

# Building Back Greener:

International Environmental Protection and Achieving the Sustainable Development Goals in the Context of COVID-19

---

**Background Paper**  
February 2022



Supported by:



Federal Ministry  
for the Environment, Nature Conservation,  
Nuclear Safety and Consumer Protection

based on a decision of  
the German Bundestag

**About this Report:** This study has been commissioned by the United Nations Environment Programme (UNEP), with financial support from the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection of Germany, in preparation for the UNEA Ministerial Meeting and Multi-stakeholder Dialogue in 2022.

It is focused on the status, opportunity and challenges of a green COVID-19 recovery. In line with the 2022 UNEA agenda, the report is focused particularly on sustainable consumption and production; resource efficiency, chemicals and waste; ecosystems and biodiversity management and protection; and environmental governance.

### **Lead author**

Emily Benson - Director of Engagement, Green Economy Coalition (UK)

### **Co-authors**

Bert De Wel - Climate Policy Officer, International Trade Union Confederation (France)

Elize Hattingh - Researcher: Sustainable Growth, Trade & Industrial Policy Strategies (TIPS) (South Africa)

Gaylor Montmasson-Clair - Senior Economist, TIPS (South Africa)

Gitika Goswami - Associate Vice President & Lead Policy Research & Planning, Development Alternatives Group (India)

Leslie Forsyth - Executive Director, Foro Nacional Internacional, (Peru)

Mirko Zürker, Senior Manager + Acting Co-Lead Green Entrepreneurship, SEED (Belgium)

Nicole Leotaud - Executive Director, Caribbean Natural Resources Institute (Trinidad)

Paul Farran - Senior Project Manager, ClimateWorks Australia

### **Edited & Produced by**

Ben Martin - Publications & Communications Manager, Green Economy Coalition

### **About the Green Economy Coalition:**

The Green Economy Coalition is a global, multistakeholder alliance on a mission to accelerate the transition to green and fair economies ([www.greeneconomycoalition.org](http://www.greeneconomycoalition.org)). The network is made up of 60+ members from civil society organisations, labour groups, small enterprise networks, and conservation organisations. The Coalition has pioneered local and national multistakeholder processes on inclusive green economic reform via 7 country and regional hubs, as well as spearheading global policy interventions. The Green Economy Tracker, launched in 2020, benchmarks how governments are transitioning towards greener, fairer economic systems. It tracks governments' progress across six policy themes including a Green COVID Recovery.

[www.greeneconomytracker.org](http://www.greeneconomytracker.org)

*The views presented in this report are those of the authors and not necessarily those of UNEP or any of the organisations listed above.*

# Contents

<b>Executive Summary .....</b>	<b>4</b>
<b>1. The impacts of COVID-19 .....</b>	<b>7</b>
1.1 Human costs.....	7
1.2 Sustainable consumption & production .....	8
1.3 Environmental Governance .....	9
<b>2: Policy responses and lessons learned .....</b>	<b>12</b>
2.1 Green Recovery policy .....	12
2.2 Green Recovery: Lessons and insights .....	16
<b>3: Ongoing challenges and opportunities .....</b>	<b>18</b>
3.1 The case for prioritising micro, small and medium sized enterprises .....	18
3.2 Bridging the green finance gap .....	20
3.3 Job-rich nature-based solutions .....	21
3.4 Win-win of action on plastics .....	22
3.5 Tackling mounting debt .....	23
<b>4: Recommendations .....</b>	<b>25</b>
Inclusive and sustainable consumption and production .....	25
Biodiversity and ecosystem conservation .....	26
Strengthen environmental governance and funding .....	26
<b>References .....</b>	<b>27</b>

# Executive summary

Over two years on from the outbreak of COVID-19, no corner of the global economy remains untouched, but it is poor and marginalised communities who are bearing the brunt of the pandemic. On the three dimensions of human development – health (SDG 3), education (SDG 4), and standard of living (SDG 1), conditions today are equivalent to levels of deprivation last seen in the mid-1980s (see Chapter 1).

While lockdowns and restrictions have provided some respite for the environment, including a marked drop in carbon emissions and some small biodiversity gains, carbon intensive economic activity is now rebounding to pre-pandemic levels in many OECD countries.

Meanwhile global demand for virgin plastics has skyrocketed, illegal deforestation has increased, environmental legislation and development regulation has slipped and unsustainable exploitation of natural resources has increased as communities struggle to survive (SDGs 12, 13, 14, 15) (see 1.2).

Set against these negative impacts, there are some cautiously heartening trends. Demand for local and sustainable products, goods and services is looking stronger in some sectors (see 1.2). In some instances, governments and businesses have prioritised science-led responses, agile policymaking and innovative production methods in response to COVID-19 (see 1.2 & 1.3). Green finance in the capital markets is increasing despite the economic downturn, though it is still only a fraction of investment in high carbon industries (see 3.2).

An inclusive Green Recovery has emerged as one of the top policy solutions to the challenges posed by COVID-19. By accompanying economic stimulus

with environmental regulatory and fiscal reforms governments have the chance to build back in a new way. International institutions have stressed the long and short term economic and societal returns of a Green Recovery.

For example, for every dollar spent on ecological restoration, US\$9 can be expected in return.<sup>1</sup> Nature-positive solutions can create 395 million new jobs by 2030.<sup>2</sup> Investments in essential social protection policies can generate a GDP multiplier effect of between 0.7 and 1.9.<sup>3</sup> (See Chapter 2)

But national progress towards a greener recovery is uneven and insufficient.

- The Green Recovery has primarily been the domain of wealthy countries. Lower income countries lack upfront funding or access to credit for large stimulus packages, green or otherwise.
- Where governments have prioritised a Green Recovery, investments have centred on low carbon projects and infrastructure, while ecosystem protection and sustainable consumption and production have been sidelined.
- Recovery packages have failed to target small green enterprises, the frontier of an inclusive green recovery.
- There remains little sign of much-needed structural changes including fiscal and pricing reforms, embedding natural capital into macro-economic planning, beyond GDP measures, etc.
- As such, decision makers are missing the opportunity to restructure their economies for the benefit of people and nature.

---

*"No corner of the global economy remains untouched, but it is poor and marginalised communities who are bearing the brunt of the pandemic."*

---

---

*"This potential will only be realised if an inclusive green recovery is embedded at scale – rather than being a small sprinkling of green stimulus on a sea of unsustainable economic activity."*

---

COVID-19 is far from over, and the recovery from the pandemic has only just begun. An inclusive green recovery remains humanity's best chance to keep global warming in check, restore the natural systems on which we all depend, and lift the world's most vulnerable out of poverty. However, this potential will only be realised if an inclusive green recovery is embedded within governing institutions, prioritised in national planning and implementation, and financed at scale – rather than being a small sprinkling of green stimulus on a sea of unsustainable economic activity (See Chapter 3).

There is still time for countries to make some far-reaching policy choices that can simultaneously spur greener, more inclusive economic growth while restoring biodiversity.

Here we set out nine key recommendations for ensuring the green recovery goes to scale (see Chapter 4).

### **Inclusive and sustainable consumption and production**

- **Embed circular economy into recovery agendas.** Prioritise a new global framework to rapidly phase out single-use plastics, incentivise the use of alternative materials, and invest in recycling capacity. Public procurement standards can rapidly scale demand for sustainable and recycled products and services, while production and manufacturing standards for businesses must integrate high labour standards, sustainability, and circular economy at every stage.
- **Screen stimulus measures and embed sustainability in budget design and implementation:** Commit to inclusive and green stimulus packages that prioritise sustainable

consumption and production measures alongside more ambitious nationally determined contributions (NDCs). Long-term recovery necessitates an integration of sustainability considerations in the budget design, planning, implementation, and monitoring. All stimulus measures should be assessed for their impacts on climate, biodiversity, workers and the most vulnerable.

- **Prioritise financing to enable micro, small and medium size enterprises (MSMEs) to pursue sustainability goals:** Provide financial support to locally rooted programmes that pioneer holistic new approaches to serve eco-inclusive MSMEs. Earmark funding to invest in digital infrastructure for MSMEs, making sure that support programmes can serve and reach green MSMEs and their beneficiaries.

### **Biodiversity and ecosystem conservation**

- **Prioritise job-rich, community-led and nature-based solutions.** Drive stimulus towards natural infrastructure that restores essential marine and land ecosystems and natural capital at local, regional, and national levels. Evolve nature-based solutions through multi-stakeholder, multi-disciplinary platforms across groups working on biodiversity, agriculture, climate, and development. Prioritise community-based natural resource governance structures to empower local communities to lead, implement, and benefit from the solutions.
- **Prioritise debt-for-nature-swaps and other innovative sustainable finance solutions.** These may include nature-performance bonds, nature and climate sovereign bond facilities, social impact investing, etc.

- **Embed the just transition into stimulus and reform programmes.** Strengthen the social safety net through investments in employment insurance, poverty reduction programs, job guarantee schemes and childcare and healthcare support for families. job transitions through retraining programs, education and/or early retirement support. Implement diversification schemes for communities formally dependent on fossil fuel industries into new sector opportunities in agriculture, alternative manufacturing, renewable energy, tourism etc.
- **Increase funding and finance commitments from developed countries to multilateral climate funds for countries facing debt challenges.** Donor governments should replenish development funds subject to the production of inclusive green recovery action plans and while taking steps to optimize existing balance sheets.
- **Hold international finance institutions to account for their role in the Green Recovery.** Embed inclusive, green outcomes into the COVID-19 responses of international finance institutions, with high-level coordination to ensure multilateral funding agencies are prioritising an inclusive Green Recovery in their portfolios.

