

## Intergenerational Climate Justice

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### Prologue: Whither Climate Justice?

In December 2015, the United Nations Framework Convention on Climate Change (UNFCCC) officials, most of the delegations of advanced economies, and many climate activists were rejoicing the conclusion of the Paris Agreement at the end of the COP 21, and the related breakthroughs that many among them qualified as ‘commitments’ and a ‘binding’ agreement.<sup>1</sup> In November 2016, breaking news on the result of the US presidential election brought a *coup de froid* to Marrakesh, where the COP 22 and the very first meeting of the parties to the Paris Agreement were taking place.<sup>2</sup> On 27 March 2017, the US President Donald Trump, as a part of the bid to make America’s energy potential great again, signed an executive order obliterating the climate measures taken by his predecessor Barack Obama, thus undermining country’s already modest commitments to the Paris Agreement.<sup>3</sup> Curiously, at the moment of writing this chapter, when asked about his intention to withdraw from the Paris Agreement, Trump seems to be still considering.<sup>4</sup>

At this point, questions of vocabulary and particular narratives remain important. Firstly, the above-mentioned ‘commitments’, or ‘undertakings’ should be qualified as ‘promises’: that is, promises of contributions. The Independent Nationally Determined Contributions (INDCs), put forward by

<sup>1</sup> The twenty-first session of the Conference of the Parties (COP) and the eleventh session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) took place from 30 November to 11 December 2015, in Paris, France, accessed March 28, 2017, [http://unfccc.int/meetings/paris\\_nov\\_2015/meeting/8926.php](http://unfccc.int/meetings/paris_nov_2015/meeting/8926.php).

<sup>2</sup> The twenty-second session of the Conference of the Parties (COP 22), the twelfth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 12), and the first session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA 1) were held in Bab Ighli, Marrakech, Morocco from 7–18 November 2016, accessed March 28, 2017, [http://unfccc.int/meetings/marrakech\\_nov\\_2016/meeting/9567.php](http://unfccc.int/meetings/marrakech_nov_2016/meeting/9567.php).

<sup>3</sup> The Guardian, “Trump moves to dismantle Obama’s climate legacy with executive order,” March 28, 2017, accessed March 28, 2017, [www.theguardian.com/us-news/2017/mar/28/trump-clean-power-plan-executive-order-coal-industry](http://www.theguardian.com/us-news/2017/mar/28/trump-clean-power-plan-executive-order-coal-industry).

<sup>4</sup> Ibid.

the IPCC secretariat, were adopted following the COP 21.<sup>5</sup> Those are voluntary contribution pledges from the Paris Agreement countries, outlining their future plans to cut emissions and adapt to climate impacts.

Secondly, Obama's widely avowed 'climate legacy' concerning the Paris deal (*i.e.* his climate commitments) has, since its inception, seemed to promise a very limited potential for global climate improvement, as well as an actual reach. In fact, in its NDC plan, the Obama administration promised to reduce US emissions by 26–28 % below 2005 levels by 2025.<sup>6</sup> During the COP 22, the US presented a mid-century strategy for deep decarbonization, including the Clean Power Plan and outlining pathways to reduce net greenhouse gases (GHG) emissions by 2050 to one fifth of 2005 levels.<sup>7</sup> A question that immediately arises is why the US' promises to cut emissions were fixed to the year 2005 and not 1990 as those of the European Union (EU) and most of industrialized countries were. The US's invocation of the Kyoto Protocol might be only a ceremonial and rather shallow rationale. After all, given the Obama administration's declared climate enthusiasm, the fact that the US is not part to the Kyoto Protocol does not theoretically preclude the US from substantiating its more recent active climate pledges by linking its reduction targets to 1990, that is, to the year which is a baseline for most of other important global GHG emitters.

Carbon dioxide (CO<sub>2</sub>) accounts for more than 80% of total US GHG emissions, the latter being almost entirely attributable to energy production and use.<sup>8</sup> Consequently, an actual reason for the choice of the particular year 2005 might simply lie in its practical usefulness for concerned US domestic energy producers and operators, hence major US polluters. To better illustrate this hypothesis, it is revealing to analyze the pertinent data from the US Energy information administration's (EIA) latest annual energy outlook, produced

<sup>5</sup> INDCs that were created by the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) as a means to get voluntary contribution plans from countries for inclusion in a mandatory agreement at COPs 19 and 20, now make part of the Paris Agreement, accessed March 28, 2017, [http://unfccc.int/focus/indc\\_portal/items/8766.php](http://unfccc.int/focus/indc_portal/items/8766.php).

<sup>6</sup> European Parliament, "Outcomes of COP 22 climate change conference," accessed March 28, 2017, [http://www.europarl.europa.eu/RegData/etudes/ATAG/2016/593547/EPRS\\_ATA\(2016\)593547\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/ATAG/2016/593547/EPRS_ATA(2016)593547_EN.pdf).

<sup>7</sup> The White House, "Mid-century strategy for deep decarbonisation," accessed March 28, 2017, [https://www.whitehouse.gov/sites/default/files/docs/mid\\_century\\_strategy\\_report-final.pdf](https://www.whitehouse.gov/sites/default/files/docs/mid_century_strategy_report-final.pdf).

<sup>8</sup> US Global Change Research Program, "Third National Climate Assessment Highlights: Responses," GLOBAL CHANGE (2014), accessed March 28, 2017, <http://nca2014.globalchange.gov/highlights/reportfindings/responses>.

under the outgoing Obama administration.<sup>9</sup> The tables demonstrating past, current and projected energy-related 1990–2040 CO<sub>2</sub> emissions from various fossil fuels show that the year 2005 was on average the peak year of US emissions (to wit, the peak year for the emissions from petroleum and one of the two peak years for those from coal).<sup>10</sup> Therefore, by tying the national reduction targets to the year of the peak of national CO<sub>2</sub> emissions, Obama merely granted the US with an additional margin in the global climate deal. And, by promising to dismantle Obama’s Clean Power Plan, Trump made real the possibility of maintaining the 2040 emissions at the same levels as those of 2016 and roughly similar to those of 1990.<sup>11</sup>

The above demonstrates a considerable gap between the UNFCCC COPs objectives, and in particular those of the Paris Agreement, and the US future emissions projections and current policies – something that is seen as a major threat to the whole global climate deal. After Trump’s adoption of the aforementioned executive order in March 2017, many stakeholders expressed their fears that the US will in effect exit the Paris Agreement, thus putting both the relevant American promises and global climate policies on a precarious perch.<sup>12</sup> Such a configuration also looks generally imbalanced and simply unfair.

