

## AN EMERGENT PLANETARY HEALTH LAW

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**Abstract** The health of the planet and its life forms are under threat from anthropogenic climate change, pollution and biodiversity loss, and the extreme weather events, heatwaves and wildfires that accompany them. The burgeoning field of planetary health studies the interplay between humanity and the Earth's biosphere and ecosystems on which human health depends. Scholarship on law from a planetary health vantage point remains scarce. This article fills this gap by delineating the conceptual building blocks of a planetary health law, which, in its latent form, is dispersed across various hard and soft sources of international environmental law and global health law that converge on the right to a healthy environment, and, to a lesser extent, rights of nature emerging in various domestic jurisdictions. It elucidates how the fragmented regimes of international environmental and global health law could be developed in more coherent ways, driven by an overarching concern for the integrity of the planetary foundations of life.

**Keywords:** planetary health, global health law, international environmental law, climate change, right to a healthy environment, rights of nature.

### I. INTRODUCTION

For millennia, during the geological epoch known as the Holocene,<sup>1</sup> humanity thrived on the Earth's clean air, freshwater, and generally stable climate and temperatures.<sup>2</sup> Since the dawn of what is being increasingly referred to as the Anthropocene epoch around the time of the Industrial Revolution,<sup>3</sup> the manifold planetary crises of climate change, widespread air and water pollution, biodiversity loss, and the reconfiguration of the biogeochemical cycles of

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<sup>1</sup> D Schimel, *Climate and Ecosystems* (Princeton University Press 2013) 51.  
<sup>2</sup> S Whitmee et al, 'Safeguarding Human Health in the Anthropocene Epoch: Report of the Rockefeller–Lancet Commission on Planetary Health' (2015) 386(10007) *Lancet* 1973, 1974.

<sup>3</sup> See PJ Crutzen and EF Stoermer, 'The "Anthropocene" (2000)' in S Benner et al (eds), *Paul J. Crutzen and the Anthropocene: A New Epoch in Earth's History* (Springer 2021) 19.

carbon, nitrogen and phosphorus<sup>4</sup> have been culminating into an existential threat to the well-being of children now living.<sup>5</sup> Major achievements in global health since the end of World War II could easily be reversed as rainfall patterns change, temperatures rise and extreme weather events happen more frequently.<sup>6</sup> Countless people have succumbed to rapid changes in precipitation and temperature, for example.<sup>7</sup>

The growing science of planetary health studies how political, economic and social forces across human societies shape the biophysical dimensions of Earth,<sup>8</sup> which in turn determine population health and the enjoyment of human rights.<sup>9</sup> From the vantage point of planetary health, humans are part and parcel of the planet's life systems, not separate from them, and the flourishing of humanity within safe 'planetary boundaries'<sup>10</sup> should take precedence over short-term economic and political considerations.<sup>11</sup> Underlying the perspective of planetary health is the principle that humans ought to 'conserve, sustain, and make resilient the planetary and human systems on which health depends by giving priority to the wellbeing of all'.<sup>12</sup> Studies of law from a planetary health point of view remain surprisingly rare and underdeveloped.<sup>13</sup> This article fills a gap in the literatures on both planetary health and law by setting out a conceptual account of planetary health law, which fosters the re-interpretation of existing, albeit fragmented and under-coordinated, norms in a more coherent way. When this is impossible, it can help understanding of how the existing regimes of international environmental and global health law, understood broadly as encompassing both 'hard law' and 'soft law',<sup>14</sup> should be integrated in a way that is driven by an overarching concern for rights, be they the rights of humans or the rights of nature.

The article is organised as follows. Section II explains the importance of the perspective of planetary health as distinguished from the related field of global

<sup>4</sup> SS Myers, 'Planetary Health: Protecting Human Health on a Rapidly Changing Planet' (2017) 390(10114) *Lancet* 2860, 2861.

<sup>5</sup> J Falk et al, 'Addressing Our Planetary Crisis: Consensus Statement from the Presenters and International Advisory Committee of the Regional Action on Climate Change (RACC) Symposium Held in Conjunction with the Kyoto-based Science and Technology in Society (STS) Forum, 1 October 2021' (2022) 17(1) *Sustain Sci* 5.

<sup>6</sup> LO Gostin, *Global Health Security: A Blueprint for the Future* (Harvard University Press 2021) 128.

<sup>7</sup> A Woodward and A Macmillan, 'Climate Change and Human Health' in R Detels et al (eds) *Oxford Textbook of Global Public Health: The Scope of Public Health* (7th edn, OUP 2021) 193, 198.

<sup>8</sup> Whitmee et al (n 2).

<sup>9</sup> AL Phelan, 'The Environment, a Changing Climate, and Planetary Health' in LO Gostin and BM Meier (eds), *Foundations of Global Health and Human Rights* (OUP 2020) 417.

<sup>10</sup> J Rockström et al, 'Planetary Boundaries: Exploring the Safe Operating Space for Humanity' (2009) 14(2) *Ecol Soc* 32.

<sup>11</sup> G Garver, *Ecological Law and the Planetary Crisis: A Legal Guide for Harmony on Earth* (Routledge 2021) 126.

<sup>12</sup> R Horton et al, 'From Public to Planetary Health: A Manifesto' (2014) 383(9920) *Lancet* 847.

<sup>13</sup> For instance, a cursory search of the term 'planetary health law' on Google returns less than two pages of results as at 10 May 2023.

<sup>14</sup> AT Guzman and TL Meyer, 'International Soft Law' (2010) 2(1) *JLA* 171, 172.

health. Section III identifies three major incoherent aspects of the existing law affecting the health of the planet on which human health depends: environmental and health institutions and laws are fragmented; the underlying links between the right to health and the right to a healthy environment are underdeveloped; and the proper relationship between the right to a healthy environment and the emerging rights of nature are undertheorised. The section then proposes a conceptual framework for understanding legal norms relating to planetary health, which coheres with ‘Peace, Dignity, and Equality on a Healthy Planet’, the official motto of the United Nations (UN), that centres on the human right to a healthy environment and, in lesser ways, draws on some of the insights of the rights of nature movement which is currently growing in a number of diverse jurisdictions across the world. Section IV concludes.

## II. FROM GLOBAL TO PLANETARY HEALTH

The concept of international health came into existence in the early twentieth century, after States recognised the importance of intergovernmental collaboration after intense imperial competition. Over the course of the century, international health gradually developed into the field of ‘global health’, which concerns the improvement of health and the reduction of global disparities<sup>15</sup> on the premise that ‘diseases know no borders’.<sup>16</sup> Given that no country alone can fend off health threats that ignore territorial boundaries, international solutions should be sought, as has been done with the formation of the ‘trilogy of global health law’—the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC), the International Health Regulations (2005) and the Pandemic Influenza Preparedness Framework—to foster a safer, healthier and fairer world.<sup>17</sup> The emerging discipline of planetary health goes further. Health is linked to the environment and ecosystems.<sup>18</sup> Its protection should look beyond individuals, populations, nations and civilisations<sup>19</sup> to the natural and physical systems of the planet.<sup>20</sup> Everything is interconnected: ‘each person on the planet, those alive today and those coming in future generations, is

<sup>15</sup> A-E Birm, Y Pillay and TH Holtz, *Textbook of Global Health* (OUP 2017) xxi.

<sup>16</sup> GM di Giulio et al, ‘Global Health and Planetary Health: Perspectives for a Transition to a More Sustainable World Post COVID-19’ (2021) 26(10) *Ciênc Saúde Colet* 4373, 4374.

<sup>17</sup> See LO Gostin, MC DeBartolo and R Katz, ‘The Global Health Law Trilogy: Towards a Safer, Healthier, and Fairer World’ (2017) 390(10105) *Lancet* 1918.