### **Strengthen environmental governance and funding**

- **Support multi-stakeholder and cross-sector national collaboration platforms.** Inclusive Green Recoveries need to be locally and nationally determined and driven. Decision makers should support multi-stakeholder platforms that enable collaboration in planning and implementing COVID-19 Recovery actions and investment. Ensure a high level of transparency and access to information so that civil society can hold decision-makers to account.

# 1. The impacts of COVID-19

*Even the short-term impacts of COVID-19 on our societies, ecosystems and economies are still being analysed while the longer-term implications are yet to be seen. Here we summarise what we know to date.*

---

## 1.1 Human costs

### The ‘new poor’

After decades of progress in reducing the number of people living on less than US\$1.90/day, COVID-19 has ushered in the first reversal in the fight against extreme poverty in a generation.<sup>4</sup> The World Bank Group forecasts that the largest share of the “new poor” will be in South Asia, with sub-Saharan Africa close behind, “many of the new poor are likely to be engaged in informal services, construction, and manufacturing – the sectors in which economic activity is most affected by lockdowns and other mobility restrictions.”<sup>5</sup>

In the lowest income countries, poverty is increasing, and it is doing so at a faster pace than expected before the pandemic – an increase of poverty in 2021 by 2.7% compared to the pre-pandemic projection of a 0.2% increase. For sub-Saharan Africa, the rate of increase in poverty is projected to more than double, from 1.0% to 2.5%.<sup>6</sup> The pandemic has dealt a severe blow to Latin America and the Caribbean where output fell by 7%, the worst of any region tracked by the IMF.<sup>7</sup>

### A magnifier of inequalities

COVID-19 has not been felt equally within or between populations. More vulnerable and marginalised communities have suffered more due to pre-existing barriers in access to health, social protection, education and decent work. The informal sector, which is where the majority of the world’s poorest live, work and sleep, has been hit

very hard during the pandemic. According to the ILO, 1.6 billion workers in the informal economy have been significantly impacted by the COVID-19 pandemic, leading to an estimated decline in their earnings of 60%.<sup>8</sup>

Health inequalities have also been exposed and exacerbated by COVID-19. The world’s vaccine production and distribution capacity has largely been reserved by wealthier nations, with latest figures suggesting that only 1 in 5 health workers are fully vaccinated globally, while in Africa less than 1 in 10 people have had the vaccine.<sup>9</sup> Part of this inequality is caused by disparities in existing health infrastructure, funding for training and deploying medical staff, and vaccine storage capacity.<sup>10</sup> But the issue of stockpiling of supply by wealthier countries and their enforcement of restrictive patent rights has also slowed the vaccine roll out considerably.<sup>11</sup>

The pandemic has seen disproportionately high infection and mortality rates among people from Black and Minority Ethnic (BAME) backgrounds in the UK and among African Americans.<sup>12</sup> The impact of the pandemic is also clearly gendered: although men generally appear more vulnerable to COVID-19 infection, women make up the majority of the global health workforce at increased risk of hospital infection.<sup>13</sup> Women and ethnic minorities are also more vulnerable to a loss of income more generally.

## Job losses, bankruptcies and insecurity for workers

With many countries in recession at the beginning of 2021, industries such as travel, leisure, tourism, retail and some manufacturing have been hardest hit by the pandemic with small enterprises especially vulnerable to bankruptcies and layoffs. Significant revenue losses have been felt across coastal and marine tourism, fisheries and aquaculture, and the global shipping industries.<sup>14</sup>

An estimated 11.5% of working hours in the Caribbean were lost in 2020, the equivalent of a loss of 2.1 million full-time jobs.<sup>15</sup> Brazil's unemployment rose to an all-time high of 14.8 million people, while in South Africa the unemployment rate reached 32.5% of the population.

The pandemic has intensified attacks on workers' rights around the world. In Myanmar, Cambodia, Bangladesh and India, COVID-19 has led to union-busting and unfair dismissals of unionised garment workers.<sup>16</sup>

The Global Rights Index found that 2020 saw a rise in the number of countries where freedom of speech and assembly was denied or constrained - increasing from 56 in 2020 to 64 in 2021.<sup>17</sup> The report notes that in many countries, COVID-19 was used as a pretext to curb free speech and civil liberties more generally.<sup>18</sup>

---

## 1.2 Sustainable consumption & production

### Energy related carbon emissions

Due to lockdowns, confinements and travel restrictions, carbon emissions fell as a result of COVID-19 in 2020. Total global energy-related CO<sub>2</sub> emissions in 2020 were about 6% lower than in 2019 - the largest absolute drop in annual CO<sub>2</sub> emissions to date.<sup>19</sup>

However, the latest data suggests that these emissions are now rebounding to pre-pandemic levels and beyond, rising 4.9% in 2021 to 36.4 billion tonnes of CO<sub>2</sub> - back to 2019 levels.<sup>20</sup> The emissions are largely driven by OECD countries and suggests that decision-makers are failing to implement clean energy policies that would lock in decarbonisation achieved during the pandemic.<sup>21</sup>

### Virgin plastics and chemical waste

Before the pandemic, the demand for recycled plastic was higher than the demand for virgin plastic for the first time. This momentum has now reversed, with approximately 3.4 billion single-use facemasks discarded daily through the COVID-19 pandemic.<sup>22</sup> At the same time, as the price for oil

dropped during the pandemic, new plastic became considerably cheaper than recycled plastics.

Recycling plants and waste picking cooperatives across the world have not only been hit by local lockdowns and work restrictions but have seen a significant drop in demand as the market for virgin plastics has increased. Recyclers worldwide have reported that their businesses have shrunk, by more than 20% in Europe, by 50% in parts of Asia and as much as 60% for some firms in the United States.<sup>23</sup>

Waste pickers, waste workers and health workers have been increasingly exposed to contagious and unsafe waste as a result of the pandemic.<sup>24</sup> Several countries have adopted safety measures to combat this contamination and manage healthcare waste; however, according to the WHO these measures are insufficient and vary widely from country to country.<sup>25</sup>



## Consumers are demanding more sustainable products

Accenture's recent survey of more than 25,000 consumers across 22 countries, with follow-up focus groups in five countries, found that 50% of consumers say that the pandemic caused them to rethink their personal purpose. These consumers are changing their buying habits towards more sustainable brands and products.<sup>26</sup> However, the longevity of behaviour changes beyond COVID-19 is more difficult to predict. According to McKinsey, e-grocery shopping, virtual healthcare visits, and home improvements were likely to stick while remote learning, declining leisure air travel, and decreasing live entertainment would likely revert closer to pre-pandemic patterns.<sup>27</sup>

Both plant-based foods and electric vehicles have continued to grow throughout the pandemic. Based on current trends, the alternative meat market will excel in size from US\$4.2 billion to US\$74 billion in the next ten years due to increased awareness of health and sustainability benefits, as well as continued declines in product price.<sup>28</sup> In 2020 sales of cars with conventional diesel and petrol-fuelled engines fell by 14%.<sup>29</sup> By contrast, and backed by existing policy support and additional stimulus measures, electric car sales worldwide climbed to over 3 million and reached a market share of over 4%, making 2020 a record-breaking year for electric mobility.<sup>30</sup>

## Agile production and an online revolution

The new circumstances and demands brought about by COVID-19 have driven a surge of innovation and agile thinking from the private sector. Automotive and airline manufacturers transformed their production lines to make ventilators, fashion retailers manufactured surgical masks, and drinks companies switched to producing sanitisers. Small, social and green enterprises have been equally if not more agile according to global research by the British Council: "two-thirds of social enterprises are running different businesses now compared to before the COVID-19 crisis, with new products and services, new trading models, and new beneficiaries and partners."<sup>31</sup>

COVID-19 has also ushered in a new age of online working and e-commerce which is likely to persist even after the pandemic declines. Latin America's online marketplace Mercado Libre, for example, sold twice as many items per day in the second quarter of 2020 compared with the same period the previous year.<sup>32</sup> And African e-commerce platform Jumia reported a 50% jump in transactions during the first six months of 2020.<sup>33</sup> But in many of the world's least developed countries, consumers and businesses haven't capitalized on pandemic e-commerce opportunities due to persistent barriers. These include costly broadband services, overreliance on cash payments, lack of consumers' trust, poor digital skills among the population and limited policy support for e-commerce.

---

## 1.3 Environmental Governance

### Illegal deforestation and rolling back on environmental legislation

Deforestation rates have been mixed. Evidence suggests that the COVID-19 pandemic has spurred illegal, opportunistic forest clearing in tropical countries, threatening forest ecosystems and their resident human communities. A total of 9583 km<sup>2</sup> of deforestation alerts from Global Land Analysis & Discovery (GLAD) were detected across the global

tropics during the first month following the implementation of confinement measures of local governments to reduce COVID-19 spread, which is nearly double that of 2019 (4732 km<sup>2</sup>).<sup>34</sup> Brazil's national space research institute INPE suggests that deforestation in the Amazon in 2020 was some 55% higher than the previous year.<sup>35</sup>

NGOs monitoring environmental governance during COVID-19 point to numerous cases of

countries rolling back on environmental legislation. In Brazil, legal deregulation peaked at the height of the COVID-19 pandemic.<sup>36</sup> The US lowered vehicle emission standards during COVID-19<sup>37</sup> while China suspended environmental regulations for small businesses.<sup>38</sup>

Data also points to an increase of indigenous killings. Global Witness reports that 227 land and environmental activists were murdered in 2020 for defending their land and the planet.<sup>39</sup> That constitutes the highest number ever recorded for a second consecutive year.<sup>40</sup>

### **Demand for stronger environmental governance**

Even as governments roll back environmental regulations, citizens around the world are demanding better protections and stronger standards for nature. In a global survey of 16,000 people across 16 countries, 3 in 4 people expect their government to make protection of the environment a priority when planning a recovery from COVID-19.<sup>41</sup> The highest support for tighter regulation was in emerging markets of China (91%), India and Mexico (89%), Brazil (85%), and South Africa (84%).<sup>42</sup> Another sample of 3000 people across 8 countries found that in the wake of the pandemic people are more concerned, not less, about addressing environmental challenges, and are more committed to changing their behaviours to advance sustainability.<sup>43</sup> While opinion polls cannot always predict real-life choices, the data does point to a shift in attitudes towards environmental governance.

