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POLICY BRIEF

A sustainable recovery? Prioritising post-pandemic law and policy innovations to achieve the UN Sustainable Development Goals

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LEVERHULME TRUST

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We are living in a convergence of crises. Recent findings by the Intergovernmental Panel on Climate Change (IPCC),[1] the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES),[2] the World Health Organization (WHO), and other global scientific bodies highlight that humanity is reaching a critical crossroads. Rapid and dangerous climate change is exacerbating global poverty rates, undermining access to essential food sources and threatening livelihoods for thousands of people,[3] even as our planet's ecosystems continue to degrade, with nearly 1 million species facing extinction.[4] Successive waves of the COVID-19 pandemic, reaching over 44.7 million cases and more than 1.1 million deaths worldwide this month,[5] risk a global economic contraction of 5.2 percent, further escalating poverty, according to the World Bank and UN Development Programme.[6] The pandemic has exacerbated existing inequalities – in health, wealth, and the burden of childcare borne by women – and it has created new ones, in access to ventilators and vaccines.

These colossal challenges are connected and increasing in severity: they are not a surprise. Complex, inter-linked "wicked problems" of inequality, social unrest, and the rise of populism; climate change, drought and hunger; terrestrial and marine ecosystem collapse and species extinction; and pandemics, among others, have been flagged by scientists and civil society, with increasing urgency, for decades. Across 195 UN member States, pressure is rising on already-limited human, financial and natural resources; intensifying the need for prompt and effective public policy responses, backed by legal and institutional reforms, to foster rather than frustrate global sustainable development.

Countries have endeavoured to develop solutions across the last forty years, through a series of international events and programmes of action, including the 1992 UN Conference on Environment and Development (UNCED), the 2002 World Summit on Sustainable Development (WSSD) and the 2012 UN Conference on Sustainable Development (UNCSD), as well as through the adoption of the Millennium Development Goals (MDGs) in 2000, and through the negotiation of myriad international instruments. Replacing the MDGs in 2015, as part of new global cooperation agenda toward 2030,

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[1] V Masson-Delmotte, et. al. "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" (IPCC, 2018). [IPCC 1.5 Report]

[2] S Diaz, et.al., "Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services" (Bonn. Germany: IPBES, 2019) [IPBES 2019]; ; Secretariat of the Convention on Biological Diversity, "Global Biodiversity Outlook 5" (Montreal, Canada: CBD, 2020). [CBD 2020]

[3] *Ibid,* IPBES, 2019 at 12-15; *Ibid,* CBD 2020, 10, 16. H-O. Pörtner, etl. al. eds, "IPCC Special Report on the Ocean and Cryosphere in a Changing Climate" (IPCC, 2019), 12, 15-16.

[4] *Ibid,* IPBES 2019, at 12.

[5] WHO, "Coronavirus Disease (COVID-19) Dashboard" (29 October 2020), online: <https://covid19.who.int/>.

[6] World Bank, "Global Economic Prospects" (Washington, DC: World Bank, 2020), online: <www.worldbank.org/en/publication/global-economic-prospects>; World Bank, "Poverty and Shared Prosperity 2020: Reversals of Fortune" (Washington, DC: World Bank, 2020), online: <https://openknowledge.worldbank.org/bitstream/handle/10986/34496/9781464816024.pdf>. And see UNDP, "Human Development Report 2019 - Beyond income, beyond averages, beyond today: Inequalities in human development in the 21st century" (New York: UN, 2019), online: <http://hdr.undp.org/sites/default/files/hdr2019.pdf>.

countries have adopted 17 Sustainable Development Goals (SDGs) with 169 key targets, covering key areas of public policy from poverty, hunger, health, education and gender equality to water, energy, employment, infrastructure, equality, cities, production and consumption patterns, climate change, biodiversity, oceans and justice, and establishing global partnerships for action. As an agenda for the global community, the SDGs apply to all countries – rich or poor – providing a common framework. The SDGs facilitate cooperation and action, a succinct set of public policy priorities and time-bound targets for international organizations, countries and stakeholders to unite behind. Of course, as detractors underline, each SDG is aspirational, strictly non-binding in nature, and there are myriad trade-offs through which progress towards one goal might undermine another. However, like other important and universal aspirations such as world peace, or human rights, the Sustainable Development Goals are not legally irrelevant. Indeed, the opposite is true.

Law and policy will help – or hinder – the implementation of every global Sustainable Development Goal. Efforts to achieve the 17 SDGs and their 169 targets are supported by the principles of international law itself,[7] and by many binding international, regional and bilateral treaties.[8]

In fact, an entire network of increasingly specific international accords prioritizing sustainable development has been adopted in recent decades, from the UN Framework Convention on Climate Change (UNFCCC) and its Paris Agreement,[9] the Convention on Biological Diversity (CBD) and its Nagoya Protocol on Access and Benefit-Sharing,[10] the Ramsar Convention on Wetlands of International Importance, [11] or the UN Convention on the Law of the Sea (UNCLOS);[12] to the key global human rights instruments such as the International Covenant on Economic, Social and Cultural Rights (ICESCR),[13] the Convention on the Elimination of Discrimination Against Women

[7] ILA, ILA New Delhi Declaration of Principles of International Law Relating to Sustainable Development. (2002) International Environmental Agreements: Politics, Law and Economics 2, 211–216; United Nations. Rio Declaration on Environment and Development, 14 June 1992, UN Doc. A/CONF.151/26 (Vol. I), 31 ILM 874 (1992; MC Cordonier Segger & A Khalfan, *Sustainable Development Law: Principles, Practices and Prospects* (Oxford, Oxford University Press: 2004)

