IASS DISCUSSION PAPER

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Aligning Post-pandemic Recovery Plans with Climate and Development Goals

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Summary

Post-pandemic recovery plans will play an important role in strengthening healthcare systems and rebuilding economies. These stimulus packages and policy responses present a unique opportunity to steer the global economy towards sustainable growth, increase resilience and bolster efforts to tackle the challenge of climate change. This IASS Discussion Paper shows how policymakers could align post-pandemic recovery planning with existing climate goals to unlock co-benefits for sustainable development and climate change mitigation and adaptation.

Contents

1. Can the pandemic flatten the emissions curve?

The Covid-19 pandemic has thrown up a host of challenges for health systems, economies, and societies worldwide. Global carbon dioxide emissions have also been affected by the pandemic: With almost half of the global population in lockdowns or facing restrictions on movement during the first wave of the crises, energy demand fell dramatically. According to the Global Energy Review (IEA, 2020), global total energy-related CO2 emissions in 2020 are expected to be down by 8% compared to 2019 (almost 2.6 GtCO2), falling to 306 GtCO2. This would be the largest reduction in modern history, six times larger than the reduction (0.4 GtCO2) that accompanied the Global Fi-nancial Crisis in 2009 (Dafnomilis, 2020).

However, lessons learnt in past global crises suggest that while greenhouse gas emissions may significantly decrease over the short term, a rapid rebound of emissions post-crisis is likely (OECD, 2020). Unless strong climate action is taken, this temporary drop in emissions is not expected to alter the current trajectory of climate change. Forster et al (2020) estimated that the direct effect of the pandemic-driven response will be negligible, with cooling of around 0.01°C by 2030 compared to a baseline scenario that follows current national policies (Forster, 2020). Another projection from NBL Netherlands Environmental Assessment Agency and the New Climate Institute indicates that the fossil fuel rebound is likely to result in a smaller reduction in emissions by 2030 (-3.0 in-stead of -4.5 GtCO2e in the mitigation scenario) and could even translate into an increase (+0.5 in-stead of -2.5 GtCO2e in the baseline scenario) (Dafnomilis, 2020).

2020 is an important milestone for the Paris Climate Agreement, with governments due to update existing Nationally Determined Contributions (NDCs) or submit new pledges for climate action. However, the pandemic has seen governments delay NDC submissions and postpone international climate negotiations. While the effect of the pandemic on projected emissions commitments under the NDCs has been limited so far (Dafnomilis, 2020), it is anticipated that countries electing to revive their ‘brown’ economies with a business-as-usual approach will fail to meet their mitigation targets. This could challenge the effective implementation of the Paris Agreement, which is the on-ly international emission reduction agreement existing today.

2. Are stimulus packages greening the energy sector?

According to a recent report by Vivid Economics, economic stimulus packages across the G20 states will pump approximately USD 3.7 trillion directly into sectors that have a large and lasting impact on carbon emissions and nature, particularly agriculture, industry, waste, energy, and transport. These measures will have a net negative environmental impact in 16 of the G20 countries (Vivid Economics, 2020). The report emphasized that emerging economies, which are highly dependent on environmentally-intensive sectors, will face the biggest hurdles in greening their stimulus measures in the absence of strong regulatory oversight. The BASIC countries (Brazil, South Africa, India, and China) have all announced stimulus measures that will be harmful to the environment (Vivid Economics, 2020).

G20 governments have committed at least USD 424.5 billion to the energy sector and want to support different types of energy through new or amended policies (Energy Policy Tracker, 2020). Almost half of these commitments are unconditionally for fossil fuels, explicitly at least USD 199.32 billion out of 424.5 billion (Energy Policy Tracker, 2020). Following a bottom-up approach, Energy Policy Tracker classified policies according to different criteria, one of the key criteria being a policy's environmental profile that depends on (i) which energy types it benefits and (ii) whether it has any environmental conditionality attached. The analysed policies span 5 categories: "fossil unconditional", "fossil conditional", "clean unconditional", "clean conditional", and "other energy" (see Figure 1 below). Unsurprisingly, the largest financial commitments to fossil fuels are made by the United States and United Kingdom, followed by various emerging and leading economies such as India, Turkey, Russia, Indonesia, and Republic of Korea. As Figure 1 shows, more than half of public spending targeting the energy sector in the context of recovery packages will support fossil fuel (unconditional and conditional commitments) (Energy Policy Tracker, 2020).