<sup>18</sup> P-M David, N Le Dévédec and A Alary, ‘Pandemics in the Age of the Anthropocene: Is “Planetary Health” the Answer?’ (2021) 16(8–9) *Glob Public Health* 1141, 1142.

<sup>19</sup> R Horton, ‘Offline: Planetary Health—Gains and Challenges’ (2016) 388(10059) *Lancet* 2462.

<sup>20</sup> See L Bonizzi, F Campana and A Soggiu, ‘Zootechnical Systems, Ecological Dysfunctions and Human Health’ in V Ingegnoli, F Lombardo and G La Torre (eds), *Environmental Alteration Leads to Human Disease: A Planetary Health Approach* (Springer 2022) 175.

connected to everyone else',<sup>21</sup> and 'what we do to the world comes back to affect us and not always in ways that we would expect'.<sup>22</sup>

In 2015, the Rockefeller Foundation–Lancet Commission on Planetary Health defined the field as being concerned with 'the achievement of the highest attainable standard of health, well-being, and equity worldwide' through attention to political, economic and social systems that affect humanity's future, and the 'safe environmental limits' within which humanity can flourish.<sup>23</sup> Planetary health reaffirms the importance of modern biomedicine but also endorses a broader view of health based on the integrity of natural systems that echoes the ancient Greek medical ethicist Hippocrates, who, more than 2,000 years ago, wrote that environmental factors are important in understanding local disease patterns.<sup>24</sup> It reaffirms the traditional knowledge systems of indigenous populations, which epitomise deep personal relationships with all things living and non-living.<sup>25</sup>

The twentieth century witnessed a 'great acceleration' of human influence over nature, such as the large-scale burning of fossil fuels,<sup>26</sup> which exceeds the Earth's ability to absorb humanity's wastes.<sup>27</sup> The Intergovernmental Panel on Climate Change, in its Sixth Assessment Report released in August 2021, observed that anthropogenic forces on the climate between 1850–1900 and 2011–2020 resulted in an increase in the global surface temperature by 1.1°C.<sup>28</sup> Anthropogenic climate change is associated with heatwaves, wildfires and extreme weather events,<sup>29</sup> such as tsunamis, hurricanes, flooding and droughts,<sup>30</sup> which have caused the displacement of tens of millions of people,<sup>31</sup> injury and death, the destruction of homes and infrastructure, decreased access to healthcare,<sup>32</sup> post-traumatic stress disorders, chronic psychological distress, substance abuse, and increased

<sup>21</sup> Myers (n 4) 2865.

<sup>22</sup> V Ingegnoli and E Giglio, 'Planetary Health: Human Impacts on the Environment' in Ingegnoli, Lombardo and La Torre (eds) (n 20) 67, 68. <sup>23</sup> Whitmee et al (n 2) 1978.

<sup>24</sup> A Haines and H Frumkin, *Planetary Health: Safeguarding Human Health and the Environment in the Anthropocene* (CUP 2021) xi.

<sup>25</sup> See N Redvers et al, 'Indigenous Natural and First Law in Planetary Health' (2020) 11(2) *Challenges* 29.

<sup>26</sup> See O Karlsson et al, 'The Human Exposome and Health in the Anthropocene' (2021) 50(2) *Int J Epidemiol* 378.

<sup>27</sup> See SS Myers, JI Pivor and AM Saraiva, 'The São Paulo Declaration on Planetary Health' (2021) 398(10308) *Lancet* 1299.

<sup>28</sup> The Intergovernmental Panel on Climate Change, *Synthesis Report on the IPCC Sixth Assessment Report (AR6): Summary for Policymakers* (IPCC 2021) 4.

<sup>29</sup> See I Feygina, D Chapman and E Markowitz, 'Climate Change: A Challenge to Human Rights, Justice, Equality, and Human Well-Being' in NS Rubin and RL Flores (eds), *The Cambridge Handbook of Psychology and Human Rights* (CUP 2020) 443.

<sup>30</sup> See RMB Harris et al, 'Biological Responses to Extreme Weather Events are Detectable but Difficult to Formally Attribute to Anthropogenic Climate Change' (2020) 10 *Sci Rep* 14067.

<sup>31</sup> O Galor, *The Journey of Humanity: The Origins of Wealth and Inequality* (Dutton 2022) 116.

<sup>32</sup> M Sarfaty, *Climate Change and Population Health: A Primer* (Jones & Bartlett Learning 2022) 40.

incidences of suicide and suicidal ideation.<sup>33</sup> These effects of climate change aggravate the distribution, frequency and risk of foodborne, vector-borne, waterborne and zoonotic diseases.<sup>34</sup>

The latest nationally determined contributions will still increase greenhouse gas emissions by 10.6 per cent by 2030, 50.8 per cent higher than in 1990, whilst to restrict global warming to 1.5°C with little or no overshoot, emissions ought to be cut by 43 per cent by 2030, relative to 2019 levels.<sup>35</sup> The WHO estimated that roughly 250,000 deaths per year between 2030 and 2050 could result from climate change-related increases in heat exposure, especially among the elderly.<sup>36</sup> Extreme heat events in the western United States, India, Europe and many other locations correlated with deaths, hospital admissions for respiratory and cardiovascular diseases,<sup>37</sup> and behavioural disorders, such as mania, neurotic disorders and schizophrenia.<sup>38</sup> Warmer conditions enlarge the geographical distribution of disease vectors, such as mosquitoes, subjecting formerly unexposed populations to Chikungunya, dengue, Zika and other infections.<sup>39</sup> Greenhouse gas emissions from the burning of fossil fuels and transportation directly contribute to poor health through air pollution, which results in the rise of cardiovascular and respiratory morbidity<sup>40</sup> and greater vulnerability among children, who tend to inhale more pollutants per minute than adults.<sup>41</sup>

The Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services identified climate change and pollution as anthropogenic drivers of the loss of biodiversity.<sup>42</sup> The incidence of West Nile encephalitis in the United States is higher, whereas the number of bird species is lower because these regions tend to be dominated by species that amplify the virus.<sup>43</sup> These have direct implications for the important human rights to life, health, private life, property, water, food and an adequate standard of living.<sup>44</sup> The WHO Constitution in its preamble proclaims ‘the enjoyment of the highest attainable standard of health’ to be ‘one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or

<sup>33</sup> See EYY Chan, *Essentials for Health Protection: Four Key Components* (OUP 2020).

<sup>34</sup> See F Bourque and AC Willox, ‘Climate Change: The Next Challenge for Public Mental Health?’ (2014) 26(4) *Int Rev Psychiatry* 415.

<sup>35</sup> UNFCCC Conference of the Parties Serving as the Meeting of the Parties to the Paris Agreement, ‘Nationally Determined Contributions under the Paris Agreement: Synthesis Report by the Secretariat’ (26 October 2022) UN Doc FCCC/PA/CMA/2022/4, 5–6.

<sup>36</sup> See A Haines and K Ebi, ‘The Imperative for Climate Action to Protect Health’ (2019) 380 *N Engl J Med* 263.

<sup>37</sup> Woodward and Macmillan (n 7) 196.

<sup>38</sup> See K Hayes et al, ‘Climate Change and Mental Health: Risks, Impacts and Priority Actions’ (2018) 12 *Int J Ment Health Syst* 28.

<sup>39</sup> Gostin (n 6) 21.

<sup>40</sup> Phelan (n 9) 424.

<sup>41</sup> Sarfaty (n 32) 38.

<sup>42</sup> See F Moullec et al, ‘Identifying and Addressing the Anthropogenic Drivers of Global Change in the North Sea: A Systematic Map Protocol’ (2021) 10 *Environ Evid* 19.

<sup>43</sup> Haines and Frumkin (n 24) 107.