[8] S Atapattu, S Fraser, "SDG 1 on Ending Poverty in All its Forms: Contributions of International Law, Policy and Governance" Issue Brief (UNEP/CISDL, 2016), online: <www.cisdl.org/2016/07/12/sdg-1/> [SDG 1 Issue Brief]; M Prabhu, S Blakely, "SDG 3 on Ensuring Healthy Lives and Promoting Well-Being for All at All Ages: Contributions of International Law, Policy and Governance" Issue Brief (UNEP/CISDL, 2016), online: <www.cisdl.org/2016/06/12/sdg-3/>; C Fenton-Glynn, P Towela Sambo "SDG 4 on Ensuring Inclusive and Equitable Quality Education: Contributions of International Law, Policy and Governance" Issue Brief (UNEP/CISDL, 2016), online: <www.cisdl.org/2016/06/12/sdg-4-issue-brief/>; A Harrington, WB Shipley, "SDG 5 on Gender Equality: Contributions of International Law, Policy and Governance" Issue Brief (UNEP/CISDL, 2016), online: <www.cisdl.org/2016/05/12/sdg-5-issue-brief/>; FK Phillips et. al., "SDG 6 on Ensuring Water and Sanitation for All: Contributions of International Law, Policy and Governance" Issue Brief (UNEP/CISDL, 2016), online: <www.cisdl.org/2016/05/01/sdg-6-issue-brief/> [SDG 6 Issue Brief]; S Bruce, S Stephenson "SDG 7 on Sustainable Energy for All: Contributions of International Law, Policy and Governance" Issue Brief (UNEP/CISDL, 2016), online: <www.cisdl.org/2016/04/01/sdg-7/>; M Gehring, FK Phillips, WB Shipley, "SDG 12 on Ensuring Sustainable Consumption and Production Patterns: Contributions of International Law, Policy and Governance" Issue Brief (UNEP/CISDL, 2016), online: <www.cisdl.org/2016/05/01/sdg12-issue-brief/>; K Lofts, et al., "SDG 13 on Taking Action on Climate Change and its Impacts: Contributions of International Law, Policy and Governance" Issue Brief (UNEP/CISDL, 2016), online: <www.cisdl.org/2016/02/12/sdg-13/> [SDG 13 Issue Brief]; K Koutouki, FK Phillips "SDG 14 on Ensuring Conservation and Sustainable Use of Oceans and Marine Resources: Contributions of International Law, Policy and Governance" Issue Brief (UNEP/CISDL, 2016), online: <www.cisdl.org/2016/04/12/sdg-14/>; J Cabrera, F Perron-Welch, B Pisupati, "SDG 15 on Terrestrial Ecosystems and Biodiversity: Contributions of International Law, Policy and Governance" Issue Brief (UNEP/CISDL, 2016), online: <www.cisdl.org/2016/02/10/sdg-15/>.

[9] *United Nations Framework Convention on Climate Change*, 9 May 1992, 1771 UNTS 107, 31 ILM 849 (entered into force 21 March 1994) [UNFCCC]; *Adoption of the Paris Agreement,* 12 December 2015, Dec 1/CP.21, FCCC/CP/2015/L.9, UNTC No 54113, (entered into force 4 November 2016) [Paris Agreement].

[10] *Convention on Biological Diversity*, 5 June 1992, 31 ILM 822 (1992), (entered into force 29 December 1993) [CBD]; *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity*, 29 October 2010, UN Doc UNEP/CBD/COP/DEC/X/1, UNTC No 30619 (entered into force 12 October 2014).

[11] *Ramsar Convention on Wetlands of International Importance,* 2 February 1971, 996 UNTS 245 (entered into force 21 December 1975).

[12] *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 397 art 136 (entered into force 16 November 1994).

[13] *International Covenant of Economic, Social and Cultural Rights,* 16 December 1966, 993 UNTS 3 (entered into force 3 January 1976). [ICESCR]

(CEDAW), and the UN Convention on the Rights of the Child (CRC);[14] to the ILO Labour Conventions[15] or the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).[16] Commitments to sustainable development are even enshrined in the Agreements establishing the World Trade Organization and in a web of inter-regional, regional and bilateral trade and investment agreements.[17] These binding accords set specific and enforceable obligations, along with cooperative work programmes and institutions that can support achievement of each SDG. In each case, the inter-governmental regime engages a community of stakeholders, from local to global in scope, to implement key operational requirements, often with public participation, financing, monitoring, reporting and verification arrangements, as well as dispute settlement and other provisions.

Efforts to achieve each SDG target and the related international obligations are also facilitated by a toolkit of related domestic legal obligations, regulations and institutions at the national and sub-national levels in each country,[18] and also by important customary norms, economic incentives, and cultural values.[19] Mobilizing action across all these channels to achieve the SDGs by 2030 would secure crucial strides toward meeting our international legal obligations and lay the foundations for great advances globally. However, preventing progress on all 17 SDGs, and on compliance with the hundreds of binding international agreements that support them, are two formidable barriers – gaping chasms that make forward progress seemingly impossible.

Put simply – we lack the financial resources, and we lack the technical capacity.