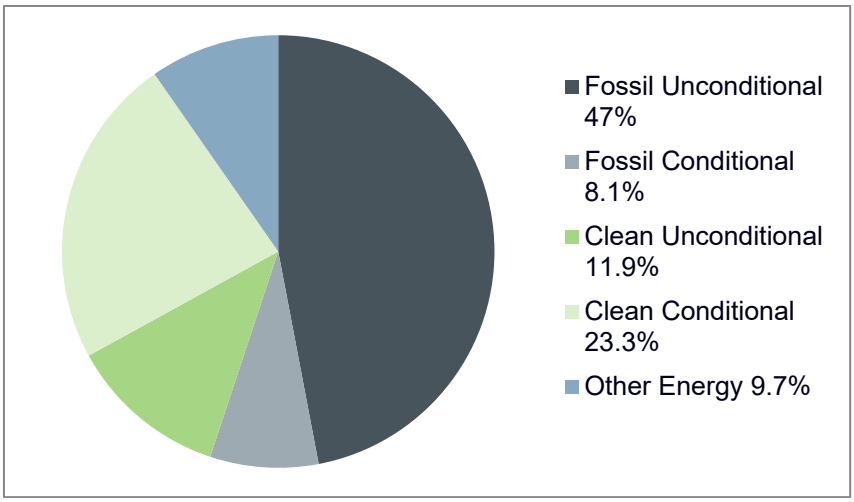

Figure 1. Public spending commitments on fossil fuels, clean and other energy in recovery packages (11/ 2020)

Source: (Energy Policy Tracker, 2020)

3. Green recovery post COVID-19: Feeding two birds with one scone

Since mid-2020, countries have launched various economic recovery packages with a view to reviving economies that have been flattened by the pandemic. This is a great opportunity to reshape economies rather than merely returning to business as usual. Instead, countries should seize the opportunity to move towards low-carbon and resilient development pathways aimed at achieving the long-term temperature goal defined under the Paris Agreement.

Multiple socio-economic benefits

Analyses conducted by McKinsey show that spending on renewable energy technologies and energy efficiency creates almost three times as many jobs as spending on fossil fuels (Engel, 2020). Among twelve low-carbon stimulus measures with strong socio-economic and de-carbonization benefits, accelerating the build-out of wind and solar power capacities would deliver the best returns in terms of job creation and gross-value-added (GVA). A recent publication by the COBENEFITS project at the IASS also confirms that the socio-economic impacts of renewable energy-based power systems can significantly increase productivity, foster economic prosperity, and create more jobs than fossil fuels (COBENEFITS, 2020).