### **Pockets of biodiversity gains**

Lockdowns during the pandemic have had direct, short-term, positive impacts on biodiversity. For example, beaches monitored in Ecuador, Peru, Spain, and Mexico have all had clearer waters,<sup>44</sup> while Lake Vembanad in Kerala, India saw concentrations of suspended particulate matter (SPM) fall by over a third.<sup>45</sup> Other data suggests that reduced shipping during COVID-19 has led to a significant decrease in the low-frequency noise and

pollution associated with ships during the first half of 2020. For example, major ports in the northeast U.S. saw a nearly 50% decrease in ship traffic in April 2020 compared to April 2019, while ship traffic for large European ports – including Antwerp, Belgium; Le Havre, France; Lisbon, Portugal; and Rotterdam, Netherlands – dropped by a quarter that month.<sup>46</sup> Meanwhile, illegal wildlife poaching of South African rhinoceros halved in six months from March 2020.<sup>47</sup>

### **Global governance of nature in a time of COVID-19**

2020 was supposed to be a “Super Year For Nature”, but COVID-19 meant that the Convention on Biological Diversity, the COP26 climate talks in Glasgow, the G7 and G20 Leaders’ Summits, the United Nations Environment Assembly, and the Commonwealth Heads of Government Meeting all had to be rescheduled or restructured to accommodate travel restrictions.

However, these delays could prove positive as it has allowed more time for action and coordination. More than 80% of global GDP – and 77% of global greenhouse gases - are now covered by a national net zero target, up from 68% and 61% last year.<sup>48</sup> By COP26 over 1000 businesses had aligned with approved science-based targets.<sup>49</sup> The USA officially re-joined the Paris Agreement and President Biden pledged to double the nation’s overseas climate aid to more than US\$11billion annually by 2024.<sup>50</sup> China has pledged to end all government support for coal projects overseas.<sup>51</sup>

The normalisation of online meetings and processes has shown how digital governance and civil society can still be effective. UN Secretariats have been forced to innovate, and now routinely use a range of procedures and software advance discussions on key issues. However, it is critical that the highest standards of transparency and accountability are maintained in virtual governing forums, and appropriate assistance offered to digitally excluded communities and marginalised voices.

## Box 1: Peru's experience of COVID-19: A health, economic and environmental crisis

Peru is one of the most mega biodiverse countries in the world, home to some 10% of the worldwide species of flora. The country's poorest and most vulnerable are heavily dependent on nature for their livelihoods. At the same time, illegal and legal deforestation have long posed a considerable threat to the country's unique biodiversity and ecosystems.

The pandemic has had a severe impact on Peru's economy. Already hit badly by the financial crisis in 2009, Peru's economy was already vulnerable to economic shocks, and decades of underinvestment in public health services resulted in one of the worst COVID-19 death tolls in the world. The decline in GDP and the fraction of people who lost their jobs during the second quarter of 2020 reached 30.2% and 39.5%, respectively, among the worst in Latin America.<sup>97</sup> Employment fell an average of 20 percent between April and December in 2020.<sup>98</sup> Informal workers were hit the hardest.<sup>99</sup>

Peru's recovery plan committed to investments worth up to 17% of Peru's GDP, with lower interest rates to facilitate access to credit for business and entrepreneurs, as well as facilitating liquidity by reprogramming debts.<sup>100</sup> Reactiva Peru was created as a credit program for boosting business which had been hit by the pandemic, designed to support credit from banks with state investment. However, small and informal businesses had little access to the Reactiva Peru credit program, and despite some changes to the policy, thousands of smaller businesses have closed because of lack of credit and a drop in consumer demand.

Economic recovery programs were not accompanied by environmental measures toward a greener economy. Unlike other countries, in Peru the discussion regarding recovery measures towards a greener economy has not existed.

*Contributor: Foro Nacional Internacional*

# 2: Policy responses and lessons learned

*Government responses to COVID-19 vary hugely from country to country and there is no single “recovery agenda” - green or otherwise.*

## 2.1 Green Recovery policy

There is no single blueprint for an inclusive Green Recovery. However, international institutions including the OECD, United Nations, World Bank, the Partners for an Inclusive Green Economy and the Green Economy Coalition have all identified a set of distinct stages: Stabilise; Stimulate; Structured Reform.

**Stabilise:** When faced with the immediate consequences of COVID-19 including mass pressure on public health systems, reduced

economic activity and crisis management, governments need to do all that they can to stabilise their economies. Decision-makers have tended to limit large scale fiscal moves (e.g. raising taxes or cutting spending) in order to stabilise the debt-to-GDP level. Emergency aid and direct support has been offered to vulnerable sectors or key industries to avoid mass unemployment and bankruptcies, and the key focus has been to build confidence and stabilise the economy.

### Box 2: What is the Green Recovery?

Rhetorical commitments to a “green recovery” have been numerous and consistent since the start of the COVID-19 pandemic, but the term itself remains underdefined. Broadly, it has come to be associated with policy choices and stimulus packages that aim to generate economic activity that has a positive potential on the environment. This might include consumer subsidies for renewable energy or electric vehicles, industrial investment or loan guarantees for sustainable manufacturing processes, green job creation via land management / energy efficiency retrofits, and so on.

Most international organisations highlight the social and environmental dimensions of a green recovery. For GIZ, “the green recovery means measures that combat the social, economic and environmental impacts of the coronavirus crisis.

It facilitates change that is sustainable, resilient and climate-neutral”,<sup>101</sup> for the OECD, the term refers to the national and sub-national stimulus packages that countries are using to address the social and economic impacts of the crisis. For the Green Economy Coalition, a Green Recovery is one guided by five principles of an inclusive green economy: Justice, Wellbeing, Sufficiency / Efficiency, Planetary Boundaries and Good Governance.<sup>102</sup>

However, in most global econometric datasets, Green Recovery spending has been defined in very narrow terms, focusing solely on ‘low carbon’, and therefore ignoring aspects of environmental sustainability, nature and – crucially – inequality, social progress or justice (Box 5).

**Stimulate:** Once stable, a raft of stimulus policies have been put in place in response to COVID-19. These range from monetary policy, such as central banks lowering base rates or purchasing loans (e.g. quantitative easing) through to fiscal policy including public spending to cover wages, investment in green energy, green infrastructure, green job programmes and green conditionality.

**Structured reform:** The final phase of a more structured reform, which includes phasing out fossil fuel and unsustainable agricultural subsidies, long term public infrastructure investments, investing in just transition (see Box 3), etc. So far at least, there has been little evidence of governments attempting to move beyond the stabilise and stimulate phases towards systemic reform.

### Box 3: Ten high-level measures for structural and inclusive Green Recovery reform

The following table sets out the key Green Recovery structural changes being put forward by the Partners for an Inclusive Green Economy, a group of international agencies and organisations collaborating to accelerate the transition to fair green economies.<sup>103</sup>

HIGH-LEVEL GREEN STRUCTURAL REFORM MEASURES		SPECIFIC GREEN STRUCTURAL REFORM MEASURES	
1	<b>Strengthened planning, strategies and governance</b>	1a	Integrated beyond-GDP metrics
		1b	Cross-ministry coordination
		1c	Multilateral cooperation (SDG17)
2	<b>Green fiscal reform</b>	2a	Higher CO2 pricing
		2b	Fossil fuel subsidy reform
		2c	Fossil fuel funding moratorium
3	<b>Green monetary tools</b>		
4	<b>Sustainable financial system</b>	4a	Broadened corporate reporting
5	<b>Just transition and inclusion policies</b>	5a	Just transition plans for sunset industries
		5b	Intersectional environmental policymaking
6	<b>Green skills and qualification measures</b>		
7	<b>Nature based solutions</b>	7a	Natural capital investment
8	<b>Green regulatory strengthening and deregulation</b>	8a	Mainstream green conditionality thresholds
		8b	Zero carbon power and transport targets
		8c	Environmental non-regression commitments
9	<b>Green infrastructure investment</b>	9a	Green innovation, R&D investment
		9b	Green energy investment
		9c	Green transport investment
		9d	Green buildings upgrades
10	<b>Empower green behaviour change</b>	10a	Alignment with digitalization policy agenda

Source: Green Economy Coalition and the Partners for Inclusive Green Economy – "Setting a structural agenda for a green economic recovery from COVID-19" (2021)

