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Climate Lessons from the COVID-19 Crisis: Part 1

While the current COVID-19 pandemic and climate change differ as disasters, they share commonalities. Both crises are the result of historical and on-going widespread ecological degradation. This degradation is indicative of our systemic disregard for the importance of intact and healthy ecosystems as the bedrock of a thriving, competitive and inclusive society and economy.

These crises bring into stark focus existing inequalities globally, while further widening social and economic disparities. Both crises are the consequence of localised human behaviours, whose collective impact reverberates far beyond the borders of any single country or generation.

What can we learn from the genesis and management of these global disasters? What are the solutions needed to solve both crises to ensure our financial stability and long-term economic competitiveness, while safeguarding our communities?

This article reflects on these questions from a social and economic perspective (Part 1) while the second article in this series examines the issues of crisis governance and management (Part 2). Together, these pieces identify a range of key issues for further deliberation and exploration in a series of future briefs.

Natural Systems, Economic and Social Wellbeing in the Anthropocene

Intact and healthy ecosystems are the basis of any competitive, resilient, and inclusive society and economy. Economies and societies, as a whole, rely on healthy ecosystems and the myriad services they provide in order to function properly.

From a climate change perspective, terrestrial and coastal ecosystems are key to mitigation, adaptation and for building resilience. Terrestrial and coastal ecosystems store more than five times as much organic carbon as there is carbon in

the atmosphere.^[1] Soil is the single largest terrestrial carbon sink^[2], while coastal ecosystems like mangroves, salt marshes and sea grasses sequester carbon faster and far more efficiently than terrestrial forests per unit of area.^[3]

Land degradation results in atmospheric greenhouse gas (GHG) emissions, including potent GHGs such as nitrous oxide, making land degradation one of the biggest contributors to climate change. An estimated two-thirds of all terrestrial carbon stores from soils and vegetation have been lost since the 19th century through land degradation.^[4]

From a marine perspective the large-scale degradation, loss or conversion of coastal and marine ecosystems have resulted in the release of massive amounts of CO₂, accounting for up to 19% of global carbon emissions from deforestation.^[5] This threatens the physical, economic and food security of coastal communities - around 40% of the world population - as well as resources for global businesses.^[6]

Crucially, the degradation and loss of ecosystems also significantly increases levels of vulnerability to climate impacts and undermines the ability of countries to adapt to climate change, to implement disaster risk reduction measures and to mitigate climate change.^[7]

With regard to the current COVID-19 pandemic, the rampant exploitation, transformation and destruction of natural systems has been a catalyst for zoonotic diseases that can be transmitted from animals to people. Increasingly, the degradation of nature is exposing people to countless emerging and infectious diseases, some of which will potentially spill over to humans.^[8] COVID-19 joins a list of devastating zoonotic viruses that include HIV, Ebola and avian influenza and is the seventh coronavirus known to infect humans.^[9]

In a recent Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) expert article, the authors state: “There is a single species that is responsible for the Covid-19 pandemic – us.”^[10]

As with the climate and biodiversity crises, recent pandemics are a direct consequence of human activity.^[11]

Thus, the first lesson from the present COVID-19 pandemic is that the destruction of natural systems has profound, pervasive and lasting social, economic and environmental impacts. Equally, we have the capacity to repair and restore degraded ecosystems and to adopt practices that enhance integrity and resilience of natural systems, as the basis for both economic development and competitiveness.

The Requirement of System Level Shifts and the Necessity of a Green Stimulus

The implementation of inclusive, green policies in line with the Sustainable Development Goals 2030 has never been more necessary or urgent. A green road to COVID-19 recovery includes a just transition to a new economy that considers both environmental requirements as well as the needs of the marginalised.

^[1] Epple, C., García Rangel, S., Jenkins, M., & Guth, M. (2016). ‘Managing ecosystems in the context of climate change mitigation: A review of current knowledge and recommendations to support ecosystem-based mitigation actions that look beyond terrestrial forests’. Technical Series No.86. Secretariat of the Convention on Biological Diversity, Montreal, 55 pages. Available: <https://www.cbd.int/doc/publications/cbd-ts-86-en.pdf>

^[2] [IUCN \(2015\) Land Degradation and Climate Change](https://www.iucn.org/sites/dev/files/import/downloads/land_degradation_issues_brief_cop21_031215.pdf) Issues Brief, November 2015. Available: https://www.iucn.org/sites/dev/files/import/downloads/land_degradation_issues_brief_cop21_031215.pdf

^[3] [IUCN \(2017\) The Ocean and Climate Change](https://www.iucn.org/sites/dev/files/the_ocean_and_climate_change_issues_brief-v2.pdf) Issues Brief, November 2017. Available: https://www.iucn.org/sites/dev/files/the_ocean_and_climate_change_issues_brief-v2.pdf

^[4] [iucn.org/resources/issues-briefs/land-degradation-and-climate-change](https://www.iucn.org/resources/issues-briefs/land-degradation-and-climate-change)