I identify, however, a more pressing question: what if the US remains a party to the Paris Agreement? In that eventuality, the US could lawfully (from its domestic perspective) enact policy impairing any meaningful cuts of national GHG emissions. This is because the Paris Agreement text and its pragmatic reading – *i.e.* an understanding that the agreement is not legally binding and the commitments are voluntary promises – allow that possibility. No sanctions are foreseen for a country that does not fulfil the promises made in Paris. And possibly no other State will seek to require the US to withdraw from the Paris Agreement on the above grounds. Here, the intricacy might lie in the following epistemological understandings of ‘climate change’ that seem to underpin and justify the current global climate deal. These include the nature of the commitments under the Paris Agreement, its questionable bindingness, and, most importantly, the highly contingent nature of the universal and future-orientated form of global jurisdiction that sanctions the UNFCCC regime,

<sup>9</sup> Energy information administration (EIA), “Annual Energy Outlook 2017,” accessed March 28, 2017, <https://www.eia.gov/outlooks/aeo/>.

<sup>10</sup> EIA, “Projected carbon dioxide emissions are sensitive to factors driving fossil fuel use,” accessed March 28, 2017, <https://www.eia.gov/todayinenergy/detail.php?id=30172>.

<sup>11</sup> Follow the ‘No Clean Power Plan’ pink variable in the aforementioned tables, EIA, id.

<sup>12</sup> The Guardian, “EU leads attacks on Trump’s rollback of Obama climate policy,” 28 March 2017, accessed March 28, 2017, <https://www.theguardian.com/environment/2017/mar/28/climate-change-eu-leader-trump-executive-order>.

thereby empowering only a particular set of regulatory actors and endorsing particular modes of regulation, as well as particular means regarding their *marge de manoeuvre*.

The above example of recent global climate goings-on demonstrates that any attempts to resolve the issue of climate change through the constrained channels of an international environmental treaty would eventually fail. This is because such efforts are inevitably limited by contemporary models of State sovereignty and market economy, and related visions of law-making, development, growth and wealth distribution. And hence the tools of international environmental law are no more apt to ‘solve’ the climate problems alone than any other method that existing environmentalism and sustainability approaches are beset with, as they represent linear methods that ignore the highly complex realities that shape the issue of climate change.<sup>13</sup>

This chapter recounts the history of the international climate regime from the present standpoint in order to highlight the extremely contingent nature of the current configuration. In particular, it highlights the times when there was potential for alternative thinking in order to disrupt a narrative in which the present appears as the inevitable outcome of the global climate regime process, which is reflective of market and economic prescriptions. The chapter traces how the regime initially operates on a social conception of inter-State community and a universal ‘common’ interest, and thereby grounds an international mitigation jurisdiction through a specific understanding of the problem of climate change as a matter of global future common concern.

The example of the climate regime best illustrates a broader configuration of contemporary environmentalism and sustainable development narratives, and I suggest that today there is little place for intergenerational climate justice – not only between the present and future generations, but also with respect to the past generations of the 20th century.

## **1 Introduction: The Evolution of Environmentalism and Sustainability Discourse**

Although transnational attempts to sustainably regulate the climate and overall ecology of our planet increased alongside contemporary environmental problems during the post-war industrial globalization era, *i.e.* the ‘great acceleration’ – for many, environmentalism was born in the early 1960’s in Rachel Carson’s *Silent Spring*. The latter is a series of articles published in 1962 in

<sup>13</sup> Cinnamon Carlarne, “Delinking International Environmental Law & Climate Change,” *Mich. J. Env’tl. & Admin. L.* 4(1) (2014): 4.

the *New Yorker* that then became an international bestseller highlighting in an unprecedented manner the political nature of environmental problems.<sup>14</sup> While Carson was a sort of a ‘social prophet’ for environmentalism, the first true ‘social entrepreneurs’ of global environmentalism were Maurice Strong, a businessman and public servant from Canada, and George Kennan, an American diplomat and conservative realist. Strong left his public position to serve as Secretary-General of the famous 1972 Conference on the Human Environment in Stockholm.<sup>15</sup> Since the year 1970, Strong began a worldwide tour to personally persuade every reluctant country’s decision-makers to send a delegation to the Stockholm Conference,<sup>16</sup> which gave birth to the Stockholm Declaration – one of the first soft law instruments of the existing international environmental law.<sup>17</sup> Kennan first started moonlighting as environmentalist with the publication of an article, “To prevent a World Wasteland”, in *Foreign Affairs* in 1970,<sup>18</sup> and then proposed the creation of an International Environmental Agency. Both men, the former by promoting the Stockholm Conference, and the latter by advocating for a new intergovernmental environmental institution contributed to the creation of the United Nations Environment Programme (UNEP) in 1972.<sup>19</sup> Both social entrepreneurs have contributed to not only shaping a new global state of intergenerational morals – environmentalism, but, through the creation of the UNEP, also the creation of some binding legal norms of international environmental law.<sup>20</sup>

<sup>14</sup> The story is about the compelled use of DDT, a chemical used to kill mosquitos, which is very harmful to humans and animals. Corporations producing and using this chemical were misinforming consumers and a wider public about its harmful effects, and politicians had helped the industry and companies to conceal the externalities.

Silent Spring initially appeared as serialized in three parts in the June 16, June 23, and June 30, 1962 issues of The New Yorker magazine. Rachel Carson, *Silent Spring*, (Mariner Books, 2002 [1st. Pub. Houghton Mifflin, 1962]).

<sup>15</sup> See Thomas Hale, David Held and Kevin Young, Gridlock. *Why Global Cooperation Fails When We Need It Most*, (Cambridge: Polity Press, 2013), 204–206.

<sup>16</sup> *Ibid.*, 205.