<sup>44</sup> A Boyle, ‘Climate Change, the Paris Agreement and Human Rights’ (2018) 67(4) *ICLQ* 759, 760.

social condition'; yet it is inconceivable that this fundamental right can be enjoyed on a planet whose health is in peril. The largest burdens of anthropogenic climate change are shouldered by vulnerable groups in low-income countries, nomads, indigenous peoples, subsistence farmers, inhabitants of coastal areas and low-lying islands, and fishers.<sup>45</sup> This is unjust and inequitable, given their 'negligible' contribution to emissions.<sup>46</sup> It is an abuse of human rights, especially the rights to life and health, for those wielding public and corporate authority to withhold climate action that could have enhanced the resilience of the most vulnerable, and enlarged the health benefits of all.<sup>47</sup>

Although countless debates have occurred between various international actors within and beyond the UN system, there remains weak coordination on planetary health. The purpose of the UN Environment Programme (UNEP) was to develop a stronger global environmental sector and coordinate environmental initiatives within the UN system. Established a quarter of a century earlier, it remains separate from WHO and is concerned with alleviating the burdens of global disease.<sup>48</sup> UNEP has been chided as 'a fairly weak organisation'.<sup>49</sup> Joint initiatives have taken place from time to time but have tended to be ad hoc and non-durable due to the turnover of personnel, new priorities and shortages of funds.<sup>50</sup> However, there are signs of hope for the emergence of more coherent planetary health governance. The WHO has developed closer collaborations between national health and environment ministers.<sup>51</sup> In 2018, the WHO, UNEP and the World Meteorological Organization launched a new global coalition called the Health, Environment and Climate Change Coalition, whose goals include the reduction of 12.6 million deaths caused every year by environmental risks, with a special focus on air pollution.<sup>52</sup> The *WHO Global Strategy on Health, Environment and Climate Change*<sup>53</sup> published in 2020 reflected the organisation's view that major environmental treaties, including the UN Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity, and the Minamata Convention on Mercury, as well as the Stockholm, Basel and Rotterdam Conventions on Hazardous Chemicals and Wastes, 'do not always adequately include consideration of these health

<sup>45</sup> *ibid.*

<sup>46</sup> WHO, *COP26 Special Report on Climate Change and Health: The Health Argument for Climate Action* (WHO 2021) 21.

<sup>48</sup> L Willetts, 'Stockholm+50: What Does it Mean for Global Health?' (2022) 6(5) *Lancet Planet Health* e388.

<sup>49</sup> KA Mingst, MP Karns and AJ Lyon, *The United Nations in the 21st Century* (Routledge 2022) 275.

<sup>50</sup> C Lajaunie and S Morand, 'Biodiversity Targets, SDGs and Health: A New Turn after the Coronavirus Pandemic?' (2021) 13(8) *Sustainability* 4353.

<sup>52</sup> CM Kauffman and PL Martin, *The Politics of Rights of Nature: Strategies for Building a More Sustainable Future* (MIT Press 2021) 233.

<sup>53</sup> WHO, *WHO Global Strategy on Health, Environment and Climate Change: The Transformation Needed to Improve Lives and Wellbeing Sustainably through Healthy Environments* (WHO 2020) 17.

threats or reflect health concerns'.<sup>54</sup> The 2021 UN Climate Change Conference held in Glasgow, commonly known as COP26, witnessed a record number of members from the global health community become involved in climate advocacy; nevertheless, health has not been formally incorporated into its negotiations.<sup>55</sup>

### III. THE BUILDING BLOCKS OF A PLANETARY HEALTH LAW

#### A. Fragmentation of Global Health and International Environmental Law

Planetary health in this broad sense should be seen as an, if not the, overarching purpose of both international environmental and global health law. Neither branch of law should continue in its present form if the planetary crisis is to be effectively addressed. Good planetary health may be understood in the sense of high degrees of structural integrity, functional vigour and the resilience of the Earth's ecosystems,<sup>56</sup> within which the degrees of disease, disability and mortality are low among populations.<sup>57</sup> This article defines planetary health law as the study and practice of domestic and international law, including hard law, such as legislation and treaties, and soft law, such as policy documents and non-binding declarations,<sup>58</sup> that delineate humanity's obligations to conserve the health of the ecosystems of planet Earth.

A new way of reinventing the law for planetary health is needed. Consider the fact that the word 'law' does not appear a single time in the WHO's 2021 *Special Report on Climate Change and Health: The Health Argument for Climate Action*, published for the 26th Conference of the Parties of the UNFCCC,<sup>59</sup> and the word 'legal' appeared three times, albeit only in relation to national air pollution control targets. In a similar vein, leading treaties on global health law, the 'soft' and 'hard' legal institutions and processes that shape the interactions between State and non-State actors<sup>60</sup> in relation to the prevention of disease and the achievement of 'the highest attainable standard of physical and mental health for the world's population',<sup>61</sup> such as the WHO Constitution, the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the FCTC, do not contain references to climate change or biodiversity loss. The International Health Regulations (2005) and current WHO policy make it next to impossible for the climate

<sup>54</sup> *ibid.*

<sup>55</sup> A Wyns, 'Climate Negotiations: Time to Implement Planetary Health Promises' (2022) 6(8) *Lancet Planet Health* e645.

<sup>56</sup> R Costanza and M Mageau, 'What is a Healthy Ecosystem?' (1999) 33 *Aquat Ecol* 105.

<sup>57</sup> See WW Eaton and MD Fallin, 'Introduction: The Public Health Approach to Mental and Behavioral Disorders' in WW Eaton and MD Fallin (eds), *Public Mental Health* (2nd edn, OUP 2019) xv.

<sup>58</sup> See a related definition of global health law in LO Gostin, *Global Health Law* (Harvard University Press 2014) 59.

<sup>60</sup> See BM Meier et al, 'Global Health Law' in M McNeill Ransom and LM Valladares (eds), *Public Health Law: Concepts and Case Studies* (Springer 2021) 169.

<sup>61</sup> Gostin (n 58) xii.

emergency to be declared a ‘public health emergency of international concern’.<sup>62</sup> Nonetheless, some provisions echo concerns about environmental degradation and, in a certain way, planetary health. Article 12 of the ICESCR requires States to take steps that are necessary for ‘the improvement of all aspects of environmental and industrial hygiene’ and ‘the creation of conditions which would assure to all medical service and medical attention in the event of sickness’. Article 18 of the FCTC demands that ‘due regard’ be given to ‘the protection of the environment and the health of persons in relation to the environment in respect of tobacco cultivation and manufacture within their respective territories’.

The UNFCCC is a flagship treaty of the legal regime commonly known as international environmental law, which traces its origins to the UN Conference on the Human Environment in 1972,<sup>63</sup> and consists of a mixture of ‘hard’ legally binding rules that are implemented and enforced in treaties and buttressed by customary international law, *droit dérivé* adopted by the Conference of the Parties (COP) created by multilateral environmental agreements<sup>64</sup> and ‘soft’ non-binding common standards.<sup>65</sup> The UNFCCC’s purpose is to serve as ‘the legal and regulatory framework devised by the community of sovereign states’<sup>66</sup> to address ‘the negative impacts that humans have on the environment with the objective of protecting and conserving the environment’.<sup>67</sup> Principles such as sustainable development and common but differentiated responsibility, which are enshrined in Article 3 of the UNFCCC, can be regarded as ‘constitutional norms’ of international environmental law despite being ‘too generic’ to provide the useful goals to alleviate the planetary crisis.<sup>68</sup> The UNFCCC’s COP has negotiated two separate instruments, one of which is the Kyoto Protocol, which established legally binding emissions reduction targets for six greenhouse gases among 36 developed and transitional countries.<sup>69</sup> The other is the Paris Agreement of 2015, whose function is to commit countries to suppress the increase in the global average temperature from pre-industrial levels to lower than 2°C and take action to limit it to 1.5°C; to strengthen adaptation to climate change; and

<sup>62</sup> A Harmer et al, ‘WHO Should Declare Climate Change a Public Health Emergency’ (2020) 368 *BMJ* m797.

