# Earth 2020

An Insider's Guide to a Rapidly Changing Planet





### https://www.openbookpublishers.com





Text © 2020 Philippe Tortell. Copyright of individual chapters is maintained by the chapters' authors.

Photgraphs © copyright Edward Burtynsky. The photos are published under an 'all rights reserved' license and have been reproduced at 72 dpi in the digital editions due to copyright restrictions.

This work is licensed under a Creative Commons Attribution 4.0 International license (CC BY 4.0). This license allows you to share, copy, distribute and transmit the work; to adapt the work and to make commercial use of the work providing attribution is made to the author (but not in any way that suggests that they endorse you or your use of the work). Attribution should include the following information:

Philippe Tortell (ed.), Earth 2020: An Insider's Guide to a Rapidly Changing Planet. Cambridge, UK: Open Book Publishers, 2020, https://doi.org/10.11647/OBP.0193

In order to access detailed and updated information on the license, please visit https://doi.org/10.11647/OBP.0193#copyright

All external links were active at the time of publication unless otherwise stated and have been archived via the Internet Archive Wayback Machine at https://archive.org/web

Any digital material and resources associated with this volume are available at: https://doi.org/10.11647/OBP.0193#resources

Every effort has been made to identify and contact copyright holders and any omission or error will be corrected if notification is made to the publisher.

ISBN Paperback: 978-1-78374-845-7 ISBN Digital ebook (mobi): 978-1-78374-849-5

ISBN Hardback: 978-1-78374-846-4 ISBN Digital (XML): 978-1-78374-850-1

ISBN Digital (PDF): 978-1-78374-847-1 DOI: 10.11647/OBP.0193

ISBN Digital ebook (epub): 978-1-78374-848-8

Cover image: *Earthrise* (24 December 1968). Photo taken by Apollo 8 crewmember Bill Anders, Wikimedia, https://commons.wikimedia.org/wiki/File:NASA Earthrise AS08-14-2383 Apollo 8 1968-12-24.jpg

Cover design: Anna Gatti

# Climate Negotiations

# Rosemary Lyster

T n the fifty years since the first Earth Day on 22 April, 1970, the planet has been irrevocably **L** changed. No matter the number of international studies and reports that have predicted the crisis since that day, nothing has arrested the steady decline of ecosystems and natural resources. Humans and non-humans alike now face threats that take them beyond their coping range and resilience. The most recent Special Reports of the Intergovernmental Panel on Climate Change (IPCC) provide clear and consistent warnings that climate change is happening and happening fast. Global warming is likely to reach 1.5°C, or even 2°C, between 2030 and 2050 if greenhouse gas emissions are not reduced, significantly increasing the risk of 'long-lasting or irreversible changes.' Meanwhile, climate change has already adversely impacted vulnerable terrestrial ecosystems, while also contributing to desertification, land degradation<sup>2</sup> and significant changes to the oceans and the cryosphere.<sup>3</sup> At the same time, the 2019 Global Assessment Report on Biodiversity and Ecosystem Services, a report by the UN's Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), now warns that biodiversity is declining faster than at any time in human history with around one million species already facing extinction, many within decades, unless action is taken to reduce the intensity of drivers of biodiversity loss.4

So, what has the international community been doing about all of this in the previous five decades? Perhaps not coincidentally, the first coordinated response to the looming

environmental crisis occurred shortly after the first Earth Day, when the United Nations convened the 1972 Stockholm Conference on the Human Environment. This was the first time that world leaders had gathered specifically to address global environmental issues, and their work led to the adoption of the Declaration of the United Nations Conference on the Human Environment (the Stockholm Declaration).<sup>5</sup> It was here that nations acknowledged that 'man has acquired the power to transform his environment in countless ways and on an unprecedented scale'. Critically, Principle 1 of the Declaration also heralded the advent of a right to environment. It stated:

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations.

So began a new dawn of environmental awakening and a commitment by all nations to acknowledge the essential role that Earth plays in sustaining human existence. Principle 1 has spawned the inclusion of environmental rights in over one hundred Constitutions around the world. It seemed that international environmentalism would enjoy a 'golden age' as governments collaborated through multilateral institutions to protect the planet.