<sup>17</sup> See the UNEP Ozone Layer Depletion-related Conference, Washington D.C., 1977; UNEP Ozone Layer Action Plan of 1977; Vienna Convention for the Protection of the Ozone Layer, 1987; United Nations Framework Convention on Climate Change, May 9, 1982; Rio Declaration of Principles on Environment and Development, 1995; Kyoto Protocol to the United Nations Framework Convention on 1998, *op.cit.*

<sup>18</sup> George Kennan, “To prevent a World Wasteland,” *Foreign Affairs* (April 1970), accessed April 19, 2017, <https://www.foreignaffairs.com/articles/1970-04-01/prevent-world-waste-land>.

<sup>19</sup> Hale et al., Gridlock, 205–206, 212–215 and 272.

<sup>20</sup> For example, in February 2009, the Governing Council of UNEP adopted Decision 25/5 on the development of a global legally binding instrument on mercury. See UNEP (DTIE)/Hg/INC.5/7, Report of the intergovernmental negotiating committee to prepare

The *Silent Spring*, and Kennan's and Strong's activities gave impetus to the recognition of the conservation of natural resources as a global priority in the 1970s, as the United Nations (UN) first articulated the dire need to incorporate the protection of Earth with poverty alleviation and development efforts. Namely, at the 1972 Conference on the Human Environment in Stockholm, two of the twenty-six principles of the Stockholm Declaration addressed the use of natural resources, particularly in terms of not exhausting and sharing of non-renewable natural resources.

More than a decade later, in 1987, the World Commission on Environment and Development published the Brundtland Report, *Our Common Future*, which embodied the spirit of the Stockholm Declaration, yet with greater focus on multilateralism for reaching sustainable development, defined for the first time as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."<sup>21</sup>

With the conceptualization of sustainability now on the world stage, the groundwork for the first UN Earth Summit had been fortified. Working with a myriad of international stakeholders, the Brundtland Report assimilated and synthesized information into a mandate that was the first of its kind to explicitly recognize the interconnectivity of humans, non-renewable natural resources, and the environment.<sup>22</sup>

One of the latest meanings of 'sustainable' (claimed to be 'universally accepted'<sup>23</sup>) is "to create and maintain conditions, under which *humans and nature can exist in productive harmony*, that permit fulfilling the social, economic and environmental requirements of present and future generations (my emphasis)".<sup>24</sup> Finally, and importantly, the post-2015 Sustainable Development Goals (SDGs) call in one of their core objectives to "[i]mprove progressively, through 2030, *global resource efficiency in consumption and production* and endeavour to *decouple economic growth from environmental degradation* (my emphasis)".<sup>25</sup>

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a global legally binding instrument on mercury on the work of its fifth session, accessed March 19, 2017, <http://www.unep.org/chemicalsandwaste/Mercury/Negotiations/INC5/INC5Report/tabid/3496/Default.aspx>.

<sup>21</sup> World Commission on the Environment and Development (WCED), *Our Common Future* [*Brundtland Report*], (Oxford/New York: Oxford University Press, 1987), 53.

<sup>22</sup> Brundtland Report, Mandate 2.

<sup>23</sup> James K. Summers and Lisa M. Smith, "The Role of Social and Intergenerational Equity in Making Changes in Human Well-Being Sustainable," *AMBIO Journal of the Human Environment* 43(6) (2014): 718–728, 720.

<sup>24</sup> Ibid.

<sup>25</sup> UN Sustainable Development Goals, Goal No.8 Decent work and economic growth: "Promote sustained, inclusive and sustainable economic growth, full and productive

The discursive retrospect of the idioms of sustainable development discloses a particular path. Namely, it starts from a vision that ecological concern posed inevitable externally imposed biophysical limits, or ‘planetary boundaries’,<sup>26</sup> onto economic growth dependent on present technologies and social organization (1987); then continues with a heading of universal growth through productive harmony (2013); and, finally and most importantly, arrives to the global resource efficiency in consumption and production, and the decoupling economic ‘goods’ from environmental ‘bads’ (by 2030). The most striking moments in the latter vision are the fact that the matters of environmental degradation are placed in the global normative basket of *economic growth*, as well as an assumption that environmental degradation and economic growth can and should be de-linked through somewhat more ‘eco-efficient’ growth patterns.

Here we are, arrived to a kind of ‘market’ sustainability and environmentalism. Were there warning signs to choose an alternative path for the environmental, sustainability and particular climate discourse, politics, practice, and justice? From the history of environmentalism and sustainability, and using the specific example of the global climate crisis as a lesson, the story begins.

There is ample evidence and scientific consensus that anthropogenic GHG emissions are affecting the climate in ways that have serious consequences on planetary habitability. This chapter recounts the history of the global climate regime by tracing a series of developments in the structure of that regime (2). The chapter continues by recognizing the seriousness of the climate crisis while simultaneously narrating how the issue of climate change has been understood and problematized in a specific way in the current global climate jurisdiction. Namely, it unpacks the market-based solutions to the climate crisis: ones that provide a basis upon which market and economic growth discourse converge and come up as a solution (3). Lastly, it discusses other, perhaps more political and pluralistic ways to think of the climate crisis, and offers final conclusions (4).

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employment and decent work for all”, see at point 8.4, accessed September 27, 2016, <https://sustainabledevelopment.un.org/topics>.

<sup>26</sup> *Brundtland Report*, 44–46, 205. For biophysical thresholds, ‘planetary boundaries’, and other related limits, see in particular Donella H. Meadows, Dennis L. Meadows, Jørgen Randers, and William W. Behrens III, *The limits to growth* (The Club of Rome: Universe Books, 1972); and Jørgen Randers, 2052, Report for the Club of Rome, (Chelsea Green Publishing, 2012).