<sup>63</sup> LJ Kotzé and RE Kim, ‘Exploring the Analytical, Normative and Transformative Dimensions of Earth System Law’ (2020) 50(6) *EnvtlPolyL* 457, 458.

<sup>64</sup> PM Dupuy and JE Viñuales, *International Environmental Law* (2nd edn, CUP 2018) 39.

<sup>65</sup> T Stephens, ‘Reimagining International Environmental Law in the Anthropocene’ in LJ Kotzé (ed), *Environmental Law and Governance for the Anthropocene* (Hart 2017) 31, 48.

<sup>66</sup> L Rajamani and J Peel, ‘International Environmental Law: Changing Context, Emerging Trends, and Expanding Frontiers’ in L Rajamani and J Peel (eds), *The Oxford Handbook of International Environmental Law* (2nd edn, OUP 2021) 1, 2.

<sup>67</sup> E Hey, *Advanced Introduction to International Environmental Law* (Edward Elgar 2016) 1.

<sup>68</sup> Stephens (n 65) 34.

<sup>69</sup> Gostin (n 6) 126.

to encourage finance to flow in ways compatible with the reduction of greenhouse gas emissions and climate resilience.<sup>70</sup>

Until the Paris Agreement, recognition of the importance of the right to health in international environmental law, held so dearly by global health law, had been 'slow',<sup>71</sup> despite the UNFCCC acknowledging the negative impact of climate change on the health of humans.<sup>72</sup> This is perplexing because a State's inability to take effective climate action would directly or indirectly breach health standards<sup>73</sup> and conditions that make health possible, which, according to General Comment 14 of the UN Committee on Economic, Social and Cultural Rights (CESCR), include 'access to safe and potable water and adequate sanitation, an adequate supply of safe food, nutrition and housing, [and] healthy occupational and, notice this: environmental conditions'. The word 'health' appeared only twice in the UNFCCC, Article 1(1) of which merely acknowledges that 'adverse effects of climate change' entail changes that have 'significant deleterious effects' on 'human health and welfare', with Article 4(f) requiring that appropriate methods be adopted to reduce 'adverse effects ... on public health and on the quality of the environment'.

The preamble of the Paris Agreement, by contrast, broke new ground in affirming that countries, 'when taking action to address climate change', should 'respect, promote and consider their respective obligations on human rights', including 'the right to health' and the rights of 'persons with disabilities and people in vulnerable situations'. Although the acknowledgement of 'the right to health' in the preamble points in the right direction in response to climate change,<sup>74</sup> it does not go far enough in prescribing the legal consequences that international law should impose on States in relation to the human rights implications of climate action or inaction.<sup>75</sup> The word 'health' does not appear once in the main text of the Agreement, which imposes no obligations on signatories to effectuate the right to health.<sup>76</sup> The Agreement contains no targets or indicators to reduce the impacts of climate change on human health.<sup>77</sup>

<sup>70</sup> See H Jepsen et al, 'Introduction' in H Jepsen et al (eds), *Negotiating the Paris Agreement: The Insider Stories* (CUP 2021) 1.

<sup>71</sup> Phelan (n 9) 421.  
<sup>72</sup> S Atapattu, *Human Rights Approaches to Climate Change: Challenges and Opportunities* (Routledge 2016) 77.

<sup>73</sup> CF Wu, 'Challenges to Protecting the Right to Health under the Climate Change Regime' (2021) 23(2) *Health Hum Rights* 121, 127.

<sup>74</sup> DP Corrigan, 'What's So Good About Environmental Human Rights? Constitutional Versus International Environmental Rights' in M Oksanen, A Dodsworth and S O'Doherty (eds), *Environmental Human Rights: A Political Theory Perspective* (Routledge 2017) 124, 144.

<sup>75</sup> S Atapattu, 'The Right to a Healthy Environment and Climate Change: Mismatch or Harmony?' in JH Knox and R Pejan (eds), *The Human Right to a Healthy Environment* (CUP 2018) 252, 258.

<sup>76</sup> Boyle (n 44) 769.  
<sup>77</sup> L Taing and K Mahadeo, 'Climate Change and Global Health: Building Health Resilience' in R Haring et al (eds), *Handbook of Global Health* (Springer 2021) 2183, 2192.

This fragmentation of the legal governance of the environment and of global health is a reflection of the ‘inescapable conundrum of the Anthropocene’,<sup>78</sup> that humanity has been placed at centre stage as the powerhouse of planetary change but lacks collective institutions and coherent norms to cope with the emergency of planetary health. This is evidenced in the Sustainable Development Goals (SDGs), contained in a soft-law instrument known as Resolution 70/1, *Transforming Our World: The 2030 Agenda for Sustainable Development*, adopted by the UN General Assembly in September 2015. The SDGs commendably embed an otherwise very strong focus on human issues within a broader planetary context.<sup>79</sup> Although most of the 17 SDGs have at least an indirect bearing on the environment and health, SDG3, which seeks to ‘ensure healthy lives and promote well-being for all at all ages’, makes no mention of climate change in its 13 subgoals; this SDG is narrowly focused on the health sector.<sup>80</sup> SDG13 calls for ‘urgent action to [be taken to] combat climate change and its impacts’ but omits any reference to health in its five subgoals. The use of law, even soft law, to address the interplay between health and planetary crises is clearly underdeveloped.<sup>81</sup>

Common charges against international environmental law are that it has ‘consistently defaulted to economic and political factors’<sup>82</sup>; that it has failed to prevent humans from ‘crossing planetary boundaries’ and ‘destroying the living foundations of all life’<sup>83</sup>; and that it is not ‘sufficiently ambitious to deal with the planetary crisis’.<sup>84</sup> A more fundamental problem with this somewhat ‘simplistic’<sup>85</sup> legal paradigm is that an emphasis on the environment has the potential of reducing non-human entities to little more than ‘an objectified, purely utilitarian and commodified status’,<sup>86</sup> and of ignoring the dynamic system that is the planet. Premised on this notion, international environmental law separates human, non-human and environmental interests into separate domains.<sup>87</sup>

The conceptual account of planetary health law proposed in this article is driven by a concern for rights. The emphasis on these two similar-sounding, albeit conceptually different, categories of rights is explained by the simple fact that a broad array of existing hard and soft legal norms at the national, regional and even global levels can readily and logically be classed under each category. But there is more to it. The notion of rights enables the understanding of climate

<sup>78</sup> M Arias-Maldonado, ‘Politics in the Anthropocene’ in JA Thomas (ed), *Altered Earth: Getting the Anthropocene Right* (CUP 2022) 160, 163.

<sup>79</sup> W Steffen et al, ‘The Emergence and Evolution of Earth System Science’ (2020) 1(1) *Nat Rev Earth Environ* 54, 62.

<sup>80</sup> Haines and Frumkin (n 24) 218.

<sup>81</sup> LO Gostin et al, ‘The Legal Determinants of Health: Harnessing the Power of Law for Global Health and Sustainable Development’ (2019) 393(10183) *Lancet* 1857, 1871.

<sup>82</sup> Garver (n 11) 127.

<sup>83</sup> Kotzé and Kim (n 63) 467.

<sup>84</sup> *ibid* 463.

<sup>85</sup> *ibid* 460.

<sup>86</sup> LJ Kotzé and D French, ‘A Critique of the Global Pact for the Environment: A Stillborn Initiative or the Foundation for *Lex Anthropocene*?’ (2018) 18 *IntlEnvtlAgree* 811, 819.

<sup>87</sup> E Jones, ‘Posthuman International Law and the Rights of Nature’ (2021) 12 *J Hum Rights Environ* 76, 101.

change, biodiversity loss and pollution as problems that require more than technocratic solutions.<sup>88</sup> More importantly, the timelessness, absoluteness and universal validity<sup>89</sup> so often entailed by the concept of rights are qualities that are critical for planetary health law to be a force for good in the Anthropocene. The following sections will develop the existing right to health into the right to a healthy environment, and explore the concept of the emerging rights of nature.