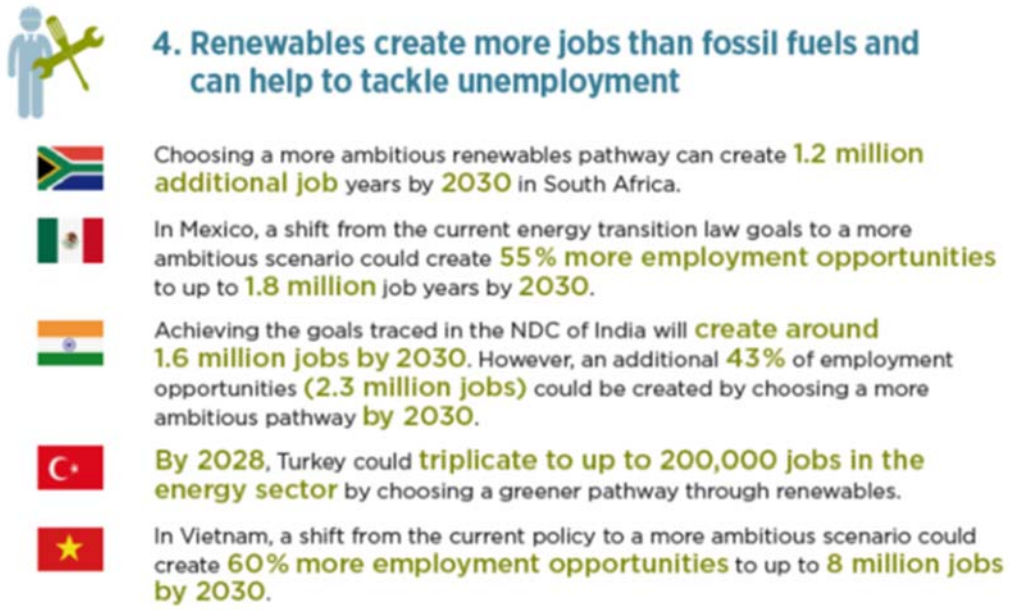

Figure 2. Co-benefits of renewables in job creation and tackling unemployment

Source: (COBENEFITS, 2020)

Besides creating employment opportunities and boosting economic growth, green recovery plans and efforts to expand renewable energy generation capacities offer various co-benefits, including improved air quality, energy security and independence, and improved energy access and affordability. Research also suggests that power systems with higher shares of renewable energy could significantly relieve pressure on public health systems (see Figure 3) (COBENEFITS, 2020).

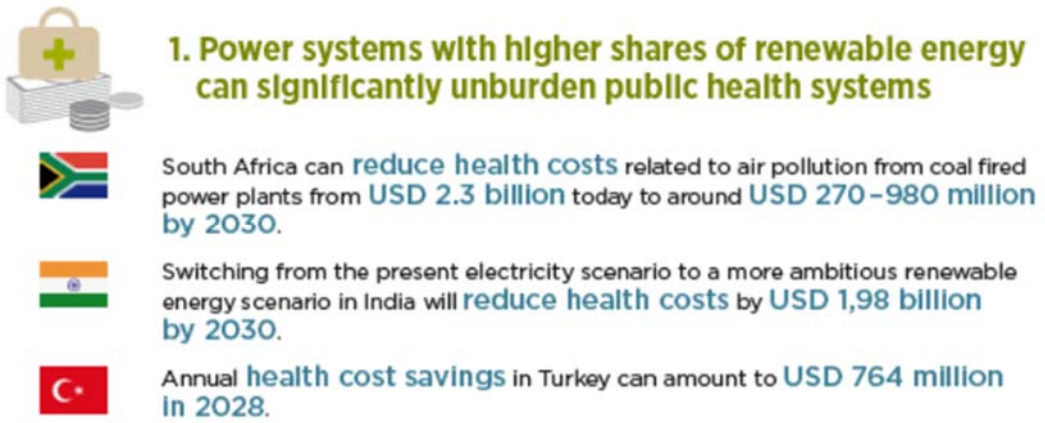

Figure 3. Co-benefit of renewables in unburdening the public health systems

Source: (COBENEFITS, 2020)

Benefits for climate change mitigation

Recovery policies could deliver on economic and climate goals by capturing co-benefits (Hepburn, 2020). A study by Forster et al (2020) suggests that future warming of 0.3oC by 2050 could be avoided if economic recovery plans were skewed towards a green stimulus agenda and investments in energy generation from fossil fuels were significantly reduced (Forster, 2020). Significantly, a green stimulus approach that integrates strong climate policies and sustainable investment can create valuable jobs, revitalize economies, and get the world on track to meet the 1.5°C target of the Paris Agreement (Climate Action Tracker, 2020). This approach could help to reduce carbon dioxide emissions by 24 – 27 GtCO2e globally (Climate Action Tracker, 2020), making a significant contribution to achieving the long-term temperature goal of the Paris Agreement.