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[14] *Convention on the Elimination of All Forms of Discrimination Against Women,* 18 December 1979, 1249 UNTS 13 (entered into force 3 September 1981) [CEDAW]; *Convention on the Rights of the Child,* 20 November 1989, 1577 UNTS 3 (entered into force 2 September 1990). [CRC]
[15] ILO, *Indigenous and Tribal Peoples Convention* (No. 169), 27 June 1989, ILO (entered into force 5 September 1991).
[16] *International Treaty on Plant Genetic Resources for Food and Agriculture*, FAO Res 3/2001, 3 November 2001, 2400 UNTS 303, (entered into force 29 June 2004). [ITPGRFA]
[17] MC Cordonier Segger, *Crafting International Trade and Investment Agreements for Sustainable Development: Athena's Treaties* (Oxford, Oxford University Press: forthcoming 2021).
[18] MC Cordonier Segger, A Harrington, FK Phillips eds., *SDG 1 on Ending poverty in all its forms everywhere: Contributions of Canadian Law, Policy and Governance A Toolkit of Legal & Institutional Practices* (Montreal, QC: Centre for International Sustainable Development Law, 2020), online: <www.cisdl.org/2020/08/17/sdg-1-a-toolkit-of-legal-institutional-practices/>; MC Cordonier Segger, A Harrington, FK Phillips eds., *SDG 4 on Ensuring Inclusive and Equitable Quality Education A Toolkit of Legal & Institutional Practices* (Montreal, QC: Centre for International Sustainable Development Law, 2020), online: <www.cisdl.org/2019/10/19/sdg-4-on-ensuring-inclusive-and-equitable-quality-education-a-toolkit-of-legal-institutional-practices/>; MC Cordonier Segger, A Harrington, FK Phillips eds., *SDG 6 to Ensure Availability and Sustainable Management of Water and Sanitation for All: Contributions of Canadian Law, Policy and Governance A Toolkit of Legal & Institutional Practices* (Montreal, QC: Centre for International Sustainable Development Law, 2020), online: <www.cisdl.org/2020/08/17/sdg-6-a-toolkit-of-legal-institutional-practices/>; MC Cordonier Segger, A Harrington, FK Phillips eds., *SDG 7 on Sustainable Energy for All: Contributions of Canadian Law, Policy and Governance A Toolkit of Legal & Institutional Practices* (Montreal, QC: Centre for International Sustainable Development Law, 2020), online: <www.cisdl.org/2019/10/19/sdg-7-on-sustainable-energy-for-all-a-toolkit-of-legal-institutional-practices/>; MC Cordonier Segger, A Harrington, FK Phillips eds., *SDG 13 on Taking Action on Climate Change and its Impacts: Contributions of Canadian Law, Policy and Governance A Toolkit of Legal & Institutional Practices* (Montreal, QC: Centre for International Sustainable Development Law, 2020), online: <www.cisdl.org/2019/10/19/sdg-13-on-taking-action-on-climate-change-and-its-impacts-a-toolkit-of-legal-institutional-practices/>; MC Cordonier Segger, A Harrington, FK Phillips eds., *SDG 14 on Conservation and Sustainable Use the Oceans: Contributions of Canadian Law, Policy and Governance A Toolkit of Legal & Institutional Practices* (Montreal, QC: Centre for International Sustainable Development Law, 2020), online: <www.cisdl.org/2020/08/17/sdg-14-a-toolkit-of-legal-institutional-practices/>; MC Cordonier Segger, A Harrington, FK Phillips eds., *SGD 15 Life on Land: Contributions of Canadian Law, Policy and Governance A Toolkit of Legal & Institutional Practices* (Montreal, QC: Centre for International Sustainable Development Law, 2020), online: <www.cisdl.org/2019/10/19/sgd-15-life-on-land-contributions-of-canadian-law-policy-and-governance-a-toolkit-of-legal-institutional-practices/>; MC Cordonier Segger, A Harrington, FK Phillips eds., *SDG 16 Peace, Justice and Strong Institutions: Contributions of Canadian Law, Policy and Governance A Toolkit of Legal & Institutional Practices* (Montreal, QC: Centre for International Sustainable Development Law, 2020), online: <www.cisdl.org/2020/08/17/sdg-16-a-toolkit-of-legal-institutional-practices/>.
[19] MC Cordonier Segger, P Reynaud eds., "Green Economy for Sustainable Development: Compendium of Legal Best Practices" (IDLO/CISDL, 2012) online: <www.idlo.int/sites/default/files/pdfs/publications/idlo-cisdl-green-economy-best-practices-2012.pdf>; IDLO, "Doing Justice to Sustainable Development: Integrating the Rule of Law into the Post-2015 Development Agenda" (IDLO, 2015), online: <www.idlo.int/sites/default/files/pdfs/publications/Doing%20Justice%20to%20Sustainable%20Development.pdf>.

Until recently, these gaps have appeared unsurmountable. Collectively, the SDGs cover nearly all areas of public policy, local to global. Achievement of the 169 SDG targets has been estimated by the UN to require an investment of £2.5-3.4 trillion GBP per year in developing countries, simply to cover costs of basic infrastructure, food security, health and education, and climate change adaptation and mitigation efforts.[20] A recent study suggests that for the poorest, least developed countries alone, the total investment gap is over £700 billon GBP.[21] These gaps concretize what international leaders have long lamented: treaty by treaty, commitment by commitment, standard by standard, we have not committed the funds to meet our international obligations.

In the context of post-pandemic recovery, we stand now at a critical crossroads. Achieving the SDGs offers broad benefits for health and well-being, restoring and creating new livelihoods for millions.[22] As countries consider new economic stimulus measures, financing of millions or even billions of pounds to help their economies and the world recover from the devastating impacts of the COVID-19 pandemic – what better priorities are there to be financed?

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The world's Sustainable Development Goals are the global investment opportunity of a millennium. This is a serious invitation. Economic evidence suggests that SDG-aligned investments in early childhood health and education, low carbon and climate resilient infrastructure, ecosystem conservation, and safeguarding clean air and water offer among the highest returns on investment in both rich and poor countries. Fortunately, not all decision-makers, not all leaders in the many areas of policy and fields of endeavour, are turning away from the opportunity. Economic stimulus measures adopted recently showcase potential to promote investment, restarting economies while also 'building back better' toward achievement of the SDGs. Indeed, examples are emerging, all over the world, of the kinds of post-pandemic investment measures necessary.