### 3 Growth as a Normative Framework of the Contemporary Concept of Sustainability: the Example of the Climate Change Regime

Currently, the correlation between economic development and intensity of energy use is maintained by the unsustainable use of Earth's exhaustible resources. This particular paradigm, traditionally advanced by the industrialized world, underlines dependence on the exploitation of Earth to grow the economy. This vision and related policies and practices have equally brought the humanity to this perplexing place in which the daily activities of a handful of the most industrialized actors, private and public alike, threaten not only the whole human species, but equally all other forms of life on our planet. Such situation has the far-reaching implications, both at inter- and intra-generational levels, and does concern humans and non-human life forms alike. This section looks at the particular problem of degradation of our climate and the global legal framework that was created to prevent dangerous anthropogenic interference with the climate (1); as well as at the discursive framing of this problem that sees the emergence and empowering of global climate governance through the market as a unique possible option to save the planet (2).

#### 3.1 *The United Nations Framework Convention on Climate Change Regime*

The UNFCCC, in its Article 2, sets an ultimate objective regarding the environment: to prevent dangerous anthropogenic interference with the climate system. Simply put, the UNFCCC is an international treaty aiming at cooperatively considering what States-parties to the treaty should do to limit average global temperature increases and the resulting climate change.<sup>27</sup> The treaty itself sets no mandatory limits on GHG emissions for its members and contains no enforcement mechanisms. Instead, it provides for updates – or protocols – that set mandatory emissions limits. The most famous and relevant is the Kyoto Protocol.<sup>28</sup>

Article 2.2 of the Kyoto Protocol sets quantitative targets and legally-binding commitments, and requires parties, listed at its Annex I,<sup>29</sup> to limit or reduce

<sup>27</sup> See UNFCCC website, accessed March 28, 2017, [http://unfccc.int/essential\\_background/items/6031.php](http://unfccc.int/essential_background/items/6031.php).

<sup>28</sup> See Kyoto Protocol's website, accessed March 28, 2017, [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php).

<sup>29</sup> The industrialized countries that were members of the OECD as of 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States. The Annex 1 countries

their GHG emissions. This also implies that non-Annex I States do not have to respect quantitative targets and related legally-binding commitments.<sup>30</sup>

According to the Kyoto Protocol, concerned members shall meet their targets primarily through national measures.<sup>31</sup> Under the UNFCCC, potential national measures include three market-based mechanisms: (i) emissions trading, or cap-and-trade; (ii) the Clean Development Mechanism (CDM); and (iii) Joint Implementation (JI). I will mostly concentrate here on emissions trading.

Emissions trading systems (ETSs) include a number of economic sectors. Such systems put on each covered sector an established limit ('cap') of overall GHG emissions that the sector is allowed to generate. Accordingly, the primary aim of an ETS is to reduce emissions of certain GHGs.<sup>32</sup> Cap-and-trade approach is said to be a cost-effective one.<sup>33</sup> That is, within a cap-and-trade, all entities of covered sectors receive individual emissions quotas, or allowances, which they can trade with one another as needed; the limit on the total number of allowances available ensures that they have a value.<sup>34</sup> Hence, emissions trading is just another kind of market where, instead of bonds or commodities, emission allowances are traded.<sup>35</sup> The cost of compliance could be seen as the rationale for ETS-type regulations. Namely, whereas under the 'command-and-control' approach (technology standards or performance requirements) a firm

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(with a few exceptions such as the US) took on binding reduction targets under the Kyoto Protocol. See the UNFCCC website.

<sup>30</sup> This distinction originates in the principle of "common but differentiated responsibilities (CBDR) and respective capabilities". Namely, non-Annex I countries are mostly developing countries. Certain groups of developing countries are recognized by the Convention as being especially vulnerable to the adverse impacts of climate change or to the potential economic impacts of climate change response measures. See the UNFCCC website.

<sup>31</sup> See detailed rules for the implementation of the Kyoto Protocol, "Marrakesh Accords", accessed March 28, 2017, [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php). See also WTO-UNEP report Trade and Climate Change, (Geneva: WTO Secretariat, 2009), "Executive Summary", xv.

<sup>32</sup> Those are mostly the carbon dioxide (CO<sub>2</sub>) emissions. More precisely, there is a so-called Kyoto basket of greenhouse gases, which includes carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>); in order to allow the global warming potential of each of the gases to be compared, the information is often converted into "CO<sub>2</sub>-equivalents." European Commission, Climate Change Statistics (2011), accessed March 28, 2017, [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Climate\\_change\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Climate_change_statistics).

<sup>33</sup> See e.g. IATA, "What You Need to Know About Emissions Trading" (2007) accessed March 28, 2017: <http://web.archive.org/web/20070303092647/http://www.iata.org/NR/rdonlyres/95D34D98-7906-4A23-8884-1FA561709037/53257/EmissionsTrading.pdf>.

<sup>34</sup> See the European Commission, Climate Action: Policies, "Emissions Trading System", accessed March 28, 2017, [http://ec.europa.eu/clima/policies/ets/index\\_en.htm](http://ec.europa.eu/clima/policies/ets/index_en.htm).

<sup>35</sup> IATA, "Emissions Trading".

has to comply with strict rules, under ETS the polluting entities can choose their levels of emissions based on the cost of abatement and the price of emissions quotas.<sup>36</sup>

The first key development of emissions trading was theoretical,<sup>37</sup> *i.e.* it is practice that caught up with theory, and not *vice versa*. In 1968, a Canadian economist John Harkness Dales has suggested, in his *Pollution, Property & Prices*, to introduce transferable pollution rights to tackle pollution externalities.<sup>38</sup> The first practical step towards emissions trading was equally done in North America. In other words, the US, although well known for its typical pessimism about the whole system of mutually recognized allowances, and especially its retreat from Kyoto negotiations, is nevertheless the original architect of emissions trading.<sup>39</sup> Notably, the US Clean Air Act amendments of 1970 and the Federal Water Pollution Control Act amendments of 1972 have set new national standards<sup>40</sup> that were technology forcing because they were much higher, and thus unattainable with existing heavily polluting technologies. In these articulations of the hegemony of that time, there emerged an

<sup>36</sup> European Commission, “Emissions Trading System”; IATA, *id.*; W. David Montgomery, “Markets in licenses and efficient pollution control programs,” *Journal of Economic Theory*, 5 (1972): 395–418.