4. Making recovery programmes work for the climate and sustainable development

In the following, this discussion paper offers a range of policy recommendations for action over the near, medium, and long term, presenting a pathway to integrate efforts to reduce emissions and strengthen resilience within a broader economic recovery agenda (see Figure 4).

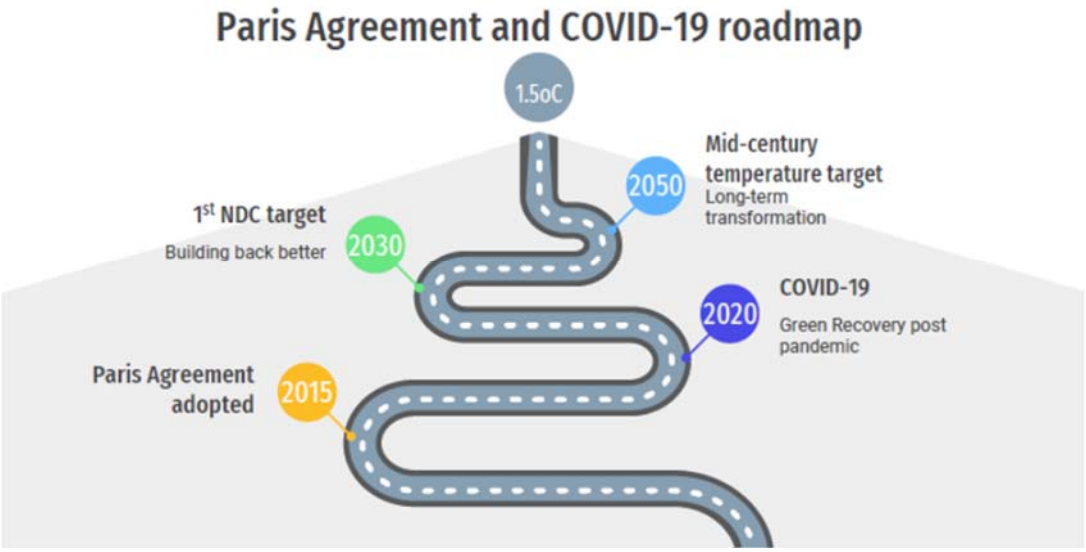

Figure 4: Roadmap to align the economic recovery agenda with climate targets

Source: Author

Near term action: Greening of existing or emerging recovery packages

- Identify and prioritize low-carbon stimulus options: A lot of green recovery frameworks/ guidance/ checklists (see Box 1) are available and feasible to apply. Governments should orient investment toward sectors and technologies that can accelerate transitions and strengthen resilience to future climate-related shocks.

- NDCs and green recovery can be mutually enhanced by integrating NDC targets and measures into existing economic recovery plans. Different climate policies such as NDCs and Long-term Strategies are building blocks to mainstream climate targets into the economic recovery by boosting economic growth, technology transformation, job creation and addressing social inequality (UNDP, 2020). Lessons learnt from the NDC process, inter alia, the ambition enhancing

mechanism, stakeholder consultation, and socio-economic assessment could be considered once countries prepare and enhance their economic stimulus programmes.

- Co-benefits such as job creation through the expansion of renewable energy generation offer a good starting point for communicating green recovery measures.

Medium- and long-term actions: Low-carbon and resilient transformations to achieve the long-term temperature goal of the Paris Agreement

- The coronavirus pandemic has highlighted the importance of healthy, well-connected, and resilient societies; long-term and collective climate action will play a crucial role in achieving this goal over the longer term. Given the urgency of the challenges ahead, countries should be encouraged to explore opportunities to enhance the fairness and ambition of their NDCs as well as the National Adaptation Plan (NAP) process. This will be helpful in reshaping economies towards more sustainable and resilient development pathways.

