



Sustainability after COVID-19: pillars for a just transition

John Morrissey¹ · Patrick Heidkamp²

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Abstract

The vulnerability of the global economy has been starkly exposed by the COVID-19 pandemic. Longer term thinking and new approaches to development and prosperity are urgently required. In this paper, we forward a series of principles on which economic and development policy for the post-COVID era should be developed. These are outlined as five ‘pillars’ from which to rebuild the global economy, based on principles of a shared sustainable prosperity. These pillars are: (I) an ecological prosperity; (II) a decarbonized economy; (III) a shared cost burden; (IV) a governance new deal; (V) a just resilience. In outlining the ‘5 pillars’ we explicitly recognize that sustainability cannot simply be a ‘green’, or environmental concern. Social and economic dimensions of sustainability are key for societal stability and continuity. This is made ever starker in the context of the fundamental economic and societal restructuring forced by the disruption of the COVID-19 pandemic. In this regard, the pillars represent a triple bottom line framing of sustainability, of mutually supportive domains of economic, social and environmental well-being. The five pillars are informed by principles of distributive and procedural justice, recognizing the importance and advantages of real community engagement and empowerment and giving due respect and deference to the ecological carrying capacity of our fragile planet. We argue that the post-COVID-19 re-build represents a once-in-a-generation opportunity to markedly shift developed trajectories to more sustainable pathways, to rebalance the domains of sustainability, and in the process, to address longer-term crises including those of climate and biodiversity loss.

Keywords COVID-19 · Sustainability · Prosperity · Climate crisis · Social justice · Resilience

Introduction

The vulnerability of the global economy has been starkly exposed by the coronavirus disease (COVID-19) pandemic, reinforcing the urgent need for longer term thinking and new approaches to development and prosperity. Here, we forward a set of ‘pillars’ from which to rebuild the global economy, based on principles of a shared sustainable prosperity. The evidence on the need to do so is now over-whelming. Humanity is facing a crisis of unprecedented scale and complexity. The Intergovernmental Panel on Climate Change (IPCC) and United Nations have repeatedly shed light on the emergency in successive reports. Total green

house gases (GHG) emissions reached a record high of 59.1 GtCO₂-equivalent in 2019 (UNEP 2020). While global emissions dropped by an unprecedented 5.4% in 2020, emissions are rapidly returning to pre-COVID-19 levels (UNEP 2021). Carbon dioxide (CO₂) concentrations in the atmosphere reached a record daily high of 421.59 ppm on 14th February 2022 (National Oceanic and Atmospheric Administration 2020). We face a likely temperature rise of 2.7 °C by 2100 (UNEP 2021), equating to a planetary-scale emergency characterized by an acute level of risk and urgency (Lenton et al. 2019).

Our ecological crises present fundamental normative questions, including the need to think about challenges to prosperity as well as justice and rights issues, reversals of development gains and resulting conflicts (Stern 2016). Though sustainable development as originally envisaged included a clear social mandate, the social dimension has been historically neglected amidst abbreviated framings of sustainability typically focused on narrow understandings conflating ‘development’ and ‘economic growth’ (Vallance et al. 2011).

✉ John Morrissey
john.morrissey@mic.ul.ie

¹ Department of Geography, Mary Immaculate College, University of Limerick, Limerick, Ireland

² Department of the Environment, Geography and Marine Sciences, Southern Connecticut State University, New Haven, CT, USA

A just transition involves a change to a low-to-no-carbon economy, while distributing the costs, risks and benefits of the societal shift in a way that can be considered ‘just’ (Sareen and Haarstad 2018). The social domain of sustainability is therefore key. However, there remains a dearth of understanding of how just transitions might be realized. Here we argue for the adoption of 5 ‘pillars’, through which key stakeholders might begin to plan for just transitions. These are: (I) an ecological prosperity; (II) a decarbonized economy; (III) a shared cost burden; (IV) a governance new deal; and (V) a just resilience.

