



UNITED NATIONS

Inclusive Green Recovery

An Essential Post-COVID-19 Paradigm Shift to Recover Better

A Synthesis Report by the United Nations Environment Management Group

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Table of Contents

- Executive Summary IV**
- Introduction 1**
- Why a Green Recovery? 3**
- What is a Green Recovery? 7**
 - Building Blocks 8**
 - Objective 1: Improving Human Wellbeing 9**
 - Objective 2: Increasing Harmony Between Humans and Nature 11**
- Priority Focus Areas 13**
 - Clean Energy 14**
 - Natural Capital 15**
 - Buildings and Energy Efficiency 18**
 - Transportation 19**
 - R&D, Education and Connectivity 20**
- Enabling a Green Recovery 22**
 - Making Long-term and Transformative Commitments to Green Economy 25**
 - Establishing Clear Timelines for Achieving Net-Zero Emissions. 26**
 - Providing Financial and Technological Assistance for Green Recovery to the Emerging and Developing Economies. 27**
 - Closing the Inequality Gap Within and Between Nations 28**
- The UN’s role in the Green Recovery 31**
 - What Qualifies the UN to Lead a Green Recovery 32**
 - Potential Barriers to Success 33**
- Annexes 36**
 - Annex I - UN Recovery Products. 37**
 - Annex II- List of Contributors 50**

Executive Summary

The COVID-19 crisis has presented us with a once-in-a-generation opportunity to rethink, re-evaluate, and redesign the ways in which the human population pursues development and prosperity. While nations around the world are developing and executing their recovery policies and plans, the United Nations recognizes the need for ensuring the integrity and coherence of these plans with the Sustainable Development Goals (SDGs). In that regard, the UN Environment Management Group (EMG) established a consultative process to help the UN system develop a “green recovery narrative”, define a coherent approach, and identify opportunities for collaboration on a green recovery. This report provides the **results of the UN EMG consultative process**, co-chaired by United Nations Environment Programme (UNEP) and International Labour Organization (ILO), **based on the input of the focal points** of over 35 UN agencies that were involved in the process (Annex II) as well as the **expert comments** received in the EMG Nexus Dialogues on Addressing COVID-19 for the Environment. The report is expected to inform and contribute to the ongoing efforts of the UN system, including the work of the UNSDG Task Team to support the country-level implementation of the UN Framework for the Immediate Socio-Economic Response to COVID-19, to enhance coherence and collaboration for green, inclusive, and rights-based recovery.

Green recovery is defined here as a systemic process of re-orienting the economic system after the COVID-19 crisis in order to: (a) **align the development model with the Future We Want and improve human wellbeing in a tangible and evaluable way**; and (b) **increase the harmony of the relationship between human development and nature**. Achieving a green recovery must be facilitated by the active involvement and alignment of the activities of the **public sector, financial sector, and private enterprises** to promote investment in five priority areas (recommended by the experts involved in the consultative process): 1) *clean energy*; 2) *natural capital* 3) *buildings and energy efficiency*; 4) *transportation*, and 5) *Research and Development (R&D), education and connectivity*. Nevertheless, according to the Global Recovery Observatory, as of June 2022, green spending only constitutes 31.2% of the recovery spending globally.

Based on the provided input by the experts and focal points, green recovery has five interrelated and interdependent building blocks:

1. **Prosperity:** Mitigating the economic impacts of the COVID-19 crisis on different stakeholders and enabling a resilient recovery of the economic system to increase productivity, create employment opportunities, and eradicate poverty and hunger (SDG1, SDG2, SDG8, and SDG9).
2. **Health:** Reshaping the way we live, work, eat and consume to cultivate a healthier environment in order to improve human health and minimize our vulnerability to environmentally driven health problems (SDG3 and SDG6).
3. **Nature:** Reforming the economic, agri-food, and infrastructure systems as well as lifestyle and consumption patterns to reduce the impacts of humans on the environment, restore ecosystems, and simultaneously address the three planetary crises of climate change, biodiversity loss, and pollution (SDG7, SDG11, SDG12, SDG13, SDG14, and SDG15).
4. **Justice:** Reducing inequalities and respecting, protecting, and fulfilling human rights, including the rights to a safe, clean, healthy and sustainable environment, access to information, public participation in decision-making and access to justice in environmental matters to enable a just and inclusive future (SDG4, SDG5, SDG10 and SDG16).
5. **Transformation:** Partnership and taking advantage of the post-COVID-19 crisis opportunity to transform the economic system, development model, governance systems, human lifestyle, and our understanding of human wellbeing to recover better and forward by going beyond a return to “normal” (SDG17).

The inclusive recovery process can be enabled through the coordination of its actors and the support from the UN through the simultaneous pursuit of these strategies:

- Making long-term and transformative commitments to green economy
- Establishing clear timelines for achieving net-zero emissions
- Providing financial and technological assistance for green recovery to the emerging and developing economies
- Closing the inequality gap within and between nations

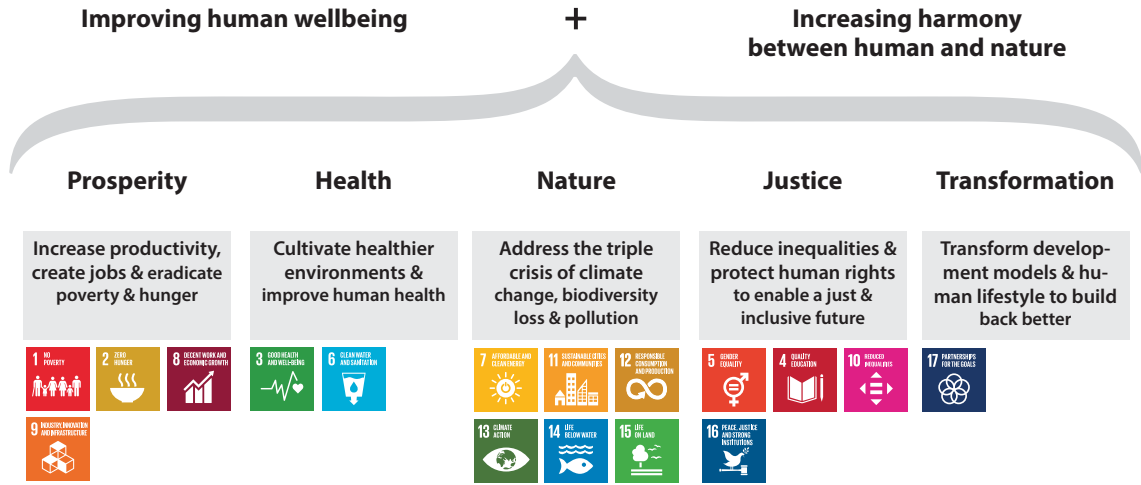
Green recovery **requires a paradigm shift** and introducing a new approach to enhancing both human wellbeing and its relationship with nature in such a way that makes the economic system and governance institutions more transparent, accountable and resilient, distributes the fruits of development in a more inclusive fashion (addressing the inequalities between and within nations), and disincentivizes activities that cause damage to the environment (e.g., climate change and biodiversity loss), and threaten the health of citizens. This new paradigm facilitates economic growth that is environmentally sustainable, as it **does not consider economic growth as the sole or the most important objective of human activities and policy making.**

For building back better, we require revisiting the definitions and frameworks we use to assess development, human wellbeing, and the success of nations. To evaluate our success in moving toward the Future We Want, we need a set of indicators that helps us holistically assess all building blocks of green recovery. The **global indicator framework** for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development provides a potentially suitable framework for assessing and comparing the success of nations in building back better, increasing the harmony between humans and nature, and achieving targets of the 2030 Agenda for Sustainable Development that reflect the Future We Want. Yet, a comprehensive evaluation of the “quality” of progress in green recovery and achieving the SDGs is still challenging in the absence of an integrated assessment framework that can **holistically examine the interdependencies and interrelated dynamics of green recovery building blocks and the SDGs.** Developing such a framework based on a **Nexus Approach** must be one of the top priorities of future efforts to facilitate green recovery in accordance with the SDGs.

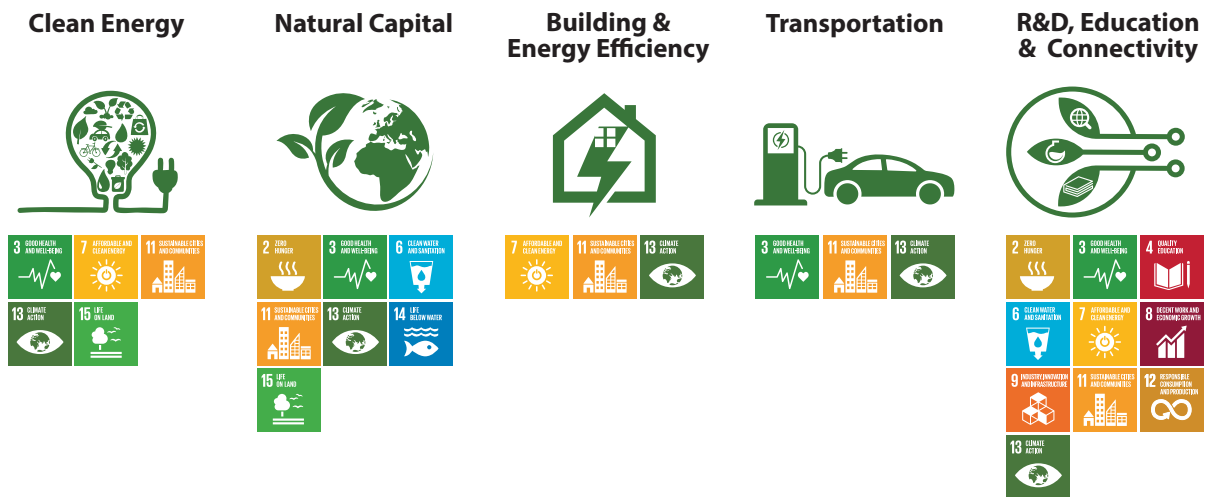
The UN’s **capacity to deliver a fast response to globally significant matters** and the **culture of inter-agency cooperation and partnership** are two of the key qualities that empower the UN to play a key role in facilitating green recovery. An inventory of the example UN agencies’ green recovery-related activities and products (Annex I) reflects the level of the UN’s commitment and support to the countries in addressing the COVID-19 crisis. Continuation of these efforts is essential to ensure that the national recovery efforts do not get the countries off the track for effectively tackling the triple planetary crisis (nature, climate change, pollution) and delivering the SDGs.

Despite its major strengths, the UN system faces some challenges and barriers that limit the effectiveness of its green recovery-related activities. A review of the UN green recovery-related products reveals a high level of redundancy, overlap, and repetition in the material produced by different UN agencies, especially in the case of guideline documents. While the heart of the response to the global COVID-19 crisis lies at the national and sub-national levels, **most of the products have a global focus** and only provide **general guidelines** and ambitious targets and solutions that can be impractical in many countries, especially in developing economies with major financial resource deficiencies.

Green Recovery Objectives and Building Blocks



Priority Investment Areas for Green Recovery



Green Recovery Actors



Green Recovery Actions

- Making long-term and transformative commitments to a green economy
- Establishing clear timelines for achieving net-zero emissions
- Providing financial and technological assistance for green recovery to emerging and developing economies
- Closing the inequality gap within and between nations

The heterogeneity of the COVID-19 impacts on different nations, together with their very diverse socio-economic and political conditions and different levels of access to financial resources, call for more focused analyses, data collection efforts, and practical solutions **at the sub-national, national, and regional levels**. This heterogeneity also highlights the **critical role of the resident coordinators and country teams** as the UN's agents of positive change across the globe. They are uniquely positioned to enable an inclusive and just green recovery by seizing and creating opportunities for operationalizing the UN guidance on the triple planetary crisis and leading the charge for change.

So far, the UN green recovery-related products have been mostly focused on the first three building blocks of green recovery (Prosperity, Health, and Nature). Yet, securing a more prosperous, healthy, sustainable, and inclusive future remains impractical in the long run without equal attention to the other two building blocks of green recovery, namely **Justice** (removing inequalities, respecting, protecting, and fulfilling human rights, involving the public in decision making, and increasing their access to data) and **Transformation** (transformation of the current economic system, development models, governance systems, human lifestyle, and our criteria for assessing human wellbeing). While radical reforms may seem unachievable in the short term, the UN agendas and guidelines must encourage a paradigm shift and facilitate fundamental transformations to recover from the COVID-19 crisis, recover better, and cope with the triple planetary crisis.

Introduction



In their 26th annual meeting in October 2020, the UN EMG Senior Officials addressed how to maintain and accelerate the achievements of the SDGs’ environmental sustainability goals while developing COVID-19 recovery and building back better efforts, policies, and plans that are integrated and coherent with those goals. In this regard, they decided to establish a consultative process to help the UN system define a coherent approach to and identify opportunities for collaboration on an inclusive, equitable, human rights-based green recovery (hereafter, “green recovery”) from the pandemic that is based on the lessons learned from human interactions with nature.