^[5] [IUCN \(2017\) The Ocean and Climate Change](https://www.iucn.org/sites/dev/files/the_ocean_and_climate_change_issues_brief-v2.pdf) Issues Brief, November 2017. Available: https://www.iucn.org/sites/dev/files/the_ocean_and_climate_change_issues_brief-v2.pdf

^[6] Ibid

^[7] Ibid

^[10] Settele, J., Díaz, S., Brondizio, E., & Daszak, P. (2020). ‘COVID-19 Stimulus Measure Must Save Lives, Protect Livelihoods, and Safeguard Nature to Reduce the Risk of Future Pandemics’, *IPBES*, 27 April 2020, Available: <https://ipbes.net/covid19stimulus>

The prevailing political discourse is largely focused on weathering the current crisis. The South African system of incentives for new capital investment still favours industries that are highly exposed to transition risk. Transition risks include policy changes, reputational impacts, shifts in market preferences, norms and technology resulting from the climate responses of key markets. Currently, planned investment decisions on South Africa's energy system, could add more than USD 25 billion to the country's transition risk.^[12]

We need to use this pandemic to shift political, ecological, social, and economic systems from the current trajectory of unsustainable consumption to a more sustainable, equitable and just course.

South Africa's post-COVID 19 stimulus packages will need to support green sectors and innovation, specifically those that decarbonise the economy and build resilience to climate change. Green stimulus investments would need to strategically include growth areas such as renewable energy, waste management, adaptation measures for flood and drought disasters and include principles of a circular economy.

COVID-19 support packages will set the economy up for a new future; we must not be regressive or reactionary as a result of panic. Reshaping our economy presents us with an opportunity to enhance our resilience as a country, economy and society. In addition, it allows us to focus on emerging sectors that will be more sustainable sources of jobs and economic growth, as well as increasing our climate ambition.

The second lesson from the COVID-19 pandemic is that we need to see beyond the current storm, to identify the opportunities available to us and to act on these; a green road to recovery is the only viable route and green investments and stimulus packages are the vehicles to achieve this end.

The National Business Initiative (NBI) aims to play a key role in helping to frame the necessary conversations that can bring about the system level shifts necessary to change what is no longer working.

The Power of Collective Action and Commitment

Fundamentally, COVID-19 has taught us that together we can bend the curve and combat climate change.

We have now witnessed the possibilities and mechanisms available to us for altering our societies to an extent not deemed possible before COVID-19. The level of cooperative action we have witnessed across Government, private sector and civil society in South Africa was previously thought to be impossible.

Each sector has acknowledged its responsibility and power to contribute to a collective good. We now need to apply the same thinking and force of action to the climate crisis.

New forms and channels for collaboration between governments, private companies and civil society groups have shown that together we can coordinate to stem a major crisis. The impossible can be made possible when there is an imperative to do so and we are bold enough to seize the opportunity.

Thus, the third lesson: While individual action is critical in bending the climate curve, collaboration on a global scale is crucial, as COVID-19 has demonstrated. Fundamentally, COVID-19 has taught us that together we can bend the curve and combat climate change.

Facts: The Basis of Robust Decision-Making

Respect for the science of epidemiology has caused countries around the world to completely (if only temporarily) alter their economies and social orders. We need to show the same level of commitment to climate change science.

^[12] Huxham, M., Anwar, M., & Nelson, D. (2019). 'Understanding the impact of a low carbon transition on South Africa'. *Climate Policy Initiative Energy Finance*.

Dealing with a powerful adversary, like COVID-19, illustrates what can be lost when there is a catastrophic failure of the science-policy interface. The outcomes for public health, the economy and international collaboration have been disastrous and costly in cases where government leaders have downplayed or disregarded the risk and enormity of the COVID-19 crisis. This has been amplified by the failure to act on the best scientific information and advice and to pass this on to the public directly. In contrast, the impacts of COVID-19, although still very serious, were mitigated where early and informed action was taken to manage the pandemic.

Scientists first expressed concern about possible climate change more than forty years ago. The most-publicized climate change report came from the **National Academy of Sciences** in 1977. But it was James E. Hansen, a scientist at NASA's Goddard Institute for Space Studies who forever altered the debate on climate change. Thirty years ago, Hansen gave his seminal testimony on climate to the United States Senate on 23rd June 1988, in which he stated: "The greenhouse effect has been detected and is changing our climate now".

The Intergovernmental Panel on Climate Change (IPCC) has since been established, to assess climate change, and to provide governments at all levels with the latest scientific information required to develop climate policies. The IPCC has delivered the most comprehensive scientific reports about climate change produced worldwide, the most recent of which is the Special Report on Global Warming of 1.5°C.