The pillars represent a triple bottom line framing of sustainability, of mutually supportive domains of economic, social and environmental well-being, informed by principles of distributive and procedural justice, recognizing the importance and advantages of real community engagement and empowerment, giving due respect and deference to the ecological carrying capacity of our fragile planet. Our goal here is not to discuss the sustainability implications of the Covid-19 pandemic, but rather, to suggest how policy efforts at sustainability need to be re-framed and re-tackled with some urgency, in the aftermath of such a significant global disruption.

We build on the significant progress of the past decade. The UN’s Sustainable Development Goals (SDGs) represent a blueprint to achieve a better and more sustainable future for the global community (United Nations 2015), for instance. We agree with Coscieme et al. (2021) and Ripple et al. (2017) that the SDGs represent a global policy achievement of some significance. The pillars presented here add emphasis to core aspects of the policy response to sustainability, while themselves also incorporating and overarching the SDGs. The SDGs are designed such that no one goal is prioritized over others (UN 2015). While on the surface, this is a laudable recognition of the balanced priority afforded by the SDGs across economic, environmental and social domains, it nonetheless presents a somewhat flat understanding of the sustainability imperatives of the 21st century. The nature and pace of ecological degradation in particular, means that all of the SDGs are dependent on how successful or not measures to arrest the climate crisis are. We are now beginning to better understand that climate change makes existing poverty worse, leads to more inequality and results in more vulnerability.

The post-pandemic re-build provides a short and opportune window in which to meaningfully shift the global economy to a more sustainable pathway. The timing is important. A return to business as usual post-Covid surely represents a key milestone on the journey to global societal ruin. Swilling (2020) suggests an alternative of transformative change equal in significance to the Neolithic agricultural revolution or the Industrial Revolution.

The pillars presented here are designed to inform the policy effort to rebalance the domains of sustainability and in the process, to address longer-term crises including those of climate and biodiversity loss.

Pillar one: an ecological prosperity

COVID-19 presents stark evidence of the increasingly damaging relationship between human society and the biosphere; the emergence and spread of the pandemic is related to habitat destruction, urbanization, live animal trade and intensive livestock farming amongst other factors (Barouki et al. 2021). Global over-consumption is placing stress on Earth’s natural life-support systems as never before. World Wide Fund for Nature (WWF 2018) have reported a 60% decline in overall populations of mammals, reptiles, fish, birds and amphibians in the 4 decades following 1970. Nevertheless, large swathes of the global population continue to experience the deprivations of poverty and resource scarcity (UNDP 2019). For example, the United Nations Development Programme (UNDP 2019, p 1) report that “17% of children born in 2000 in so-called low human development countries will have died before age 20, compared with a figure of 1% in very high human development countries”.

Economic growth, while vital for poverty alleviation, remains coupled with material resource extraction, specifically fossil fuel dependency. Our current development model contains an ‘unanswerable question’, how can climate change mitigation and sufficient levels of development and poverty alleviation be delivered simultaneously? This dilemma manifests spatially as profound inequality in resource use and development outcomes, as well as uneven exposure to climate impacts. The result, overconsumption in the wealthy advanced economies and continuing issues of energy poverty, lack of basic infrastructure and poor Human Development Index (HDI) performance in communities in the poorest nations.

The seminal work on planetary boundaries by Rockström et al. (2009) has mapped the ceiling(s) to resource use, considering global ecological limits and carrying capacity. The ‘safe operating space’ can be applied to identify clear resource and emissions caps, and to establish performance targets and policy measures in response to identified global environmental pressures (Rockström et al. 2009; Steffen et al. 2015; Hjalsted et al. 2021). However, much of the world’s population face a lack of access to resources (UNDP 2019).

The SDGs establish an internationally agreed basis for a ‘social foundation’. These are presented in Table 1.