## The status of stimulus

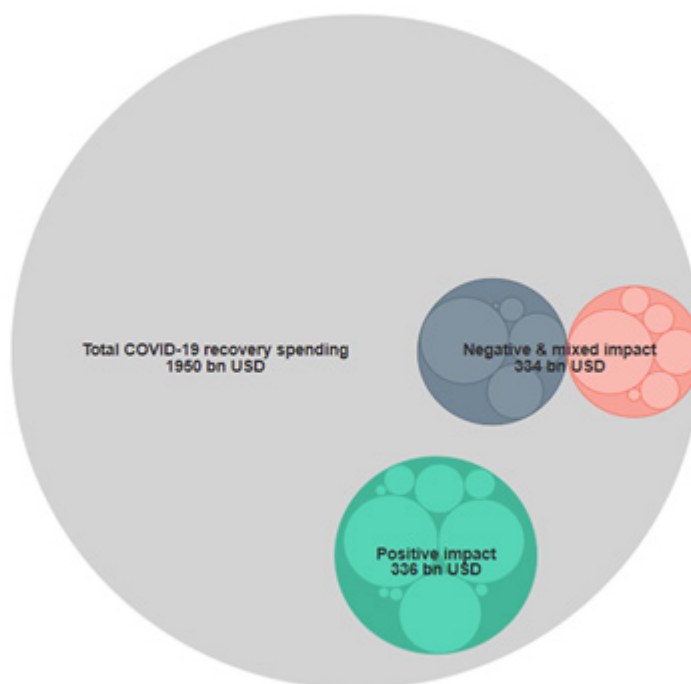
Overall, green investments make up only a small fraction of overall recovery spending. According to the Global Recovery Observatory,<sup>52</sup> of US\$3.11 trillion worth of recovery spending globally, 31.2.5% has gone towards 'green spending'.<sup>53</sup> Similarly, the OECD's analysis of recovery spending shows that of a total COVID-19 recovery spending of US\$ 1.950 billion, only US\$334 billion has contributed towards positive environmental outcomes (see Figure 1).<sup>54</sup>

To date, the most wide-reaching Green Recovery agenda has been spearheaded by the European Union (EU), with a EU€750 billion recovery package as the centrepiece of its pandemic response.<sup>55</sup> About 25% of the EU entire stimulus package (€1.8 trillion) is set aside for climate-friendly measures like retrofitting old buildings, clean energy technologies, low-carbon vehicles and sustainable land use.<sup>56</sup> However, in part due to the COVID

response, EU leaders halved the Just Transition Fund (JTF) compared to the Commission's proposal, from €40 billion to €17.5 billion.<sup>57</sup>

Other OECD countries have also devoted significant green stimulus packages. France has dedicated 30% of stimulus towards a Green Recovery,<sup>58</sup> while Sweden has prioritised multiple cross-cutting measures and dedicated approximately 12% or US\$3.5 billion of its three-year Budget Bill explicitly to green measures.<sup>59</sup> In the UK, initial green spending included US\$3.7 billion in energy efficiency improvements estimated to create 140,000 jobs in construction, and US\$2.5 billion for new public transport infrastructure.<sup>60</sup> Early support for nature also included a US\$40 million Green Jobs Challenge Fund which aims to create 5,000 jobs in nature restoration and conservation.<sup>61</sup>

**Figure 1:** Total COVID-19 recovery spending vs positive, negative and mixed impact spending



Source: [OECD Green Recovery Database \(2021\)](#) - Total spending estimated from [Global Recovery Observatory](#) data

## Box 4: Economic returns of an inclusive Green Recovery

- If cities in 21 emerging markets prioritize climate-smart growth in their recovery plans, they stand to gain as much as US\$7 trillion in investments and could create 144 million new jobs by 2030.<sup>104</sup>
- Every dollar spent on ecological restoration generates a further US\$9 in economic and societal benefits.<sup>105</sup>
- Nature-positive solutions can create 395 million jobs by 2030.<sup>106</sup>
- Social protection investments generate positive returns in terms of overall economic growth. An investment of 1% of GDP in social protection policies has a multiplier effect on GDP of between 0.7 and 1.9.<sup>107</sup>

Some OECD countries have made state support to industry conditional on increased green ambition. For example, the UK attached green conditions to bailouts of environmentally intensive industry, with a US\$40 million emergency loan to Celsa Steel UK conditional on commitments to net-zero targets and protecting jobs.<sup>62</sup> Similarly, Canada's Large Employer Emergency Financing programme brought in under COVID-19 provides financial support to corporations (with annual revenues above US\$300 million) spanning a wide range of sectors, conditional on increased commitments to climate-related financial transparency.<sup>63</sup>

Lower income countries, faced by more entrenched and extreme poverty and with weaker health infrastructure, have struggled to allocate significant green stimulus. Some countries already on the brink of debt distress could have been pushed into default by declining fiscal resources, with Small Island Developing States (SIDS) some of the most vulnerable countries in the world.<sup>64</sup>

However, there are some glimpses of small green recovery programmes. For example, Uganda has

issued US\$0.4 billion in fiscal stimulus, primarily aimed at safeguarding household incomes and industrial recovery.<sup>65</sup> The stimulus includes a small number of solar powered irrigation schemes and seed capital to support women and youth small scale enterprises. As part of South Africa's Economic Reconstruction and Recovery Plan, the Presidential Employment Stimulus aims to create new employment, provide livelihood support and protect existing jobs in vulnerable sectors.<sup>66</sup> This includes a large share of 'green jobs' and the temporary introduction of a basic income grant as a response.

Multilateral agencies and donors have supported the green recovery agenda in different ways but have mostly prioritised emergency support. For example, the World Bank has deployed over \$157 billion to fight the pandemic's health, economic and social impacts. This is the largest crisis response of any such period in the Bank's history and represents an increase of more than 60% over the 15-month period prior to the pandemic.

## 2.2 Green Recovery: Lessons and insights

Two years into the pandemic and the subsequent economic response, several trends have emerged.<sup>67</sup>

1. Despite the rhetoric, **green recovery and stimulus spending remains a fraction of investment in and support for fossil-fuel based sectors and industries.**<sup>68</sup>
2. **The Green Recovery has, so far, largely been the domain of wealthier countries.**<sup>69</sup> Yet countries in the Global South are the most vulnerable to external shocks such as economic turbulence, public health threats and climate change, with little adaptive capacity. Lower income countries lack the up-front finance, credit access and in some cases capacity to undertake large scale green stimulus programmes, and urgently require new and additional financial support donor nations and institutions.
3. **Green Recovery investments and policies have prioritised decarbonisation above all else.**<sup>70</sup> Very little investment has been earmarked for other vital elements of a green recovery, such as circular production and consumption, climate adaptation, nature restoration or preservation of ecosystems and biodiversity.
4. **The countries that have been most ambitious in stimulating a Green Recovery from COVID-19 are those already starting to transition to green economies.**<sup>71</sup> For example, France's Ministry for Ecological Transition, established in 2017, was able to lead an ambitious Green Recovery agenda; while Sweden's green recovery focus has been able to build on their existing commitments to ensuring social protection and a just transition.

### Box 5: Are just transition policies being embedded in recovery packages?

A *Just Transition* secures the future and livelihoods of workers and their communities in the transition to a low-carbon economy. It is based on social dialogue between workers and their unions, employers, and government, and consultation with communities and civil society. As many of the poorer communities and countries are being simultaneously hit by COVID-19 and climate change, the imperative for a socially inclusive and just transition is paramount.

While significant work has been done laying out principles and guidelines for a just transition led by organisations such as the International Labour Organization, few countries have taken the process through to completion. In those that have, it has been constrained to individual sectors, such as Canada's and Germany's coal transitions, which started well before the pandemic. Only a handful of updated NDCs submitted under the Paris Agreement include Just Transition plans or social dialogue.



5. **Few Green Recovery packages managed to take an integrated approach to social and green issues.**<sup>72</sup> However there are some useful exceptions, as outlined in Box 6 below.
6. **The Green Recovery has been dominated by stabilisation and stimulus efforts, with little progress towards much-needed structural economic reforms,** such as nature-positive fiscal reform, embedding the values of biodiversity into national planning, prioritising enabling conditions for green MSMEs, aligning macro-economic policy with NDCs, and embedding gender and labour rights across national and subnational policy frameworks.<sup>73</sup>

## Box 6: Glimpses of green, inclusive & nature-based recovery

**Pakistan:** Responding to spiralling unemployment caused by COVID-19, a government afforestation scheme dubbed the “tree tsunami” has created 85,000 jobs working in tree nurseries and look after saplings and aims to employ another 200,000 people over the next few years.<sup>108</sup> 15 new national parks across 7,300 square kilometres of land were created in 2020, alongside a new National Park Service with 5,000 jobs in nature protection.<sup>109</sup>

**Canada:** As part of Canada’s US\$270 billion recovery programme, green measures and just transition policies include US\$1.3 billion on an inactive oil well clean-up job programme, anticipated to create +5,000 new green jobs and enable a just transition for communities heavily dependent on the oil and gas industry.<sup>110</sup> Ecological measures include adopting nature-based solutions by planting 2 billion trees and committing to expand national parks.<sup>111</sup>

**Jamaica:** The “Renew Jamaica”<sup>112</sup> initiative acknowledges the link between environmental sustainability and economic growth, and aims to develop new protected areas, improve forest management, national tree planting initiatives, REDD+ readiness projects, mangrove restoration to capture and store carbon, and ecosystem-based livelihoods.<sup>113</sup>

**Indonesia:** The Indonesian economy contracted by 5.3% during the second quarter of 2020 and 3.5% during the third.<sup>114</sup> The Government shifted an equivalent of 2.5% of GDP from the national budget to healthcare, social safety nets, and fiscal stimulus, initially drawing resources away from climate-related activities.<sup>115</sup> Recognising the opportunity of green investment to create new jobs, the Government have more recently signed off on a Green Recovery Roadmap which focuses on the waste, energy, and plantation crop sectors. It provides stimulus for 7,500 waste MSMEs to develop waste management performance improvements; Installs rooftop solar panels on 70 government buildings, totalling 14MW; and invest in plantation rejuvenation to increase crop productivity and farmer incomes while reducing emissions through avoided deforestation.<sup>116</sup> In total, these pilot projects are projected to sustain and create more than 300,000 jobs in the next three years, avoid more than 400 million tCO<sub>2</sub>e over 25 years, and strengthen climate resilience.<sup>117</sup>

# 3: Ongoing challenges and opportunities

*COVID-19 has not landed in a political, environmental or economic vacuum. It has intensified many of the challenges that nations are already facing: climate change, biodiversity loss, mounting debt, unemployment and weak environmental governance.*

*However, many of the policy solutions to these challenges are already evolving or underway, and the Green Recovery agenda still has the potential to accelerate and embed these solutions on a global level.*

---

## 3.1 The case for prioritising micro, small and medium sized enterprises (MSMEs)

While small businesses were at the forefront of many policy responses early on in the COVID-19 response, as the pandemic has worn on MSMEs find themselves in an increasingly precarious position. New firms and start-ups, self-employed entrepreneurs, and women- or minority-owned businesses are particularly under threat. In many cases, women have been responsible for childcare and home schooling during the pandemic and have had to stop working.