<sup>37</sup> “Economists spend much of their time attempting to understand how markets work. In the case of tradable permit schemes, the reverse is true: these markets have been created from theoretical considerations. Their origins are usually traced back to a famous article by Ronald Coase (1960)—a sharp criticism of the “Pigouvian tradition” that gave birth to environmental taxes. This led J.H. Dales (1968) to suggest introducing transferable pollution rights to deal with pollution ... Various economists further developed that concept or backed it by demonstrating that current command-and-control policies dealing with pollution or other environment or natural resources problems were needlessly costly and could be dealt with more cost-effectively with tradable permits.” Cédric Philibert and Julia Reinaud, OECD, “Emissions Trading: Taking Stock and Looking Forward Environment Directorate/International Energy Agency,” (Paris: OECD), 9.

<sup>38</sup> “If it is feasible to establish a market to implement a policy, no policy-maker can afford to do without one. Unless I am very much mistaken, markets can be used to implement any anti-pollution policy that you or I can dream up (original emphasis).” John H. Dales, *Pollution, Property & Prices: An Essay in Policy-making and Economics*, (Northampton, MA: Edward Edgar Publishing, [1968] 2002), 100.

<sup>39</sup> The US initially inspired environmental policies, starting in 1970 with Nixon’s environmental decade and following the creation of the Environmental Protection Agency (EPA) and other agencies, and regulations covering primarily first-generation pollutants in the air, surface water, groundwater, and solid waste disposal. Notably, the 1970 Clean Air Act set binding benchmarks for automobile emission standards in new cars, resulting in the development and adoption of catalytic converters and greatly reducing automobile pollution. Jack Lewis, “The birth of EPA,” *EPA Journal*, 11(9) (1985).

<sup>40</sup> *Id.*

ever-growing race to efficiency, and a vitalism driven by a ‘technology forcing’ policy drift: *i.e.* the creativity, innovation and the growth ‘with no limits’ that coincided with the peak of neo-liberalism.<sup>41</sup>

In the 1990s, the US first designed a programme using a ‘cap-and-trade’ method (instead of the traditional ‘command-and-control’ line) that was established as a result of the enactment of the 1990 Clean Air Act Amendments (1990 CAAA) and consisted of a two-phase, market-based measure for reducing sulphur dioxide (SO<sub>2</sub>) emissions from fossil-fuel burning power plants located in the American continental forty-eight states.<sup>42</sup> During the Kyoto Protocol talks, the US successfully negotiated for an analogous scheme to be enacted within the UNFCCC framework, based on arguments that if the command-and-control was preferred, the cost of abatement would be ‘unbearable’ for developed countries.<sup>43</sup> First, the EU (EC at that time), G77 and China were against the ETS option; but following the sudden withdrawal of the US from the negotiations, European delegates felt somewhat compelled to assume the leadership, and finally supported and even insisted on the ETS proposal.<sup>44</sup> Thus, by passing through the OECD negotiations, the cap-and-trade ended up in the UN – namely, in 1997, emissions trading between States became part of

<sup>41</sup> See e.g. Andrew Lang, *World Trade Law after Neoliberalism*, (Cambridge: Cambridge University Press, 2011), 4; Robert Howse, “Introduction”, in *Research Handbook on the WTO and Technical Barriers to Trade*, ed. Tracey Epps and Michael J. Trebilcock (Edward Edgar, 2013), 2.

<sup>42</sup> See Denny A. Ellerman, Richard Schmalensee, Elizabeth M. Bailey, Paul L. Joskow and Juan-Pablo Montero, *Markets for Clean Air: The U.S. Acid Rain Program*, (Cambridge: Cambridge University Press, 2006); Denny A. Ellerman, “The U.S. SO<sub>2</sub> Cap-and-Trade Programme,” in *OECD, Tradeable Permits: Policy Evaluation, Design and Reform*, (Paris: Éditions OECD, 2004); Dallas Burtraw, David A. Evans, Alan Krupnick, Karen Palmer, and Russell Toth, “Economics of Pollution Trading for SO<sub>2</sub> and NO<sub>x</sub>,” *Annual Review of Environment and Resources*, 30 (2005): 253–289.

<sup>43</sup> See Michael Grubb, Christiaan Vrolijk, Duncan Brack, *The Kyoto Protocol: a Guide and Assessment*, (London: Royal Institute of International Affairs, 1999), 87; Ricardo Sequeiros Coelho, “Deconstructing abstract carbon: All carbon emissions were not created equal,” Centre for Social Studies, University of Coimbra, accessed March 28, 2017, [http://www.eese2011.org/registration/fullpapers/esee2011\\_a554f8\\_2\\_130497194\\_0\\_2990\\_2392.pdf](http://www.eese2011.org/registration/fullpapers/esee2011_a554f8_2_130497194_0_2990_2392.pdf).

<sup>44</sup> Marcel Braun, “The evolution of emissions trading in the European Union – The role of policy networks, knowledge and policy entrepreneurs,” *Accounting, Organizations and Society*, 34(3–4):469–487, in Coelho, “Deconstructing ...”; Philibert and Renaud, “Emissions Trading”, 9. For a general discussion, see also OECD, *The Economics of Climate Change Mitigation. Policies and Options for Global Action beyond 2012*, (OECD Publishing, 2009). For more details, see e.g. Denny A. Ellerman and Ian Sue Wing, “Absolute vs. Intensity-Based Emission Caps”, Massachusetts Institute of Technology, MIT Joint Program on the Science and Policy of Global Change, Report No.100 (2003).

the Kyoto Protocol, and its operating rules were agreed at the COP 7 (2001) in Marrakech.