But subsequent progress was slow. Despite the bold assertions of the Stockholm Declaration, it would take many years for the global community to acknowledge the threat that climate change, in particular, posed to the planet. A first important step was the 1987 publication of Report of the World Commission on Environment and Development: *Our Common Future*. This document, also known as the Brundtland Report, was the outcome of an independent political and scientific commission led by former Norwegian Prime Minister Gro Harlem Brundtland, and commissioned by the World Commission on Environment and Development. It responded to an urgent call by the General Assembly of the United Nations to propose long-term environmental strategies for achieving sustainable development by the year 2000 and beyond. The Commission provided a definition of sustainable development which changed the face of environmental regulation forever:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

A rereading of the Brundtland Report, more than three decades after its publication, is a rather poignant reminder of the pioneering work, and even optimism, of this Commission as it grappled with the major social, economic, environmental and geo-political issues of the day, while envisioning a different future. Yet the authors also presented a clear warning that 'the time has come to take the decisions needed to secure the resources to sustain this and coming generations'.

Around the time that the Brundtland Commissioners were undertaking their work, another important development occurred. Faced with growing evidence of global climate change, the World Meteorological Organization (WMO) established the Intergovernmental Panel on Climate Change (IPCC) as a definitive international scientific body to advise the United Nations on the state of Earth's evolving climate. Anyone who has read the IPCC's periodic Assessment Reports<sup>7</sup> will know that each successive Report expresses increasing degrees of confidence about the observed changes in the global climate, as well as the model-based predictions for the future.

The first IPCC report appeared in 1990, just a few years after the publication of the Brundtland Report. Together, these two documents were a significant driving force for the 1992 United Nations Conference on Environment and Development (the Rio Conference). It was here that the United Nations Framework Convention on Climate Change (UNFCCC) was born, as part of a package of measures for the twenty-first century, including the Rio Declaration on Environment and Development,<sup>8</sup> Agenda 21,<sup>9</sup> the Convention on Biological Diversity (CBD),<sup>10</sup> and the Forest Principles.<sup>11</sup> The Preamble to the UNFCCC<sup>12</sup> contains the following principles, which resonate with the underlying norms of International Law as well as sustainable development: that the Earth's climate and adverse effects are a common concern of humankind; that the greenhouse effect will warm Earth's surface and atmosphere and adversely affect natural ecosystems and humankind; that there is a need for an appropriate international response in accordance with common but differentiated responsibilities; that developed countries have a

historical but also current responsibility for their emissions, while emissions originating in developing countries will need to grow in future; that developed countries should take immediate action to develop comprehensive strategies; and that responses to climate change should be coordinated with social and economic development. Pertinently, the Parties acknowledged that low-lying small island developing states, and other developing countries prone to floods, drought and desertification, are particularly vulnerable to the adverse effects of climate change.

The principal objectives of the UNFCCC and Rio Declaration serve as a reminder that in 1992 there was international agreement to establish 'a new and equitable global partnership' and to develop international agreements which would 'respect the interests of all and protect the integrity of the global environmental and developmental system'. Perhaps the most influential elements of the Rio Declaration have proved to be the principle of intergenerational equity, the precautionary principle and the polluter pays principle. Intergenerational equity requires current rates of development to equitably meet the development and environmental needs of present and future generations. The precautionary principle holds 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'. Finally, the polluter pays principle envisages the 'internalisation of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution'.<sup>13</sup>

The ultimate objective of the UNFCCC was to achieve stabilization of greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level was to be achieved within a timeframe (not clearly articulated in 1992) sufficient to allow ecosystems to adapt naturally to climate change and to ensure sustainable food production and economic development. The first step towards legally-binding GHG emissions targets was the 1997 Kyoto Protocol, whereby developed countries agreed that overall emissions would be capped at 5% below 1990 levels by the end of 2012. Developing countries were not required to meet any targets, and this was seen by some nations as a major point of contention.

With the early focus on reducing GHG emissions in the mid-1990s, there was a view that identifying climate change adaptation options would be tantamount to accepting the reality of climate change — at a time when the science was more tenuous than it is now. Developed countries were also concerned that accepting the need for adaptation amounted to an implicit assumption of responsibility, with the associated duty to compensate. At the same time, many developing countries were reluctant to discuss adaptation lest it derail developed country commitments to mitigation. But as the science became clearer, and the failure of global efforts to reduce GHG emissions increasingly apparent, more attention shifted towards adaptation. At the Cancun negotiations in December 2010, the Parties to the UNFCCC established the Cancun Adaptation Framework, in which Parties were requested to start making assessments of their vulnerability to climate change, plan adaptation actions, strengthen institutional capacities, build resilience and enhance their climate-related disaster risk reduction strategies.