The SDGs address poverty, inequality, environmental degradation, climate change, peace and justice, offering a

Table 1 The sustainable development goals

Goal no.	Description
Goal 1	No poverty
Goal 2	Zero hunger
Goal 3	Good health and well-being
Goal 4	Quality education
Goal 5	Gender equality
Goal 6	Clean water and sanitation
Goal 7	Affordable and clean energy
Goal 8	Decent work and economic growth
Goal 9	Industry, innovation and infrastructure
Goal 10	Reduced inequality
Goal 11	Sustainable cities and communities
Goal 12	Responsible consumption and production
Goal 13	Climate action
Goal 14	Life below water
Goal 15	Life on land
Goal 16	Peace and justice strong institutions
Goal 17	Partnerships to achieve the goal

means to chart progress to a more sustainable, equal and just future (United Nations 2015). Raworth’s ‘Doughnut for the Anthropocene’ provides an inventive and useful combination of both the planetary boundaries and the SDGs (Raworth 2017). The ‘doughnut’ concept provides a succinct integration of two sets of boundaries, an ecological ‘ceiling’ informed by the planetary boundaries work of Rockström et al. (2009) and Steffen et al. (2015) and a social ‘floor’ or foundation, informed by the SDGs. In this way, the doughnut presents two concentric radar charts representing the social and ecological boundaries, which together determine human wellbeing (Raworth 2017). The so-called doughnut represents a type of compass which might be applied by national regional and local policy makers to broadly frame the debate on just transitions, by helping to navigating society to “an ecologically safe and socially just space” (Raworth 2017).

However, the challenge for policy-makers is considerable. The radical change required to limit warming to 1.5 °C, is likely to lead to some difficult policy trade-offs and tensions between respecting the planetary boundaries and building adequate social foundations globally. The IPCC (2018, p 19) state that while some synergies are possible, “mitigation options consistent with 1.5 °C pathways are associated with multiple trade-offs across the Sustainable Development Goals (SDGs)”.

Pillar two: a decarbonized economy

The ‘conceptual technology’ of ecological economics has been under used if not outright ignored in mainstream economics thinking. Simple concepts such as the *polluter pays*¹ and the *precautionary principle*² have not been applied in a meaningful way to the carbon pollution problem. Mainstream economics has failed to address global environmental externalities in a real way; consider the spatial and temporal displacement of costs to global and intergenerational communities from fossil fuel extraction and use. There is growing recognition that the material extraction of nature from finite planetary resources cannot sustain infinite economic growth/increases in gross domestic product (GDP), while simultaneously accumulating societal risk and contributing to the loss of biodiversity and climate change (Özdemir 2019).

Additionally, our global failure to account for the economic benefits of ecosystem regulating services, including water filtration, flood mitigation and crop pollination have further contributed to the accumulation of ecological degradation (WWF 2018). In the longer-term, radical alternatives such as steady-state economies, or economics of de-growth will have to be considered. These radical alternatives would not be realizable in the short-medium term without unprecedented socio-political disruption. Our immediate priority is to decarbonize the global economy. There are immediate fixes available. For example, the inclusion of a wider range of indicators in basic macroeconomic accounting would serve to broaden economic debate beyond perennial GDP and employment fixations (Jackson 2017). The Project Drawdown report, published in 2017, describes the 100 most substantive solutions to the climate crisis, for which the technology already exists. Solutions include better refrigerant management (potential to reduce 57.75 gigatons of CO₂-e over 2020–2050) and better health and education provision for women and girls (potential to reduce 85.42 gigatons of CO₂-e over 2020–2050) (Hawken 2017).

Additionally, measures to reduce wealth inequality are urgently required, including reforms to ensure that taxes, prices and incentive systems consider the actual ecological and social costs of current consumption patterns (Ripple et al. 2017). The argument for large-scale mobilisation of public sector resources is also now overwhelming, given the scale of emissions reductions required over the

¹ “The polluter pays principle contends that firms and in turn countries should be charged for the full costs to society of their current pollution” (Tilton 2016, p 117).