### B. The Right to a Healthy Environment at a Planetary Scale

The human right to a healthy environment, ‘a fledgling global norm’,<sup>90</sup> has been affirmed by most jurisdictions to be a constitutional or legal right at the national or provincial level,<sup>91</sup> and by regional international agreements to which some 130 jurisdictions are parties, including Article 11 of the Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights or the Protocol of San Salvador (1988) and Article 24 of the Arab Charter on Human Rights (2004).<sup>92</sup> The roots of this right can be discerned in Principle 1 of the Stockholm Declaration on the Human Environment of the UN Conference on the Environment of 1972,<sup>93</sup> which inspired successive revisions of constitutions and legislation across nations to incorporate environmental rights and responsibilities.<sup>94</sup> Principle 1 states that humanity ‘has a fundamental right to freedom, equality and adequate conditions of life, within a quality environment that enables us to lead a life of dignity and well-being’, but also encourages them to ‘[bear] a solemn responsibility to protect and improve the environment for present and future generations’.

On the eve of the UN Conference on Environment and Development in 1992, the World Health Assembly—the legislature of the WHO—called upon Member States to step up their environmental measures to protect and promote human health and well-being and build on community participation in sustainable development measures that integrate health considerations.<sup>95</sup> The Report of the Rio Earth Summit contains the 27-point Rio Declaration

<sup>88</sup> C Williams, A Blaiklock and P Hunt, ‘The Right to Health Supports Global Public Health’ in Detels et al (eds) (n 7) 273, 275.

<sup>89</sup> See R Bratspies, ‘Do We Need a Human Right to a Healthy Environment?’ (2015) 13(1) *Santa Clara J Intl L* 31.

<sup>90</sup> K Woods, ‘The Rights of Humans as Ecologically Embedded Beings’ in Oksanen, Dodsworth and O’Doherty (eds) (n 74) 17, 27.

<sup>91</sup> Gostin (n 58) 163.

<sup>92</sup> E Daly and JR May, ‘The Indivisibility of Human Dignity and Sustainability’ in SA Atapattu, CG Gonzalez and SL Seck (eds), *The Cambridge Handbook of Environmental Justice and Sustainable Development* (CUP 2021) 23, 27.

<sup>93</sup> D Piselli and H van Asselt, ‘Planetary Boundaries and Regime Interaction in International Law’ in D French and LJ Kotzé (eds), *Research Handbook on Law, Governance and Planetary Boundaries* (Edward Elgar 2021) 125, 161.

<sup>94</sup> DR Boyd, ‘Catalyst for Change: Evaluating Forty Years of Experience in Implementing the Right to a Healthy Environment’ in Knox and Pejan (eds) (n 75) 17, 24.

<sup>95</sup> Lajaunie and Morand (n 50).

on Environment and Development,<sup>96</sup> whose Principle 7 urges States to cooperate ‘to conserve, protect and restore the health and integrity of the Earth’s ecosystem’, under the principle of ‘common but differentiated responsibilities’; and enjoins them, in Principle 14, to ‘prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health’.

In the last two decades, international courts and human rights bodies have adopted ‘greening’ interpretations of human rights law in harmony with the right to a healthy environment.<sup>97</sup> Such an approach may result in creative interpretations which make explicit the implicit principles of the human right to live on a healthy planet.<sup>98</sup> In the *Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons*<sup>99</sup> of 1996, delivered in July 1996, the International Court of Justice held that ‘the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn’.<sup>100</sup>

Though not framed in the language of rights, judicial statements like this are compatible with the notion that the emergent right to a healthy environment should be bridged with the sustainability principles of intra-generational justice and inter-generational justice. In General Comment 14, adopted in August 2000, the CESCR, which monitors adherence to the ICESCR, openly clarified that the Covenant’s reference to the notion of ‘the highest attainable standard of physical and mental health’ is not confined to ‘health care’, but encompasses ‘the underlying determinants of health’, which, noticeably, include ‘a healthy environment’,<sup>101</sup> and ‘healthy occupational and environmental conditions’.<sup>102</sup> ‘The improvement of all aspects of environmental and industrial hygiene’ required by Article 12.2 (b) of the Covenant, consists, according to the CESCR, of ‘the prevention and reduction of the population’s exposure to harmful substances such as radiation and harmful chemicals or other detrimental environmental conditions that directly or indirectly impact upon human health’.<sup>103</sup>

What is more, the CESCR called on States to integrate the right to health into other international legal regimes, not only human rights or global health law, by ‘ensur[ing] that the right to health is given due attention in international

<sup>96</sup> UN Conference on Environment and Development, *Report of the United Nations Conference on Environment and Development*, vol I: *Resolution Adopted by the Conference* (United Nations 1993).

<sup>97</sup> S Borràs, ‘New Transitions from Human Rights to the Environment to the Rights of Nature’ (2016) 5(1) TEL 113, 117.

<sup>98</sup> See EC Ip, ‘The Constitutional Determinants of Planetary Health’ (2021) 5(6) *Lancet Planet Health* e331.

<sup>99</sup> *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion) [1996] ICJ Rep 226.

<sup>100</sup> *ibid* 241.

<sup>101</sup> CESCR, ‘General Comment No. 14 (2000): The Right to the Highest Attainable Standard of Health (article 12 of the International Covenant on Economic, Social and Cultural Rights)’ (11 August 2000) UN Doc E/C.12/2000/4, para 3.

<sup>102</sup> *ibid*, para 11.

<sup>103</sup> *ibid*, para 15.

agreements and, to that end, should consider the development of further legal instruments'.<sup>104</sup> By the same token, 'in relation to the conclusion of other international agreements', States ought to take measures 'to ensure that these instruments do not adversely impact upon the right to health'.<sup>105</sup> In April 2013, the Committee on the Rights of the Child, said that States should protect children's entitlement to healthcare not only from third parties, but also from 'environmental threats', which could be construed to include anthropogenic climate change. More recently, in August 2023, the Committee affirmed in its General Comment 26 that '[a] clean, healthy and sustainable environment is both a human right itself and necessary for the full enjoyment of a broad range of children's rights'.<sup>106</sup> Indeed, children born in 2020 are predicted to experience four to seven times more heatwaves during their lifetimes compared to those born six decades earlier.<sup>107</sup>

In October 2018, the CESCR issued a statement to the effect that 'a failure to prevent foreseeable harm to human rights caused by climate change, or a failure to mobilize the maximum available resources in an effort to do so, could constitute a breach of [an] obligation [to protect the rights to health, food and sanitation]'.<sup>108</sup> In the same month, the UN Human Rights Committee, which oversees compliance with the International Covenant on Civil and Political Rights, underscored in General Comment 36 how climate inaction could threaten a 'first generation right', namely, the right to life: '[i]mplementation of the obligation to respect and ensure the right to life, and in particular life with dignity, depends, *inter alia*, on measures taken by States parties to preserve the environment and protect it against harm, pollution and climate change caused by public and private actors'.<sup>109</sup>

In the context of the accumulation of solid legal doctrines outlined above, in March 2021, 15 entities of the UN, including the WHO and UNEP, issued a statement that laid blame on the failure of the global community to recognise the right to a healthy environment formally as the cause of the delayed achievement of the SDGs, exacerbated inequalities, and gaps of protection in relation to environmental human rights defenders and indigenous peoples. Also, six months later, the UN Human Rights Council adopted a historic resolution which '[r]ecognizes the right to a clean, healthy and sustainable

<sup>104</sup> *ibid.*, para 39.