The imperative to scale up investment is strikingly evident in the context of furthering ambitious greenhouse gas (GHG) emissions mitigation, adaptation and resilience to support SDG 13 to take urgent action to combat climate change and its impacts, and to implement key, binding international obligations under the UNFCCC and the Paris Agreement.[23] In parallel, we require substantial investment in SDG 7 to ensure access to affordable, reliable, sustainable and modern energy for all, both to meet our Paris Agreement obligations, and to support the mandate of the International Renewable Energy Agency (IRENA), the Energy Charter and other clean energy, eco-innovation trade

[20] D Vorisek, S Yu, "Understanding the Cost of Achieving the Sustainable Development Goals" World Bank Policy Research Working Paper 9146 (February 2020), online: <documents1.worldbank.org/curated/en/744701582827333101/pdf/Understanding-the-Cost-of-Achieving-the-Sustainable-Development-Goals.pdf>; CA Adams, PB Puckman, RC Picot, "Sustainable Development Goals Disclosure (SDGD) Recommendations" (Integrated Reporting/World Benchmarking Alliance/ACCA/ICAS/Chartered Accountants Aus&NZ/IFAC, 2020) online: <https://integratedreporting.org/wp-content/uploads/2020/01/ICAS5045_SDGD_Recommendations_A4_22pp_AW3-1.pdf>.

[21] H Kharas, J McArthur, "Building the SDG Economy: Needs, spending, and financing for universal achievement of the Sustainable Development Goals" Global Economy and Development at Brookings Working Paper 131 (October 2019), at 23, online: <www.brookings.edu/wp-content/uploads/2019/10/Building-the-SDG-economy.pdf>.

[22] A Raquel Nunes, K Lee, T O'Riordan, 'The Importance of an Integrating Framework for Achieving the Sustainable Development Goals: The example of health and well-being". BMJ Global Health (2016), online: <https://gh.bmj.com/content/bmjgh/1/3/e000068.full.pdf>.

[23] UNFCCC *supra* note 9; Paris Agreement, *supra* note 9, Article 2(1), 4(1); SDG 13 Issue Brief, *supra* note 8.

and investment commitments.[24] Post-pandemic recovery measures must therefore be carefully crafted to foster rather than frustrate ambitious efforts to prevent dangerous climate change and make clean, renewable energy more affordable for all.

In Canada, for example, Prime Minister Justin Trudeau has focused on deploying climate-friendly investments as a way to "build back better."[25] Canada is committing $2.65 billion CAD (£1.5 billion) over five years to deliver a broad array of climate action: new jobs from climate-related technologies, energy efficient innovations and building retrofits, zero emission vehicles and infrastructure; climate-related disaster impact reduction; and net zero future industries.[26] These efforts are reinforced by a Pan Canadian Framework on Climate Change which provides a pathway for achievement of Canada's Nationally Determined Contribution (NDC) under the Paris Agreement of an emission reduction of 30% below 2005 levels,[27] backed by the 2018 *Greenhouse Gas Pollution Pricing Act* which introduced a federal price on carbon of $10/tonne in 2018 to $50/tonne by 2022.[28] On a broader scale, the EU "Green Deal" aims to position Europe on a forward-focused path to become the "first climate-neutral continent" through investment in a transition to a greener economy, development of environmentally-friendly technologies, to foster innovation, enable cleaner and cost-effective transportation options, decarbonize industrial sectors, enhance energy efficiency, and collaborate with international partners to improve global standards.[29] Buttressing these developments is a proposed EU Climate Law that, among other key provisions, mandates EU institutions and Member States to make "ensure continuous progress in enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change in accordance with Article 7 of the Paris Agreement" and to develop and implement adaptation strategies and plans that include comprehensive risk management frameworks, based on robust climate and vulnerability baselines and progress assessments.[30]

Further, within the EU, individual Member States have also embraced measures realizing ambitious domestic climate change and energy transition goals. For instance, the German Federal Climate Act establishes a carbon-neutrality requirement for 2050[31] while Finland has increased capitalization of the national climate fund with an injection of €300 million. Lithuania has dedicated €50 million (£44

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[24] *Statute of the International Renewable Energy Agency*, IRENA/FC/Statute, 26 January 2009 (entered into force 8 July 2010), Article 3-4; *Energy Charter Treaty*, 17 December 1994, 2080 UNTS 95 (entered into force 16 April 1998), Article 19(1)(d); *Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects*, opened for signature 17 December 1994, 2081 UNTS 3 (entered into force 16 April 1998), Article 1, 3(2), 5.

[25] Canada, "A Stronger and More Resilient Canada: Speech from the Throne to Open the Second Session of the Forty-third Parliament of Canada," (September 23, 2020), at 5, 14, online: <www.canada.ca/content/dam/pco-bcp/documents/pm/SFT_2020_EN_WEB.pdf>. [Canada Throne Speech]

[26] *Ibid,* Canada Throne Speech, at 22-23.

[27] Canada, "Nationally Determined Contribution" (2015), online: <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Canada%20First/INDC%20-%20Canada%20-%20English.pdf>.

[28] Greenhouse Gas Pollution Pricing Act, S.C. 2018, c. 12, s. 186, Schedule 4. Provincial measures can help localize climate responses, such as through the *Environmental Management Act* in British Columbia which provides for local climate plans and enhanced resilience, see Environmental Management Act, SBC 2003, c 53, Section 5, which allows for climate-related policy development, planning adaptation and mitigation undertakings, enhanced resilience, and public ecosystem conservation; or the Quebec's *Environmental Quality Act* which provides for assessment of climate-related impacts for projected work see Loi sur la qualité de l'environnement, RLRQ c Q-2, Section 24-25, 31.1, 31.76, 31.101-102, 95.1(29), which provides a basis for application of the precautionary principle, calculation of climate considerations, and inclusion of climate-focused mitigations actions.

[29] EU Commission, A European Green Deal - 2019, <https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en>.