² According to the Rio Declaration, “the precautionary principle states that where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation” (United Nations 1992, p 3,4).

coming 2 decades. Green New Deal (GND) ideas propose to achieve an ecological restructuring of the economy through sustained investment (Bauhardt 2014). Central to GND concepts are a commitment to radical economic restructuring and investment in the public realm at scale (Galvin and Healy 2020), required to deliver the large-scale, expensive and systemwide infrastructure required for a no carbon economy. Newell and Simms (2021) argue that an imperative to mobilise finance, both public and private, is “almost a given” when considering socio-technical transitions. We argue that a massive investment effort is required to deliver a no-carbon socio-technical regime, including, renewable energy technologies developed at sufficient scale to deliver decarbonized electricity grids; public transport networks which displace reliance on private motor vehicles; so-called green infrastructure, land-use reserved for biodiversity and ecosystem services; dedicated forestry for carbon sequestration; investment in adaptation and climate resilience infrastructure, including for instance flood defence schemes; R&D investment in sustainable and resilient agri-food systems; and at a fundamental level, investment in the so-called low hanging fruit of building retrofit and energy efficiency measures. GND ideas are not without precedent. As argued by Newell and Simms (2021) “historically states have played a key role in managing adaptations to external shocks or re-wiring their economies in line with shifting domestic needs and global demands within short periods of time”. If designed appropriately, GND based policies can accelerate sustainability transitions, within a context of social protection (Allam et al. 2022). The post-Covid rebuild therefore needs to keep sight of the pressing imperatives of the climate crisis, just transitions and the no carbon economy when designing stimulus packages.

Pillar three: a shared cost burden

The unsustainability and inherent inequality of current carbon-intensive lifestyles and consumption patterns are obvious. The drivers of the climate crisis have a direct relationship with economic inequality, whereby the greenhouse gas emissions of the ‘haves’ are largely driving a crisis which will impact on the ‘have-nots’ the hardest (Gore 2015). The G20 group of nations account for 78% of all emissions (UNEP 2019a). The average carbon footprint of the 1% most wealthy globally may be as much as 175 times that of the poorest 10% (Gore 2015). While countries in sub-Saharan Africa contribute the lowest levels of per capita CO₂ equivalent emissions, these countries are ranked as the most vulnerable to climate change impacts (Eckstein et al. 2019). By 2030, an additional 100 million people may be pushed into poverty in the absence of urgent action (Eckstein et al. 2019). Developing countries will be disproportionately

impacted due to low latitudes locations, the amount and variability of rainfall and current levels of development (Stern 2007). For vulnerable countries in the global south, both the cost of borrowing and the risk of debt crises are increased by environmental hazards; many such vulnerable countries are already highly indebted to begin with (Fresnillo 2020). Countries facing highest levels of temperature variability also have the least economic potential to cope with the impacts (Bassetti 2019). Fleurbaey et al. (2014) outline four key equity principles: responsibility, capacity, equality, and the right to sustainable development. Given international poverty alleviation goals, redistribution of carbon shares from wealthy elites to the global poor would seem to be appropriate (Hubacek et al. 2017), from both distributional justice and operational policy perspectives. Fair burden sharing between countries implies that countries benefiting from greater climate stability should also help to shoulder a higher burden of the effort and costs of climate change mitigation and adaptation (Puaschunder 2020).

Pillar four: a governance new deal

Governance for sustainable development is crucially deficient, characterized by fragmented policy implementation and deficiencies in stakeholder cooperation and engagement (Leal Filho et al. 2016). Participation is a key factor when considering issues of sustainable development, specifically in relation to SDGs achievement (Glass and Newig 2019). Despite a lack of capacity at present, there is potential for multiple benefits from empowering communities and realizing meaningful community involvement through participatory models (Middlemiss and Parrish 2010). Participation of diverse societal actors in the governance of complex, long-term challenges such as the climate crisis can potentially make planning trade-offs and equity considerations clearer in policy design (Cavaleri Gerhardinger et al. 2020). Such approach can enhance legitimacy and acceptability. Governance decisions arrived at through participatory processes are more likely to be acceptable to communities, in contrast to uneven outcomes typical of top-down governance. Jasanoff’s (2018) ‘humble approach’ to just energy transitions emphasizes a move away from traditional top-down command and control hierarchal governance models and argues for an explicit acknowledgement and prioritization of procedural justice principles in particular. Genuine participatory models to empower communities can result in policy and planning decisions that are more likely to be acceptable as well as more effective in the long-term (Garland et al. 2019; Heidkamp et al. 2021). Transdisciplinary action research is a promising avenue for collaborative learning and decision making in this context (Nicolescu 2002). Such an approach

also calls for academic humility, necessitating a radical rethink on how scholars communicate academic knowledge to the public.