<sup>105</sup> *ibid.*

<sup>106</sup> UN Committee on the Rights of the Child, 'General Comment No. 15 (2013) on the Right of the Child to the Enjoyment of the Highest Attainable Standard of Health (art. 241)' (17 April 2013) UN Doc CRC/C/GC/15/2013, para 71; UN Committee on the Rights of the Child, 'General Comment No. 26 (2023) on Children's Rights and the Environment, with a Special Focus on Climate Change' (22 August 2023) GE.23-11144 (E) 210823 220823, para 8.

<sup>107</sup> K Burrows and E Fussell, 'A Life Course Epidemiology Approach to Climate Extremes and Human Health' (2022) 6(7) *Lancet Planet Health* e549.

<sup>108</sup> CESCR, 'Climate Change and the International Covenant on Economic, Social and Cultural Rights: Statement of the Committee on Economic, Social and Cultural Rights' (8 October 2018) UN Doc E/C.12/2018/1, para 6.

<sup>109</sup> UN Human Rights Committee, 'General Comment No. 36: Article 6: Right to Life' (3 September 2019) UN Doc CCPR/C/GC/36, para 62.

environment as a human right that is important for the enjoyment of human rights'.<sup>110</sup> The right to a healthy environment has increasingly been interpreted with a planetary bent. The UN General Assembly, in Resolution 75/2801 of 24 May 2021, convened 'Stockholm + 50: A Healthy Planet for the Prosperity of All'; the Ministerial Statement of Stockholm + 50 declared 'a moral imperative to ensure that future generations of humanity can live full and healthy lives, underpinned by the dignity and rights', premised on 'a clean, healthy, and sustainable environment and a safe and fair world' and underpinned by the principle of 'intergenerational equity'.<sup>111</sup>

Consequently, in July 2022, the UN General Assembly adopted Resolution 76/300 by a landslide of 161 votes in favour, 0 against, with 8 abstentions, which recognised 'the right to a clean, healthy and sustainable environment as a human right',<sup>112</sup> and which calls for 'the full implementation of the multilateral environmental agreements under the principles of international environmental law'.<sup>113</sup> Although neither the right to health nor the instruments of global health law is mentioned, the Resolution explains that it is predicated on the assumption that the impact of climate change, the unsustainable use of natural resources, air, land and water pollution, the unsound management of waste and chemicals and biodiversity loss 'has negative implications, both direct and indirect, for the effective enjoyment of all human rights'.<sup>114</sup>

There remains substantial concern about upgrading this right to that of a universal legal obligation, which requires States to report regularly on the state of their environment.<sup>115</sup> It may be argued that the content of this right is overly vague, in defiance of the rule-of-law axiom of legal certainty. And yet, ambiguity is not particular to the right to a healthy environment, as seen in recurring debates all over the world about what constitutes the rights to free speech or freedom from discrimination.<sup>116</sup> More precise definitions are readily available from the scholarly literature for consideration. For instance, the adjective 'healthy' in 'healthy environment' can be understood as 'the absence of substantial human interference or pollution that would compromise ecological integrity as it is understood or would threaten irreversible environmental harm'.<sup>117</sup> Nothing necessarily prevents the

<sup>110</sup> UN Human Rights Council Resolution 48/13 (18 October 2021) UN Doc A/HRC/RES/48/13, art 1.

<sup>111</sup> UN General Assembly Resolution (24 May 2021) UN Doc A/RES/75/280; Ministerial Statement on Future Generations, Stockholm+50 (2 June 2022), para 1.

<sup>112</sup> UN General Assembly Resolution 76/300 (28 July 2022) UN Doc A/RES/76/300, art 1.

<sup>113</sup> *ibid*, art 3.

<sup>114</sup> *ibid*, preamble.

<sup>115</sup> S Atapattu, 'Environmental Rights and International Human Rights Covenants: What Standards Are Relevant?' in SJ Turner et al (eds), *Environmental Rights: The Development of Standards* (CUP 2019) 17, 40.

<sup>116</sup> Atapattu (n 72) 51.

<sup>117</sup> N Bryner, 'A Constitutional Human Right to a Healthy Environment' in D Fisher (ed), *Research Handbook on Fundamental Concepts of Environmental Law* (Edward Elgar 2022) 141, 144.

contours of this right from being incrementally developed by treaty bodies and international tribunals.

These can be interpreted as welcome signs that the right to a healthy environment can be more fittingly described as a right that should be protected at a planetary scale, and which embraces not only the environment of a particular territory but also the planet and its ecosystems and biosystems. The concept of the ‘environment’ in environmental law is founded upon an outdated dichotomy of human beings as distinct units surrounded by a non-human nature, contrary to the findings of contemporary ecological science.<sup>118</sup> The right to a healthy environment, if safeguarded at a planetary rather than territorial level, will provide a corrective to the excesses of international law’s State-centrism, which has become less relevant in the midst of a planetary crisis. The lens of the right to a healthy planet gives a human face to the planetary crisis.<sup>119</sup>

The formal recognition of this right as a ‘distinct, stand-alone’ legal right at an international level would encourage a stronger public understanding of the mutual dependence of population health and planetary health,<sup>120</sup> by teasing out and consolidating the previously hidden elements of this right in the rights to life and health long recognised by international human rights law. In reality, the right to a healthy environment awaits better integration with the rest of international human rights law.<sup>121</sup> It remains to be seen how this right, being non-absolute like most other human rights, will be balanced against other rights judicially and legislatively in international, regional and domestic legal systems. Although the trend towards a more developed right to a healthy environment, with a heavier planetary emphasis, should be welcomed, it can be ‘problematically anthropocentric’<sup>122</sup> if taken to the extreme. The planetary health perspective put forward in this article would counsel against treating ecological degradation as a good legal cause only when it is linked to the well-being of human persons. The controversial rights of nature will now be considered.

### C. *The Place of the Rights of Nature*

Ecological science demonstrates that ecosystems are composed of interacting and interdependent communities of living forms and the landscapes which they inhabit.<sup>123</sup> Yet an environmental soft-law instrument as influential as Principle 1 of the Rio Declaration on Environment and Development still referred to human beings as being located ‘at the centre of concerns for sustainable development’, and thereby falling short of affirming the intrinsic

<sup>118</sup> See F Biermann, ‘The Future of “Environmental” Policy in the Anthropocene: Time for a Paradigm Shift’ (2021) 30(1–2) *Environ Politics* 61.

<sup>120</sup> *ibid* 50–1.

<sup>121</sup> See Wu (n 73) 126.

<sup>119</sup> Atapattu (n 72) 98.

<sup>122</sup> Jones (n 87) 101.

<sup>123</sup> E Sala, *The Nature of Nature: Why We Need the Wild* (National Geographic Partners 2020) 183.

value of nature separate from its benefits to humanity.<sup>124</sup> In a similar vein, the preamble of the Convention on Biological Diversity of 1992 speaks of the ‘conservation and sustainable use of biological diversity’ as being ‘of critical importance for meeting the food, health and other needs of the growing world population’. These views may be seen as overly anthropocentric and shaped by a rigid dichotomy between society and nature.<sup>125</sup> As David Boyd, UN Special Rapporteur on Human Rights and the Environment, has pointed out, it is not possible to protect the environment if human superiority and universal ownership of all land and wildlife to pursue endless economic growth are continuously asserted.<sup>126</sup>

To avoid the excesses of an extreme anthropocentric approach that indiscriminately subjugates ecosystems to narrowly defined human interests, several jurisdictions have found it necessary to infuse a dose of ecocentrism, in the form of ‘rights of nature’, into a burgeoning planetary health law. Rights of nature refer to rights attributed to natural entities such as rivers, mountains and forests in a particular region,<sup>127</sup> whose primary purpose is to conserve ecological integrity and prevent the disruption of ecosystems by moving nature away from being merely an object owned and dominated by humanity. Rights of nature thus place humans and their non-human counterparts on a more or less equal footing, in a manner that is far more ecological in focus than environmental law, which leaves unchallenged humanity’s dominance over nature through property law.<sup>128</sup>

The rights of nature have the potential to reduce the harm inflicted upon sentient animals, cease human-induced species extinction and safeguard the planet’s systems of life support.<sup>129</sup> The notion arguably constitutes ‘the strongest language’ for critiquing the fundamental inequality of humanity’s relationship to the planet,<sup>130</sup> and coheres with the central principle of planetary health; that humans are part and parcel of an interconnected Earth which is entitled to be recognised as the subject of legal rights, as sanctioned by millennia of indigenous and traditional laws and worldviews.<sup>131</sup> The

<sup>124</sup> F Francioni, ‘Principle 1: Human Beings and the Environment’ in JE Viñuales (ed), *The Rio Declaration on Environment and Development: A Commentary* (OUP 2015) 93, 94.