[30] Proposal for a Regulation of the European Parliament and of the Council establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 COM/2020/80 final, Article 4, online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020PC0080&from=EN>. [European Climate Law]

[31] Bundes-Klimaschutzgesetz of 12 Dec 2019, online: <www.gesetze-im-internet.de/ksg/KSG.pdf>.

million) for co-financing of climate-related investments including technology innovation, research and infrastructure development.[32]

The United Kingdom, meanwhile, has announced plans to invest £160 million into offshore wind energy to create jobs, reduce carbon emissions and increase exports. The funding is being directed toward upgrading ports and infrastructure across the UK, with the goal of creating upwards of 60,000 indirect and 2,000 direct jobs.[33] This contributes toward a wider effort to mobilize £4.42 billion in UK public and private investment toward renewable energy for 2020. The UK has provided a further £200 million to develop energy efficiency technologies, home retrofits, and to reduce the carbon footprint of the transport sector.[34] Similarly, Norway approved NOK 160 billion (£13.3 billion) to provided fiscal incentives to encourage investment in among, other things, green recovery/transition (green economy, digitization, energy efficiency, transportation).[35]Australia also announced fiscal stimulus packages, together amounting to A$40 billion (£21.9 billion) to provide payments to vulnerable households, construction, infrastructure packages, and investment in renewable energy and green technologies.[36] It is thus clearly possible to align post-pandemic economic stimulus with SDGs 13 and 7, while supporting implementation of binding treaty obligations.

Post-pandemic recovery measures can simultaneously support efforts to achieve SDG 2 to end hunger, achieve food security and improved nutrition and promote sustainable agriculture, and to protect terrestrial ecosystems and biodiversity in support of SDG 15. Countries are announcing measures to advance the human right to food, shoring up their obligations under the ICESCR,[37] Universal Declaration of Human Rights[38] the CRC,[39] the ITPGRFA, [40] and the instruments establishing the UN Food and Agriculture Organization.[41] Additional standards are being advanced to address global biodiversity and habitat degradation as committed in the CBD,[42] the Convention on Migratory

[32] IMF, "Policy Responses to COVID-19," online: <www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19> [IMF COVID-19 Policy Response Database], see Finland, Lithuania.
[33] Government of the United Kingdom, "New Plans to make UK World Leader in Green Energy", online: https://www.gov.uk/government/news/new-plans-to-make-uk-world-leader-in-green-energy.
[34] IMF, "Policy Responses to COVID-19," online: <www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19> [IMF COVID-19 Policy Response Database], see UK.
[35] IMF COVID-19 Policy Response Database, see Norway.
[36] IMF COVID-19 Policy Response Database, see Australia.
[37] ICESCR, *supra* note 13, Article 11.
[38] UN General Assembly, Universal Declaration of Human Rights, 10 December 1948, 217 A (III), Article 25. (UDHR)
[39] CRC, *supra* note 14, Article 24(1)(c).
[40] ITPGRFA, *supra* note 16.
[41] Ibid, ITPGRA; *Plant Protection Agreement for the Asia and Pacific Region*, 26 November 1995, 808 UNTS 297 (entry into force 2 July 1956); *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas*, 24 November 1993, 2221 UNTS 91 (entry into force 24 April 2003); *Agreement for the Establishment of a Commission for Controlling the Desert Locust in the Central Region*, 1 July 1965, FAO (entry into force 21 February 1967); *Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal Unreported and Unregulated Fishing*, 22 November 2009, FAO (entry into force 5 June 2019); *Agreement for the establishment of the Asia-Pacific Fishery Commission*, 1 November 1948, FAO (entry into force 9 November 1948); *Agreement for the Establishment of the Indian Ocean Tuna Commission*, 25 November 1993, 1927 UNTS 329 (entry into force 27 March 1996); *Agreement on the Central Asian and Caucasus Regional Fisheries and Aquaculture Commission,* 30 September 2009, FAO (entry into force 3 December 2010); *Agreement for the Establishment of an FAO Commission for Controlling the Desert Locust in South-West Asia*, 3 December 1963, FAO (entry into force 15 December 1964); *Constitution of the International Rice Commission*, 1 November 1948, 120 UNTS 13 (entry into force 4 January 1949); *Plant Protection Agreement for the Asia and Pacific Region*, 26 November 1955, 1983 UNTS 289 (entry into force 2 July 1956); *Agreement for the Establishment of a General Fisheries Commission for the Mediterranean - Amended text approved by FAO Council at its 113th Session* (Nov. 1997), 1 November 1949 amended 6 November 1997, 2275 UNTS 157 (entry into force 29 April 2004); *Agreement for the Establishment of the Regional Commission for Fisheries*, 11 November 1999, 2144 UNTS 105 (entry into force 26 February 2001*); International Plant Protection Convention*, 6 December 1951, 150 UNTS 67 (entry into force 3 April 1952).
[42] CBD, *supra* note 10, Article 1, 7-8, 10-11.

Species, [43] the Convention on International Trade in Endangered Species of Flora and Fauna (CITES),[44] the Ramsar Convention,[45] and myriad other nature treaties, while also providing nature-based solutions to climate change under the UNFCCC and its Paris Agreement.

On food security and nutrition, according to the International Monetary Fund (IMF),[46] The Gambia has spent £12.2 million on a national food distribution program, which has reached 84 percent of households nation-wide.[47] Ethiopia has dedicated £490 million for emergency food distribution and £11.5 million specifically for individuals vulnerable to food insecurity who are not covered under existing programs through the COVID-19 Multi-Sectoral Preparedness and Response Plan.[48] Samoa has also created an economic stimulus package of £19.6 million to create a grace period of three months to be applied for all loan payments, an exemption on import duties for nearly all commonly bought food items and an expansion in duty concessions that are applied to agricultural and fishing materials.[49] These countries and others have, in their post-pandemic recovery strategies, prioritized efforts to eradicate poverty and secure greater food security, adopting targeted measures such as providing monthly stipends to protect resource-constrained families.[50] Institutional arrangements such as funding mechanisms to enhance response measures, commissions and mandates to integrate protection and enhancement of livelihoods into ongoing development programmes, and safety nets which provide a minimum threshold for quality of life and food security, offer important governance support to these post-pandemic measures.