Pillar five: a just resilience

A warming level of over 1.5 °C will be unavoidable, if national emissions reductions commitments are not radically increased in the immediate short-term (UNEP 2019a). Gleeson (2018) warns of a “tsunami of human and global change” of overwhelming scale and magnitude. However, sustainable development policy responses to date assume the stability of the political-economic structure and aim for socio-technical transition rather than any fundamental system transformation. Bradshaw et al.’s (2021) dire predictions of ‘a ghastly future’ of mass extinction, resource conflicts and climate-disruption upheavals are a stark reminder of the challenges. The application of justice principles is vital in navigating the decision-making of this complex milieu and to facilitate public reasoning on what is considered to be legitimate (Forsyth 2014). “Bounce forward” resilience concepts frame disruption as an opportunity to radically address social issues (Manyena et al. 2011), with a central recognition of the importance of justice considerations (Popke et al. 2016). However, while climate related disruptions may prompt a transformative change of socio-economic systems, whether recovery will be characterized by a return to the *status quo ante* or a transition to enhanced sustainability is uncertain. In this context, justice principles can help to address the question, “What is the right thing to do”? as posed by Sandel (2009). Adaptive and resilience focused responses can be informed by rights-based and capabilities-based approaches to justice in conjunction with principles of procedural and distributive justice, to frame ‘just disruptions’ (Morrissey 2021).

Scaling-up public resources for adaptation, loss and damage as well providing sufficient financial support for mitigation and adaptation remains an urgent task (Eckstein et al. 2019). It must also be acknowledged that the capacity to realize sustainability transitions may differ significantly between regions (Hansen and Coenen 2015). Existing patterns of uneven development may inform new patterns of socio-spatial differentiation in transitions (Bridge et al. 2013; Balta-Ozkan et al. 2015), whereby transitions are likely to occur in a spatially homogenous fashion, informed by institutional contexts, prevailing governance models, capacity issues etc. Likewise, responses to climate related disruptions are likely to be space and place specific. For example, Walters (2015) reports on respective responses to major flooding events in two different cities, Dhaka in Bangladesh and Brisbane in Australia. Both cities demonstrated considerably different post-flood recovery pathways after floods in

1998 in Dhaka and 2011 in Brisbane. A strong public realm, robust institutions and low inequality levels enabled a strong recovery in Brisbane. By contrast, a deficiency of city-wide institutions and a weak public realm meant that poor communities in Dhaka received little support. An understanding of ‘spaces’ and ‘places’ is therefore critical in understanding and framing just responses to the challenges of sustainability and resilience (Bahadur and Tanner 2014).

Towards shared sustainable prosperity

How might these principles be realized in practice? The challenge is stark. By 2030, annual emissions need to be 28 GtCO₂e lower than current unconditional Nationally Determined Contributions (NDCs) for the 1.5 °C goal and 13 GtCO₂e lower for the 2 °C goal (UNEP 2021). Figure 1 shows the implications of these levels of emissions cuts for the carbon intensity of the global economy under a range of growth scenarios.

To limit global warming to 1.5 °C, the carbon intensity of the global economy would need to be reduced to 0.11, 0.09 and 0.07 (kg per PPP \$ of GDP) by 2030 under no growth, 2.5% growth and 4.5% growth scenarios respectively. For warming of 2 °C, the carbon intensity of the global economy would need to be reduced to 0.19, 0.16 and 0.13 (kg per PPP \$ of GDP) under no growth, 2.5% growth and 4.5% growth scenarios respectively. These figures stand in contrast to the 2019 figure of ~0.28 (kg per PPP \$ of GDP), starkly illustrating the level of decarbonisation required across the global economy by 2030.