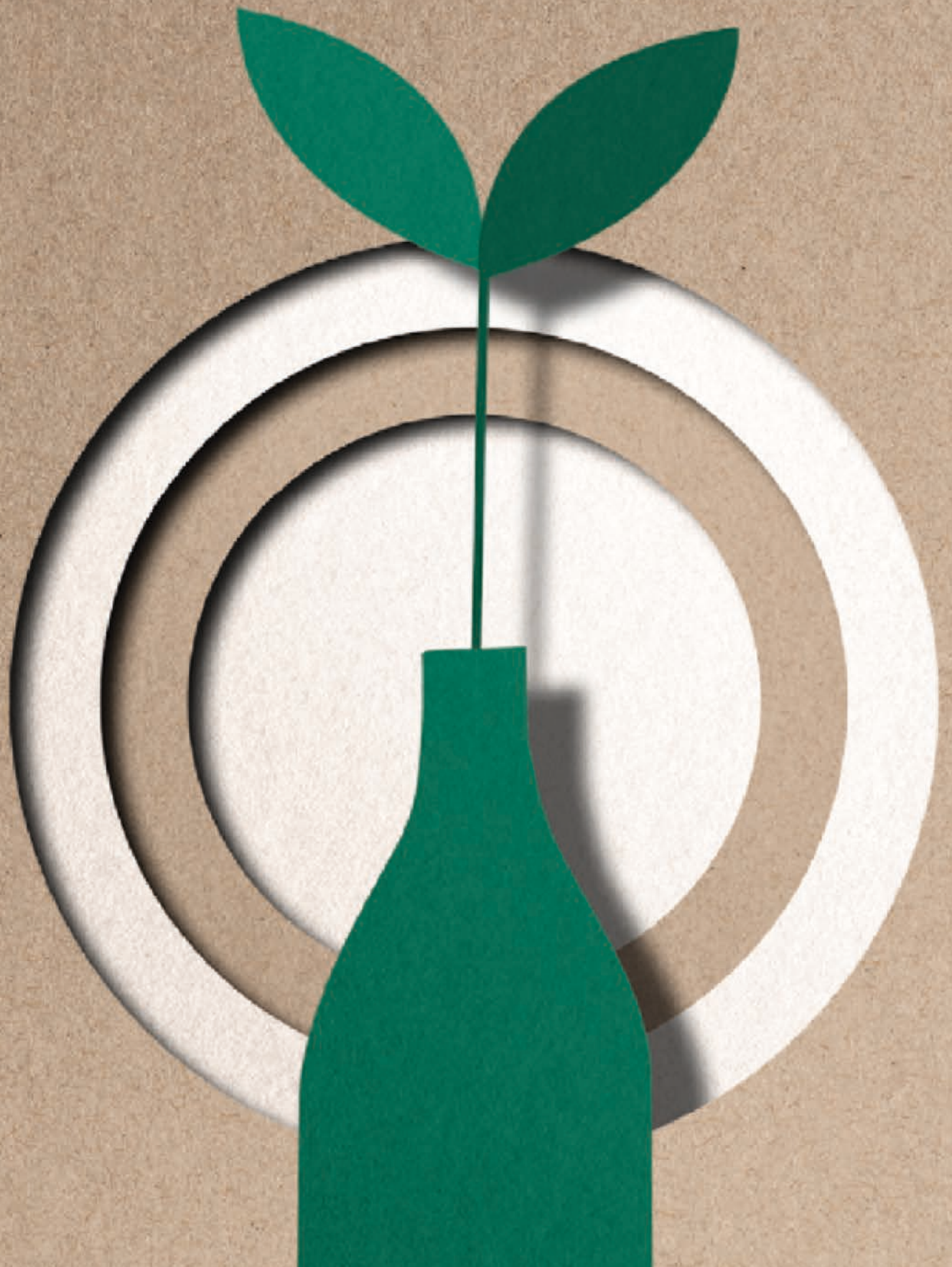
The consultative process was co-chaired by UNEP and ILO and involved the focal points of over 35 UN agencies (Annex II). Through multiple rounds of surveys and virtual in-person interviews, the focal points provided their views on the definition of green recovery, the objectives and building blocks of green recovery, the key investment areas for green recovery, the main actors and their required actions for facilitating green recovery, the role of the UN system in green recovery, the current activities and products of UN agencies that are related to the COVID-19 crisis and the environment, and the challenges that the UN needs to overcome for effective leadership of green recovery. Additionally, input was sought on these topics from subject matter experts as well as the panelists of the EMG Nexus Dialogues on Addressing COVID-19 for the Environment.¹

This report provides the results of the UN EMG consultative process based on the input of the focal points and subject matter experts. First, the report provides a background on the need for green recovery. Then, it defines green recovery, its objectives and building blocks, as well as the recommended priority investment areas based on the provided input. This is followed by an overview of the main actors of green recovery and the actions required of them to facilitate and achieve it. The last section of the report discusses the unique position of the UN

to take a leadership role in inclusive green recovery, what has been accomplished by the UN system in the green recovery space since the start of the pandemic, and the challenges that must be addressed by the UN system to strengthen its role in green recovery leadership and support. The report also includes a non-inclusive inventory of the UN system’s green recovery-related products (Annex I) and their connections with the green recovery building blocks and the SDGs. The report is expected to inform and complement the ongoing efforts of the UN system, including the work of the UNSDG Task Team to support the country-level implementation of the UN Framework for the Immediate Socio-Economic Response to COVID-19, to enhance coherence and collaboration for green, inclusive, and rights-based recovery.

¹ UN Covid-19 and Environment (n.d.). Retrieved June 21, 2021, from <https://unemg.org/covid-19-and-environment/>

Why a Green Recovery?



The pre-COVID-19 world had been created by a wide variety of choices and actions, which had brought forth warnings from the scientists, intergovernmental agencies, thought leaders, and activists. Much of these warnings stemmed from the continuation of unsustainable practices that could bring humankind to crisis-like situations. Despite repeated warnings²,³ and the efforts made by both national and international institutions, business-as-usual practices continued to cause harm to natural resources, biodiversity, and climate stability⁴ globally.

Parallel to the unsustainable practices which have skewed the economic system towards a path that is harmful to both humans and the environment, inequalities in income and wealth have increased⁵. Twelve years after the proposition of the Global Green New Deal (GGND),⁶ the world has not been successful in building a “Green Economy” and effectively addressing the triple crisis of climate, nature, and pollution.⁷

COVID-19, whose zoonotic origin is strongly suspected, is another crisis with significant health and socio-economic impacts that highlights the need for

sustainable interactions between humans and nature.⁸ The interrelated outcomes of biodiversity and habitat loss, water, air and land pollution, illegal exploitation and other types of environmental degradation increase the rise of zoonotic diseases and disaster risk. These outcomes and their already experienced impacts on human systems highlight the significant interconnectedness between human, animal and environmental health as well as “the need for a reimagining of the human relationship to nature as a symbiotic one”⁹

The speed at which the COVID-19 virus spread, and the adverse health effects it caused, caught our health systems off guard. Health systems became overwhelmed and soon were plunged into a serious crisis. Yet, the extent of this crisis was not limited to the health sector. The failure of the health system had a domino effect on other sectors, widening the existing inequalities between and within nations. This reflected the lack of resilience in the current systems of governance and the interconnected dynamics of various sectors, including the environmental sector. The Under-Secretary-General of the United Nations (UN) and Executive Director of the UN Environment Programme (UNEP), Inger Andersen, referred to the COVID-19 crisis as nature’s message to humans.¹⁰

The health crisis triggered by the rapid spread of COVID-19 forced policy makers to respond by imposing necessary and life-saving lockdowns, which

² IPCC (2019) Climate Change and Land, Retrieved September 26, 2021, from <https://www.ipcc.ch/srccl/>

³ Bélanger, J. and Pilling, D. (eds.) (2019) The State of the World’s Biodiversity for Food and Agriculture, FAO, Rome, Italy, Retrieved September 26, 2021, from <http://www.fao.org/documents/card/en/c/ca3129en/>

⁴ UN Climate Change - Key findings. (n.d). Retrieved June 07, 2021, from <https://www.un.org/en/climatechange/science/key-findings>

⁵ Piketty, T., & Goldhammer, A. (2017). *Capital in the twenty-first century*. Cambridge, MA: The Belknap Press of Harvard University Press.

⁶ UNEP (2009) - Global Green New Deal policy brief, Retrieved June 07, 2021, from https://wedocs.unep.org/bitstream/handle/20.500.11822/7903/A_Global_Green_New_Deal_Policy_Brief.pdf?sequence=3&%3BisAllowed=

⁷ UNEP (2020) Retrieved June 07, 2021, from <https://www.unep.org/news-and-stories/speech/triple-planetary-crisis-forging-new-relationship-between-people-and-earth>

⁸ About 60 percent of known human infectious diseases and 75 percent of all emerging infectious diseases are zoonotic, UNEP & International Livestock Research Institute (ILRI) (2020) Preventing the Next Pandemic: Zoonotic Diseases and How to Break the Chain of Transmission, Retrieved September 26, 2021, from <https://www.unep.org/resources/report/preventing-future-zoonotic-disease-outbreaks-protecting-environment-animals-and>

⁹ CEB UN (2021) *A common approach to integrating biodiversity and nature-based solutions for sustainable development into the UN’s policy and programme planning and delivery*, CEB/2021/1/Add.1, https://unsceb.org/sites/default/files/2021-09/CEB_2021_1_Add.1%20%28Biodiversity%20Common%20Approach%29.pdf

¹⁰ Carrington, D. (March 25, 2020). *Coronavirus: ‘Nature is sending us a message’, says UN environment chief*. The Guardian. Retrieved on June 07, 2021, from <https://www.theguardian.com/world/2020/mar/25/coronavirus-nature-is-sending-us-a-message-says-un-environment-chief>

in turn, by some estimates, pushed over 100 million people into extreme poverty¹¹. The pandemic created an additional burden for many governments, adding to the impacts of conflicts and other types of shocks such as extreme climatic events (droughts and floods), pests, and diseases. This further limited food availability and access, especially in countries already facing food crises.¹² In 2020, one-third of the world population (2.37 billion) did not have access to adequate food (320 million more people than 2019), 720-811 million people faced hunger, and the Prevalence of Undernourishment (PoU) increased to about 9.9% (compared to 8.4% in 2019).¹³ This is due to sharply reduced economic activity which resulted in significant reductions in employment, income and access to adequate and healthy diets, especially among vulnerable populations. According to the ILO,¹⁴ as of January 2021, 93% of the world's workers were residing in countries with some form of workplace closures in place; in 2020, 8.8% of global working hours, equivalent to 255 million full-time jobs, were lost relative to the 4th quarter of 2019; the impact of labour market disruptions in 2020 was bigger than that of the global financial crisis of 2009; and employment losses in 2020 amounted to a loss of 114 million jobs compared to the pre-crisis employment level in 2019.

Involuntary loss of employment and diminishing incomes due to the economic downturn called for other policy responses from national institutions

in various forms, including monetary¹⁵ and fiscal¹⁶ expansions, in order to mitigate the hardships imposed on populations, mainly in advanced economies. Fiscal constraints and weak systems of social security caused further hardships in developing and poor economies.

Economic stimulus packages can serve as an opportunity to protect and benefit persons, groups and peoples in vulnerable situations while advancing efforts to respect, protect and fulfil human rights, achieve the 2030 Agenda and the Sustainable Development Goals, and limit global warming to the greatest extent possible. Yet, so far, stimulus spending for recovery from the COVID-19 crisis in various countries has been a mixed bag of green (nature-friendly) and brown (nature-unfriendly) spending. As of June 2022, green spending only constitutes 31.2% of the recovery spending globally.¹⁷ Green investments have gravitated more towards clean transport and clean energy infrastructure (new or refurbished renewable energy generation facilities), buildings upgrades and energy efficiency infrastructure, green market creation, natural capital and green space, electric vehicles, and clean R&D.

Despite the magnitude of the challenge, there is much room for optimism. The unprecedented nature of this economic sudden-stop has provided us with a once-in-a-generation opportunity to rethink, re-evaluate, and redesign the way forward in order to

¹¹ World Bank, Poverty and shared prosperity 2020. (n.d.). Retrieved June 07, 2021, from <https://www.worldbank.org/en/publication/poverty-and-shared-prosperity>

¹² FAO (2021), Deep Dive for Resident Coordinators on the Triple Planetary Crisis: Nature, Climate, Pollution and the Role of the UN Development System in Responding, Rome, Italy.

¹³ FAO, IFAD, UNICEF, WFP & WHO (2021) The State of Food Security and Nutrition in the World 2021. Transforming food systems for food security, improved nutrition and affordable healthy diets for all. Rome, FAO, <http://www.fao.org/documents/card/en/c/cb4474en>

¹⁴ ILO (2021) ILO Monitor: COVID-19 and the world of work. 7th edition, https://www.ilo.org/global/topics/coronavirus/impacts-and-responses/WCMS_767028/lang-en/index.htm

¹⁵ Cheng, J., Powell, T., Skidmore, D., & Wessel, D. (2021, March 30). What's the Fed doing in response to the COVID-19 Crisis? What more could it do? Retrieved June 07, 2021, from <https://www.brookings.edu/research/fed-response-to-covid19/>

¹⁶ UNEP, Poverty and shared prosperity 2020. (n.d.). Retrieved June 07, 2021, from <https://www.worldbank.org/en/publication/poverty-and-shared-prosperity>

¹⁷ 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. Retrieved June 02, 2022, from <https://recovery.smithschool.ox.ac.uk/tracking/t>

recover better.¹⁸ The world now recognizes the urgent need to strengthen its policy making institutions and build resilience, reduce inequalities, strengthen social protection systems and protect the environment, so that the costs of future crises would be mitigated without major impacts on human societies. The recovery process must also be inclusive and minimize the inequalities within and between nations. Indeed, the UN Sustainable Development Goals (SDGs) and the ambitious targets set out by the Paris Agreement and other conventions (to reduce greenhouse gas emissions, enhance biodiversity, reduce pollution, respect, protect and fulfil human rights, improve food security, and empower women, children and marginalized communities, etc.) are appropriate to guide this recovery process. The radical changes in our lifestyle after the COVID-19 breakout were forced under extreme conditions. But they have given us the confidence to believe that major reforms are possible and moving away from business-as-usual is not out of reach. The experiences learned from the COVID-19 crisis together with the opportunities created by it (such as the rapid move towards the use of digital infrastructure for education purposes) can give a new momentum to work towards implementation of all SDGs and actively pursue Our Common Agenda.^{19, 20}

In September 2021, the UN Secretary-General, António Guterres, urged the world to keep its commitments to people and the planet, make global decision making more representative and cooperative, and re-embrace global solidarity to accelerate the implementation of Our Common Agenda.²¹ While the world is

experiencing its most significant shared test since the Second World War²², it is important to acknowledge the shared responsibility to “recover better”. The recovery from this pandemic needs to be inclusive (reducing the various forms of inequalities, including wealth, income, and digital divides) and needs to put the economic system on a sustainable path. The UN system aims to provide a decisive response to this message. Recognizing that the “national and global recovery plans will determine if future threats to human wellbeing, to our economies and to planet are mitigated or amplified,”²³ different UN agencies have been engaged within their respective mandates to facilitate a “green recovery” from the pandemic and support countries in responding to the ongoing health and economic crisis, and in guiding their recovery efforts. In addition, many countries have already recognized the need for an inclusive, green and just recovery and have announced plans for the implementation of different economic measures for building back better.