In addressing habitat loss, Pakistan has begun to hire unemployed day labourers to plant saplings as a component of its "10 Billion Tree Tsunami" program, at once combatting national challenges of poverty and deforestation.[51] Similarly, New Zealand announced a NZ$1.1 billion (£566.1 million) program to create 11,000 jobs through investments in restoration of wetlands and riverbanks, and removing invasive species[52], while Germany allocated €700 million (£632.7 million) for forest conservation and management in its recovery stimulus.[53]

With regard to support for biodiversity, forests and other ecosystems, Canada has committed £763 million CAD to preserve a quarter of all national lands and coastal zones as part of the country's nature legacy, as well as planting two billion trees,[54] providing a pathway for post-pandemic recovery

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[43] *Convention on the conservation of migratory species of wild animals,* 23 June 1979, 1651 UNTS 333 (entry into force 1 November 1983), Article 2.
[44] *Convention on International Trade in Endangered Species of Flora and Fauna*, 3 March 1973, 993 UNTS 243 (entry into force 1 July 1975), Article 2-5.
[45] Ramsar, *supra* note 11, Article 3.1-2, 4.1
[46] IMF COVID-19 Policy Response Database, *supra* note 32.
[47] *Ibid,* IMF COVID-19 Policy Response Database, see The Gambia.
[48] *Ibid,* IMF COVID-19 Policy Response Database, see Ethiopia.
[49] *Ibid,* IMF COVID-19 Policy Response Database; see , Samoa.
[50] *Ibid,* IMF COVID-19 Policy Response Database; see Cambodia, Chile, Philippines, Tuvalu, Gambia, Ethiopia, and Samoa
[51] UNDP Ecosystems & Biodiversity, "10 Billion Trees: Reversing deforestation, tackling climate change and managing forests sustainably in Pakistan" UNDP Biodiversity Exposure (18 March 2019), online: <https://undp-biodiversity.exposure.co/10-billion-trees>; Rina Saeed Khan, "As a 'green stimulus' Pakistan sets virus-idled to work planting trees"
[52] Jonathan Cook, Rod Taylor, "Nature is An Economic Winner for COVID-19 Recovery" WRI (2020), online: < www.wri.org/news/coronavirus-nature-based-solutions-economic-recovery> [Cook & Taylor]; Amelia Wade, "Budget 2020: $1.1b towards saving environment while creating jobs" NZ Herald (13 May 2020), online: <www.nzherald.co.nz/nz/budget-2020-11b-towards-saving-environment-while-creating-jobs/YH5XRPFLEIK63LSFUF5WSGM3XQ/>.
[53] *Ibid,* Cook & Taylor; Benjamin Wehrmann Julian Wettengel, "Germany gives energy transition mild push with economic stimulus programme" Climate Energy Wire (4 June 2020), online: <www.cleanenergywire.org/news/germany-gives-energy-transition-some-extra-boost-economic-stimulus-programme >.
[54] *Ibid,* Canada Throne Speech, at 24.

which restores ecosystems. Nature-based solutions are advanced at all scales in Canada – federally, through the *Canada National Parks Act* which allows for the designation of protected environmental spaces and the application of sustainable management practices;[55] at provincial levels, through laws such as the Nova Scotia *Wilderness Areas Protection Act*;[56] and through conservation of private land, with measures such as British Columbia's *Islands Trust Natural Area Protection Tax Exemption Regulation*.[57] Likewise, the United Kingdom is including measures on natural conservation in its economic stimulus package. The package dedicated £640 million for the Nature for Climate Fund to plant over 40 million trees and to restore 35,000 hectares of peatland across England. It also dedicated £25 million to create a new Nature Recovery Network in England and £10 million in annual support for the Darwin Plus programme, which protects unique wildlife in UK Overseas Territories.[58] These investments are supported by critical legal instruments supporting conservation practices within the UK.[59]

A third cluster of post-pandemic economic stimulus measures support the targets of SDG 3 to ensure healthy lives and promote well-being for all, and SDG 6 to ensure availability and sustainable management of water and sanitation for all, working to strengthen health infrastructure and improve access to water and sanitation facilities support efforts. By doing so, these measures help to implement human rights obligations, including rights to health, water and sanitation found in the ICESCR, [60] CEDAW[61] and the CRC, [62] as well as water quality and sustainable watershed management provisions in the Ramsar Convention,[63] the Helsinki Water Convention[64] and the UN Watercourses Convention,[65] among others.[66]

To this end, the Dominican Republic has prioritized strengthening domestic capacity and healthcare infrastructure through procurement of medical supplies and equipment, conducting COVID-19 tests in private labs, paying the rent of two private medical centers and creating additional support for the pharmaceutical industry.[67] The government ha mobilized loans from various organizations to cover pandemic response costs, with the majority of health care expenditure coming from private donations. Analogously, Togo invested CFAF 19 billion (£26.1 billion) into containment and mitigation measures, and CFAF 33 billion (£45.4 billion) into laboratory equipment and new health centers, while excepting COVID-19 medical equipment from taxes and duties.[68]