Small, locally rooted green enterprises hold the key for an inclusive and scalable Green Recovery. Small green enterprises are more likely to use resource-

efficient material in their products, make more use of renewable energy, provide basic services and goods to underserved communities. These businesses support gender and youth empowerment, create jobs for their communities, and are key adopters and developers of environmental innovations. Put simply, MSMEs deliver essential benefits at the local and community level.<sup>74</sup> Yet, even before COVID-19 struck, small enterprises were only accessing up to 3% of global climate funds.<sup>75</sup>

### Box 7: Supporting MSMEs for a Green Recovery

A global analysis of how small green enterprises have fared during COVID-19 recovery efforts notes that the Green Recovery is missing MSMEs for a number of reasons, many of which relate to existing constraints.<sup>118</sup>

Firstly, green and social enterprises are not sufficiently recognised for the positive impact they can generate. In part this is due to ongoing data gaps and inadequate classification for impact driven MSMEs. As a result, Green Recovery programmes tend to prioritise large businesses.

## Box 7: (continued)

Secondly, MSMEs are often difficult to reach using national-level policy interventions. More decentralised and localised interventions are required to enable smaller enterprises to access and afford support. Customising support options to MSMEs between formal and informal sectors and/or with varying needs, requires a high level of flexibility and ingenuity by support providers.

Thirdly, dedicated financial support schemes for MSMEs are limited. Many support programmes try to facilitate access to finance, but find it difficult to identify relevant finance vehicles and instruments. Blended finance is bringing in more capital to eco-inclusive MSMEs, but these funds only represent a fraction of the funding needed. Government funds and domestic capital have the potential to reach and grow eco-inclusive SMEs, but these actors are not yet mainstreaming finance. This gap is exacerbated within many national-level government-led green recovery stimulus packages, with MSMEs not properly integrated into existing public procurement procedures.

Finally, limited digital literacy and infrastructure has held back MSMEs and policymakers from making the most of new opportunities around

e-commerce. At the same time, this situation has presented an opportunity for many to test new approaches.

To reach MSMEs, decision makers should therefore:

- Provide financial support to local programmes that pioneer new approaches to serve green and inclusive MSMEs
- Prioritise digital infrastructure, making sure that support programmes can serve and reach green and inclusive MSMEs and their beneficiaries
- Foster impact studies and gather data as evidence on green and social MSMEs impact potentials
- Support the development of a green recovery taxonomy that integrates the perspectives of green MSMEs into the broader green recovery context
- Ensure recovery schemes build on lessons from existing enterprise support programmes, to reduce access barriers faced by MSMEs.

## 3.2 Bridging the green finance gap

In August 2021, the IPCC released its latest comprehensive report on current climate science, heralded as a “code red for humanity” by UN Secretary-General António Guterres.<sup>76</sup> The report concludes that unless radical action is taken the world is on course for a 2°C increase in global temperatures within a decade, and even the most optimistic of the five policy scenarios sees temperatures rise above the 1.5°C target established under the 2015 Paris Climate Agreement.<sup>77</sup>

The need for green investment at scale has never been more urgent. Fortunately, investment has continued to rise throughout the pandemic in the capital markets. According to the credit ratings agency Moody’s, over US\$1 trillion of Green Social Sustainability and sustainability-linked bonds (GSSS) were issued in 2021, nearly double that generated in 2020.<sup>78</sup>

More than half of the volume came from five countries: the U.S., France, China, Germany and Italy.<sup>79</sup> Similarly, global investment in the green energy transition hit a new annual high of US\$500 billion in 2020, and has started to diversify beyond renewable energy to also include US\$139 billion on EVs and infrastructure, storage and electrified heat.<sup>80</sup>

However, current financial flows are not sufficient. Even before COVID-19 hit, SDG financing was falling short, with an estimated annual gap of 2.5

trillion dollars. Developing countries face an estimated gap of 1 trillion dollars in COVID-19 emergency and response spending.<sup>81</sup> The OECD suggests that SDG financing gap in developing countries could increase by 1.7 trillion dollars, or by about 70%.<sup>82</sup> Despite some progress at COP26 (see Box 8), developed countries have failed to deliver the US\$100 billion a year in climate assistance to developing countries first promised in 2009.<sup>83</sup>

One of the biggest challenges is ensuring that finance reaches the communities, small enterprises, ecosystems and sectors that need it most. Beyond increasing the scale of climate financing, steps must be taken to reduce the disproportionate costs of accessing climate investment incurred by Least Developed Countries (LDCs). LDCs, and many low- and middle-income countries, often face higher costs of capital for low-carbon projects due to heightened risk profiles, lower perceptions of credit worthiness and a lack of market maturity, among other factors.

Multilateral development finance institutions can help to overcome these challenges by providing more concessional loans, cancelling debt, issuing direct support for green bonds, providing cornerstone and anchoring investments, and credit enhancement supports to improve the profile of green bond issuances.

### Box 8: Green finance progress at COP26?

Developed countries have failed to meet the target of US\$100 billion of green finance to support developing countries tackle the climate crisis,<sup>119</sup> but some progress was made at COP26 in Glasgow towards achieving the target by 2022.

The United States joined Britain, France, Germany and the European Union in a multibillion-dollar partnership to support South Africa finance a just transition from coal and the development of green hydrogen and e-mobility. This initiative is valued at US\$ 8.5 billion overall.<sup>120</sup>

Japan and Australia have also announced commitments to double their adaptation finance, and the United States, Switzerland and Canada also significantly raised their financial support to adaptation.<sup>121</sup>

Countries have also committed to funnel US\$12 billion for forest-related climate finance between 2021-2025.<sup>122</sup>

### 3.3 Job-rich nature-based solutions

Nature has been largely neglected in existing stimulus packages, even though nature supports the majority of global GDP and the processes that provide humanity with clean air, food, and water.<sup>84</sup> According to one assessment, of the quantified green stimulus to date, worth US\$567 billion, only US\$108 billion was related to improving biodiversity or preserving ecosystems.<sup>85</sup> Moreover, stimulus with harmful effects on the environment exceeds that with beneficial effects on nature. Unless considerably more stimulus is redirected to initiatives that protect and restore nature, recovery investments risk exacerbating the biodiversity and climate crises and so ultimately undermining economies in the future.

Nature-based activities create new, green jobs, protect existing jobs and enhance existing nature dependent sectors. Nature-based solutions can contribute to disaster risk reduction, build resilient cities, improve water management and contribute to long-term food security. They can decrease public health costs through their health co-benefits. Green infrastructure and vegetation contribute to decreasing pollution thereby reducing associated health risks. By ensuring a fair distribution of these benefits, nature-based solutions can also help achieve social and environmental justice goals that are particularly relevant post-COVID-19.

#### Box 9: Getting finance to green MSMEs

**Green bonds for MSMEs:** Green bonds also offer a range of sustainable financing options, including from banks that aggregate MSME loans, and securitization of MSME loans into asset-backed securities. Last year, Swiss-based Symbiotics raised money through the issuance of green bonds.<sup>123</sup> They used the bond proceeds to issue a four-year senior unsecured, local currency loan of US\$7.75 million to Sri Lanka's Pan Asia Banking Corporation for on-lending to projects with reduced environmental effects, e.g., renewable energy and sustainable agriculture.<sup>124</sup>

**Partial Repayment Schemes:** Available MSME financing is largely dominated by small ticket sizes, short repayment periods, high interest rates, and a lack of financing models tailored to MSME needs. This

results in a “missing middle” SME financing gap across sectors. Innovative loan repayment subsidies can bridge this gap. Blended finance partnerships with commercial banks can increase the flow of debt finance to MSMEs, blending grant finance instruments (the subsidy) with private capital (loans) provided by commercial banks. A partial repayment grant subsidises the loan, resulting in a reduction of effective costs of capital, lower loan repayment amounts, and reduced collateral requirements for MSMEs. For example, the Uganda Green Enterprise Finance Accelerator (UGEFA), implemented by adelphi with funding by the EU has applied this approach. It has been validated by 3 partner banks, including Equity Bank, the biggest East African bank.<sup>125</sup>

### 3.4 Win-win of action on plastics

Each year, at least 8 million tonnes of plastics leak into the ocean, an amount set to quadruple by 2050 (from 2017 levels) unless major reform is put in place.<sup>86</sup> Up to 13 million tonnes of plastic leak into our oceans each year, and 51 trillion plastic particles are already present in the marine environment. Toxic chemicals from plastic are human food chain, and are likely to increase the risk of cancer, obesity, and heart disease.<sup>87</sup> COVID-19 saw a sharp surge in the production of virgin plastics, further exacerbating an already mounting issue of plastic overconsumption, disposal waste. At the same time workers and health workers have been increasingly exposed to contagious and unsafe waste throughout the pandemic. (see section 1.2).