While the need for a green recovery has been recognized at international as well as national levels, a coherent narrative that defines an inclusive green recovery, its main objectives, its components, and the way to assess progress is still missing. This report provides a narrative to guide and accelerate the green recovery process in order to increase the integrity, harmony, and coherence of recovery plans and policies with the environmental sustainability goals under the SDGs.

¹⁸ The OECD Green Recovery Database: Examining the environmental implications of COVID-19 Recovery Policies. (2021, April 19). Retrieved June 07, 2021, from <https://www.oecd.org/coronavirus/policy-responses/the-oecd-green-recovery-database-47ae0f0d/>

¹⁹ UN (2021) Our Common Agenda, Report of the Secretary-General. Retrieved September 23, 2021, from https://www.un.org/en/content/common-agenda-report/assets/pdf/Common_Agenda_Report_English.pdf

²⁰ UN Secretary-General's high-level panel on digital Cooperation. (n.d.). Retrieved June 07, 2021, from <https://www.un.org/en/sg-digital-cooperation-panel>

²¹ UN (2021) Our Common Agenda, Report of the Secretary-General. Retrieved September 23, 2021, from https://www.un.org/en/content/common-agenda-report/assets/pdf/Common_Agenda_Report_English.pdf

²² Ibid.

²³ UN COVID Hub. Retrieved June 07, 2021, from <https://www.un-page.org/covid>

What is a Green Recovery?



Green recovery is the systemic process of re-orienting the economic system after the COVID-19 crisis and aligning the development model with the Future We Want²⁴ by (a) improving human wellbeing in a tangible and evaluable way; and (b) increasing the harmony of the relationship between human and nature.

Building Blocks

Based on the provided input by the experts involved in the consultative process, inclusive green recovery has five interrelated and interdependent²⁵ building blocks:

Prosperity: Mitigating the economic impacts of the COVID-19 crisis on different stakeholders and enabling a resilient recovery of the economic system to increase productivity, create employment opportunities, and eradicate poverty and hunger (SDG1, SDG2, SDG8, and SDG9).

Health: Reshaping the way we live, work, eat and consume to cultivate a healthier environment in order to improve human health and minimize

our vulnerability to environmentally driven health problems²⁶ (SDG3 and SDG6).

Nature: Reforming the economic, eco-agri-food²⁷, and infrastructure systems as well as lifestyle and consumption patterns to reduce the impacts of human on the environment, restore ecosystems, and simultaneously address the three planetary crises of climate change, biodiversity loss, and pollution (SDG7, SDG11, SDG12, SDG13, SDG14, and SDG15).

Justice: Reducing inequalities and respecting, protecting, and fulfilling human rights, including the rights to a safe, clean, healthy and sustainable environment, access to information, public participation in decision-making and access to justice in environmental matters²⁸ to enable a just and inclusive future (SDG4, SDG5, SDG10 and SDG16).

Transformation: Partnership and taking advantage of the post-COVID-19 crisis opportunity to transform the economic system, development model, governance systems, human lifestyle, and our understanding of human wellbeing to build back better and forward by going beyond a return to “normal” (SDG17).

Resilient and inclusive green recovery sets out to provide a mission-oriented narrative that would guide and inform stakeholders towards action. Towards this end, the following two objectives must be carefully examined, evaluated, reimagined, and reformed with respect to the five building blocks of Prosperity, Health, Nature, Justice and Transformation.

²⁴ UN DESA (n.d.). Future we want - outcome document: sustainable development knowledge platform. Retrieved June 20, 2021, from <https://sustainabledevelopment.un.org/futurewewant.html>

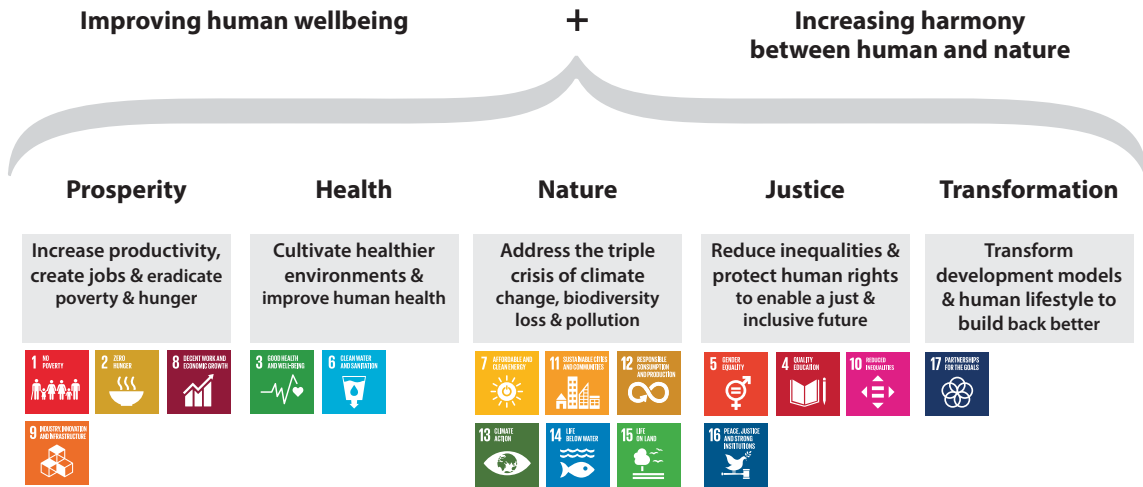
²⁵ Here, the SDGs are associated with the most relevant green recovery building block. But, the suggested categorization of the SDGs under each building block is non-exhaustive. This is because the building blocks of green recovery and their corresponding SDGs are interrelated and interdependent. For example, SDG2, access to safe and nutritious food, has immediate health benefits (SDG3) or the sustainable agriculture and genetic diversity targets of SDG2 have benefits for the nature (e.g., SDG13 and SDG15). On the other hand, improved environmental conditions can improve agricultural/economic productivity and health conditions. This co-dependency among the SDGs and the building blocks of green recovery necessitates a Nexus Approach (<https://flores.unu.edu/en/research/nexus>) to achieving the SDGs and facilitating green recovery.

²⁶ WHO manifesto for a healthy recovery from COVID-19. (2020, May 26). Retrieved June 20, 2021, from <https://www.who.int/publications/i/item/who-manifesto-healthy-recovery-covid19>

²⁷ The Economics of Ecosystems and Biodiversity (TEEB) (2018). TEEB for Agriculture & Food: Scientific and Economic Foundations. Geneva: UN Environment, <http://teebweb.org/our-work/agrifood/reports/scientific-economic-foundations/>

²⁸ See objective 1 of the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, <https://unece.org/environment-policy/public-participation>

Green Recovery Objectives and Building Blocks



Objective 1: Improving Human Wellbeing

The first objective of inclusive green recovery is improving human development and wellbeing,²⁹ taking into account the achievements of countries (in health, food security, education, income, fulfilment of human rights, etc.) and how equally these achievements are distributed among the population. This goal encompasses the Prosperity, Health, Justice, and Transformation components of inclusive green recovery. The world can achieve this goal by taking advantage of the opportunity created by the COVID-19 crisis to implement transformative changes and make its policy institutions and processes more resilient and inclusive.

The gap between the current state and the desired states of the world, i.e., the Future We Want,³⁰ as

specified by the SDGs, has continuously widened due to the unsustainability of the current development paradigm. The opportunity, however, for a transformational change based on a mission-oriented approach, is still within grasp. Business-as-usual has been interrupted by a global crisis. The world should not allow itself to go back to status-quo by putting in place policies and mechanisms that prevent that from happening again; hence, recovering better through green recovery is now not only possible, but also a necessity for human survival.

Gross Domestic Product (GDP) and its rate of growth has long been one of the main indicators used for assessing “success” in a march towards development. This indicator, in light of today’s challenges, is no

²⁹ UNDP (n.d.). What is the purpose of the Inequality-adjusted HDI (IHDI)? Retrieved June 07, 2021, from <http://hdr.undp.org/en/faq-page/inequality-adjusted-human-development-index-ihdi>

³⁰ Future we want - outcome document .. sustainable development knowledge platform. (n.d.). Retrieved June 20, 2021, from <https://sustainabledevelopment.un.org/futurewewant.html>

longer fit for purpose.^{31, 32, 33} Green recovery calls for a transformation of the way we assess the success and development trajectory of nations. GDP, Growth National Income (GNI), unemployment rate, life expectancy, Gini coefficient, greenhouse gas emissions, and literacy rate are examples of indicators that have been commonly used for evaluating the achievements of nations. Some composite indicators have also been developed to facilitate a multi-dimensional assessment of nations' achievements. Human Development Index³⁴ (HDI), for example, is a static composite indicator that combines the GNI per capita, life expectancy, and the education level to assess the development achievements of nations. Inequality-adjusted HDI³⁵ (IHDI) is an improved version of HDI, which also takes into account how the achievements of the countries in income, health and education have been distributed among their populations, noting that equality is an integral element to human development. Planetary pressures-adjusted Human Development Index (PHDI) is another development index that tries to reflect the concern for intragenerational inequality in assessing the achievements of countries by discounting the HDI for pressures on the planet.³⁶ While these indicators are helpful, their scopes are limited in helping us

comprehensively assess success based on today's understanding of our challenges, needs and targets for improving human wellbeing. For example, these indicators cannot tell us if human rights are protected, if water is clean, or if gender inequalities have been removed.

To recover better, we require revisiting the definitions and frameworks we use to assess development, human wellbeing, and the success of nations. To evaluate our success in moving toward the Future We Want, we need a set of indicators that helps us holistically assess all building blocks of green recovery. The global indicator framework,³⁷ adopted by the UN General Assembly on 6 July 2017 and contained in the Resolution adopted by the General Assembly on World of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development (A/RES/71/313), Annex, provides a potentially suitable framework for assessing and comparing the success of nations in green recovery, building back better, increasing the harmony between humans and nature, and achieving targets of the 2030 Agenda for Sustainable Development that reflect the Future We Want. Yet, a comprehensive evaluation of the "quality" of progress in green recovery and achieving the SDGs remains challenging in the absence of an integrated assessment framework that can holistically assess the interdependencies and interrelated dynamics of green recovery building blocks and the SDGs. Developing such a framework based on a Nexus Approach³⁸ must be one of the top priorities of future efforts to facilitate policy design for green recovery, tackling the triple planetary crisis, and delivering the SDGs.

³¹ Stiglitz, J. (2019, November 24). It's time to retire metrics like GDP. They don't measure everything that matters | The Guardian. Retrieved June 07, 2021, from <https://www.theguardian.com/commentisfree/2019/nov/24/metrics-gdp-economic-performance-social-progress>

³² Kubiszewski, I., Costanza, R., Franco C, Lawn, P., Talberth, J., Jackson, T. & Aylmer, C. (2013) Beyond GDP: Measuring and achieving global genuine progress, *Ecological Economics*, 93, 57-68.

³³ Costanza, R., Daly, L., Fioramonti, L., Giovannini, E., Kubiszewski, I., Mortensen, L. F., Pickett, K. E., Ragnarsdottir, K. V., De Vogli, R. D. & Wilkinson, R. (2016) Modelling and measuring sustainable wellbeing in connection with the UN Sustainable Development Goals, *Ecological Economics*, 130, 350-355.

³⁴ Human Development Index (HDI), Human Development Reports, UNDP (n.d.). Retrieved June 07, 2021, from <http://hdr.undp.org/en/content/human-development-index-hdi>

³⁵ What is the purpose of the inequality adjusted HDI (IHDI)? (n.d.). Retrieved June 07, 2021, from <http://hdr.undp.org/en/faq-page/inequality-adjusted-human-development-index-ihdi#t293n2905>

³⁶ Planetary pressures-adjusted Human Development Index (PHDI) (n.d.). Retrieved June 30, 2021, from <http://hdr.undp.org/en/content/planetary-pressures%E2%80%93adjusted-human-development-index-phdi>

³⁷ SDG indicators - SDG Indicators. (n.d.). Retrieved June 07, 2021, from <https://unstats.un.org/sdgs/indicators/indicators-list/>

³⁸ UNU-FLORES (n.d.) The Nexus Approach to Environmental Resources Management- Retrieved September 20, 2021, from <https://flores.unu.edu/en/research/nexus>

Objective 2: Increasing Harmony Between Humans and Nature

The second objective of green recovery seeks to address the existing problems related to the unhealthy interactions between our economic system, human development, and the environment to make the human-nature relationship more harmonious (the Nature building block). The economic paradigm formed and theorized based on historical developments during the previous industrial revolutions assumed a pivotal role for economic growth, production, and consumption in order to improve the wellbeing of societies. This mainstream economic paradigm reinforced by neoclassical economic models, encourages maximizing production and consumption while neglecting the limits to sources (how much natural resources are available to use) and sinks (how much harm can be done to the environment, i.e., emissions and waste). As a result, our economies continue to metabolize more natural resources to improve GDP and widen the gap between (i) the actual and the sustainable rate of extracting natural resources (sources), and (ii) the actual and sustainable rate of using natural sinks (e.g., atmosphere, forests, soil, and oceans), which are expected to absorb the disposed byproducts (emissions and pollutants) of the economic system's operation. Consequently, while the past industrial revolutions brought material prosperity to humankind, the prevalence of the underlying economic paradigm has led to the adoption of practices and resource governance structures that put excessive pressure on the natural world, caused erosion, and in many cases, major irreversible damage to the ecosystems, reduced the productivity and resilience of agri-food systems, resulted in major health costs for humans and substantial adverse impacts on the human rights, pushed many species to extinction, created unjust inequality between and within nations, and brought humans on a trajectory that is worryingly unsustainable.