By 2013, following the IPCC's Special Report Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX),<sup>17</sup> it had become apparent that many extreme weather and slow onset events were linked to a warming climate. Based on the best available science, the Parties established the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (the Mechanism),<sup>18</sup> under the Adaptation Framework. The Mechanism acknowledged that the loss and damage associated with climate change impacts cannot all be reduced by adaptation.<sup>19</sup> The Mechanism called on countries, amongst other things, to: undertake impact, vulnerability and adaptation assessments;<sup>20</sup> engage in climate resilient development,<sup>21</sup> enhance climate change disaster risk reduction;<sup>22</sup> and understand and cooperate on Climate Displaced Persons, migration and planned relocation at the national, regional and international levels.<sup>23</sup>

E ven with the growing discussion around climate adaptation strategies over the past decade, there has been continued, if faltering, discussion of mitigation through control of greenhouse gas emissions. The most recent instalment, drafted in 2015 and signed in 2016, is the Paris Agreement, which committed Parties to limit the increase in global average temperature to well below 2°C above pre-industrial levels, and pursue efforts to

limit the temperature increase to 1.5°C.<sup>25</sup> For the first time, both developed and developing country Parties must prepare, communicate and implement successive voluntary nationally determined contributions (NDCs) that will be implemented through domestic mitigation measures. New NDCs must be communicated every five years and be informed by a Global Stocktake of emissions, starting in 2023.<sup>26</sup> Each successive NDC must represent a stronger target than the previous one, and developed countries are still expected to take the lead by undertaking economy-wide absolute emission reduction targets.

One of the important accountability mechanisms for Parties is the Enhanced Transparency Framework, which requires developed and developing countries to report every two years on progress towards meeting their emissions reduction targets. The information provided will be subject to a technical expert review, which will identify potential compliance issues and areas for improvement. A disappointing feature of the Paris Agreement is that it does not provide a basis for any liability or compensation for the impacts of climate change. However, a Task Force on Displacement was established to deal with the millions of people who will ultimately be displaced as a result of climate change.

Some believe that the Paris Agreement may be our final curtain call. Indeed, the United Nations Environment Programme's 2018 Emissions Gap Report<sup>27</sup> issues a warning that '[p]athways reflecting current NDCs imply global warming of about 3°C by 2100, with warming continuing afterwards. If the emissions gap is not closed by 2030, it is very plausible that the goal of a well-below 2°C temperature increase is also out of reach.'<sup>28</sup> Unfortunately, progress under the UNFCCC has moved at a snail's pace given the urgency of the project. Negotiations have threatened to collapse on many occasions,<sup>29</sup> and have involved astonishing brinkmanship among some of the key global leaders,<sup>30</sup> along with heroic and emotional appeals from developing country representatives. These past failures have shone a searching light on the weaknesses of multilateral negotiations, leading many to question the effectiveness of the legal enforcement mechanisms available through International Law.

It is clear that efforts to deal with the climate 'emergency' have been thwarted by domestic election cycles in fossil fuel-developed economies. Many politicians have either lacked the knowledge, or the political will, to lead a national discussion on the imperative to take action. Even worse, some politicians in the US, Australia and Canada, for example, have acted against the scientific consensus on climate change. Citizens have been encouraged to focus on the financial costs of carbon prices, as politicians chase the goal of winning government in short-term election cycles. Seldom is the current consensus on climate science clearly articulated and communicated to counter the deliberate undermining by the fossil fuel lobby and climate change skeptics. The potentially devastating impacts of climate change on economies and ecosystems are rarely discussed. Instead, the most significant climate change messages are lost as political sound bites resonate in the voting public's consciousness.<sup>31</sup>

Given the current state of affairs, some may regard the tenacity of the multilateral climate change negotiations as something of a miracle, especially in light of the tremendous changes the world has witnessed since 1992. Other pragmatists will know that walking away from the only negotiating platform for a global approach to climate change would leave nothing in its place. It is this acknowledgement that will keep the negotiations rolling on well into the future.

## **Endnotes**

- 1. IPPC, 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, ed. V. Masson-Delmotte et al., Geneva: World Meteorological Organization, 2018, https://www.ipcc.ch/srl5/
- 2. IPCC, Climate Change and Land: An IPCC Special Report on Climate change, Desertification, Land Degradation, Sustainable Land Management, Food Security and Greenhouse Gas Fluxes in Terrestrial Ecosystems, ed. H.-O. Pörtner et al., Geneva: IPCC, 2019, https://www.ipcc.ch/report/srccl/; See also 'Everyday Biodiversity' by Jeffrey R. Smith and Gretchen C. Daily in this volume.