Plastics are not only harmful to human and planetary health, but they are almost all made from fossil fuels and contribute significantly to greenhouse gas emissions, with emissions from plastics on track to increase threefold by 2050.<sup>88</sup> Prioritising a zero plastics approach is critical for achieving zero carbon.

A concerted policy effort could halve plastic consumption by 2050, recycle 75% of remaining plastic, and increase the amount of plastic produced without fossil fuels, finds analysis by the Overseas Development Institute (ODI).<sup>89</sup> This would reduce greenhouse gas emissions from plastics from 1,984 Mt CO<sub>2</sub> in 2015 to 790 Mt CO<sub>2</sub> in 2050.<sup>90</sup>

#### Box 10: Examples of job rich nature-based solutions

Investment in nature provides effective policy options to create jobs and support socio-economic development. IUCN found that forest landscape restoration in **El Salvador** created approximately 50 jobs per US\$1 million invested in ecosystem restoration.<sup>126</sup> This is considerably more than were created by a similar investment in the manufacturing sector amongst others, and these jobs were concentrated in rural and low-income areas.

Unlike many other sectors, the benefits of these jobs can support those who the pandemic has hit hardest. For example, the jobs created from **Rwanda's** efforts to restore forests accrued roughly equally between women and men, with women gaining 49% of the short-term jobs and 46% of the long-term jobs.<sup>127</sup>

In **Germany**, the Emscher Landscape Park is one of the longest ecological restoration programmes that has generated an estimated 85,892 jobs over a 20 year period.<sup>128</sup> While the jobs cannot be maintained

over the long-term, the park provides an estimated €21 million in direct ecosystem services every year, with additional benefits to the community valued at about €107 million.<sup>129</sup>

Komaza in coastal **Kenya** is a company enabling small-scale farmers to participate in industrial wood markets. It partners with rural farmers to plant woodlots that are collectively managed as 'virtual plantations'. Komaza's model offers a new income stream to smallholder farmers, while reducing pressure on virgin forest and increasing the area of reforested land. To date, Komaza has 4,000 hectares planted with 14,000 farmers with aims to scale to 30,000 hectares.<sup>130</sup>

In **Malawi** the government spends 1.5% of its annual budget to mobilize Malawi's youth to protect and plant trees across 50,000 hectares. In the first 18 months of the program, 11,283 youth from 472 youth groups have been employed.<sup>131</sup>

## Box 11. The Blue Economy opportunity

The Blue Economy is currently valued at US\$1.5 Trillion per annum and 350 million jobs world-wide are linked to fisheries. However, public and private investments in the ocean economy are insufficient. Indeed, SDG 14—Life Below Water—currently receives the lowest impact investment<sup>132</sup> and fewest blended finance vehicles of all SDGs.<sup>133</sup>

The ocean economy was projected to double by 2030, but this growth potential has been curtailed by COVID-19.<sup>134</sup> The strategic investment of recovery

and stimulus funds into the ocean economy offers an untapped opportunity to support job creation and economic diversification and relief in the short term. Such investments can accelerate the sustainable and equitable growth of ocean industries, and so secure the long-term health and resilience of the ocean and ocean economy and the many benefits that it provides to communities.<sup>135</sup>

## 3.5 Tackling mounting debt

Before the COVID-19 crisis, several low-income countries and some emerging economies were already facing sovereign debt problems. According to UNCTAD, developing countries now face a decade of near-insurmountable debt service re-payments throughout the 2020s.

In 2020 and 2021 alone, repayments on public external debt were estimated at nearly US\$3.4 trillion – between US\$2 trillion and US\$2.3 trillion in high-income developing countries and between US\$666 billion and US\$1.06 trillion in middle- and low-income countries.<sup>91</sup> Such levels of debt can limit national capacity to manage the economic and social effects of the pandemic.

The IMF has granted interest exemptions to 29 of its most vulnerable members until April 2022.<sup>92</sup> The G20 offered a suspension of debt service payments to the 73 countries of the International Development Association (IDA) for 2020, and a corresponding repayment holiday was adopted by the Paris Club and China.<sup>93</sup>

However, few private creditors took up the G20's request to follow suit, and some debtor countries did not apply for fear that their sovereign credit ratings would be negatively affected. In the words of UNCTAD, “more systematic, transparent and coordinated measures towards writing off developing country debt across the board are urgently needed.”<sup>94</sup>

This growing mountain of debt has led to a renewed call for “debt for nature swaps”, first pioneered in the 1970's and 80's, where debtor nations agree to invest in environmental conservation in return for debt forgiveness. Past debt for nature swap programmes benefitted nearly forty developing countries including Costa Rica, which used the funds to enlarge natural parks and reserves and promote eco-tourism.

However, the initiatives struggled to go to scale. Now, international agencies including the IMF and the World Bank are focused on integrating climate change action into debt negotiations, and President Biden has included green debt relief in his climate plan.<sup>95</sup>

The International Institute for Environment and Development (IIED) notes, “the macro-policy context for debt for climate investment swaps is fundamentally different to what it was a decade ago. Rapid technological developments in renewable energy and climate-resilient agriculture, for example, have significantly reduced costs of climate resilience and low-carbon development, increasing returns on investments”.<sup>96</sup>

## Box 12: UN treaty on plastics

Civil society organisations and businesses are calling for a new UN treaty on plastics to drive an ambitious common standard of action for all countries<sup>136</sup>. The new treaty on plastics would establish global standards, clear definitions for success, and common regulations, to create a level playing field for a globally operating industry for the first time. All participating countries would be supported with the tools, knowledge, and robust frameworks to create a circular economy for plastics.<sup>137</sup>

In May 2021, two countries — Peru and Rwanda — announced their intention to establish an intergovernmental negotiating committee to begin the process of developing the framework to attain “sustainable levels of plastic production and consumption” at UNEA 5.2<sup>138</sup>. Over 700 groups from 113 countries are calling on UN Member States to agree to establish a UN treaty on plastics.<sup>139</sup>

## Box 13: Debt for nature in action

The government of **Pakistan** is now developing a debt-for-nature scheme to accelerate the “10 billion tree tsunami”.<sup>140</sup> The nature performance bond would link debt retirement with nature restoration targets. To ensure the environmental integrity of the pilot, satellite images will be used to monitor performance against agreed restoration goals.<sup>141</sup>

**Belize** was hit hard by the pandemic and the subsequent drop in tourism, and in response has bought back its only international bond, a US\$553 million liability called a “superbond”, at 55 cents on the dollar<sup>142</sup>. The bond was funded with US\$364 million arranged by the NGO The Nature Conservancy, and insured by the International Development Finance Corp. The transaction is backed by the proceeds of a “blue bond” arranged by Credit Suisse. The payback is due over 19 years with a coupon that begins below that of the superbond but rises above it over time.<sup>143</sup>

As part of its medium-term strategy, the Government of **Antigua and Barbuda** is aiming to reduce arrears and is pursuing a debt for climate swap initiative.<sup>144</sup> The Government started negotiating trilateral debt for climate swaps with the Green Climate Fund (GCF) and Paris Club member creditors. GCF aims to partially finance the redirection of US\$147M in debt towards investing in climate change projects.<sup>145</sup>

The flagship example of financing the blue economy through debt for nature swaps and blue bonds is the **Seychelles**. The Seychelles Blue Economy Roadmap lays out opportunities for sustainable development through job creation, equitable wealth sharing and climate adaptation, and was financed initially by a debt swap of over US\$21 million and the establishment of the world’s first sovereign blue bond supported by a blended finance model in partnership with the World Bank and Global Environment Facility it operates in conjunction with a legislated system for its management and fund dispersal system that on average provides US\$700,000 per year.<sup>146</sup> It has been broadly lauded as a success for both the environment and the communities who depend on it for their livelihoods.<sup>147</sup>



# 4: Recommendations

*The COVID-19 pandemic is an unprecedented global health and economic crisis. But it is also a once in a generation opportunity for governments, companies and citizens to put the planet on track for a liveable, sustainable and equitable future.*

However, an inclusive and green economic recovery will not happen on its own – it needs bold commitment and ambitious action for its full potential to be unleashed.

A mere sprinkling of green stimulus on a landscape of brown economic activity will lock many countries into unsafe and self-destructive economic pathways for generations to come.

---

## Inclusive and sustainable consumption and production

- **Embed circular economy into recovery agendas.** Prioritise a new global framework to rapidly phase out single-use plastics, incentivise the use of alternative materials and invest in recycling capacity. Public procurement standards can rapidly scale demand for sustainable and recycled products and services, while production and manufacturing standards for businesses must integrate high labour standards, sustainability, and circular economy at every stage.
- **Screen stimulus measures and embed sustainability in budget design and implementation.** Commit to inclusive and green stimulus packages that prioritise sustainable consumption and production measures alongside more ambitious nationally determined contributions (NDCs). Long-term recovery necessitates an integration of sustainability considerations in the budget design, planning, implementation, and monitoring. All stimulus measures should be assessed for their impacts on climate, biodiversity, workers and the most vulnerable.
- **Prioritise financing to enable micro, small and medium size enterprises (MSMEs) to pursue sustainability goals.** Provide financial support to locally rooted programmes that pioneer holistic new approaches to serve eco-inclusive MSMEs. Earmark funding to invest in digital infrastructure for MSMEs, making sure that support programmes can serve and reach green MSMEs and their beneficiaries.