The GDP-oriented growth paradigm has already proven to be defective and “ungreen”³⁹ and faced fierce criticism, especially after the 2008 Global Financial Crisis (GFC), which plunged many economies into recession. Despite the recognition of the need and the global call for green (low carbon, resource efficient and socially inclusive) economic growth⁴⁰ after this crisis, efforts to maintain the status quo have prevailed, and the opportunity to reduce the material intensity of GDP (SDG Targets 8.4 and 12.2) and change the trajectory of the nations' unsustainable practices has not been adequately grasped. Business-as-usual practices, lack of strong political will, and the economic cost of transformation prevented integration of green economy principles in development models and investment decisions in a way that could drive a meaningful, practical change to the way people live and govern our systems. As a result, sustainable production and consumption continues to remain as one of the key challenges of the required economic transformation to achieve the Future We Want.

Green Recovery recognizes the unsustainability of the GDP-based growth models. Considering the full life cycle of processes and products, green recovery advocates for green economy and reducing the natural resource-dependency of economic development by minimizing the amounts of resources needed as well as the generated waste and released emissions per unit of product or service.⁴¹ Green Recovery promotes circular economy and acknowledges the value of natural capital and the need for sustainable production and consumption and improving resource use efficiency.

³⁹ Hickel J. (2021). *Less is More: How Degrowth Will Save the World*, Penguin Random House, London, U.K.

⁴⁰ UNEP (2009) Global Green New Deal policy brief, Retrieved June 07, 2021, from https://wedocs.unep.org/bitstream/handle/20.500.11822/7903/A_Global_Green_New_Deal_Policy_Brief.pdf?sequence=3&isAllowed=

⁴¹ UNEP (n.d.) Green Economy - supporting resource efficiency - Retrieved June 07, 2021, from <https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy>

Green recovery requires a paradigm shift and introduces a new approach to enhancing both human wellbeing and people’s relationship with nature, in such a way that makes the economic system and governance institutions more transparent, accountable and resilient, distributes the fruits of development in a more inclusive fashion (addressing the inequalities between and within nations), and disincentivizes activities that cause damage to the environment (e.g., climate change, pollution, and biodiversity loss) and threaten the health of citizens. This new paradigm facilitates economic growth that

is environmentally and socially sustainable, as it does not consider economic growth as the sole or the most important objective of human activities and policy making. The process of increasing the harmony between humans and nature must be based on the recognition of the intrinsic value of nature. This process can benefit from the analysis frameworks that integrate environmental and economic data to provide a more comprehensive view of the interrelationships between the nature and economy, such as the System of Environmental-Economic Accounting (SEEA)⁴² and the SEEA Ecosystem Accounting (SEEA EA)⁴³.

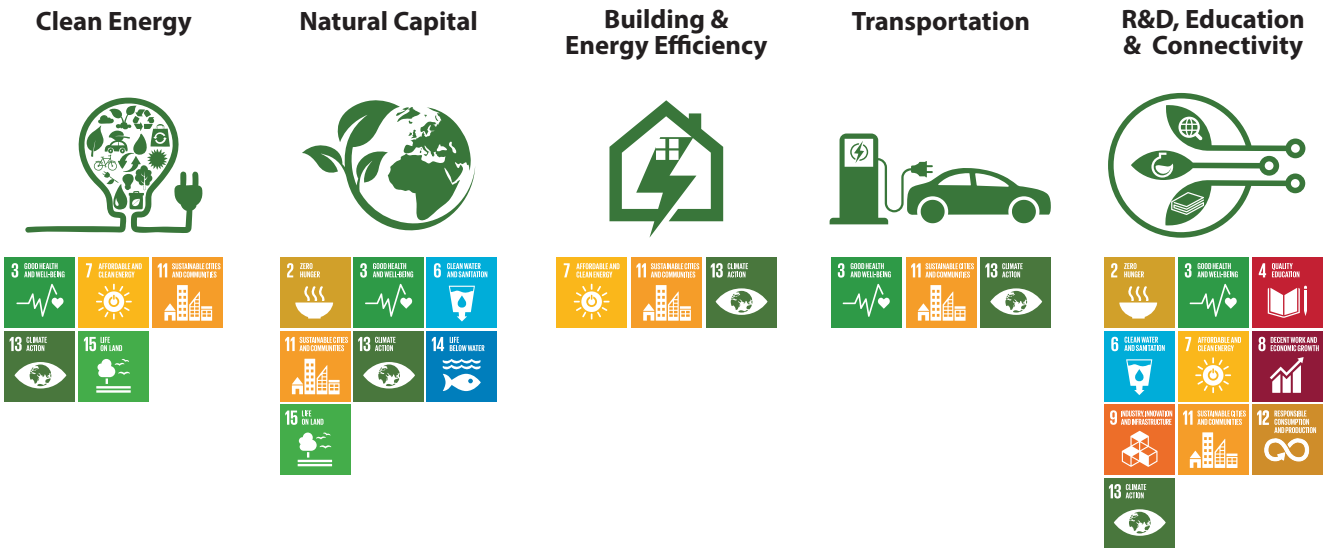
⁴² System of Environmental Economic Accounting, What is the SEEA?, Retrieved June 30, 2021, from <https://seea.un.org/>

⁴³ System of Environmental Economic Accounting, Ecosystem Accounting, Retrieved June 30, 2021, from <https://seea.un.org/ecosystem-accounting>

Priority Focus Areas



Priority Investment Areas for Green Recovery



Based on the views and advice of the experts involved in the consultative process and many other sources,^{44, 45, 46} Green Recovery can be facilitated by investment in five key (non-exclusive) areas: 1) clean energy; 2) natural capital; 3) buildings and energy efficiency; 4) transportation; and 5) R&D, education and connectivity.

Clean Energy

Energy use accounts for more than 70%⁴⁷ of greenhouse gas emissions globally. Given its high impact on climate, and the rapid technological

advances that have steadily reduced the cost of renewable energies (e.g., over the past decade, the levelized cost of producing energy has dropped by about 82 % for photovoltaic solar (PV), 47% for concentrated solar energy (CSP), 39% for onshore wind, and 29% for offshore wind⁴⁸) and storage devices, steering recovery spending towards this area is a cost-effective avenue for achieving the SDGs (SDG3, SDG7, SDG11, and SDG13, and SD15) and the objectives of the Paris Agreement. Investment in the clean energy sector is considered to have high economic multipliers,⁴⁹ which would imply a significant contribution to the expansion of employment and economic growth.^{50, 51}

⁴⁴ Hepburn, C., O’Callaghan, B., Stern, N., Stiglitz, J., Zenghelis, D. (2020), Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?, *Oxford Review of Economic Policy*, Volume 36, Issue Supplement_1, Pages S359–S381, <https://doi.org/10.1093/oxrep/graa015>.

⁴⁵ UNEP Are We Building Back Better? Evidence from 2020 and Pathways for Inclusive Green Recovery (March 2021) Retrieved June 20, 2021, from <https://www.unep.org/resources/publication/are-we-building-back-better-evidence-2020-and-pathways-inclusive-green>

⁴⁶ UN (n.d.) Six Climate-Positive Actions to Help Rebuild Economies From COVID-19 Pandemic, <https://www.un.org/en/climatechange/recovering-better/six-climate-positive-actions>

⁴⁷ UNEP Are We Building Back Better? Evidence from 2020 and Pathways for Inclusive Green Recovery (March 2021) Retrieved June 20, 2021, from <https://www.unep.org/resources/publication/are-we-building-back-better-evidence-2020-and-pathways-inclusive-green>

⁴⁸ Rollet, C. (2020), Solar costs have fallen 82% since 2010, PV Magazine, Retrieved August 8, 2021, from <https://www.pv-magazine.com/2020/06/03/solar-costs-have-fallen-82-since-2010/>

⁴⁹ Batin N., Di Serio M., Fragetta, M., Melina, G., and Waldron A. (2021). Building Back Better: How Big Are Green Spending Multipliers?, International Monetary Fund (IMF), WP/21/87. <https://www.elibrary.imf.org/view/journals/001/2021/087/article-A001-en.xml>

⁵⁰ IEA (2021) Net Zero by 2050: A Roadmap for the Global Energy Sector, <https://www.iea.org/reports/net-zero-by-2050>

⁵¹ PAGE (2021) Modelling a Global Inclusive Green Economy COVID-19 Recovery Programme, <https://www.greengrowthknowledge.org/research/modelling-global-inclusive-green-economy-covid-19-recovery-programme-0>

June 2022 the Global Recovery Observatory⁵² is reporting a \$147.98 billion recovery investment channeled towards clean energy infrastructure.

Energy has long been the primary driver of economic activity. Thus, reaching a net-zero economy will require investments geared towards: decarbonizing electricity, electrification of industry, and increasing energy efficiency across all sectors. Making sure that the greatest possible share of this new energy generation is via clean renewables,^{53,54} is paramount. The opportunities for renewable energy development in areas without existing energy infrastructure are significant. Nonetheless, the prospects of growth in energy demand are not uniform in the advanced economies compared with the emerging markets and developing economies. Focusing on a transition path of decarbonizing or *greening* the energy sector proves to be challenging for all economies, including the emerging markets and developing economies facing ever-increasing energy demand.

The transition ahead requires the involvement and partnership of the public and private sectors. According to the International Monetary Fund (IMF), expenditure on clean energy has 2 to 7 times larger multiplier effects⁵⁵ on

the economy. IPCC estimates that the required additional global investment from 2015 to 2050 could be close to \$ 830 billion (in the range of \$ 150 to 1,700 billion) per annum.⁵⁶ Although the total sum may seem quite large, considering the context of the total recovery spending and the potential threats to human wellbeing caused by climate change and pollution⁵⁷, this investment is necessary. The global GDP today stands close to \$ 100 trillion.⁵⁸ With a growth rate of close to 3%, this figure could go well beyond \$ 200 trillion by 2050. An investment aligned with common but differentiated responsibilities and equivalent to less than 0.6% of global income over the next four decades is needed in order to “avoid potentially catastrophic harm to human welfare.”⁵⁹

Natural Capital

Human well-being (prosperity, physical and mental health, and growth opportunities) heavily depends on the natural capital (the world’s stocks of natural assets (both sources and sinks), including geology, soil, water, air, and all living things⁶⁰) and its services. Today, about 1.2 billion jobs (40% of total employment globally)

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. <https://data.undp.org/content/global-recovery-observatory/>

⁵³ Mahlooji, M., Gaudard, L., Ristic, B., & Madani, K. (2020) The importance of considering resource availability restrictions in energy planning: What is the footprint of electricity generation in the Middle East and North Africa (MENA)?, *Science of the Total Environment*, 717, 135035, <https://doi.org/10.1016/j.scitotenv.2019.135035>

⁵⁴ Ristic B., Mahlooji M., Gaudard L., Madani K. (2019) The relative aggregate footprint of electricity generation technologies in the European Union (EU): a system of systems approach, *Resources, Conservation and Recycling*, 143, 282-290, <https://doi.org/10.1016/j.resconrec.2018.12.010>

⁵⁵ Batini, N., Di Serio, M., Fragetta, M., Melina, G., & Waldron, A. (2021). Building back better: How big are green spending multipliers? Retrieved June 0, 2021, from <https://www.imf.org/en/Publications/WP/Issues/2021/03/19/Building-Back-Better-How-Big-Are-Green-Spending-Multipliers-50264>

⁵⁶ IPCC (2018) Summary for Policymakers. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. World Meteorological Organization, Geneva, Switzerland, 32 pp.

⁵⁷ A critical co-benefit of a just transition to renewable energy would also be the prevention of roughly 7 million premature deaths from air pollution each year, WHO (n.d.),- Retrieved June 20, 2021, from https://www.who.int/health-topics/air-pollution#tab=tab_1

⁵⁸ World Bank - Data - Retrieved June 20, 2021, from <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>

⁵⁹ Turner, A. (October 24, 2018). Zero-Carbon Economy is within Reach by Adair Turner, Project Syndicate. Retrieved June 07, 2021, from <https://www.project-syndicate.org/commentary/zero-carbon-economy-within-reach-by-adair-turner-2018-10>

⁶⁰ CBD (n.d.) Natural Capital, Retrieved September 28, 2021, from <https://www.cbd.int/business/projects/natcap.shtml>

directly depend on healthy and stable nature,⁶¹ and over half the world's total GDP (USD 44 trillion of economic value added) highly or moderately depends on the environment.⁶² But unsustainable economic growth and exploitation of natural capital are associated with harm to the environment, which subsequently impedes growth and negatively impacts human health.

During the last century, food production systems have changed dramatically, resulting in an unprecedented rise in crop yields and sharp increases in production efficiency per area and labour unit. However, this development has come with significant trade-offs and costs entailing increased greenhouse gas emissions, loss of biodiversity, significant water withdrawals, runoff pollution, and other environmental threats. In 2019, the agriculture sector, which heavily relies on natural capital, provided more than 25% of the employment opportunities globally.⁶³ The unsustainable growth and practise of agri-food systems have made the agricultural sector responsible for 60% of the terrestrial biodiversity loss, 33% of soil degradation, 61% of the depletion of commercial fish stocks 24% of greenhouse gas emissions at the global level.^{64, 65} Biodiversity loss is currently costing the global economy 10% of its annual output.⁶⁶ Heat stress (expected to be intensified by climate change) is expected to reduce the global

GDP by USD 2.4 trillion in 2030. However, it is essential and possible to reverse this course and reduce the environmental damages of economic growth by adequate investment in restoration, protection and sustainable use of natural capital in order to create harmony between the economic system (managed by humans) and the natural ecosystem (managed by nature). For example, eradicating hunger and poverty requires boosting agricultural productivity and rural incomes, necessitating the restoration, protection, and sustainable use of the key inputs into food production (water, land, healthy soils, and plant genetic resources) and increasing investment in research and development of technologies that improve the sustainability of eco-agri-food systems.⁶⁷

While the two-way relationship between human and nature has long been understood, the investments in the natural world have thus far been inadequate, making economic growth unsustainable and harmful to the environment and human health, and subsequently to the economic system. Investments geared towards promotion of sustainable and resilient eco-agri-food systems and protection and restoration of natural capital bring multiple benefits such as clean water and air, pollution reduction, reforestation, flood prevention, increased agricultural productivity and resilience, restoration of land, soil, and biodiversity, as well as safeguarding the aesthetic, spiritual and cultural values of nature, having major food security, health and justice benefits. In addition, these investments create massive employment opportunities with low skill requirements (e.g., in tourism and agriculture) and significant potential for income generation. The time for nature-positive food systems has come and should be one of the major targets of green recovery investments in natural capital to generate jobs, improve food security and nutrition, reduce inequality, mitigate the

⁶¹ UNU-CPR (2021) Beyond Opportunism: The UN Development System's Response to the Triple Planetary Crisis, <https://cpr.unu.edu/research/projects/the-triple-planetary-crisis.html>

⁶² UN (n.d.) Six Climate-Positive Actions to Help Rebuild Economies From COVID-19 Pandemic, <https://www.un.org/en/climatechange/recovering-better/six-climate-positive-actions>

⁶³ World Bank (n.d.) Employment in Agriculture (% of total employment) (modelled ILO estimate), <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?end=2019&start=1991&view=chart>

⁶⁴ UNEP (2016) Food Systems and Natural Resources. A Report of the Working Group on Food Systems of the International Resource Panel. Geneva: UNEP.