<sup>125</sup> F Adloff and I Hilbrich, ‘Practices of Sustainability and the Enactment of their Natures/ Cultures: Ecosystem Services, Rights of Nature, and Geoengineering’ (2021) 60(2) *Soc Sci Inf* 168, 180.

<sup>126</sup> DE Boyd, *The Rights of Nature: A Legal Revolution That Could Save the World* (ECW Press 2017) xxxiv.

<sup>127</sup> Y Epstein and H Schoukens, ‘A Positivist Approach to Rights of Nature in the European Union’ (2021) 12(2) *JHRE* 205, 206.

<sup>128</sup> G Garver, ‘Are Rights of Nature Radical Enough for Ecological Law?’ in K Anker et al (eds), *From Environmental to Ecological Law* (Routledge 2020) 90, 90. <sup>129</sup> Boyd (n 126) xxxv.

<sup>130</sup> S Knauß, ‘Conceptualizing Human Stewardship in the Anthropocene: The Rights of Nature in Ecuador, New Zealand and India’ (2018) 31 *J Agric Environ Ethics* 703, 704.

<sup>131</sup> RE Kim and LJ Kotzé, ‘Governing the Complexity of Planetary Boundaries: A State-of-the-Art Analysis of Social Science Scholarship’ in French and Kotzé (eds) (n 93) 45.

rights of nature may not be as revolutionary as they appear to be.<sup>132</sup> The existence of a right to a healthy environment implies an obligation to protect the health of the environment, which deserves respect and restoration; it follows that the right to a healthy environment and the rights of nature converge on the same substantive obligation to protect the environment.<sup>133</sup> Pragmatically speaking, both anthropocentric and ecocentric approaches agree that harm to the planet should be minimised.<sup>134</sup> This is why it is helpful to think of them as two sides of the same coin.

The UN World Charter for Nature of 1982, a prominent soft-law instrument, in Article 1(1), proclaims that nature should be ‘respected’ and ‘its essential processes shall not be impaired’, ideas that were repeated later in the Rio Declaration and UN General Assembly Resolutions,<sup>135</sup> such as the 12th Harmony with Nature Resolution 75/220,<sup>136</sup> which contains four cautious references to ‘rights of nature’ or ‘rights of Mother Earth’, without explicitly endorsing them. This resolution, adopted in December 2020, nonetheless calls for ‘efforts to restore the health and integrity of the Earth’s ecosystems’. Rights of nature have been recognised in diverse jurisdictions, such as Bangladesh, Bolivia, Colombia, Ecuador, India, New Zealand and Uganda. Local legislation that recognises the rights of nature exists in Argentina, Brazil, Colombia, France’s Loyalty Islands, India, Italy, Mexico, the Netherlands and the United States (US);<sup>137</sup> many US local ordinances, for example, define nature as combinations of aquifers, rivers, soil, streams, wetlands, and native species of fauna and flora.<sup>138</sup>

Rights-of-nature enthusiasts believe that their project is a ‘game-changing leap’ that has the potential to heal wounded human–nature relations.<sup>139</sup> One must be realistic about the rights of nature, however. Nature does not owe duties to human beings,<sup>140</sup> and the interplays between a lion and a zebra, or a river and the forests surrounding it, do not need any rights framework whatsoever.<sup>141</sup> Rights of nature, in spite of their ecocentrism, remain legal devices that exist within that human institution called law, and which, similar

<sup>132</sup> J Bétaille, ‘Rights of Nature: Why it Might Not Save the Entire World’ (2019) 16(1) JEEPL 35, 55. <sup>133</sup> *ibid* 57–8.

<sup>134</sup> S Theil, *Towards the Environmental Minimum: Environmental Protection through Human Rights* (CUP 2021) 14.

<sup>135</sup> See H Harden-Davies et al, ‘Rights of Nature: Perspectives for Global Ocean Stewardship’ (2020) 122 *MarPoly* 104059.

<sup>136</sup> UN General Assembly Resolution 75/220 (21 December 2020) UN Doc A/RES/75/220.

<sup>137</sup> Kauffman and Martin (n 52) 16.

<sup>138</sup> CM Kauffman and PL Martin, ‘Constructing Rights of Nature Norms in the US, Ecuador, and New Zealand’ (2018) 18(4) *GlobalEnvntPol* 43, 49.

<sup>139</sup> IDV Roncancio, ‘Conjuring Sentient Beings and Relations in the Law: Rights of Nature and a Comparative Praxis of Legal Cosmologies in Latin America’ in Anker et al (eds) (n 128) 119, 123.

<sup>140</sup> P Burdon and C Williams, ‘Rights of Nature: A Critique’ in Fisher (ed) (n 116) 164, 172.

<sup>141</sup> Garver (n 128) 96.

to other human institutions, cannot function without human involvement. One approach to defending these rights is to argue that natural entities are, in some ways, analogous to the insane, or unrepresented infants who cannot speak for themselves.<sup>142</sup> Human stewardship is necessitated by the rights of nature.<sup>143</sup> For the rights of nature to be taken seriously, they need to be enforced by citizens or organisations designated as ‘guardians’ of natural entities, as envisioned in Article 71 of the Ecuadorian Constitution.<sup>144</sup> Even critics of the rights of nature have suggested that vesting primary legal authority in those communities that are most committed to maintaining a thriving human relationship with nature is a viable means of regulating human activities.<sup>145</sup> Internationally speaking, guardians of nature could be appointed from among agencies such as the WHO, UNEP and relevant civil society organisations.<sup>146</sup>

However, acceptance of these rights remains significantly lower than the right to a healthy environment. It has been pointed out that no clear line could be drawn between those parts of ‘nature’ that are supposed to possess legal rights, and the rest of the biosphere.<sup>147</sup> If a given river has a right to exist and flourish, should not also be the same right granted to the riverbank and the grass and microbes on the surrounding land too?<sup>148</sup> There may be conflicts between local rights of nature and the well-being of the planet overall: building a hydroelectric dam may possibly violate the rights of local ecosystems, but is beneficial to the health of the planet as a whole due to its contribution to the reduction of greenhouse gas emissions.<sup>149</sup> In addition, it has been argued that the notion of rights is in itself rooted in anthropocentric worldviews which historically arose from a prevalent focus on the individual human being.<sup>150</sup>

To some degree, weaker forms of anthropocentrism and ecocentrism are, in fact, not necessarily incompatible. Viewing humanity as an interdependent member of the Earth community ‘does not foreclose recognition of the uniqueness of humans among the Earth’s species’.<sup>151</sup> It is plausible to inject certain aspects of rights of nature into the less controversial and increasingly accepted right to a healthy environment by holding that an ecologically balanced environment consisting of healthy ecosystems, is intrinsically valuable, regardless of its value to human health,<sup>152</sup> despite the equally intrinsic right of humans to inhabit a healthy environment undamaged by those humans who have emitted excessively greenhouse gases, polluted and escalated the extinction of species.