---

## Biodiversity and ecosystem conservation

- **Prioritise job-rich, community-led and nature-based solutions.** Drive stimulus towards natural infrastructure that restores essential ecosystems and natural capital at local, regional and national levels. Evolve nature-based solutions through multi-stakeholder, multi-disciplinary platforms across groups working on biodiversity, agriculture, climate and development. Prioritise community-based natural resource governance structures to empower local communities to lead, implement, and benefit from the solutions.
- **Prioritise debt-for-nature-swaps and other innovative sustainable finance solutions.** These may include nature-performance bonds, nature and climate sovereign bond facilities, social impact investing, etc.
- **Embed the just transition into stimulus and reform programmes.** Strengthen the social safety net through investments in employment insurance, poverty reduction programs, job guarantee schemes and childcare and healthcare support for families. job transitions through retraining programs, education and/or early retirement support. Implement diversification schemes for communities formally dependent on fossil fuel industries into new sector opportunities in agriculture, alternative manufacturing, renewable energy, tourism etc.

---

## Strengthen environmental governance and funding

- **Support multi-stakeholder and cross-sector national collaboration platforms.** Inclusive Green Recoveries need to be locally and nationally determined and driven. Decision makers should support multi-stakeholder platforms that enable collaboration in planning and implementing COVID-19 Recovery actions and investment. Ensure a high level of transparency and access to information so that civil society can hold decision-makers to account.
- **Multilateral funding. Increase funding and finance commitments from developed countries to multilateral climate funds for countries facing debt challenges.** Donor governments should signal their readiness to replenish development funds subject to the production of inclusive green recovery action plans and while taking steps to optimize existing balance sheets.
- **Hold international finance institutions to account for their role in the Green Recovery.** Embed inclusive, green outcomes into the COVID-19 responses of international finance institutions, with high-level coordination to ensure multilateral funding agencies are prioritising an inclusive Green Recovery in their portfolios.

# References

1. UNEP, FAO, [Strategy of the UN Decade on Ecosystem Restoration](#) (Geneva, UNEP, 2020)
2. WEF, [The Future of Nature and Business](#), (Geneva, WEF, 2020)
3. ITUC, [Investments in social protection and their impacts on economic growth](#) (Brussels, ITUC, 2021)
4. The World Bank, 14<sup>th</sup> December 2020, [2020 Year in Review: The impact of COVID-19 in 12 charts](#)
5. World Bank. [Poverty and Shared Prosperity: Reversals of Fortune](#) (Washington, DC: World Bank, 2020).
6. World Bank, [Updated estimates of the impact of COVID-19 on global poverty: Turning the corner on the pandemic in 2021?](#)
7. Bakker, B; Goncalves, C., [IMF Working Paper No. 2021/168, COVID-19 in Latin America: A High Toll on Lives and Livelihoods](#) (June 2021)
8. ILO, [Impact of lockdown measures on the informal economy](#) (April 2020)
9. Cross institutional data across World Bank Group, the World Health Organization, the IMF, World Trade Organization - [Multilateral leaders taskforce on COVID-19](#)
10. Vaccine hesitancy in some parts of the world is also likely a contributing factor alongside availability and access but data tends to be rather anecdotal.
11. The African Union's Centers for Disease Control and Prevention has announced a plan to establish new vaccine factories with the aim of reducing the continent's reliance on imports from 99% to 40% of supply by 2040. A group of countries led by South Africa and India has called for the World Trade Organization to lift intellectual-property protections for makers of COVID vaccines to enable additional plants to produce more shots beyond the current concentration in the U.S., Europe, India and China.
12. Bentley GR. Don't blame the BAME: Ethnic and structural inequalities in susceptibilities to COVID-19. (Am J Hum Biol. 2020)
13. Jensen, N., Kelly, A.H. & Avendano, M. The COVID-19 pandemic underscores the need for an equity-focused global health agenda. (Humanit Soc Sci Commun 8, 15, 2021).
14. A conservative estimate as it does not include discouraged job-seekers.
15. ILO. COVID-19 and the world of work. Seventh edition. (ILO 2021)
16. Business and Human Rights Resource Centre, [Union busting & unfair dismissals: Garment workers during COVID-19](#) (August 2020)
17. ITUC, [2021 ITUC Global Rights Index](#), (Brussels, ITUC, 2021)
18. Ibid.
19. IEA, [Global Energy Review: CO<sub>2</sub> Emissions in 2020](#), (IEA, Paris, 2021)
20. Pierre Friedlingstein et al., [Global Carbon Budget 2021](#), Earth System Science Data
21. IEA, [Global Energy Review: CO<sub>2</sub> Emissions in 2020](#), (IEA, Paris, 2021)
22. Nsikak U. Benson, David E. Bassegy, Thavamani Palanisami, COVID pollution: impact of COVID-19 pandemic on global plastic waste footprint, (Heliyon, 2021)
23. Reuters, Plastic pandemic: COVID-19 trashed the recycling dream, (Reuters, Tuesday, 6 October 2020)
24. Atanu Kumar Das, Md. Nazrul Islam, Md. Morsaline Billah, Asim Sarker, [COVID-19 pandemic and healthcare solid waste management strategy – A mini-review](#), Science of The Total Environment, (2021),
25. Ibid.
26. Accenture, [Life Reimagined](#), (London, 2021)
27. McKinsey Global Institute, [The consumer demand recovery and lasting effects of COVID-19](#) (New York, March 2021)
28. Bloomberg Intelligence, [Plant-Based Foods Poised for Explosive Growth](#) (August 2021)
29. IEA, [How global electric car sales defied Covid-19 in 2020](#), (IEA, Paris 2021)
30. Ibid.
31. British Council, Innovation and Resilience - A global snapshot of social enterprise responses to Covid-19 (British Council 2020)
32. UNCTAD, [COVID-19 and e-commerce: a global review](#), (New York, March 2021)
33. Ibid.
34. Pedro H.S. Brancalion, Eben N. Broadbent, Sergio de-Miguel, Adrián Cardil, Marcos R. Rosa, Catherine T. Almeida, Danilo R.A. Almeida, Shourish Chakravarty, Mo Zhou, Javier G.P. Gamarra, Jingjing Liang, Renato Crouzeilles, Bruno Héroult, Luiz E.O.C. Aragão, Carlos Alberto Silva, Angelica M. Almeyda-Zambrano, [Emerging threats linking tropical deforestation and the COVID-19 pandemic](#), Perspectives in Ecology and Conservation, Volume 18, Issue 4, 2020,
35. Data from INPE's deforestation monitoring system DETER quoted in article in Mongabay, 11 April 2020, [Despite COVID, Amazon deforestation races higher](#)
36. SciDevNet, News article, 23<sup>rd</sup> February 2021, [Pandemic covers up setbacks in Brazilian environmental laws](#)
37. NPR, News article, 31<sup>st</sup> March 2020, [Trump Administration Weakens Auto Emissions Standards](#)
38. Reuters, News article, 10<sup>th</sup> March 2020, [China to modify environmental supervision of firms to boost post-coronavirus recovery](#)
39. Global Witness, September 2021, [Last Line of Defence](#).
40. Ibid.
41. Ipsos Mori, Press Release, Majority of people expect government to make environment a priority in post COVID-19 recovery (Paris, June 5, 2020)
42. Ibid.
43. Boston Consulting Group, The Pandemic Is Heightening Environmental Awareness (July 14, 2020)
44. Ormazza-Gonzalez Franklin I., Castro-Rodas Divar, Statham Peter J., [COVID-19 Impacts on Beaches and Coastal Water Pollution at Selected Sites in Ecuador](#) (Frontiers in Marine Science, 2021)
45. Kulk, G.; George, G.; Abdulaziz, A.; Menon, N.; Theenathayalan, V.; Jayaram, C.; Brewin, R.J.W.; Sathyendranath, S. [Effect of Reduced Anthropogenic Activities on Water Quality in Lake Vembanad, India](#).