⁶⁵ TEEB (2018). TEEB for Agriculture & Food: Scientific and Economic Foundations. Geneva: UN Environment, <http://teebweb.org/our-work/agrifood/reports/scientific-economic-foundations/>

⁶⁶ UNEP (2021), World needs USD 8.1 trillion investment in nature by 2050 to tackle triple planetary crisis, Retrieved July 06, 2021, from <https://www.unep.org/news-and-stories/press-release/world-needs-usd-81-trillion-investment-nature-2050-tackle-triple>

⁶⁷ UN (n.d.), Food Security and Nutrition and Sustainable Agriculture, Retrieved September 28, 2021, from <https://sustainabledevelopment.un.org/topics/foodagriculture>

environmental impacts of current agri-food systems⁶⁸, and contribute to One Health.⁶⁹

Increased investments in ecosystem restoration and halting deforestation is essential to green recovery.⁷⁰ Every dollar invested in ecosystem restoration is expected to create up to \$ 30 in economic benefits.⁷¹ If ecosystem services continue to decline, around \$10 trillion in global GDP could be lost by 2050.⁷² This makes the cost of inaction greater than the cost of ecosystem restoration.⁷³ In addition to creating no-harm jobs, reducing unemployment, and boosting economic activity, investment in natural capital and implementing nature-based solutions has major long-term gains⁷⁴ as it reduces potential future costs related to climate change, biodiversity loss, pollution and chemicals. A human rights-based approach to investment in nature-based solutions (such as reforestation, ecosystem/watershed restoration, use of agroecological approaches in food and agriculture production, replacing pesticides and other chemicals with bio-based options, protecting and expanding green spaces in urban environments, and management of invasive species) can improve human prosperity

and health while simultaneously protecting nature,⁷⁵ creating a low-cost path to implementing the SDGs, including SDG2, SDG3, SDG6, SDG11, SDG13, SDG14, and SDG15.

Currently, public funds and private finance, respectively, make up 86% and 14% of the current \$ 133 billion⁷⁶ (about 0.1% of global GDP⁷⁷) that the world is investing annually in nature-based solutions. Over a third of the public funds are invested into landscapes and biodiversity protection. The rest is spent on forest/peatland restoration, natural pollution control systems, water conservation, and regenerative agriculture. Private sector finance for nature-based solutions is mainly used for biodiversity offsets, private equity impact investment, and sustainable supply chains.

The State of Finance for Nature report found that future investment in nature-based solutions must be at least tripled in real terms by 2030 and increase four-fold by 2050, so the world can meet its interlinked climate change, biodiversity and land degradation targets.⁷⁸ This calls for a cumulative investment of about \$ 8.1 trillion (annual investment rate of \$ 536 billion per year, including \$ 203 billion per year in forest-based solutions) in nature by 2050. This is \$ 4.1 trillion more than the expected cumulative investment by 2050 at the current rate of global investments in nature-based solutions. Filling this gap requires a major contribution from the private sector in addition to the increased support of governments. As of June 2022, the Global

⁶⁸ von Braun, J., Afsana, K., Fresco, L. O., Hassan M. (Eds) (2021) Science and Innovation for Food Systems Transformation and Summit Actions, UN Food Systems Summit 2021, Retrieved September 28, 2021, from https://sc-fss2021.org/wp-content/uploads/2021/09/ScGroup_Reader_UNFSS2021.pdf

⁶⁹ FAO (n.d.), One Health, Retrieved September 28, 2021, from <http://www.fao.org/one-health/en/>

⁷⁰ FAO (2021), Deep Dive for Resident Coordinators on the Triple Planetary Crisis: Nature, Climate, Pollution and the Role of the UN Development System in Responding, Rome, Italy.

⁷¹ Ding, H., Faruqi, S., Wu, A., Altamirano, J-C., Ortega, A. A., Zamora-Cristales, R., Chazdon, R., Vergara, W. & Verdone M. (2018). Roots of Prosperity: The Economics and Finance of Restoring Land. Washington, DC: World Resources Institute.

⁷² Johnson, J.A., Baldos, U., Hertel, T., Liu, J., Nootenboom, C., Polasky, S. and Roxburgh, T. (2020). Global Futures: Modelling the Global Economic Impacts of Environmental Change to Support Policy-Making. WWF-UK.

⁷³ UNEP (2021). Becoming #GenerationRestoration: Ecosystem Restoration for People, Nature and Climate, <https://www.unep.org/resources/ecosystem-restoration-people-nature-climate>

⁷⁴ Batini, N., Di Serio, M., Fragetta, M., Melina, G., & Waldron, A. (2021) Building back better: How big are green spending multipliers? Retrieved June 06, 2021, from <https://www.imf.org/en/Publications/WP/Issues/2021/03/19/Building-Back-Better-How-Big-Are-Green-Spending-Multipliers-50264>

⁷⁵ WWF and ILO (2020). Nature Hires: How nature-based solutions can power a green jobs recovery, https://wwf-eu.awsassets.panda.org/downloads/nature_hires_report_wwf_ilo.pdf

⁷⁶ UNEP (2021). State of Finance for Nature 2021, <https://www.unep.org/resources/state-finance-nature>

⁷⁷ World Economic Forum (2021). Investing Less than 1% of World GDP into Nature-Based Solutions Can Tackle Climate Change and Biodiversity Crisis, Retrieved July 09, 2021, from <https://www.weforum.org/press/2021/05/investing-less-than-1-of-world-gdp-into-nature-based-solutions-can-tackle-climate-change-and-biodiversity-crisis/>

⁷⁸ UNEP (2021). State of Finance for Nature 2021, <https://www.unep.org/resources/state-finance-nature>

Recovery Observatory⁷⁹ reported a \$ 122.28 billion recovery investment being channeled towards natural infrastructure and green spaces.

Buildings and Energy Efficiency

The electricity consumption of building operations represents about 55% of global electricity use. Operation of buildings accountz for nearly 28% of energy-related carbon emissions globally. By considering the carbon footprint of the buildings construction industry, the share of this sector increases to about 38% of the total energy-related carbon emissions at the global level.⁸⁰ The significant electricity use and carbon footprint of buildings command attention and adequate response.

The building sector’s jobs are relatively low-skilled and were generally hit harder by the COVID-19 pandemic.⁸¹ Building and construction stimulus programs can effectively activate local value chains, create employment opportunities (9-30 jobs for every \$ 1 million of energy efficiency investment in the sector⁸²), and boost economic activities.

As of June 2022, the Global Recovery Observatory⁸³ reported a \$ 52.78 billion recovery investment being channeled towards building upgrades and energy efficiency infrastructure.

Within brown energy systems (those with fossil fuels dependencies), retrofits can significantly lower air pollution and greenhouse gas emissions. Energy efficiency improvements and construction of green residential and commercial buildings provide several benefits, including a quick and local avenue for job creation and reduced energy costs (especially important for poor households for whom energy bills tend to be a higher portion of expenditure).⁸⁴

To achieve a net-zero carbon building stock by 2050, direct building carbon emissions need to decrease by 50%.⁸⁵ Retrofits for improving energy efficiency, investments in green buildings, reducing the lifecycle environmental footprints of building material, and providing access to buildings that can provide adequate cooling and heating for residents with minimum to no negative environmental and health contributions are essential parts of a just transition to a green economy.⁸⁶ International standards can provide important guidance for improving the energy efficiency of buildings and directly reducing their environmental impacts. The ITU has developed standards that can help to set the minimum requirements for efficient and

⁷⁹ 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. <https://data.undp.org/content/global-recovery-observatory/>

⁸⁰ UNEP (2020) The 2020 Global Status Report for Buildings and Construction, <http://globalabc.org/news/launched-2020-global-status-report-buildings-and-construction>

⁸¹ ILO (2021) ILO Monitor: COVID-19 and the world of work. 7th edition, https://www.ilo.org/global/topics/coronavirus/impacts-and-responses/WCMS_767028/lang--en/index.htm

⁸² IEA (2020) Sustainable Recovery: World Energy Outlook Special Report, <https://www.iea.org/reports/sustainable-recovery>

⁸³ 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. <https://data.undp.org/content/global-recovery-observatory/>

⁸⁴ UNEP (2021) Are We Building Back Better? Evidence from 2020 and Pathways for Inclusive Green Recovery, Retrieved June 20, 2021, from <https://www.unep.org/resources/publication/are-we-building-back-better-evidence-2020-and-pathways-inclusive-green>

⁸⁵ UNEP (2020) The 2020 Global Status Report for Buildings and Construction, <http://globalabc.org/news/launched-2020-global-status-report-buildings-and-construction>

⁸⁶ ILO (2016) Guidelines for a just transition towards environmentally sustainable economies and societies for all, Retrieved September 15, 2021, from https://www.ilo.org/global/topics/green-jobs/publications/WCMS_432859/lang--en/index.htm

sustainable management of buildings and assessing the sustainability performance of buildings across key parameters, including energy, water, waste and more.⁸⁷,⁸⁸ Decarbonizing buildings and increasing their energy efficiency have the potential to contribute to achieving the objectives of the Paris Agreement as well as SDG7, SDG11, and SDG13.

Transportation

The transport sector is one of the key contributors to air pollution and is responsible for around 23% of energy-related carbon emissions globally.⁸⁹ Nonetheless, rapid technological transformation in this sector makes it a suitable green investment area. Allowing the necessary stimulus funds to decarbonize the transport sector, expand the public transport capacity, increase the bike lanes and sidewalks in urban environments, and lay out the necessary infrastructure to accelerate Electric Vehicles (EV) adoption which serves several purposes at once: job creation and economic recovery, lowering greenhouse gas emissions, reducing air pollution in large and dense cities, and securing a healthy and sustainable environment. These benefits are in line with SDG3, SDG11, and SDG13. As of June 2022, the Global Recovery Observatory⁹⁰ reported a \$ 276.38 billion and \$ 30.78 billion recovery investment being channeled

towards clean transport infrastructure and EV, respectively.

Public transport creates more than three times as many jobs as building new highways, per dollar invested.⁹¹ The expansion and decarbonization of public transport, together with incentivizing the public to opt for clean modes of transport (including walking and cycling), can reduce pollution and emission and enhance health and quality of life, especially in urban areas. Existing modes of transport (bus, rail, aviation, and other modes of mass transport) can also benefit from technological and energy use efficiency improvements as well as decreased dependency on fossil energy sources.

Dramatic fall in the price of lithium-ion batteries has made EV steadily less and less expensive. Battery prices are expected to fall by nearly 60% until 2030 to \$58 per kilowatt hour, paving the way for EVs to become cheaper than conventional cars within the next decade.⁹² Expansion of EV production capacity, encouraging the adoption of EVs, and developing the necessary infrastructure for bringing more of these vehicles on the road (charging stations, and in particular, inter-city charging stations), therefore, become important areas for public funds to flow in. The benefits associated with the wider adoption of EVs include clean air, healthy environment, and non-trivial reduction in greenhouse gas emissions.

⁸⁷ ITU (2020), Recommendation ITU-T L.1370: Sustainable and intelligent building services, <https://www.itu.int/rec/T-REC-L.1370-201811-I>

⁸⁸ ITU (2020) Recommendation ITU-T L.1371: A methodology for assessing and scoring the sustainability performance of office buildings, <https://www.itu.int/rec/T-REC-L.1371-202006-I>

⁸⁹ IEA (2021) Global energy-related CO2 emissions by sector (updated on 25 Mar 2021), Retrieved August 2, 2021, from <https://www.iea.org/data-and-statistics/charts/global-energy-related-co2-emissions-by-sector>

⁹⁰ 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. <https://data.undp.org/content/global-recovery-observatory/>

⁹¹ Welle B. (2021) 5 Ways to Shape a Greener, More Equitable Recovery Through Transport (24 June 2021), Retrieved August 2, 2021, from <https://www.wri.org/insights/transport-stimulus-spending-green-recovery>

⁹² Partridge J. (2021), Electric cars 'will be cheaper to produce than fossil fuel vehicles by 2027', The Guardian (9 May 2021), Retrieved June 20, 2021, from <https://www.theguardian.com/business/2021/may/09/electric-cars-will-be-cheaper-to-produce-than-fossil-fuel-vehicles-by-2027>

Enabling a Green Recovery



Hub,¹¹³ WIPO GREEN¹¹⁴, and Green Budget Tagging¹¹⁵ are example platforms, tools, and methods supported by intergovernmental agencies that can be used for tracking the “greenness” of COVID-19 fiscal response

packages, supporting green recovery progress tracking, leveraging accountability, identifying green technology solutions, and saving countries’ time and resources.