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[55] Canada National Parks Act, SC 2000, c 32, Section 4, 8, 11-12.
[56] Wilderness Areas Protection Act, RSNS, 1998, c. 27, Section 2, 11, 14-15 which allows for the designation of public wilderness areas for conservation and grounded in a management plan and socio-economic assessment.
[57] Islands Trust Act [RSBC 1996] Chapter 239, Sec 49.1-2; Islands Trust Natural Area Protection Tax Exemption Regulation, BC Reg 41/2002, Section 2-3, which allows land owners to create of a protective covenant and receive an exemption from tax at a designated rate.
[58] United Kingdom, Budget 2020: Delivering on our Promises to the British People HC 121 (March 2020), 1.251, 2.116, online: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/871799/Budget_2020_Web_Accessible_Complete.pdf> .
[59] UK, Wildlife and Countryside Act 1991, C.39; UK, The Conservation Regulations 1994, No. 2716.
[60] ICESCR, *supra* note 13, Article 12.
[61] CEDAW, *supra* note 14, preamble, Article 1-2.
[62] CRC, *supra* note 14, Article 2-3, 6, 24.1-2, 29.1.
[63] Ramsar, *supra* note 11, Article 3.1-2, 4.1.
[64] *Convention on the Protection and Use of Transboundary Watercourses and International Lakes* (1992), 17 March 1992, 1936 UNTS 269, Article 1-3, 5-6, 9, 12.
[65] *UN Convention on the Law of the Non-navigational Uses of International Watercourses*, 21 May 1997, annexed to GA Res 51/229 (1997), *preamble,* Article 5.
[66] Ramsar, *supra* note 11, Article 3.1-2, 4.1; *Convention on Biological Diversity*, 5 June 1992, 31 ILM 822 (1992), (entered into force 29 December 1993) ; SDG 6 Issue Brief, *supra* note 8.
[67] IMF COVID-19 Policy Response Database, *supra* note 32; see Dominican Republic.
[68] *Ibid,* IMF COVID-19 Policy Response Database; see Togo.

During the early stages of the pandemic, Finland invested €1 billion (£903.7 million) in health care measures, including funding for COVID-19 vaccine research and innovation on rapid diagnostic testing. In a second round of funding, an additional £14.5 million was dedicated to research for a COVID-19 vaccine, with £4.5 million given to non-profit organizations working on vaccine development.[69] Comparable approaches are prevalent among non-OECD members as well. Malawi has focused on recruiting and training an additional 2,000 healthcare workers to buttress its strained system, part of the country's £15.46 million in spending toward healthcare and targeted social assistance programs.[70] Further, a number of jurisdictions have committed to temporarily suspend, offset, or reduce the costs associated with delivery of water and electricity.[71] Notably, Zimbabwe has dedicated ZWL$114.2 million (£242.5 million) to increasing access to water and sanitation facilities. Burundi and Central African Republic mandate enhanced water and sanitation facilities in public areas.[72] By developing and enhancing much-needed water and sanitation infrastructure, these countries are investing their pandemic response measures in achievement of SDG 6.

An additional set of post-pandemic recovery efforts, particularly those from highly resource-constrained jurisdictions, directly support a cluster of targets under SDG 1 to end poverty in all its forms everywhere, and SDG 9 to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. Such measures help to implement human rights and poverty eradication obligations under the ICESCR,[73] UDHR,[74] CEDAW,[75] CRC, [76] ILO Convention 169,[77] and UNDRIP,[78] as well as several key international trade and investment agreements.[79]

For example, Sri Lanka has established a Task Force on Economic Revival and Poverty Eradication, as well as a special fund comprised of local and foreign tax-free donations.[80] Cambodia has dedicated US$52 million (£40 million) to support a COVID-19 preparedness response plan to alleviate COVID-19 repercussions for vulnerable people and households.[81] Chile has created a £1.5 billion fiscal stimulus package with enhanced subsidies and unemployment benefits, prioritizing support for the most vulnerable independent workers.[82] The Philippines has launched a £9.4 billion fiscal package focusing on cash transfers and social protection measures for workers.[83] Even the tiny Pacific island

[69] *Ibid,* IMF COVID-19 Policy Response Database; seeFinland.
[70] *Ibid,* IMF COVID-19 Policy Response Database; see Malawi.
[71] *Ibid,* IMF COVID-19 Policy Response Database; see Bahrain, Bolivia, Botswana, Burkina Faso, Chad, Democratic Republic of Congo, Eswatini, Gabon, Guyana, Maldives, Mali, Peru, Samoa, Senegal, Thailand, Timor-Lest, Togo.
[72] *Ibid,* IMF COVID-19 Policy Response Database, see Zimbabwe, Burundi, Central African Republic.
[73] ICESCR, *supra* note 13, Article 1, 2.1, 9, 11.
[74] UDHR, *supra* note 38, Article 3, 25.
[75] CEDAW, *supra* note 14, preamble, Article 1-2.
[76] CRC, *supra* note 14, Article 2-3, 6, 24.1, 29.1.
[77] ILO 169, *supra* note 15, Article 1-3.
[78] *Declaration on the Rights of Indigenous Peoples*, UN GA Res 61/295, 13 September 2007, UN Doc.A/61/49 (2008), Article 31
[79] Canada EC (CETA) (2016), Article 24.3; EC Korea (2010), Article 1.1(h); EC Singapore (2015), Article 12.6; EC Vietnam (2016), Article 13.1; Japan EC (2018), Article 16.4(4).
[80] Sri Lanka, "President appoints Presidential Task Force for economic revival and poverty eradication" Government of Sri Lanka COVID-19 Response (25 April 2020), online: <https://covid19.gov.lk/news/economy/president-appoints-presidential-task-force-for-economic-revival-and-poverty-elevation.html>; IMF COVID-19 Policy Response Database, *supra* note 32, see Sri Lanka.
[81] *Ibid,* IMF COVID-19 Policy Response Database see Cambodia.
[82] *Ibid,* IMF COVID-19 Policy Response Database see Chile.
[83] *Ibid,* IMF COVID-19 Policy Response Database see Philippines.

of Tuvalu has designated US$4 million (£3.07 million) toward helping its people through the welfare system.[84]

In South Korea, with the passage of the "Korean New Deal," aimed to transition the nation away from fossil fuel dependency to a green economy, the government has committed new investments of investments of £45 billion GBP (67 billon KRW) by 2022 toward green technology, digitalization, and an enhanced social safety net.[85] Cameroon, set aside US$16.5 million (£12.7 million) to fund local COVID solutions.[86] Slovenia, provided €95 million (£85.9 million) to fund microloans for R&D and innovation.[87]

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Such creatively designed measures, taking shape across a broad swath of countries, provide an encouraging outlook for the notion that economic stimulus measures could be aligned to increase rather than impede progress on the SDGs, backed by public policy and legal innovation from global to local levels. However, ensuring the necessary resources are in place to facilitate implementation across diverse national contexts – demanding a mix of post-pandemic public and private investments – throws the global capacity chasm into sharp relief.