46. Carr, S., 24<sup>th</sup> March 2021, [How much did the COVID-19 pandemic quiet the oceans?](#)
47. Department of Forestry, Fisheries & the environment – Government of the Republic of South Africa, 31 July 2020, [Rhino poaching decreases by more than half in first half of 2020](#)
48. Oxford Net Zero, University of Oxford, [Net Zero Tracker](#) (Oxford, 2022)
49. Science Based Targets Initiative, Press release, 8<sup>th</sup> October 2021, [The new normal: 1,000 companies are now setting science-based climate targets](#)
50. Reuters, News article, April 2021, [U.S. to double public climate finance to developing countries by 2024](#)
51. BBC, News article, 22 September 2021, [China pledges to stop building new coal energy plants abroad](#)
52. O’Callaghan, B., Yau, N., Murdock, E., Tritsch, D., Janz, A., Blackwood, A., Purroy Sanchez, L., Sadler, A., Wen, E., Kope, H., Flodell, H., Tillman-Morris, L., Ostrovsky, N., Kitsberg, A., Lee, T., Hristov, D., Didarali, Z., Chowdhry, K., Karlubik, M., Shewry, A., Bialek, F., Wang, M., Rosenbaum, N., Gupta, S., Hazell, T., Angell, Z., Grey, G., Bulut, H., Bentley, K., Erder, O., Polkinghorne, K., Hepburn, C., Beal, E., and Heeney, L. (2021). Global Recovery Observatory. Oxford University Economic Recovery Project.
53. The analysis considers green spending across a number of different impacts including GHG emissions, natural capital, wealth inequality, quality of life and rural livelihood. See Global Recovery Observatory, [Methodology Paper](#)
54. The OECD Green Recovery Database: Examining the environmental implications of COVID-19 recovery policies
55. European Commission, [Press release, 27 May 2020, Europe’s moment: Repair and prepare for the next generation](#)
56. Euroactive, Press article, 27 May 2020, [‘Do no harm’: EU recovery fund has green strings attached](#)
57. Breugel, Press article, 23 July 2020 [Is the EU Council agreement aligned with the Green Deal ambitions?](#)
58. Green Economy Coalition, [Green Economy Tracker](#), See country pages on [France](#), [UK](#), [Sweden](#), [Canada](#) (London, 2021)
59. Ibid.
60. Ibid.
61. Ibid.
62. Ibid.
63. Ibid.
64. Piemonte, C. The Impact of COVID-19 Crisis on External Debt in Small Island Developing States. Organisation for Economic Cooperation and Development (OECD, Paris, 2021)
65. Green Economy Coalition, [Green Economy Tracker](#), See country pages on [Uganda](#) and [South Africa](#) (London, 2021)
66. Ibid.
67. Desk based review of all literature on the Green Recovery for the Partners for an Inclusive Green Economy – see Green Economy Coalition website for more information.
68. Global Recovery Observatory, UNEP, et al. [Are we building back better?](#) (2020)
69. Green Economy Coalition, [Greta’s ‘blah blah blah’ is spot on- Myth of a global green COVID recovery laid bare by policy tracker](#) (2021)
70. Vivid Economics - Finance for Biodiversity initiative, [Greening the Stimulus: investing in nature](#) (2020)
71. Green Economy Coalition, [Green Economy Tracker](#) (2021)
72. Green Economy Coalition, [Green Economy Tracker](#) (2021)
73. Green Economy Coalition, [Green Economy Tracker](#) (2021)
74. Montmasson-Clair, G.; Shakespear, M; [Inclusivity within the green economy](#) (TIPS, 2019)
75. Rose, Benita; Zurker, Mirko, Ong, Sonya, [Eco-Inclusive Enterprises Driving Green Recovery Pathways](#) (SEED, 2021)
76. UN, Press release, 9<sup>th</sup> August 2021, [Secretary-General Calls Latest IPCC Climate Report ‘Code Red for Humanity’, Stressing ‘Irrefutable’ Evidence of Human Influence](#)
77. IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C.
78. Moody’s ESG Solutions, [Sustainable bonds on course to top \\$1 trillion annual issuance in 2021](#), (New York, 27 October 2021)
79. Ibid.
80. BloombergNEF, Energy Transition Investment Hit \$500 Billion in 2020 – For First Time (London and New York, January 19, 2021)
81. OECD, November 2020 [Launch of the 2021 Global Outlook on Financing for Sustainable Development](#)
82. Ibid.
83. BBC, News Article, 14<sup>th</sup> November 2021, [COP 26: How much are poor countries getting to fight climate change?](#)
84. GEC, [Nature at the heart of a green COVID-19 recovery: Global and country perspectives](#) (GEC, 2021)
85. Vivid Economics and Finance For Biodiversity, [Greenness of Stimulus Index](#), (London 2021)
86. Environmental Investigation Agency UK, [Plastics Pollution](#) (2021)
87. Ibid.
88. Scott, Andrew; Pickard, Sam; Sharp Samuel; Becqué, Renilde; [Phasing out of plastics \(ODI, 2020\)](#)
89. Ibid.
90. Ibid.
91. UNCTAD, [COVID-19 is a matter of life and debt, global deal needed](#) (UNCTAD, 2020)
92. IMF, December 2021. [IMF Executive Board Extends Debt Service Relief for 25 Eligible Low-Income Countries](#)
93. Reuters, 15<sup>th</sup> October 2020, [Factbox: How the G20’s Debt Service Suspension Initiative works](#)
94. UNCTAD, [COVID-19 is a matter of life and debt, global deal needed](#) (UNCTAD, 2020)
95. Government of the United States, 27<sup>th</sup> January 2021, [Executive Order on Tackling the Climate Crisis at Home and Abroad](#)
96. Steele, Paul; Patel, Sejal, [Tackling the triple crisis - Using debt swaps to address debt, climate and nature loss post-COVID-19](#) (IIED, 2020)
97. Cueva R., Del Carpio. X., Winkler, H., [Policy Research Working Paper - The Impacts of COVID-19 on Informal Labor Markets](#) (World Bank Poverty and Equity Global Practice, May 2021)
98. World Bank, [World Bank in Peru](#)
99. Cueva R., Del Carpio. X., Winkler, H., [Policy Research Working Paper - The Impacts of COVID-19 on Informal Labor Markets](#) (World Bank Poverty and Equity Global Practice, May 2021)

100. Green Economy Coalition, [Green Economy Tracker](#), See country page on [Peru](#). (London, 2021)
101. GIZ, Green Recovery
102. Green Economy Coalition, [Principles, priorities and pathways for inclusive green economies](#), (GEC, 2019)
103. Hopkins, C., Greenfield, O. Draft working paper. [Setting a structural agenda for a green economic recovery from COVID-19](#), Green Economy Coalition - with the support of Partners for Inclusive Green Economy (PIGE) (November 2021).
104. Da Silva, Lisa; Robins, Eleanor, World Bank, blog, A green reboot for cities: Strategies for post-COVID growth (May 5, 2021)
105. UNEP, FAO, [Strategy of the UN Decade on Ecosystem Restoration](#) (Geneva, 2020)
106. WEF and AlphaBeta, [The Future of Nature and Business](#) (Geneva, 14 July 2020)
107. ITUC, [Investments in social protection and their impacts on economic growth](#) (Brussels, ITUC, 2021)
108. Khan, Malik Amin Aslam, WEF, News article, 12<sup>th</sup> February 2021, [How Pakistan is aiming for a green recovery from the pandemic](#)
109. Ibid.
110. Green Economy Coalition, [Green Economy Tracker](#), See country page on [Canada](#) (London, 2021)
111. Ibid.
112. Government of Jamaica – Ministry of Housing, Urban renewal, environment & climate change, 4<sup>th</sup> May 2021, [renew Jamaica – Sectoral presentation 2021 - 2022](#)
113. SciDev, Latin America & Caribbean desk, 21<sup>st</sup> June 2020 [Jamaica revamps energy policy for green COVID-19 recovery](#)
114. NDC Partnership Support Unit, 31<sup>st</sup> October 2021, [Indonesia's new green recovery roadmap sets a framework for low carbon, climate-resilient economic growth and job creation](#).
115. Ibid.
116. Ibid.
117. Ibid.
118. Ibid.
119. BBC, News Article, 14<sup>th</sup> November 2021, [COP 26: How much are poor countries getting to fight climate change?](#)
120. Republic of South Africa, News release, 2 November 2021, ['South Africa establishes a historical international partnership to support a just transition'](#).
121. UK COP26 Presidency, Press release, 3<sup>rd</sup> November 2021, ['Global Finance Ministers to Discuss Transition to Net Zero'](#)
122. UK COP26 Presidency, Press release, 2<sup>nd</sup> November 2021, ['The Global Forest Finance Pledge'](#)
123. Symbiotics, Press Release, 16<sup>th</sup> June 2020, ["Symbiotics launches first USD 7.75 million Green Bond with Pan Asia Banking Corporation"](#)(Geneva, June 2020)
124. Ibid.
125. See website for more details: <https://ugefa.eu/>
126. IUCN, Issues Brief - Nature Based Recovery (IUCN, 2021)
127. Ibid.
128. Kopsieker L., Gerritsen E., Stainforth T., Lucic A., Costa Domingo G., Naumann S., Röschel L. and Davis Mc. ["Nature-based solutions and their socio-economic benefits for Europe's recovery: Enhancing the uptake of nature-based solutions across EU policies"](#). Policy briefing by the Institute for European Environmental Policy (IEEP) and the Ecologic Institute.
129. Ibid.
130. The Global Commission on the Economy and Climate, [Unlocking the Inclusive Growth of the 21<sup>st</sup> Century](#) (2018)
131. Reyntar et al, [Malawi is Putting its Money Where its Forests Are](#) (2018)
132. Libes, L. & Eldridge M. [Who, what, where and how: 440 investors - A deepening view of impact investing](#). Investorflow.org (2019).
133. Basile, I. & Dutra, J. Blended Finance Funds and Facilities: 2018 Survey Results. OECD Development Co-operation Working Papers, No. 59 (OECD Publishing, 2019).
134. Richens, J., and M. Koehring. ["A Sustainable Ocean Economy in 2030: Opportunities and Challenges."](#) The Economist Group: World Ocean Initiative (2020).
135. Northrop, E; Konar M.; Frost, N.; Hollaway, E;; [High Level Panel for Ocean - A Sustainable and Equitable Blue Recovery to the COVID-19 Crisis](#) (2020)
136. WWF, 14 December 2021 [Over 700 Groups Call for an International Plastics Treaty](#)
137. Ellen Macarthur Foundation, [A UN treaty on plastics](#)
138. UNEP, 154<sup>th</sup> Meeting of the Committee of Permanent Representatives, 28 May 2021, [Chair's Summary](#)
139. WWF, 14 December 2021 [Over 700 Groups Call for an International Plastics Treaty](#)
140. Climate Home News, News article, 16<sup>th</sup> April 2021, [Pakistan explores debt-for-nature scheme to accelerate its 10 billion tree tsunami](#)
141. Ibid.
142. Egolf, S. [The Belize Debt-for-Nature Swap](#). (2001)
143. Ibid.
144. The Commonwealth and the Climate Finance Access Hub, [Debt-for-Climate Swaps Innovative Financial Instruments for Public Debt Management in the Caribbean](#) (June 2022)
145. Ibid.
146. Blended Finance Taskforce, [Seychelles Debt Swap](#)
147. Isabelle Gerretsen, BBC Futures, 3<sup>rd</sup> August 2020, [The deal that saved Seychelles troubled waters](#)