Green Recovery Actors



Public Sector



Financial Sector



Private Enterprises

Green Recovery Actions

- Making long-term and transformative commitments to a green economy
- Establishing clear timelines for achieving net-zero emissions
- Providing financial and technological assistance for green recovery to emerging and developing economies
- Closing the inequality gap within and between nations

In order to pursue full product transparency, traceability and accountability, it is crucial to promote (a) environmentally and socially sustainable public procurement mechanisms; (b) applying tools such as eco-labelling, energy-labelling, product passports, product declarations, warning labelling, and other tools to inform the consumers; (c) use of pollutant release and transfer registers¹¹⁶ and (d) multi-stakeholder dialogues in the different economic sectors, bringing together suppliers, producers, retailers, consumers, environmental non-governmental organizations and other interested members of the public; and (e) the interoperability of product information systems using

best available state-of-the-art digital technologies and open data principles.¹¹⁷

Inclusive green recovery can be enabled through the coordination of its actors and the support from the UN, by the simultaneous pursuit of these strategies:

- Making long-term and transformative commitments to a green economy
- Establishing clear timelines for achieving net-zero emissions
- Providing financial and technological assistance for green recovery to emerging and developing economies
- Closing the inequality gap within and between nations

¹¹³ <https://www.un-page.org/covid>

¹¹⁴ <https://www3.wipo.int/wipogreen/en/>

¹¹⁵ OECD (2021). Green Budget Tagging: Introductory Guidance & Principles, <https://doi.org/10.1787/fe7bfcc4-en>

¹¹⁶ See <https://prtr.unece.org/>

¹¹⁷ See article 5 (6) and (8) of the ECE Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters (Aarhus Convention) and the outcomes of the Task Force on Access to Information (<https://unece.org/environmental-policy/events/seventh-meeting-task-force-access-information-under-aarhus-convention>)

Making Long-term and Transformative Commitments to Green Economy

Green recovery can be facilitated through the development and implementation of transformative and unambiguous green policies that expand the green-bond market, increase government investments in sustainability, strengthen regulation of businesses, and improve accountability and enforcement mechanisms. Such policies can incentivize the financial sector to get actively involved in green recovery and contribute to future developments in the green recovery investment priority areas.

It is important to emphasize that stimulus spending, although necessary, is insufficient for a green recovery. What is needed are appropriate policies as well as long-term and consistent investments backed by strongly held commitments by all actors to pursue a green recovery, motivated by a shared interest in cultivating a business environment in which private enterprise serves the interests of people in enabling the Future We Want and balancing the human-nature relationship. The UN Guiding Principles on Business and Human Rights affirm that business enterprises have a responsibility to respect human rights and provide an authoritative description of human rights due diligence processes, which can serve as a reference for the identification and management of social and environmental risks.¹¹⁸ The alignment of public and private sector agendas has already yielded commitments such as Net-Zero Banking Alliance, the UN Principles for Responsible Banking, UN-Convened Net-Zero Asset Owner Alliance, responding to SDG cross-sectoral alignment, and legislative examples such as the Netherlands' legislation on mandatory energy efficiency labels for commercial real estate.

¹¹⁸ *United Guiding Principles on Business and Human Rights, A/ HRC/17/31/Annex*, endorsed by the Human Rights Council by resolution 17/4 of 16 June 2011, https://www.ohchr.org/documents/publications/guidingprinciplesbusinesshr_en.pdf

Governments need to establish policies that assure commitment to transparency, accountability, and long-term investments in green recovery packages and growth of the green-bond market, symptomatic for the growth of green financing mechanisms in the private sector (e.g., Luxembourg Green Exchange). One-off investments will not provide the clear signals that institutional investors need in order to channel their funds towards the green market. As of June 2022, the Global Recovery Observatory¹¹⁹ reported that only a \$ 176.58 billion recovery investment has been channeled towards green market creation. Establishing long-term objectives and series (*pipe-ines*) of green projects would provide the right signal that investors need in order to establish interest in green investment priority areas and redirect their funds to the green market. Green recovery will not be achievable as long as public investments target unsustainable sectors and brown projects.

Institutional investors must be encouraged with the right incentive tools to direct their funds towards green assets. Given the primary role of financial institutions (channeling funds towards the most profitable investment projects), it is important for the governments to recognize market externalities and price distortions. Given the dependence of the current operations of the economic system on fossil fuels and the subsidies that they receive, it is no surprise that financial institutions still consider fossil fuel infrastructure to be a safe destination for the flow of funds. However, once the Environmental, Social and Governance (ESG) risks are considered and the cost of damages caused by greenhouse gas emissions and various forms of pollution are priced in, the investment landscape changes. For example, charging the true cost and price of food can have undeniable effects on food production, consumption, and waste, justifying investments in transforming agri-food systems to boost

¹¹⁹ 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. <https://data.undp.org/content/global-recovery-observatory/>

nature-positive production. Thus, getting the right price for carbon emissions as well as other types of pollution is crucial. Since this task is currently on the way, tax incentives must play a role in correcting this price distortion. This means, governments must do whatever it takes to make sure investments in green projects are *at least* as profitable as other types of investments. This step must be followed by a gradual increase in taxes levied on fossil fuel investments, until the consensus regarding the right price for various types of emissions and pollution is agreed upon.

Establishing Clear Timelines for Achieving Net-Zero Emissions

Governments should remove the ambiguities regarding the timeline of achieving net-zero emissions and eliminating fossil fuel subsidies to: increase the adoption of net-zero emission targets across the private sector; increase the usage of internal carbon pricing to screen investments; and secure financial resources for green investments by rapid reduction of the cost of fossil fuel subsidies or generating revenue through pricing pollution/emissions.¹²⁰ This task requires arriving at a consensus (at first on the national level, and then on the international stage) regarding the mechanism for establishing the true cost of carbon emissions. Thus far, the task has proved to be a major challenge. Establishing a clear policy regarding the true cost of carbon not only can mobilize financial resources towards the much-needed inclusive green recovery but also may prove to be a vital instrument for saving the financial system from the next wave of instability caused by stranded assets.

Without clear indications regarding the trajectory of the evolution of the price of carbon (which by some estimates should be between \$ 50 to \$ 100 per metric

tonne of emission¹²¹), mobilizing all the necessary financial resources may remain an unfulfilled objective. Establishing this controversial figure would serve another purpose. The financial system is vulnerable to possible instabilities caused by unserviceable loans, extended for the development of stranded assets.¹²² Addressing this issue would benefit private enterprises by way of allowing them a clear view of how to do a cost-benefit analysis. It would benefit the financial sector by way of removing uncertainties that may lead to instabilities and would benefit the general public by offering them a view of what is to come regarding actions for addressing the climate emergency.

The financial sector needs to have a clear understanding of the pathway and policy framework for the gradual reduction and ultimate elimination of fossil fuel subsidies. Fossil fuels have long been the primary source of energy for the economic system. Therefore, the subsidies they receive may well be intended for lubricating the gears of the economy. In 2020 (during the COVID-19 crisis year), the G20 countries channeled \$ 230 billion in subsidies¹²³ towards fossil fuels. Rapid decline of these subsidies is not pragmatic. But failure to put forth a clear roadmap for gradual reduction and ultimate elimination of these subsidies and stopping new investments in fossil fuels, while preventing negative impacts on the poor, may be considered irresponsible. The nearly \$ 200 billion annual subsidies paid to fossil fuel industries are a major source of funding that could play a role in the transition from fossil fuels to renewable energies (SDG7). This large sum needs to be redirected to green energies through developing a clear set of policies and timelines

¹²⁰ UN (n.d.) Six Climate-Positive Actions to Help Rebuild Economies From COVID-19 Pandemic, <https://www.un.org/en/climatechange/recovering-better/six-climate-positive-actions>

¹²¹ Wagner, G., Anthoff, D., Cropper, M., Dietz, S., Gillingham, K., Groom, B., Stock, J. (2021, February 19). Eight priorities for calculating the social cost of carbon. Retrieved June 20, 2021, from <https://www.nature.com/articles/d41586-021-00441-0>

¹²² This term refers to a group of non-performing assets (most likely due to inaccurate carbon pricing) which were thought to be economical during the planning stage but cannot continue to operate due to their emission-related costs. Hence, they have become obsolete.

¹²³ Win, T. L. (2020, November 10). G20 countries still backing fossil fuels through Covid-19 response. Retrieved June 20, 2021, from <https://www.reuters.com/article/us-g20-climatechange-energy-trfn-idUSKBN27Q00Q>

for removing fossil fuel subsidies and incentivizing investment in renewable energies.

Providing Financial and Technological Assistance for Green Recovery to the Emerging and Developing Economies

The adverse effects of the COVID-19 crisis were better mitigated in advanced economies - where there was sufficient fiscal space for the public sector's intervention. Other less fortunate nations – some of which had struggled with decade-long debt crises – had less room for action, making the need for an *inclusive* green recovery clearer. Generally, financial resources (either in the form of bank lending or bond purchases by Central Banks) remain accessible to advanced economies - in particular, in the context of low interest rates which have been the norm since the Global Financial Crisis of 2008. Governments across the advanced economies (North America, European Union, as well as some Asian countries which have enjoyed export-led growth and development) were in a position to offer relatively generous financial aid to households in response to the hardships imposed by the COVID-19 pandemic, and remain in a position to make large recovery investments. These expenditures (often referred to as *fiscal expansions*) are possible for countries which have strong and stable currencies, supported by credible Central Banks. Emerging markets and developing economies, however, are in a less fortunate position. Their outstanding loans to institutions such as the World Bank or the IMF¹²⁴ were a burden during the pandemic. Therefore, facilitating their access to capital is paramount. Noteworthy steps along this path have already been taken; however, there is much to be done.

¹²⁴ UN (2020), A UN framework for the immediate socio-economic response to COVID-19, Retrieved July 18, 2021, from <https://unsdg.un.org/resources/un-framework-immediate-socio-economic-response-covid-19>

Plans for delivering financial aid to vulnerable countries in line with the principles of equity and common but differentiated responsibility are a part of the solution. During the G7 summit in June 2021, held in Cornwall, United Kingdom, representatives from the United States, United Kingdom, France, Germany, Canada, Italy, and Japan, pledged \$100 billion¹²⁵ per year from private and public resources to “help poorer nations cut carbon emissions and cope with global warming.” Putting this plan into action would be a starting point, but far from adequate.

Among the steps taken to enable inclusive green recovery in weaker economies is debt repayment suspension¹²⁶ proposed by the World Bank and IMF. This action reduced emerging markets' and developing economies' debt burdens, and thus, offered governments some fiscal room. Hence, the plans for an inclusive green recovery must be mindful of these asymmetries (differences in ease of access to financial resources) and close the existing gaps. Nature-Performance-Based Bonds,¹²⁷ currently being piloted by UNDP-GEF, is another financial mechanism which enables debtor countries to reduce their debt burdens, or improve their stance regarding access to capital, by committing to conservation. Other debt-oriented interventions include debt-for-nature swaps, debt-for-climate-swaps, green and blue bonds, and payments for ecosystem services, which should be undertaken in an inclusive manner and address any risks of the commodification of nature.

Additionally, emerging economies and developing countries can play a major role in global green recovery through financial and technological assistance from the international community and avoid paths that may lead to exploiting natural resources for the purpose

¹²⁵ Piper, E. and Schomberg, W. (2021, June 12). More needed: G7 nations agree to boost climate finance. Retrieved June 20, 2021, from <https://www.reuters.com/business/sustainable-business/g7-leaders-commit-increasing-climate-finance-contributions-2021-06-12/>

¹²⁶ IMF financing and debt service relief. (2021, May 27). Retrieved June 20, 2021, from <https://www.imf.org/en/Topics/imf-and-covid19/COVID-Lending-Tracker>

¹²⁷ Finance for Biodiversity Initiative: Greening Sovereign Debt. (n. d.) Retrieved June 20, 2021, from <https://www.f4b-initiative.net/sovereigndebt>

of accelerating economic recovery. Without access to sufficient financial sources and technology, the developing economies cannot successfully transform their current economic system, halt their support for fossil fuels, and increase their harmony with nature. Sufficient transfers of financial means, technology and know-how from advanced economies to emerging markets and developing economies are necessary for enabling the developing world to move toward a greener future.¹²⁸ The international community has developed open standards that aim to elevate best practices at the local and regional levels, providing an ideal platform for facilitating global learning and transferring technical knowledge to any developing region. For example, ITU green standards provide useful guidance for improving the energy efficiency of information and communications technology (ICT) devices and infrastructure and provide use cases for a pathway to success.¹²⁹

Closing the Inequality Gap Within and Between Nations

An integral part of green recovery is the recognition of the need for inclusivity. The need for inclusivity may manifest itself in different contexts, such as opportunities for decent work and social mobility, effective public participation in decision-making as well as access to education, health services, food, energy, housing, clean water, safe environment, public infrastructure, justice and human rights. Inequality (both within and between nations), especially in terms of income inequality as the most visible reflection of inequalities within societies, had emerged as one of the most challenging problems of our time, long before the pandemic brought the economies to a stand-

still mode. Scholars and international institutions¹³⁰ alike have turned their attention to this problem. The remedy, however, may differ in developed countries from that in developing countries.¹³¹

Green recovery calls for removing inequalities within and between nations through different policy tools that facilitate the safeguarding of the sources of income and means of livelihood, transfer of wealth from the wealthy to the poor, respecting, protecting and fulfilment of human rights, including the right to a safe, clean, healthy and sustainable environment and public participation in environmental decision-making, increasing access to information and to justice, improvement of human welfare, enhancement of the harmony between humans and nature, empowerment of under-privileged nations and communities, and addressing the basic needs of societies such as employment and income, food, water, health services, clean water, education, and life-enjoyment free from threats of violence. Green recovery is unachievable without recognizing, respecting, protecting and fulfilling all human rights¹³², including the rights to a safe, clean, healthy and sustainable environment, access to information, participation and justice. Green recovery must recognize the technological context in which it is being conceived, and thus, take full advantage of digitization, digital cooperation, and universal connectivity, and all the benefits they can potentially provide to the developing nations and underprivileged communities. Meaningful participation and empowerment of women, children, and marginalized populations with knowledge, skill sets, and other services through digital infrastructure will facilitate

¹²⁸ UN (2020) A UN framework for the immediate socio-economic response to COVID-19, Retrieved July 18, 2021, from <https://unsdg.un.org/resources/un-framework-immediate-socio-economic-response-covid-19>

¹²⁹ ITU (n.d.) ITU-T Recommendations under Study Group 5 responsibility, https://www.itu.int/ITU-T/recommendations/index_sg.aspx?sg=5

¹³⁰ Stiglitz, J. (2020, September) COVID-19 and global Inequality – IMF. Retrieved June 07, 2021, from <https://www.imf.org/external/pubs/ft/fandd/2020/09/COVID19-and-global-inequality-joseph-stiglitz.htm>

¹³¹ UNECE (2021) COVID-19 Response Policies and the Care Economy:

Mapping economic and social policies in the ECE region, <https://unece.org/ru/documents/2021/01/informal-documents/covid-19-response-policies-and-care-economy-mapping>

¹³² Both procedural and substantive rights, including the rights to access to information, meaningful participation and justice in environmental matters and the right to a safe, clean, healthy and sustainable environment

the process of achieving the SDGs, a just society and a peaceful world.