<sup>142</sup> CD Stone, *Should Trees Have Standing? Law, Morality, and the Environment* (OUP 2010) 131. <sup>143</sup> S Knauß (n 130) 720.

<sup>144</sup> See A Bleby, ‘Rights of Nature as an Expression of Earth System Law’ in T Cadman, M Hurlbert and AC Simonelli (eds), *Earth System Law: Standing on the Precipice of the Anthropocene* (Routledge 2022) 111, 118. <sup>145</sup> Garver (n 128) 94. <sup>146</sup> Stone (n 142) 131.

<sup>147</sup> Burdon and Williams (n 140) 174. <sup>148</sup> *ibid* 176. <sup>149</sup> Garver (n 128) 95.

<sup>150</sup> *ibid* 93. <sup>151</sup> *ibid* 100. <sup>152</sup> *ibid* 94.

*D. The Way Forward*

The above account of planetary health law has the potential to guide the development of law along a path that is more reflective of and sensitive to the complex functioning of the Earth's systems. There should be a closer integration of international environmental law and global health law in both principle and governance, driven by more balanced and holistic perspectives of planetary health. The right to a healthy environment, understood as a right with a planetary—as opposed to purely national or territorial—level promises to bring together, if not unify, the largely separate regimes of international environmental rights<sup>153</sup> and global health rights,<sup>154</sup> each being central to existing international environmental law and global health law, respectively. Closer collaboration between human rights advocates, public health experts, ecologists and environmental policymakers offers rich possibilities for promoting the health of peoples and ecosystems on a healthy planet.<sup>155</sup> Concerns for the restoration of a healthy planet, such as how climate change exacerbates outbreaks, should be incorporated into a post-COVID-19 pandemic treaty currently being negotiated within the WHO,<sup>156</sup> preferably with input from UNEP and others. Similarly, leading climate treaties, including the UNFCCC, should be amended to underscore explicitly the protection of the rights to health and to a healthy planet as an overarching goal of climate action. Complementary modifications should be implemented in health and environment-related national laws and regional agreements.

While treaties and legislation are at times difficult to amend, Conferences of the Parties, national and regional governments, and international and domestic courts can borrow from the interpretive doctrine of the 'living instrument' developed in the jurisprudence of the UN human rights bodies and the European Court of Human Rights, to construe treaties such as the ICESCR and the WHO Constitution as organically growing instruments that address the pressing needs of planetary health in the Anthropocene. A new comment from the CESCR may authoritatively reinterpret the right to health in Article 12 of the ICESCR requiring the realisation of a clean, healthy and sustainable planet.<sup>157</sup> If there is greater acceptance of the rights of nature in the future, a bill of planetary rights to health, in the form of a soft-law instrument such as an UN General Assembly resolution, may be adopted to help identify ecologically grounded criteria under which natural entities may become holders of rights,

<sup>153</sup> See WF Baber and JR May (eds), *Environmental Human Rights in the Anthropocene: Concepts, Contexts, and Challenges* (CUP 2023).

<sup>154</sup> See C Ó Néill et al (eds), *Routledge Handbook of Global Health Rights* (Routledge 2021).

<sup>155</sup> See DW Patterson, 'The Right to Health and the Climate Crisis: The Vital Role of Civic Space' (2021) 23(2) *Health Hum Rights* 109, 110–1.

<sup>156</sup> AL Phelan, 'How Climate Law Can Help to Prevent the Next Pandemic' (2022) 605 *Nature* 397.

<sup>157</sup> See EC Ip and D Cheung, 'Mapping the Legal Foundations of Planetary Mental Health' (2022) 9 *Glob Ment Health* 206.

fleshing out the precise scope of such rights, and prescribing mechanisms of enforcement,<sup>158</sup> which might involve lost reputation, retaliation or reciprocal non-compliance.<sup>159</sup>

#### IV. CONCLUSION

Humanity is not above the planet but is a part of it, and a healthy planet is a fundamental prerequisite for global health. Scientific research on planetary tipping points and boundaries has changed how human impact on the Earth is perceived, from an immediate, localised ‘environmental’ context to a planetary one.<sup>160</sup> Just as researchers from multiple fields and disciplines are examining the causes, solutions and challenges in the current geological epoch—that is, the Anthropocene—there is no reason why scholars and students of the law—a critical institution so central to humanity’s political, economic and social systems—should not do the same.<sup>161</sup> This is where the burgeoning science of planetary health, and the well-established fields of international environmental law and global health law can enter into a synergetic dialogue. Development of an emergent planetary health law to restrain the actions of humanity is urgently needed in the current geological epoch during which anthropogenically induced climate change, biodiversity loss and pollution profoundly threaten the planet on which human well-being and the realisation of human rights crucially depend.<sup>162</sup>

This article has demonstrated that the law should abandon the previous consensus that humans are absolute masters of the planet and that human health can be understood separately from the health of planetary ecosystems. Humans are part of the Earth community;<sup>163</sup> and as ‘gifted members’ of the Earth community, humans must shoulder a moral and legal obligation to heal the harm that they have inflicted since the advent of the Anthropocene.<sup>164</sup> Although the legal architectures of global health and international environmental governance remain highly fractured, if not also unjustifiably anthropocentric, there have been encouraging developments in the law on the right to a healthy environment and, to a lesser extent, the rights of nature, which this article argues should be further reconceptualised into elements of a right to a healthy environment deserving protection at a planetary scale. Given that a

<sup>158</sup> G Chapron, Y Epstein and JV López-Bao, ‘A Rights Revolution for Nature’ (2019) 363 (6434) *Science* 1392.

<sup>160</sup> LJ Kotzé, ‘*Neubauer et al. versus Germany: Planetary Climate Litigation for the Anthropocene?*’ (2021) 22 *GermLJ* 1423, 1428.

<sup>161</sup> L Viaene, ‘Can Rights of Nature Save Us from the Anthropocene Catastrophe? Some Critical Reflections from the Field’ (2022) 9(2) *AsianJLS* 187, 202.

<sup>162</sup> I Feygina, Chapman and Markowitz (n 29) 453.

<sup>163</sup> See EC Ip, ‘Harnessing Legal Structures of Virtue for Planetary Health’ (2023) *JMedEthics* <<http://dx.doi.org/10.1136/jme-2022-108759>>.

<sup>164</sup> AR Zelle et al, *Earth Law: Emerging Ecocentric Law—A Guide for Practitioners* (Wolters Kluwer 2021) 685.

healthy environment is necessary for the enjoyment of myriad recognised rights, the time is ripe for the recognition of a right to a healthy environment against the background of the multifaceted planetary crisis.<sup>165</sup>

It is impossible to realise the intrinsic human right to flourish in a healthy environment if essential ecological processes and the natural foundations of life continue to be abused as mere property of humanity devoid of intrinsic value. Therefore, there is room to argue that invoking the rhetoric of rights or quasi-rights to nature to reframe human obligations not to destroy nature may be a ‘nudge’<sup>166</sup> that helps balance the potential anthropocentric tendencies of the human right to a healthy environment with the assumption that the multifaceted dimensions of the biosphere must be respected. Henceforward, it should be appreciated that the rights of the planet do not terminate all human activities but only those that treat other living forms and ecosystems with disrespect.<sup>167</sup> More research, doctrinal and empirical, is needed to determine the necessity of the rights of nature as a complement to the more accepted right to a healthy environment. At the end of the day, a sound law of planetary health, similar to a sound environmental ethic, ought to be ‘balanced and grounded in a firm sense of reality’.<sup>168</sup>

<sup>165</sup> Atapattu (n 114) 40.

<sup>166</sup> See RH Thaler and CR Sunstein, *Nudge: The Final Edition* (Penguin 2021).

<sup>167</sup> Boyd (n 126) 231.

<sup>168</sup> G Bassham, *Environmental Ethics: The Central Issues* (Hackett 2020) 106.