The end of the story to date is that more than 20 years after a heavy US lobbying within the UNFCCC talks in favour of market-driven climate change mitigation, 17 years after the agreement on the ETS operations at the COP 7, and some time after the enactment of the EU ETS, the overall greenhouse gas concentrations in the atmosphere had lately reached a new record height, as did the annual GHG emissions.<sup>45</sup> That is, the ultimate objective of the UNFCCC – to prevent dangerous anthropogenic interference with the climate system – has failed to be attained and seems hardly ever attainable. Indeed, regarding the EU ETS,<sup>46</sup> for example, it was initially calculated that it would reduce GHG emissions, and also that the declining cap would give rise to a price signal to generate low-carbon investments. The puzzling part of the story is that the initially projected CO<sub>2</sub> price is ten times higher than the actual market price of carbon. That is, instead of the price projected in the early 2000s, namely EUR 40 per ton of carbon,<sup>47</sup> in 2017 the price fluctuates between EUR 4 and 4.95 per ton, but never rises above EUR 5.<sup>48</sup>

<sup>45</sup> The most recent data from the UN World Meteorological Organisation (WMO) shows that GHG concentrations in the atmosphere are now 400 parts per million (ppm). CO<sub>2</sub> levels had previously reached the 400 ppm barrier for certain months of the year 2016 and in certain locations but never before on a global average basis for the entire year (that is, the year 2016). The longest-established WMO GHG monitoring station at Mauna Loa, Hawaii, predicts that CO<sub>2</sub> concentrations will stay above 400 ppm and will not dip below that level for many generations. Between 1990 and 2015 there was a 37% increase in radiative forcing – the warming effect on Earth climate – because of long-lived GHGs such as CO<sub>2</sub>, methane and N<sub>2</sub>O (nitrous oxide). “The year 2015 ushered in a new era of optimism and climate action with the Paris climate change agreement. But it will also make history as marking a new era of climate change reality with record high greenhouse gas concentrations,” says WMO Secretary-General Petteri Taalas. WMO, “The El Niño event has disappeared. Climate change has not,” accessed April 28, 2017, <https://public.wmo.int/en/media/press-release/globally-averaged-co2-levels-reach-400-parts-million-2015>.

<sup>46</sup> Consolidated version of the Directive 2003/87/EC establishing a scheme for GHG emission allowance trading within the Community [OJ 2003, L 275/32].

<sup>47</sup> In retrospect, in the first EU ETS trading period the CO<sub>2</sub> price collapsed to zero as a result of the over-allocation of allowances. In the second phase (2008–2012), the carbon price just started to rise – up to EUR30/tonne in June 2008 – but was severely hit by the recession; the price has not fallen to zero but was floating between EUR6 and 7. See [http://www.europeanenergyreview.eu/site/pagina.php?id\\_mailing=267&toegang=eda80a3d5b344bc40f3bc04f65b7a357&id=3642](http://www.europeanenergyreview.eu/site/pagina.php?id_mailing=267&toegang=eda80a3d5b344bc40f3bc04f65b7a357&id=3642). Then, in late January 2013, the EU carbon price fell to a new record low of EUR2.81 following the Energy and Industry Committee of the European Parliament opposition to a proposal to withhold 900 million future-dated allowances from the market. <http://www.theguardian.com/environment/2013/jan/24/eu-carbon-price-crash-record-low>, all accessed April 12, 2017.

<sup>48</sup> Carbon market data, accessed April 30, 2017, <http://www.eex.com/en/market-data#/market-data>.

Overall, since the 1970s, following Dales' *Pollution, Property & Prices*, many started seriously thinking that self-regulating markets alone were the solution for such complex problems as climate change.

### 3.2 ***Orthodox Discourse on Climate Change: 'Our Contemporary Common Universal Problem That Can Be Solved by the Market'***

Here, I discuss the legal and regulatory, and especially the discursive framing of the problem of global warming that sees the emergence and empowering of global climate governance through the market as a unique possible option to save the planet. Such particular vision of the climate crisis has become a dominant cognitive setting in official, popular, academic and technical-scientific discourse.

As mentioned above, Coase and Dales were among the first scholars arguing in favour of fixing social problems through market solutions, such as environmental taxes. But, especially since the late 1980s, the sustainability discourse in general, and particularly the intergenerational equity and justice notions were increasingly permeated with specific conceptualizations based on the vision of environmental degradation as current and future collective problems of our global commons. In this discourse, we as humankind are supposed to define and implement the protection of the environment for both present and future generations;<sup>49</sup> the environmental resources are a public trust of humanity;<sup>50</sup> and sustainable development is parallel (if not equivalent!) to sustainable economic growth.<sup>51</sup> The two (*i.e.* sustainable development and sustainable economic growth) are expected to enable the countries of the world to better address the problems of climate change.<sup>52</sup>

<sup>49</sup> "Sustainable development rests on a commitment to equity with future generations. In 1972 the United Nations Stockholm Conference on the Human Environment recognized that we had a responsibility to "protect and improve" the environment for both present and future generations. In 1992, we are faced with defining and implementing this commitment to future generations in the context of environmentally sustainable development." Edith Brown Weiss, "Intergenerational equity: a legal framework for global environmental change," in *Environmental change and international law: New challenges and dimensions*, ed. Edith Brown Weiss (Tokyo: United Nations University Press, 1992), 1. And, by the same author, see, generally, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity*, (Transnational Publishers Inc., 1989); and "Our Rights and Obligations to Future Generations," *American Journal of International Law* 84 (1990): 198.

<sup>50</sup> Sharon Beder, "Responsibility and intergenerational equity," in *Enough for All Forever: A Handbook for Learning about Sustainability*, ed. Joy Murray, Glenn Cawthorne, Christopher Dey and Chris Andrew (Champaign, Illinois: Common Ground Publishing, 2012), 131, 133.

<sup>51</sup> See *supra*, Introduction.

<sup>52</sup> *Ibid.* See also UNFCCC Articles 3(4) and (5).

In the specific example of the climate change regime, in addition to Dales' theoretical commodification of pollution, taken up and developed in practice by the US, the OECD, the EU and eventually the whole international community of States in the UN, a particular economic cost-benefit approach came to determine what constitutes a riskless climate through very specific models of economic analysis and risk-assessment.<sup>53</sup> It thus has arguably played a supra-normative role in legitimizing one way of determining scientific evidence and prioritizing it above all else. Following these determinations, the question of what makes our climate riskless meant assessments of which actors and institutions are relevant, what sorts of risks are acceptable, etc., all of which are extremely politically sensitive and relatively suggestible issues. Imposing those in 'objective' terms seems to have influenced what kind of data and risk calculation make the basis of legal and regulatory objectives of sustainability, and specifically the climate regime.