- 3. IPPC, Special Report on the Ocean and Cryosphere in a Changing Climate, ed. H.-O. Pörtner et al., Geneva: IPCC, 2019, https://www.ipcc.ch/srocc/home/; See also 'Oceans 2020' by David M. Karl in this volume, and 'Ice' by Julian Dowdeswell in this volume
- 4. IPBES, Global Assessment Report on Biodiversity and Ecosystem Services, ed. M. Carneiro da Cunha, G. M. Mace and H. Mooney, Bonn, Germany: IPBES Secretariat, 2019, https://ipbes.net/global-assessment-report-biodiversity-ecosystem-services
- 5. Available at https://www.soas.ac.uk/cedep-demos/000\_P514\_IEL\_K3736-Demo/treaties/media/1972%20Stockholm%201972%20-%20Declaration%20of%20the%20United%20Nations%20Conference%20on%20the%20Human%20Environment%20-%20UNEP.pdf
- 6. World Commission on Environment and Development, *Our Common Future*, Oxford: Oxford University Press, 1987, http://www.un-documents.net/our-common-future.pdf
- 7. Available at https://www.ipcc.ch/
- 8. Available at https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A\_CONF.151\_26\_Vol.I\_Declaration.pdf
- 9. Available at http://sustainabledevelopment.un.org/content/documents/Agenda21.pdf
- 10. Available at http://www.cbd.int/convention/text/default.shtml
- 11. Available at https://digitallibrary.un.org/record/144461?ln=en
- 12. United Nations, *United Nations Framework Convention on Climate Change*, [n.p.]: UN, 1992 http://unfccc.int/resource/docs/convkp/conveng.pdf
- 13. See also 'Environmental Economics' by Don Fullerton in this volume.
- $14. \quad Available\ at\ https://unfccc.int/resource/docs/convkp/kpeng.pdf$
- 15. See E. L. F. Schipper, 'Conceptual History of Adaptation in the UNFCCC Process', in *The Earthscan Reader in Adaptation to Climate Change*, ed. by E. L. F. Schipper and I. Burton, London: Earthscan, 2009, 359–76 at 362.
- 16. The Cancun Adaptation Framework is contained within Articles 11–15 of the COP (Conference of the Parties) Report from the Cancun negotiations in 2010 (available at https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf).
- 17. IPCC, Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: Special Report of the Intergovernmental Panel on Climate Change, ed. C. B. Field et al., Cambridge, UK: Cambridge University Press, 2012, https://www.ipcc.ch/site/assets/uploads/2018/03/SREX\_Full\_Report-1.pdf

- 18. United Nations, Report of the Conference on its Nineteenth Session held in Warsaw from 11 to 23 November 2013, Addendum, Part Two, FCCC/CP/2013/10/Add.1, Decision 2/CP.19, http://unfccc.int/resource/docs/2013/cop19/eng/10a01.pdf
- 19. Ibid.
- 20. Ibid. Art. 14(b).
- 21. Ibid. Art. 14(e).
- 22. Ibid. Art. 14(e).
- 23. Ibid. Art. 14(f).
- 24. Available at https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf
- 25. Ibid. Art. 2(a).
- 26. Ibid. Art. 14(2).
- 27. United Nations, *The Emissions Gap Report 2018*, Nairobi: United Nations Environment Programme, 2018, http://wedocs.unep.org/bitstream/handle/20.500.11822/26895/EGR2018\_FullReport\_EN.pdf?sequence=1&isAllowed=y
- 28. Ibid. at xiv.
- 29. For example, the collapse of negotiations during the 2000 COP 6 at The Hague, the hastily convened COP 6.5 in Bonn 2001 and the failure of the 2009 Copenhagen COP 15 to adopt any decision on a legally binding agreement for the post-2012 era.
- 30. Such as the Premier Wen Jiabao declining President Obama's invitation to meet at Copenhagen until Obama, about to leave the COP, walked into a meeting of the BASIC countries and asked Premier Wen Jiabao whether he was ready to meet. It was this fortuitous meeting which resulted in the drafting in the final hours of the COP of the Copenhagen Accord.
- 31. On media coverage of climate change, see 'Media' by Candis Callison in this volume.