The cost burden of current unsustainable growth pathways will be disproportionately borne by developing countries. Under a 2 °C warming scenario, accumulated costs of damages from warming to global aggregate economic growth may be as high as USD 69 trillion by 2100.³ This remains as high as USD 54 trillion under a 1.5 °C warming scenario (Hoegh-Guldberg et al. 2018). Overall, the global economy could be impacted by an additional 10% loss in GDP by 2050 if commitments in the Paris agreement are not met (Swiss Re Institute 2021). Impact related costs fall disproportionately on developing countries (Black 2022). Economies in south and southeast Asia are particularly vulnerable to adverse climate related effects—for example, analysis by Swiss Re points to losses of 33–36% of GDP by 2048 for Malaysia, Thailand and the Philippines under a 2–2.6 °C warming scenario. By contrast, many advanced economies are less vulnerable, characterised by lower exposure levels and higher capacities to respond (Swiss Re Institute 2021). Kikstra et al.’s (2021) analysis projects deteriorating growth trajectories in Africa, Latin America and South Asia as a

³ Relative to 1961–1990.

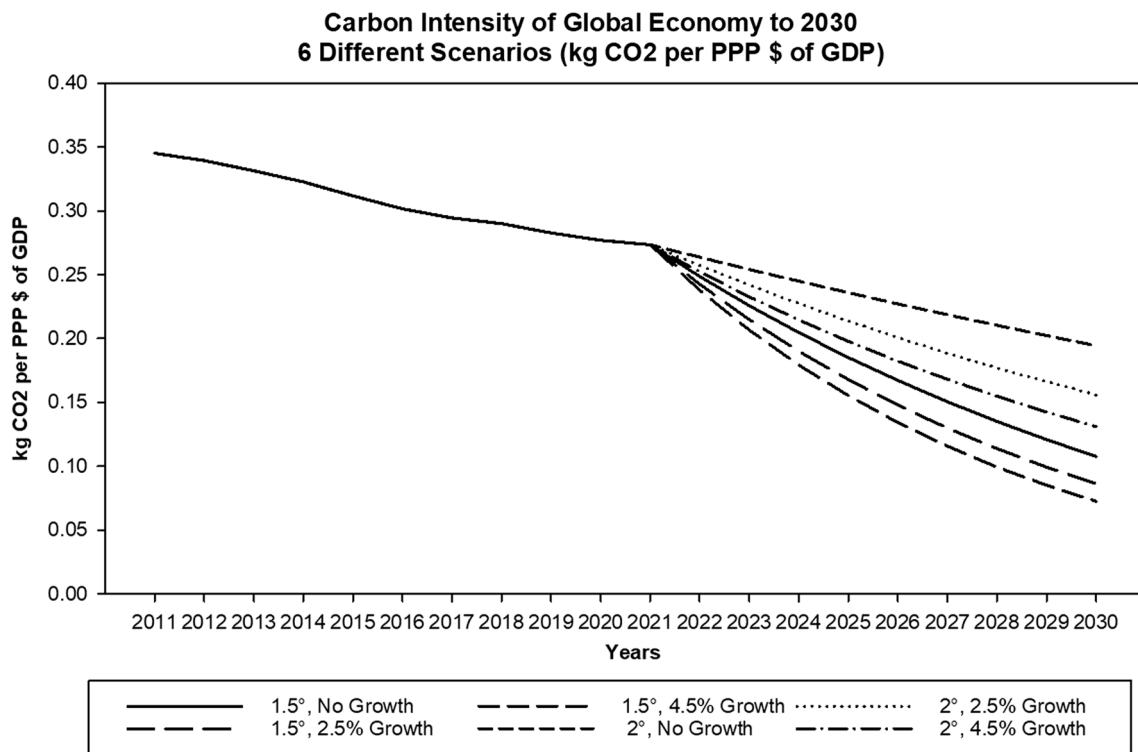


Fig. 1 Carbon intensity of global economy by 2030 under 6 different scenarios. Historical data on carbon intensity for the time-horizon 2011–2019 from Our World in Data (2021). Global emissions data for 2020 and 2021 were sourced from Statistica (2021). Figures applied for economic growth scenarios based on average global growth rate 2010 to 2020 of ~2.5% and max global growth rate of ~4.5% (in 2010) from World Bank (2021). Data on global GDP for 2020 and 2021 sourced from the International Monetary Fund (2021).

result of climate change. Further, Cevik and Jalles (2022) report that vulnerability and resilience to climate change have a significant impact on the cost of government borrowing, all else being equal, further exacerbating risks for countries in the global south.