Economic cost-benefit analysis in the climate arena has taken on an analogous supra-normative relationship with public international law. The *Stern Review's* model<sup>54</sup> by which such a collective global policy objective stipulated in international environmental treaties should be determined, appears to be one based on Coase's and Dales' theoretical representations allowing to commodify environmental externalities, and, amongst others, pollution. The above model, which apparently gained authority from its positioning as 'scientific' and 'objective', is nonetheless based on several arguments that seem being mere assumptions,<sup>55</sup> including potential projections of the future of assumed economic growth.<sup>56</sup> These assumptions and the already embedded questions of valuation represent the most controversial aspects of the modelling in the *Stern Review* relating to the discounting rate that was adopted based on a Western appreciation of how future risk/harm is assessed.<sup>57</sup> That is, the life style and risks of the global North seem to be taken as a sample, or a point of departure. Notably, later Stern himself argued that his model "suffer[s] from

<sup>53</sup> The most influential of that kind of studies is the famous Stern Review. Nicholas H. Stern, *The Economics of Climate Change: The Stern Review*, (Cambridge: Cambridge University Press, 2007). See also Jean Dreze and Nicholas H. Stern, "The Theory of Cost-Benefit Analysis," in *Handbook of Public Economics, Vol II*, ed. Alan J. Auerbach and Martin Feldstein (Elsevier, 1987).

<sup>54</sup> "[M]easuring and comparing the expected benefits and costs over time of different potential policy goals can provide guidance to help decide how much to do and how quickly", Stern, *Stern Review*, 318.

<sup>55</sup> Dreze and Stern, "Cost-Benefit Analysis," 900–990, in particular 911.

<sup>56</sup> For a discussion of these debates see Stern, *Stern Review*, "Chapter 2: Economics, Ethics and Climate Change" and "Chapter 2A: Ethical Frameworks of Intertemporal Equity".

<sup>57</sup> *Ibid.*

the omission of the scale of damage that could arise from catastrophes, mass migration and serious conflict.”<sup>58</sup>

With respect to the latter ‘omissions’, numerous studies represent sharp counter-evidence of the underpinnings, as well as the tangible and potential results of the existing global climate regime adaptation to and mitigation (curiously, in 2017 we are not talking anymore about the *abatement!*) of global warming. As many researchers argue, natural environmental disasters, such as hurricanes and floods, can be of concern for environmental justice,<sup>59</sup> for the poorest countries in the international system are, at the same time, the most geographically and economically vulnerable.<sup>60</sup> Some even go so far as to claim that the focus of the international climate regime, previously being a strategy of abatement, later becoming that of mitigation and adaptation, includes the projected removal of entire indigenous communities if necessary.<sup>61</sup> Yet the same most vulnerable actors have the least impact on legal mechanisms aiming to prevent the escalation of climate disasters.<sup>62</sup> Summers and Smith, in referring to numerous US and international studies, argue that

[j]ust as these impoverished small Third World nations are among the most vulnerable to the effects of global warming while simultaneously being in the weakest position to halt its progress, indigenous peoples in the United States (particularly tribes of Alaska) are in a similar situation.<sup>63</sup>

In 2017 the catastrophes, cases of mass migration, and armed conflicts are far from scarce. We hence do not need to wait some abstract future to see how the scale of damage affects Stern’s climate model: that is, the model is simply

<sup>58</sup> Nicholas H. Stern, “The Structure of Economic Modelling of the Potential Impacts of Climate Change: Grafting Gross Underestimation of Risk onto Already Narrow Science Models,” *Journal of Economic Literature* 51(2) (2013): 838, 847.

<sup>59</sup> Barbara L. Allen, “Environmental justice and expert knowledge in the wake of a disaster,” *Social Studies of Science* 37 (2007): 103–110; Yvonne Rydin, “Justice and the geography of Hurricane Katrina,” *Geoforum* 37 (2005): 4–6; James R. Elliott and Jeremy Pais, “Race, class, and Hurricane Katrina: Social differences in human responses to disaster,” *Social Science Research* 35 (2006): 295–321; Miranada Welbourne, “The environmental justice movement’s response to Hurricane Katrina, a critique: Problems faced, successes, failures, and the state of the movement one year later,” *Thurgood Marshall Law Review* 125 (2007): 125–145.

<sup>60</sup> Ruth Gordon, “Climate change and the poorest nations: Further reflections on global inequality,” *University of Colorado Law Review* 78 (2007): 1559–1624.

<sup>61</sup> Rebecca Tsosie, “Indigenous people and environmental justice: The impact of climate change,” *University of Colorado Law Review* 78 (2007): 1625–1677.

<sup>62</sup> Gordon, “Climate change,” 1561.

<sup>63</sup> Summers and Smith, “Intergenerational Equity,” 722.

not working. The efforts to resolve the complexities of global climate crisis by means of public international law, and specifically, international environmental law instruments seem to equally fail. These can be attributed to the pervasive contemporary models of development, based on an underlying assumption that cost-benefit analysis and economic growth can simultaneously address concrete crises and solve overall distributive justice concerns. A very particular governance rationality they generate seems to underpin the form of global climate action whereby governmental measures, subject to a set of 'scientific' or 'objective' truths, were formulated in a way that sanctions the market to check the governmental action. The next section looks at the rationale of particular bottlenecks with which the above models endorsing current climate regime, and indeed the whole contemporary discourse of sustainability and international environmental law, are beset.

#### **4 Main Conflicts Permeating Market Sustainability and Environmentalism**

As mentioned above, the economic cost-benefit analysis in the climate regime seems to take on a supra-normative relationship with relevant public international law. This particular *Stern Review's* methodology was used to set collective global environmental and climate objectives. As a result of the aforesaid methodology, the *Stern Review* came to the conclusion that

[t]he current evidence suggests aiming for stabilisation somewhere within the range 450–550ppm CO<sub>2</sub>. Anything higher would substantially increase risks of very harmful impacts but would only reduce the expected costs of mitigation by comparatively little. Anything lower would impose very high adjustment costs in the near future for relatively small gains and might not even be feasible, not least because of past delays in taking action.<sup>64</sup>

The Paris Agreement, entered into force on 4 November 2016 sets in its Article 2 the following goals: to maintain the increase in global temperatures well below 2°C above pre-industrial levels, whilst making efforts to limit it to 1.5°C.