Developed nations are facing a wave of skills-biased-technological-change that may displace workers¹³³ and reduce the working-age population’s participation in the workforce. This phenomenon has been studied and is known to impose adverse effects on the health of certain cohorts of the population¹³⁴ (commonly referred to as Deaths of Despair). The Digital Revolution can potentially facilitate the access of underprivileged groups to online education and data in order to acquire the necessary skills and know-how needed to become productive members of society. Closing the inequality gap within different socio-economic classes requires expanded training programmes for reskilling the workforce according to current and future needs. Green Recovery recognizes the need for modernizing the education system and rethinking how it must prepare the human population to address the SDGs while taking advantage of the borderless and intangible nature of ICT and various products of the fourth industrial revolution (e.g., artificial intelligence) in order to prepare the workforce for jobs of tomorrow. In the meantime, the global community must note that digitalization and industry 4.0 products could also pose a risk to the environment (e-waste¹³⁵ and the environmental footprint of digital products^{136, 137}), equality (digital divide), security (data protection

and cyber-crimes) and human rights (digital human rights).^{138, 139, 140}

Closing the inequality gap between nations, however, poses a more formidable challenge, which in turn requires bolder actions on the international stage. Green Recovery recognizes the need for international approaches to solving international problems through North-South, South-South, and Triangular cooperation.¹⁴¹ Additionally, the need for international transfers of wealth, technology and know-how from the wealthy to poor nations must be recognized as an essential element of green recovery in order to close the inequality gap between countries. Such a scheme currently exists¹⁴² in various forms (such as development aid or infrastructure grants) but can be expanded and re-oriented towards green recovery to ensure the improvement of quality of life and the human-nature balance. It is equally important to develop a transparent system for managing these transfers and monitor the resulting green recovery progress. In line with the Paris Agreement, countries must respect, promote and consider their respective obligations on human rights when taking action on climate change, and pursue international cooperation for a green recovery on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.

¹³³ Acemoglu, D., & Restrepo, P. (2019, March 25). The wrong kind of AI? Artificial intelligence and the future of labor demand. Retrieved June 07, 2021, from <https://www.nber.org/papers/w25682>

¹³⁴ Case A, Deaton A. (2017) Mortality and morbidity in the 21st century. *Brook Pap Econ Act.*, Retrieved June 07, 2021, from https://www.brookings.edu/wp-content/uploads/2017/03/6_casedeaton.pdf

¹³⁵ ITU (2021) E-waste: Environment and climate change, Retrieved June 07, 2021 from <https://www.itu.int/en/action/environment-and-climate-change/Pages/ewaste.aspx>

¹³⁶ Obringer R., Rachunok B., Maia-Silva D., Arbabzadeh M., Nateghi R., Madani K. (2021) "The Overlooked Environmental Footprint of Increasing Internet Use", *Resources, Conservation and Recycling*, Vol. 167, 105389, doi: <http://dx.doi.org/10.1016/j.resconrec.2020.105389>.

¹³⁷ Chamanara S., Ghaffarizadehh A., Madani K. (2021) "The Environmental Costs of Mining Bitcoin", *Earth and Space Science Open Archive (ESSOAr)*, doi: <https://doi.org/10.1002/essoar.10507153.3>.

¹³⁸ UN Secretary-General's high-level panel on digital Cooperation. (n.d.). Retrieved June 07, 2021, from <https://www.un.org/en/sg-digital-cooperation-panel>

¹³⁹ UN (n.d.). Call to Action for Human Rights: New Frontiers of Human Rights, Retrieved September 14, 2021, from <https://www.un.org/en/content/action-for-human-rights/assets/pdf/info%20sheet%20-%20New%20Frontiers.pdf>

¹⁴⁰ International standards developed by ITU provide guidance on addressing some of the challenges related to digitization, for example see the list of international standards developed by ITU-T Study Group 5 on "Environment, climate change and circular economy" https://www.itu.int/ITU-T/recommendations/index_sg.aspx?sg=5 and list of international standards developed by ITU-T Study Group 20 on "Internet of Things, smart cities and communities" https://www.itu.int/ITU-T/recommendations/index_sg.aspx?sg=20

¹⁴¹ UN (n.d.) Six Climate-Positive Actions to Help Rebuild Economies From COVID-19 Pandemic, <https://www.un.org/en/climatechange/recovering-better/six-climate-positive-actions>

¹⁴² UN (2020) Report of the Secretary General: Roadmap for Digital Cooperation, Retrieved June 07, 2021, from <https://www.un.org/en/content/digital-cooperation-roadmap>

Green Recovery also has the important mission of restoring the harmony between the economic system and the natural world; thus, natural capital (defined as the world's stocks of natural assets, which include geology, soil, air, water, and all living things) requires attention, as well as investment. The process of restoring this harmony requires continuous assessment of the stock of natural capital in countries, as well as the assessment of the progress that is being made because of the adoption of 'green' policies. It is necessary that the future investments for recovery recognize the unsustainable use of natural resources, nature destruction, biodiversity loss, and pollution as a potential cause of environmental injustice and zoonotic diseases that threaten human health and socio-economic conditions with major implications for disadvantaged communities, women, and children.

Respecting, protecting and fulfilling human rights is at the heart of sustainable development and green recovery.^{143, 144} Justice, peace, equality, and sustainability are unachievable without the universal protection and promotion of human rights. Inclusive green recovery recognizes protection of human rights, gender equality and equal rights for women, empowerment of minorities and disadvantaged communities/nations, and addressing the rights of children and future generations, including climate justice, as its essential elements. All people have a right to meaningful, informed and effective participation in the recovery and fulfilling this right will lead to more effective, equitable and inclusive environmental action.

¹⁴³ UN (2020) The Highest Aspiration: A Call to Action for Human Rights, Retrieved June 07, 2021, https://www.un.org/peacebuilding/sites/www.un.org.peacebuilding/files/documents/2020_sg_call_to_action_for_hr_the_highest_aspiration.pdf

¹⁴⁴ UN (2020) A UN framework for the immediate socio-economic response to COVID-19, Retrieved July 18, 2021, <https://unsdg.un.org/resources/un-framework-immediate-socio-economic-response-covid-19>

The UN's role in the Green Recovery



In March 2020, António Guterres, the UN Secretary-General, referred to the COVID-19 crisis as a “human crisis” that is unprecedented in the history of the UN.¹⁴⁵ In his call for “solidarity,” he called on world leaders to respond to this global crisis by offering urgent and coordinated response that targets these critical action areas:^{146, 147} 1) tackling the health emergency (saving lives); 2) focusing on the social impact and the economic response and recovery (protecting people); and 3) recognizing the responsibility to recover better (rebuild better).

Recognizing the scale and scope of the multi-dimensional impacts of the pandemic, the UN implemented major repurposing and reprogramming efforts in close collaboration with donors, partners, and countries to expand, adjust, and reorient its resources, programs, and activities towards the needs of the COVID-19 crisis.¹⁴⁸ In April 2020, the UN Development System (UNDS) announced the decision to switch to emergency mode and allocate a significant proportion of the UN’s existing \$ 17.8 billion portfolio of sustainable development programs across all SDGs to COVID-19 related activities to support the Member States, while remaining committed to the promise of the 2030 Agenda.¹⁴⁹

Annex I provides a non-exhaustive inventory of the UN agencies’ green recovery-related activities and products. As of September 2021, 69 UN organizations and partners produced 146 green recovery products. Among these, 106 were guidance documents, 78 provided recommendations, and 67 provided tools.

On average, each organization contributed to more than 3.2 products and the average product had about 1.5 contributing organizations. The wide range of activities reflect the UN’s level of commitment to addressing the COVID-19 crisis. The inventory also highlights how the UN’s response maintains support for nations to ensure their recovery efforts do not diverge from the track needed for effectively tackling the triple planetary crisis (nature, climate change, pollution) and delivering the SDGs.

What Qualifies the UN to Lead a Green Recovery

Since the start of the pandemic, the UN agencies have been actively warning and raising awareness about the socio-economic, health, environmental, human rights and humanitarian aspects of the crisis. The UN system has been instrumental in setting the agenda, expectations, and targets for building back better. The UN agencies have put major efforts into providing data, information, and policy tools (Annex I) to facilitate green recovery, support Member States, and promote multilateral collaborations to address the global COVID-19 crisis and its lasting consequences.

The UN system has an unparalleled capacity to leverage and facilitate an inclusive green recovery and support the nations in this process due to multiple reasons.¹⁵⁰ The UN has the broadest range of mandates, giving it the interest, knowledge, and capacity to assess multi-dimensional global problems and provide support and leadership to cope with them. The UN is serving 162 countries and territories through 131 country teams. This gives the UN system a regional and global network of expertise and knowledge coupled with established relationships with and access to local communities, extensive interactions with civil society organizations, volunteer groups, and women’s groups, and even connections to the private sector. Overlooking the agencies involved in each of the UN’s green recovery-related

¹⁴⁵ UN (2020.) Secretary-General Remarks on COVID-19: A Call for Solidarity (March 19, 2020), https://www.un.org/sites/un2.un.org/files/sg_remarks_on_covid-19_english_19_march_2020.pdf

¹⁴⁶ UN (2020.) Shared responsibility, global solidarity: Responding to the socio-economic impacts of COVID-19, <https://unsdg.un.org/resources/shared-responsibility-global-solidarity-responding-socio-economic-impacts-covid-19>

¹⁴⁷ UN (2020.) Secretary-General Remarks on COVID-19: A Call for Solidarity (March 19, 2020), https://www.un.org/sites/un2.un.org/files/sg_remarks_on_covid-19_english_19_march_2020.pdf

¹⁴⁸ UN (2020.) A UN framework for the immediate socio-economic response to COVID-19, <https://unsdg.un.org/resources/un-framework-immediate-socio-economic-response-covid-19>

¹⁴⁹ Ibid.

¹⁵⁰ Ibid.

products (Annex I) reveals an important insight into how the UN delivered a major and multi-dimensional response to the pandemic. The culture of inter-agency cooperation and partnership has clearly been a key contributor to the UN’s high level of productivity in response to this globally significant crisis.

The response to the COVID-19 crisis has created an unprecedented opportunity and momentum for the UN system to benefit from its existing framework for action to address the needs of humans and the planet – the 2030 Agenda for Sustainable Development and the Paris Agreement on Climate Change¹⁵¹ and presents an opportunity to support a just transition to a sustainable, low-carbon economy founded on human rights, sustainable resource use, community empowerment and livelihoods of dignity. Besides its regional knowledge acquired through a global presence and local interactions, the UN system is equipped with an in-house breadth of expertise in all fields relevant to holistic assessment and global crisis response as needed for the COVID-19 pandemic. The UN can connect governments and those in need of expert advice to the knowledge available in-house or accessible through the UN’s collaboration networks. The UN can mobilize its resources, expertise, experience, knowledge, infrastructure, vast partnership networks, convening power, and strong policy advocacy capacity to effectively facilitate and lead the partnership for inclusive green recovery at the global scale.¹⁵²

At the country level, the UN’s flexible and wide range of support modalities enables it to tailor its support to governments according to their local and immediate needs. At the forefront of the UN’s response to the COVID-19 crisis, the UN resident coordinators can muster the UN capacities to support government

response and recovery.¹⁵³ The resident coordinators play a key role in ensuring that the UN’s country level and regional support is integrated, connecting impact analysis and responses across all relevant sectors, while building continuity between immediate crisis response and longer-term recovery.¹⁵⁴

Potential Barriers to Success

Despite its major strengths, the UN system faces some challenges and barriers that limit the effectiveness of its green recovery-related activities. Given the scale and scope of the COVID-19 crisis, the UN system requires additional resources. Business-as-usual within the UN system will limit its ability to play a game changing role in the green recovery. The UN is a large system with many mandates and programs, and with budgets tied to these. This limits the liquidity of financial resources and reduces flexibility in operations and programming. As a result, aligning emergency response strategies at the organizational level with the existing mandates and programs is very challenging in practice.

While a multi-dimensional crisis like the COVID-19 pandemic requires an integrated approach based on nexus thinking, the current structure of the UN system, the objectives of its different agencies and programs, as well as their relationships and commitments to the donors and partners, can result in siloed operations.¹⁵⁵ This diminishes the overall efficiency and productivity of the UN system, increases unhelpful redundancies and overlap in missions, programs and operations, and in some cases leads to unconstructive competitions among elements of

¹⁵¹ UN (2020) Secretary-General Remarks on COVID-19: A Call for Solidarity (March 19, 2020), https://www.un.org/sites/un2.un.org/files/sg_remarks_on_covid-19_english_19_march_2020.pdf

¹⁵² UN (2020.) A UN framework for the immediate socio-economic response to COVID-19, <https://unsdg.un.org/resources/un-framework-immediate-socio-economic-response-covid-19>

¹⁵³ UNU-CPR (2021) Beyond Opportunism: The UN Development System’s Response to the Triple Planetary Crisis, <https://cpr.unu.edu/research/projects/the-triple-planetary-crisis.html>

¹⁵⁴ UN (2020.) A UN framework for the immediate socio-economic response to COVID-19, <https://unsdg.un.org/resources/un-framework-immediate-socio-economic-response-covid-19>

¹⁵⁵ UNU-CPR (2021) Beyond Opportunism: The UN Development System’s Response to the Triple Planetary Crisis, <https://cpr.unu.edu/research/projects/the-triple-planetary-crisis.html>

the UN system. While the COVID-19 crisis has further promoted cooperation among the UN agencies (Annex I), lack of agenda cohesion and incoherent approaches to crisis response, have led to inconsistent or ambiguous messages and narratives regarding the green recovery pillars, objectives, and pathways. This issue had been noted by the UN EMG Senior Officials, who in their 26th annual meeting in October 2020, decided to establish a consultative process to help the UN system define a coherent green recovery narrative, leading to this report).

