and related infrastructure present a key green stimulus intervention opportunity in energy and electricity supply. Given the electricity sector must fully decarbonise by 2050, such direct investments, particularly in renewable energy, must not only align with the Paris Agreement, but they will also have the potential to create direct employment and economic multiplier effects in the short-term while fostering technological innovation and structural benefits for economic development<sup>18</sup>. Governments must provide targeted financial support for the continued growth of renewables in 2020 and beyond<sup>19</sup>. This ranges

<sup>16</sup> REA, 2020.

<sup>17</sup> Morgan, 2020.

<sup>18</sup> Bahar, 2020.

<sup>19</sup> Ibid

from extending deadlines for commissioning projects beyond 2020, to continuing and extending existing policy measures proven to accelerate cost-effective deployment of renewable capacity. Such support assists industry to navigate the external shock of COVID-19: similar measures after the 2008-09 GFC proved highly effective in creating short-term employment opportunities<sup>20</sup>. For example, the African Union and the International Renewable Energy Agency have already agreed to work closely to advance renewable energy across the continent to bolster Africa's response to Covid-19<sup>21</sup>.

The accelerated development of large-scale energy infrastructure projects - for example in the field of smart grids, electric-vehicle charging, and digital connectivity - lays the foundation for a more efficient, resilient and future-proofed energy system<sup>22</sup>. Economic recovery packages can include funding the early decommissioning of ageing fossil fuel plants and oil wells under the condition of direct replacement with renewable-plus-battery combinations<sup>23</sup>. Such early decommissioning, in combination with the replacement, could be packaged with concessional debt or debt guarantees. Green stimulus measures can further support accelerated R&D and pilot funding for not-yet fully commercialised zero-emission technologies with significant cost reduction potential<sup>24</sup>. Examples include floating offshore wind farms, marine technologies and low-carbon hydrogen production.

### **Fiscal reform on fossil fuel subsidies**

Green fiscal policy can be an important element in a government's response toolkit for COVID-19 relief and recovery. This supports countries to rationalise inefficient expenditures such as environmentally harmful subsidies to create fiscal space and redirect the savings to high priority sectors such as health<sup>25</sup>. For example, carbon taxation and fossil fuel subsidy reform can be especially effective in the current low oil price environment. This is because the collapse in oil demand and prices has lowered the opportunity cost for fossil fuel subsidy reform. As noted in a recent IEA commentary, this recent drop in oil prices could see more than 40% of the current global fossil fuel subsidies, earmarked for oil, channelled directly towards clean energy transitions<sup>26</sup>. Subsidy swaps from fossil fuels to clean energy have direct sustainable development benefits, including job creation, skill development, gender equality and improving public health<sup>27</sup>. Removing fossil fuel subsidies and introducing taxes on fossil fuels that take externalities into account could provide average revenue streams to governments of about 2.6 per cent of global GDP<sup>28</sup>. The scale of global fossil fuel subsidies means that reforming them could cover a large portion of the "SDG financing gap"<sup>29</sup>. Savings realised through subsidy reductions could be further invested in solutions that promote a more resilient economy.

### **Investing in environmental sustainability**

Funding and incentives directed to energy efficiency measures and renewable energy technologies should be keystone elements in any effort to rebuild the economy. In the short-term, focusing on environmental sustainability can deliver on key criteria that most countries have for designing measures: job creation, the multiplier effect on demand and economic activity, and the speed of these transmissions. For example, research estimates that "\$1 m invested in the oil and gas in the United States creates just five jobs, compared to 17 jobs per million dollars invested in energy-saving building retrofits, 22 jobs for mass transit, 13 for wind, and 14 for solar"<sup>30</sup>.

In the medium to long term, the positive effects of a low-carbon and SDG-aligned transition on the human, natural and physical capital of nations, and the increased resilience of the socio-economy to environmental and climate change risk also adds more weight to the necessity for an environmental sustainability framing stimulus measures for a post – COVID-19 future.

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<sup>20</sup> Strand and Toman, 2010.

<sup>21</sup> IRENA, 2020

<sup>22</sup> IEA, 2020a

<sup>23</sup> Liebreich, 2020

<sup>24</sup> Bahar, 2020

<sup>25</sup> Green Growth Knowledge Platform, 2020.

<sup>26</sup> Birol, 2020.

<sup>27</sup> Bridle et al., 2019.

<sup>28</sup> International Monetary Fund, 2016.

<sup>29</sup> Sustainable Development Solutions Network, 2015.

<sup>30</sup> Guardian, 2020.

## Conclusion

The gravity of this pandemic gives us a renewed recognition of the interconnection between societies and nature. But this is an unprecedented opportunity to move away from unmitigated growth at all costs and the old fossil fuel economy, and deliver a lasting balance between people, prosperity and our planetary boundaries<sup>31</sup>. As COVID-19 has shown us, overnight transformational change is possible. Now is the time to rapidly phase out fossil fuels and invest in the future of energy. As Richard Damania, Chief Economist, Sustainable Development, at the World Bank said<sup>32</sup>: *“The challenge and the opportunity are certainly far larger than anything the world has seen since the end of WWII in terms of the amount of money that’s available to shift and build economies. It would be dreadful if we miss this opportunity because in a generation there is no such further opportunity coming”*. To build back better, a smarter use of natural resources is key. From the way we generate wealth, to the way we live, move, and eat, we must shift to a new paradigm of resource use that is socially equitable, economically resilient, and environmentally healthy.

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<sup>31</sup> Eurelectric, 2020.

<sup>32</sup> Green Growth Knowledge Platform, 2020.

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