These projected impacts will occur in the context of disparate historical development pathways, and by extension of historical carbon usage. Analysis of historical cumulative emissions by Teng et al. (2011) shows that 70% of ‘carbon space’ in the atmosphere has been unequally distributed. The remaining carbon budget to limit warming to 1.5 °C relative to pre-industrial levels is approximately 400 GtCO₂, rising to 1150 GtCO₂ for 2 °C (UNEP 2021). The paper by Alcaraz et al. (2018) presents a model for distributing this global carbon budget using climate justice criteria. Applying a Model of Climate Justice per capita (MCJ), countries with large populations and low levels of historical emissions, including for example India, Brazil, Other Latin American and Caribbean (OLAC) countries and Other African (OA) countries would benefit from higher carbon budgets reflective of their low historical emissions. In contrast, countries

Emissions cuts scenarios of 7.6% per year to meet the 1.5 °C goal and 2.7% per year for the 2 °C goal applied in this analysis have been sourced from UNEP (2019a, b). These emissions cuts are reported by UNEP for a 2020–2030 time-horizon and in the analysis shown in this figure, emissions cut figures have been adjusted to account for actual economic and emissions growth in 2020–2021, with emissions cuts ‘missed’ for 2021 then spread across 2022–2030

with historical emission levels above the world average, including for example the EU27 and the USA would be allocated considerably reduced carbon budgets. Applying Alcaraz et al.’s MCJ model to the UNEP headline figure of 1150 GtCO₂ for 2 °C of warming, carbon budget emissions figures by 2100 include: EU27-63GT, USA-31GT, India-220GT, Brazil-33GT, Other African-219GT. Such budgets would require an extraordinary mobilisation of resources in the advanced economies, for which there is little evidence to date.⁴

These figures underline in the clearest terms that, in championing global action for sustainability, more needs to be done and urgently. Seen by many commentators as a missed opportunity, COP26 nevertheless produced some incremental progress. While “the COP did not make any fundamentally new decisions” (Editorial 2021), Kinley describes (2022) “one of history’s more productive

⁴ G20 members are not collectively on track to achieve either original or updated 2030 emissions reduction pledges (UNEP 2021).

COPs”. Positives include (IISD 2021; Jacobs 2021; Arora and Mishra 2021; Gingerich 2022):

- 153 countries forwarded new 2030 emissions targets (NDCs) and over 90% of global GDP is now covered by net zero commitments.
- Developed countries to double 2019 adaptation finance levels by 2025.
- The ‘Glasgow Pact’ calls for all countries to strengthen emissions-cutting plans in 2022 in an attempt to keep the goal to limit warming to 1.5 C viable.
- A Glasgow Dialogue on Loss and Damage funding arrangements emerged.
- A ‘global methane pledge’ to reduce methane emissions by 30% from levels of 2020 by 2030 was signed by 105 nations.
- More than 130 countries pledged to reverse deforestation by 2030.
- The need to reduce the use of fossil fuels explicitly mentioned in a COP decision.

However, as described by Jacobs (2021) “much more far-reaching interventions which will be needed if fossil fuels are to be squeezed out of the global economy and investment in green solutions increased to the levels required”.

Conclusions

We argue that the post-COVID 19 re-build represents a once-in-a generation opportunity to markedly shift developed trajectories to more sustainable pathways, to rebalance the domains of sustainability, and in the process, to address longer-term crises including those of climate and biodiversity loss. The contribution of the pillars is in underlining the linked triple-bottom-line nature of our current crises. These crises consist of ecological, social and environmental dimensions. It follows that adequate responses must also work across the domains of sustainability. While useful overview framings of these crises have been published, we argue that these have been too narrowly framed, overlooking important aspects in part. The five pillars presented here are informed by principles of distributive and procedural justice, recognizing the importance and advantages of real community engagement and empowerment and giving due respect and deference to the ecological carrying capacity of our fragile planet.

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Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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