The report concluded that human-induced global warming had reached approximately 1°C above pre-industrial levels in 2017, with warming of more than 1.5°C above pre-industrial already being experienced in many regions of the world.^[13]

Even in the face of overwhelming scientific agreement, leaders have questioned or denied the existence of human-induced climate change. The starkest example was the failure of the 24th Conference of the Parties (COP24) of the United Nations Framework Convention on Climate Change (UNFCCC) to adopt the Special Report on Global Warming of 1.5°C produced by the Intergovernmental Panel on Climate Change. The USA, Russia, Saudi Arabia and Kuwait blocked a proposal to support the Special Report at COP24.

Worse still, some government leaders and actors on social media have deliberately engaged in misinformation campaigns about COVID-19 causing public confusion and delayed action. A similar trend is evident regarding climate change where misinformation is disseminated through social and mainstream media.^[14]

There is still time to address the climate crisis based on the advice of experts and the best available scientific data – if we heed the warning. It is imperative we do something impactful with the time available.

The fourth lesson from the COVID-19 pandemic is that we should pay careful attention to the science related to climate change and to heed the warnings backed by robust science and inquiry.

COVID-19: A Mirror into our Climate Futures

The climate change debate risks losing its chair at the global table as the clamour around the current crisis and pending recession continue to drown it out. In addition, key climate meetings, such as COP26 to be held in Glasgow in the UK, have been postponed for a year in the wake of the COVID-19 lock-down and other restrictions.

^[13] Rogelj, J., Shindell, D., Jiang, K., Fifita, S., Forster, P., Ginzburg, V., Handa, C., Kheshgi, H., Kobayashi, S., Kriegler, E., Mundaca, L., Séférian, R. and Vilariño M.V. (2018): Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press

^[14] Cook, J. (2019). Understanding and countering misinformation about climate change. In Chiluwá, I. & Samoilenko, S. (Eds.), *Handbook of Research on Deception, Fake News, and Misinformation Online* (pp. 281-306). Hershey, PA: IGI-Global.

Now, more than ever, it is imperative that we mobilise to tackle climate change. We must acknowledge that failing to do so will result in impacts such as increasing temperatures, variable rainfall and increasingly frequent and more intense natural disasters and fires. Climate change may also increase the prevalence of zoonotic diseases like COVID-19.

Countries are expected to reaffirm their individual commitment to the global climate effort under the Paris Climate Agreement. For the Paris Agreement goals to be achieved, every country needs to play its part as defined in their respective Nationally Determined Contribution (NDC) submitted to the UNFCCC. It is vital that we drive even more ambitious national climate action in key sectors as part of our own NDC.

We need to frame economic development in terms of a green post COVID-19 stimulus packages, as well as realign social and environmental sustainability goals across all sectors of society and spheres of government. This enables us to recognise how responding to climate change sets the country up for enhanced social, economic and environmental resilience, as well as emergency response capacity.

Taking progressive and ambitious climate action in the short-term therefore, provides the foundation for economic, social and environmental development to proceed in a sustainable and sustained manner.

If we do not, the impacts of COVID-19 will have felt like a minor dress rehearsal to the main act of climate change, which is waiting in the wings.

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[1] Epple, C., García Rangel, S., Jenkins, M., & Guth, M. (2016). Managing ecosystems in the context of climate change mitigation: A review of current knowledge and recommendations to support ecosystem-based mitigation actions that look beyond terrestrial forests. Technical Series No.86. Secretariat of the Convention on Biological Diversity, Montreal, 55 pages. Available: <https://www.cbd.int/doc/publications/cbd-ts-86-en.pdf>

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[6] Ibid

[7] Ibid

[8] Rulli, M., Santini, M., Hayman, D. et al. (2017). The nexus between forest fragmentation in Africa and Ebola virus disease outbreaks. *Scientific Reports* 7, 41613. <https://doi.org/10.1038/srep41613>

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[10] Settele, J., Díaz, S., Brondizio, E., & Daszak, P. (2020). 'COVID-19 Stimulus Measure Must Save Lives, Protect Livelihoods, and Safeguard Nature to Reduce the Risk of Future Pandemics', *IPBES*, 27 April 2020, Available: <https://ipbes.net/covid19stimulus>

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[12] Huxham, M., Anwar, M., & Nelson, D. (2019). 'Understanding the impact of a low carbon transition on South Africa'. *Climate Policy Initiative March 2019*. Available at: <https://climatepolicyinitiative.org/wp-content/uploads/2019/03/CPI-Energy-Finance-Understanding-the-impact-of-a-low-carbon-transition-on-South-Africa-March-2019.pdf>

[13] Rogelj, J., Shindell, D., Jiang, K., Fifita, S., Forster, P., Ginzburg, V., Handa, C., Kheshgi, H., Kobayashi, S., Kriegler, E., Mundaca, L., Séférian, R. and Vilariño M.V. (2018). Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press

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The National Business Initiative (NBI) is an independent and voluntary coalition of South African and multinational businesses launched in 1995 by the then President, Nelson Mandela

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