Awareness, knowledge and understanding, supported by keenly focused research, by new skills development, and above all, by quality education – are desperately needed to advance achievement of each SDG, all 169 targets, as well as to prepare future generation to be resolute and resilient in the face of the impacts that centuries of unsustainable development have already set in motion. This is the role for universities and colleges, and it is a crucial one. In Europe, nearly 4.8 million students graduate each year from colleges and universities, with the United Kingdom graduating around 784,000 newly qualified students each year.[88] In the US, over 124,477 engineering degrees were awarded in the year 2017.[89] Comparatively, there were 33,954 US law graduates in 2019, down from 46,776 in 2013.[90] How can we persuade as many as possible of these brilliant, newly capable graduates to dedicate their careers to achieving one or more of the 17 SDGs, post-pandemic, so that globally we can build back better, or indeed, build forward?[91]

There are signs of movement, though more is needed. As one example, the Sustainable Development Solutions Network (SDSN), whose mission is to "promote integrated approaches to implement the SDGs […] through education, research, policy analysis, and global cooperation," has already launched 38 national and regional nodes, even opening online forums for professors who teach the SDGs to share syllabi and materials. As another example, in 2019 Vice Chancellor of the University of

[84] *Ibid,* IMF COVID-19 Policy Response Database see: Tuvalu.
[85] *Ibid,* IMF COVID-19 Policy Response Database see South Korea.
[86] *Ibid,* IMF COVID-19 Policy Response Database, see Cameroon.
[87] *Ibid,* IMF COVID-19 Policy Response Database, see Slovenia.
[88] Eurostat,"Tertiary education statistics", Online: https://ec.europa.eu/eurostat/statistics-explained/index.php/Tertiary_education_statistics#Graduates.
[89] Brian Yoder, "Engineering by the Numbers", Online: https://www.asee.org/documents/papers-and-publications/publications/college-profiles/2017-Engineering-by-Numbers-Engineering-Statistics.pdf.
[90] E Mazareanu, "Number of law graduates in the U.S. 2013-2019" Statista (10 June 2020), online: <www.statista.com/statistics/428985/number-of-law-graduates-us/>.
[91] M Mehling, H van Asselt, K Kulovesi, E Morgera, "Teaching Climate Law: Trends, Methods and Outlook," Journal of Environmental Law eqz036, online: <https://academic.oup.com/jel/advance-article/doi/10.1093/jel/eqz036/5716377>; authors have found 19 climate-related courses predominantly at the post graduate level.

Cambridge launched a global coalition of university leaders to incentivize education and action on climate change. The University has also launched Cambridge Zero, an initiative involving over 1000 experts to mobilize our collective initiative and intellectual capacity to advance research and action around mitigation, to better understand pathways for rapid decarbonization, and to deliver policy responses informed by robust research to policy markers, with a commitment to cut the institution's GHG emissions to zero by 2038, and to divest from fossil fuels by 2030.[92]

What of professionals already practicing, entrepreneurs and businesses already operating, farms or craftsmen? To date, very few judicial, professional or crafts associations, let alone public service schools, seem to be stepping forward on sustainability, or even opening committees on climate action or other SDGs. Even fewer have joined SDG-related networks or launched new training programs. This said, in key sectors addressing pressing SDG challenges such as climate change, new initiatives are advancing. For instance, the Climate Law and Governance Initiative (CLGI) convenes government officials, parliamentarians, judges, academics and legal professionals to share experiences, disseminate knowledge, and strengthen capacity globally to achieve SDG 13 and implement the UNFCCC Paris Agreement,[93] and in other international treaty bodies related to each SDG, there are networks of vibrant, active women, farmers, indigenous, youth, academic, business and civil society leaders taking shape. Investors and business communities (from micro, small and medium sized firms to global companies) are increasingly embracing the SDGs as purpose-led enterprises, for instance through the UN Global Compact. Emerging alliances among business leaders, investors and banks have committed to ensuring their investment and finance practices align with the Paris Agreement, as an ever-growing number of businesses declare pathways to carbon-neutrality or even carbon-negativity.

There are glimmers of optimism, but a great deal more action is needed. These are terrifying times. The climate crisis is intensifying, as are its social, economic, and ecological consequences, even as the COVID-19 pandemic exposes the vulnerabilities and systemic inequalities in our societies. These are our generation's "wicked problems"; they are our challenge but also our opportunity. Particularly as scholars and educators, but also as advisors across all fields and disciplines, we must be prepared to speak truth to power. Rather than turning away, many countries, communities, companies and indeed, academic institutions are now focusing on change, and actively searching for ways to "build back better." At the very least, we should be ready to recommend ways and means for our governments to assess and enhance the sustainability impacts of post-pandemic economic stimulus plans. We should be able to help our public policy colleagues align each measure with international obligations and local laws that – although bent nearly to the breaking point – still hold the potential to achieve our world's Sustainable Development Goals. This commitment, creativity and courage is the key to action and offers hope. Our world – future generations of all species including humanity – is depending on us.

[92] Stephen Toope, "Vice-Chancellor's Address to the University, 1 October 2020" University of Cambridge, online: <www.v-c.admin.cam.ac.uk/professor-stephen-j-toope/selected-speeches-professor-stephen-j-toope/address-1-october-2020>.
[93] Climate Law and Governance Initiative, online: <www.climatelawgovernance.org/about/>.

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