- Investments in a workable and affordable Green New Deal to transition from fossil fuels to a low-carbon economy could support the post-pandemic recovery, accelerate the green transition, and contribute to the Paris Agreement's goals. The European Green Deal is a great example of a comprehensive plan to transform the EU into a modern, resource-efficient and competitive economy with the capacity to achieve net zero GHG emissions by 2050 (EU, 2019). In the wake of the Climate Ambition Summit held in December 2020, 24 countries announced new commitments or strategies to achieve carbon neutrality, with some setting out ambitious dates to reach net zero emissions: Finland (2035), Austria (2040) and Sweden (2045) (Climate Ambition Summit 2020 Release). China also announced its intention to peak carbon dioxide emissions before 2030 and achieve carbon neutrality before 2060 (H.E. Xi Jinping, December 2020). As momentum builds, developing countries and emerging economies will inevitably have to restructure their economies towards sustainability and Green New Deals could offer achievable and affordable solutions.

Box 1. Some feasible and applicable green recovery frameworks/ guidance/ checklists for reference

- COVID-19 Recovery – A Pathway to a Low-Carbon and Resilient Future (ADB). Link: https://rb.gy/hrvkzg
- A Government Roadmap for Addressing the Climate and Post COVID-19 Economic Crises (Climate Action Tracker). Link: https://rb.gy/rteef9
- Seven Priorities to Help the Global Economy Recover – While Building a Healthier, More Resilient, Net-Zero-Emissions Economy (Energy transitions commission). Link: https://rb.gy/sbl24h
- Achieving Green Growth and Climate Action Post-COVID-19 (GGGI). Link: https://rb.gy/gwbdtm
- Green Deals to Accelerate Climate Action Post-COVID-19 (GGGI). Link: https://rb.gy/lloaev
- The POST-COVID Recovery – An Agenda for resilience, development and equality (IRENA). Link: https://rb.gy/qxqqwx
- Exploring the impact of the COVID-19 pandemic on global emission projections – An assessment of green versus on-green recovery (NBL Netherlands Environmental Assessment Agency and the New Climate Institute). Link: https://rb.gy/tz7tf1
- OECD series of policy briefs on post COVID-19 and green recovery. Link: https://rb.gy/mnldvs
- Green Stimulus Index – An assessment of COVID-19 stimulus by G20 countries in relation to climate action and biodiversity goals (Vivid Economics). Link: https://rb.gy/lcezdv
- Proposed Sustainability Checklist for Assessing Economic Recovery Interventions, April 2020 (World Bank). Link: https://rb.gy/nijja8

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Minh Anh Nguyen

Minh Anh Nguyen joined the IASS in April 2020 as a Fellow under the International Climate Protection Fellowship programme of the Alexander von Humboldt Foundation. Her current research focuses on climate policy, specifically in assessing the transformational change impact of climate mitigation actions within Vietnam's nationally determined contribution under the Paris Agreement. Minh hold an Msc. on Climate Change with a focus on the economics of climate change.

Before joining the IASS, Minh Anh Nguyen worked at GIZ Vietnam, where she was involved in different climate mitigation projects such as "Support to Vietnam for the Implementation of the Paris Agreement", "Advancing Transport Climate Strategy in Vietnam" (TraCS) and "Creation of an overarching framework for NAMAs and MRV in Viet Nam". Working with GIZ, Minh provided technical advice within the development process for Vietnam's nationally determined contribution (NDC), its National Adaptation Plan (NAP) as well as the Paris Agreement's implementation at her home country. She was also involved in the development of the pioneering Low Carbon Bus NAMA (Nationally Appropriate Mitigation Action), which aims to contribute to the sustainable development of the transport sector in Vietnam.

Institute for Advanced Sustainability Studies e.V. (IASS)

Funded by the ministries of research of the Federal Republic of Germany and the State of Brandenburg, the Institute for Advanced Sustainability Studies (IASS) aims to identify and promote development pathways for a global transformation towards a sustainable society. The IASS employs a transdisciplinary approach that encourages dialogue to understand sustainability issues and generate potential solutions in cooperation with partners from academia, civil society, policymaking, and the business sector. A strong network of national and international partners supports the work of the institute. Its central research topics include the energy transition, emerging technologies, climate change, air quality, systemic risks, governance and participation, and cultures of transformation.

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