A review of the UN green recovery-related products (included in Annex I) reveals a high level of redundancy, overlap, and repetition in the material produced by different UN agencies, especially in the case of guideline documents. This calls for enhancing inter-agency and intra-agency coordination and activity/objective alignment which can in turn reduce the cost of operations and improve resource use efficiency within the UN system.

The heart of the response to the global COVID-19 crisis lies at the national and sub-national levels.¹⁵⁶ Nonetheless, most of the products have a global focus and only provide general guidelines, ambitious targets and solutions that can be impractical in many countries, especially in developing economies with major financial resource deficiencies. The heterogeneity of the COVID-19 impacts across different nations, in addition to their very diverse socio-economic, political, and financial conditions, calls for more focused analyses, data collection efforts, and practical solution design at the sub-national, national, and regional levels. This heterogeneity also highlights the critical role of the resident coordinators and country teams as the UN's agents of positive change across the globe. The resident coordinators and country teams have the capacity to translate the UN's broad vision and agendas into reality based on their practical understanding of the opportunities and limitations in the countries. They take leadership and capitalize on the UN's leverage to turn into policy

change accelerators at the country level.¹⁵⁷ They can also communicate the realities on the ground to the UN agencies, increase transparency and accountability, improve data access at the country level, and help UN agencies identify and develop practical green recovery pathways that are in line with the national development agendas.

The resident coordinators and country teams are uniquely placed to call on and support countries in responding to the COVID-19 crisis and enable an inclusive green recovery. They can do this by providing technical advice, mobilizing the available resources, and liaising with local governments, NGOs, civil society, the private sector, and other actors. By doing this, they can seize and create opportunities for operationalizing the UN guidance on the triple planetary crisis and leading the charge for change.¹⁵⁸ Such coordination should support the meaningful participation of all stakeholders and address limitations on civic space, which risks undermining the crucial advocacy of environmental human rights defenders, including women and indigenous environmental defenders.¹⁵⁹ Nevertheless, this is only possible if the resident coordinators are empowered and well-equipped with sufficient financial, technical, and knowledge resources – including well-trained country economists. The recent UNU-CPR report¹⁶⁰ provides valuable recommendations in this regard and calls for bold and important changes to the UN strategies for country teams and resident coordinators.

The overview of the UN green recovery-related products also suggests that these products have been primarily focused on the first three building blocks of green recovery (Prosperity, Health and

¹⁵⁶ UN (2020.) A UN framework for the immediate socio-economic response to COVID-19, <https://unsdg.un.org/resources/un-framework-immediate-socio-economic-response-covid-19>

¹⁵⁷ UNU-CPR (2021) Beyond Opportunism: The UN Development System's Response to the Triple Planetary Crisis, <https://cpr.unu.edu/research/projects/the-triple-planetary-crisis.html>

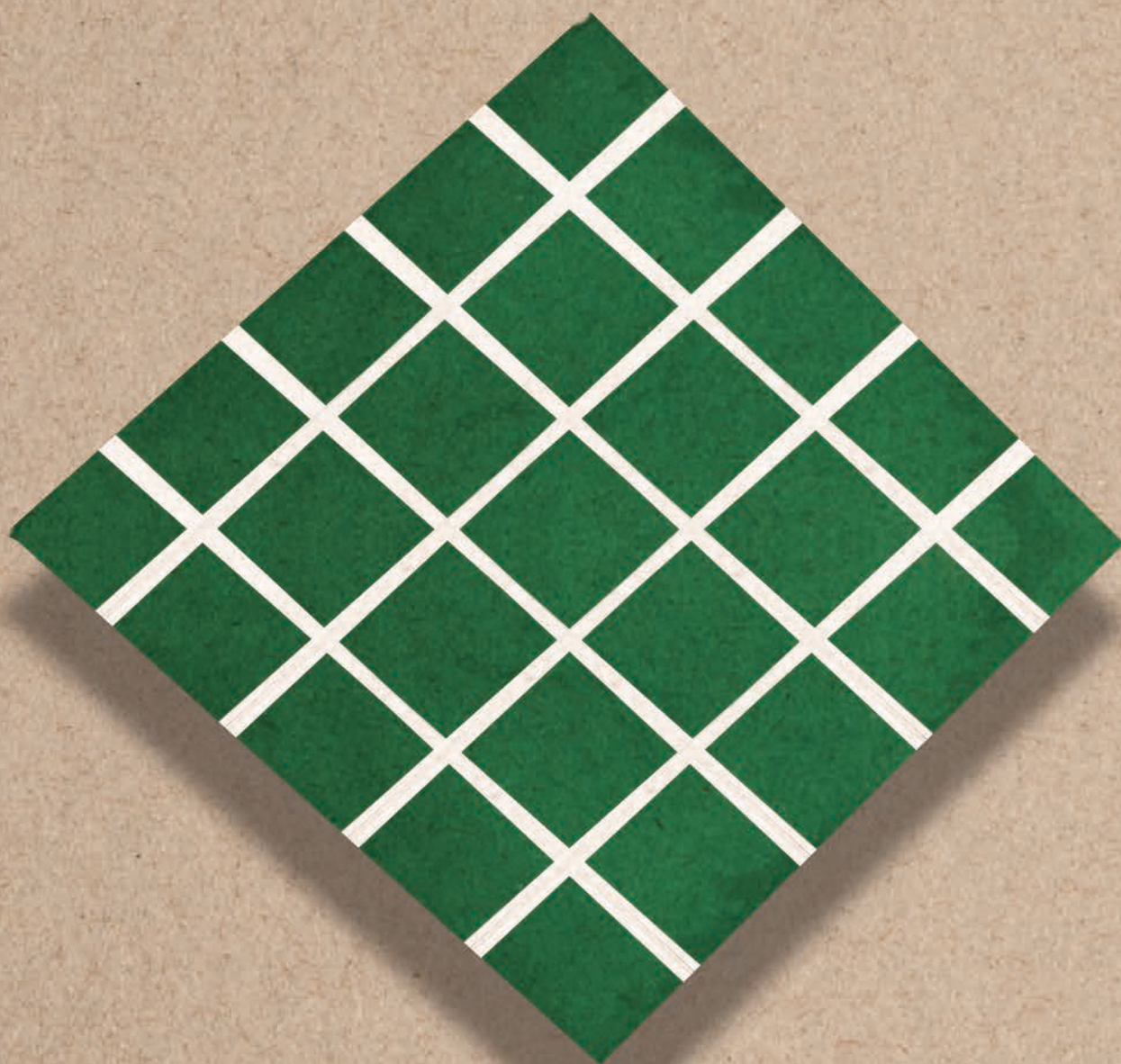
¹⁵⁸ Ibid.

¹⁵⁹ See, for example, UN (2020) United Nations Guidance Note: Protection and Promotion of Civic Space, https://www.ohchr.org/Documents/Issues/CivicSpace/UN_Guidance_Note.pdf and Human Rights Council resolution 40/11 (2019), *Recognizing the contribution of environmental human rights defenders to the enjoyment of human rights, environmental protection and sustainable development*.

¹⁶⁰ Ibid.

Nature) and their associated SDGs. Yet, securing a more prosperous, healthy, sustainable, and inclusive future remains impractical in the long run without equal attention to the other two building blocks of green recovery, namely Justice (removing inequalities, respecting, protecting and fulfilling human rights, involving the public in decision making, and increasing their access to data) and Transformation (transformation of the current economic system, development models, governance systems, human lifestyle, and our criteria for assessing human wellbeing). While radical reforms may seem unachievable in the short-term, the UN agendas and guidelines must encourage a paradigm shift and facilitate fundamental transformations to recover from the COVID-19 crisis, recover better and forward, and cope with the triple planetary crisis.

Annexes



Annex I - UN Recovery Products

The table provides a non-exhaustive inventory of the UN agencies' green recovery-related activities and products as of September 2021.

Product Information						Product Relevance to Building Blocks & SDGs															
Organizations	Product title	Date	Product Type			Prosperity			Health			Nature			Justice			Transformation			
			Guidance	Recommendation	Tool	SDG1 Poverty	SDG2 Hunger	SDG8 Work	SDG9 Industry	SDG3 Health	SDG6 Water	SDG7 Energy	SDG11 Cities	SDG12 Co.&Prod.	SDG13 Climate	SDG14 Oceans	SDG15 Land		SDG4 Education	SDG5 Gender	SDG10 Inequality
BRS	Environmentally Sound Management of Household Waste	May 2020	✓									✓	✓		✓	✓					
CBD	Global Biodiversity Outlook	2020	✓	✓				✓		✓	✓	✓	✓	✓	✓						
CBD	Special virtual session for SBSTTA-24 and SBI-03 on biodiversity, One Health and COVID-19	June 2021	✓						✓												
CITES, UNODC	UNODC World Wildlife Crime Report	May 2020	✓	✓										✓	✓						
CMS	Preventing the Next Pandemic: Zoonotic Diseases and how to break the chain of transmission	July 2020	✓	✓				✓													
ECLAC	Analysis and responses of Latin America and the Caribbean to the effects of COVID-19 on food systems	May 2020	✓										✓	✓	✓						
ECLAC	Recovery measures for the tourism sector in Latin America and the Caribbean present an opportunity to promote sustainability and resilience	July 2020	✓	✓				✓				✓	✓								
ECLAC	The 2030 Agenda for Sustainable Development in the new global and regional context: Scenarios and projections in the current crisis	July 2020	✓	✓				✓		✓	✓	✓	✓								
ESCAP	Accelerating Implementation of the Paris Agreement in Asia-Pacific: A Guide for Policymakers	December 2020	✓	✓									✓								

Product Information						Product Relevance to Building Blocks & SDGs																
Organizations	Product title	Date	Product Type			Prosperity				Health		Nature					Justice				Transformation	
			Guidance	Recommendation	Tool	SDG1 Poverty	SDG2 Hunger	SDG8 Work	SDG9 Industry	SDG3 Health	SDG6 Water	SDG7 Energy	SDG11 Cities	SDG12 Co.&Prod.	SDG13 Climate	SDG14 Oceans	SDG15 Land	SDG4 Education	SDG5 Gender	SDG10 Inequality	SDG16 Pea.&Jus.	SDG17 Partner
UNECE, Water Convention and Protocol on Water and Health, UN regional commissions, WHO, IFIs	The Protocol on Water and Health and the COVID-19 pandemic: Relevance, lessons learned and future perspectives	April 2021	√						√	√												
UNECE, Water Convention and Protocol on Water and Health, UN regional commissions, WHO, IFIs	Website on the Role of the Water Convention and the Protocol during COVID-19 pandemic, recovery including tools and guidance	June 2021	√						√	√												
UNEP	COVID-19 Waste Management Factsheets	June 2020	√		√					√	√	√	√	√								
UNEP	Earth School Adventures	April 2020	√		√					√	√		√	√	√	√						
UNEP	State of Finance for Nature	May 2021		√	√								√		√							√
UNEP	Working with the environment to protect people: UNEP's COVID-19 Response	May 2020		√				√			√		√	√	√	√						
UNEP, OHCHR	Environmental Rights Bulletin	September 2020	√		√								√						√	√	√	√
UNESCO	Cross sectoral biodiversity strategy for all UNESCO in the next medium strategy	2021	√	√	√											√						
UNESCO	UNESCO's "Next Normal" Campaign	July 2020	√		√			√			√	√	√	√	√	√						

Product Information						Product Relevance to Building Blocks & SDGs																
Organizations	Product title	Date	Product Type			Prosperity				Health		Nature				Justice			Transformation			
			Guidance	Recommendation	Tool	SDG1 Poverty	SDG2 Hunger	SDG8 Work	SDG9 Industry	SDG3 Health	SDG6 Water	SDG7 Energy	SDG11 Cities	SDG12 Co.&Prod.	SDG13 Climate	SDG14 Oceans	SDG15 Land	SDG4 Education	SDG5 Gender	SDG10 Inequality	SDG16 Pea.&Jus.	SDG17 Partner
UNIDO	ISID Working Paper on Policy Response to COVID-19- Supporting African Industry Through the Pandemic	August 2020	√					√	√													
UNIDO	Responding to the Covid-19 Crisis- Pathway to Business Continuity & Recovery (Guidance for MSMEs)	June 2020	√		√			√	√													
UNIDO	Responding to the Crisis: Building a better future	May 2020	√	√				√		√		√	√	√								
UNIDO	Why Industrial Development Matters Now More Than Ever	May 2021	√					√	√				√					√				
University of Oxford, IMF, UNEP, GIZ, GFPPN, SSEE, ERP, UNDP	Global Recovery Observatory	March 2021		√	√								√						√			√
UNODC	The potential of pathogen exposure from wildlife seizures: Guidance for evaluating and reducing the risks of transmission to frontline enforcement officers	Spring 2021	√	√						√						√						
UNODC	UNODC Guidance Note on COVID-19 links to Wildlife Crime	April 2020	√	√										√	√							
UNOOSA	Space for Health	May 2020			√								√	√	√							
UNU	Beyond Opportunism: The UN Development System's Response to the Triple Planetary Crisis	June 2021	√	√									√									
UNU	Evidence, Policy, and Interventions for COVID-19 (EPIC Tracker)	December 2021			√					√	√											
UNU	PhD cohort will develop scientific analyses and provide data	Ongoing	√	√	√												√					√

Annex II- List of Contributors

The report has benefited from the contributions of many individuals and experts, including but not limited to the people named below, who generously shared their thought and provided input at different stages of the consultative process.

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