The action aiming at restricting the temperature rise above pre-industrial levels 'well below' 2°C, and especially to limit it to 1.5°C requires stabilization

<sup>64</sup> Stern, *Stern Review*, 318.

at no more than 450 parts per million (ppm) whereas, as I mentioned earlier, a global average basis for 2016 was already 400ppm.<sup>65</sup> However, even this stabilization, let alone Stern's above stabilization "somewhere within the range 450–550ppm CO<sub>2</sub>" is already very dangerous. To wit, at the Copenhagen COP, a spokesperson for small island States warned that with restricting the global warming to 2°C "some countries will flat out disappear", while a spokesperson for Africa described such a target as a "suicide pact" for the drought-stricken continent.<sup>66</sup> As such, these 'one-size-fits-all' quantifications of our 'common' global limits or climatically equal mitigation targets are not only unjust regarding climatically different parts of the world, but are simply dangerous.

The remainder of this section addresses specific techniques and practices that are utilized to achieve this 'common vision' of economically 'efficient' ecological limits of anthropogenic interference with the climate and overall Earth ecology. I will address only two techniques that seem to be the most problematic, hence important, for the topic of the intergenerational justice and equity. Recall that the Kyoto Protocol flexibility mechanisms, consisting of ETS as well as two offset mechanisms, JI and the CDM, that is, both 'cap-and-trade' and 'command-and-control' schemes rely on legislatively imposed limits. After the US lobbied for the incorporation of a binding 'cap-and-trade' into the UNFCCC, and a decade later, the EU launched the first ETS, the qualitative assessment of limits within the climate regime resulted in a very particular approach to the question of limits in international environmental law and a broader sustainability discourse. Namely, it involves at least two main alterations from Brundtland's sustainability narrative (the latter seeking intergenerational justice by aiming at limits, not growth): substitutability of nature (1); and the decoupling of economy from actual resource use (2).

#### 4.1 *Substitutability*

A mainstream business and industry argument is that we may compensate future generations for the loss of exhaustible natural resources with 'human-made' capital (*i.e.* machinery, buildings, *etc.*) and properly 'human' capital (technology, skills and knowledge).<sup>67</sup> The rationale of this – quite simplified – argument is that an exhausted natural resource could be compensated by investments in technology and knowledge,<sup>68</sup> including investment in, for

<sup>65</sup> WMO, "The El Niño".

<sup>66</sup> Cited in Bill McKibben, "Global Warming's Terrifying New Maths," Rolling Stone 19 July 2012, accessed March 8, 2017, <http://www.rollingstone.com/politics/news/global-warmings-terrifying-new-math20120719>.

<sup>67</sup> Beder, "Responsibility", 136.

<sup>68</sup> Ibid.

instance, the R&D on, as well as actual production of, the alternative energy sources – so as to provide an ongoing equivalent income.

Regarding the example taken in this chapter, namely, our current global climate regime, one commentator has observed that it is quite based on a “fetishist invocation of CO<sub>2</sub> as the ‘thing’ around which our environmental dreams, aspirations, contestations as well as policies crystallize.”<sup>69</sup> Indeed, all targets of CO<sub>2</sub> emissions cuts are constructed as tradable commodities by “abstracting away from place, technology, history and greenhouse gas type.”<sup>70</sup> They thus sanction only a very relational view that sees different past, current and future climate disasters as equivalent both climatically and in GHG emissions terms.

Legally speaking with respect to the climate regime, substitutability means the methods by which any mitigation policy could be realized in equivalent terms through the commodification of pollution and its subsequent trading, and specifically, CO<sub>2</sub> trading.

## 4.2 Decoupling

In the current global action endorsed by the UNFCCC, decoupling participates in the making of new forms of jurisdiction, rights and values – in particular, through the operations of carbon trading.

Generally, a decoupled economy is one that is able to sustain GDP growth without having a negative impact on environmental conditions.<sup>71</sup> Decoupling, especially advertised and brought to the wider public by the UNEP since the early 2000s, was taken up by the OECD, the latter defining the term as referring to breaking the link between environmental ‘bads’ and economic ‘goods’.<sup>72</sup> In 2014, the UNEP International Resource Panel published a second report, “Decoupling-2” (logically) that focused on existing technological options for both developing and developed countries to accelerate decoupling, hence

<sup>69</sup> Erik Swyngedouw, “Apocalypse Forever?: Post-Political Populism and the Spectre of Climate Change,” *Theory, Culture and Society* 27 (2010): 213, 219.

<sup>70</sup> Larry Lohmann, “When Markets Are Poison: Learning About Climate Policy from the Financial Crisis,” The Corner House, Briefing 40, (2009), 29.

<sup>71</sup> UNEP International Resource Panel (IRP), Decoupling natural resource use and environmental impacts from economic growth, 2011 Report, accessed March 30, 2017, <http://www.unep.org/resourcepanel/Publications/AreasofAssessment/Decoupling/Decoupling/tabid/56048/Default.aspx>. For critics of decoupling, see e.g. John B. Foster, Brett Clark and Richard York, “The Midas Effect: A Critique of Climate Change Economics,” *Development and Change* 40(6) (2009): 1085.

<sup>72</sup> OECD, “Indicators to Measure Decoupling of Environmental Pressure from Economic Growth,” 2002, accessed March 31, 2017, <http://www.oecd.org/dataoecd/0/52/1933638.pdf>.

boost their resource ‘productivity’—that is, to bring in the economic and environmental ‘benefits’.<sup>73</sup>

On 26–27 September 2015, the UN’s new Sustainable Development Goals (SDGs) were signed in New York. Alongside the main overall objective – to eradicate poverty by 2030—objective No.8, called “Decent work and economic growth”, aims to promote “sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”.<sup>74</sup> In particular, its objective 8.4 aims to improve “progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead”.<sup>75</sup>

In this paradigm of decoupling, few issues remained unanswered vis-a-vis inter-generational – but also inter-class and racial – justice and equity. They could especially be brought by critics of so-called Brundtland’s ‘sufficientarianism’: *i.e.* where Brundtland’s sustainability definition falls short to explain plural systems and values, local climate and soil particularities, population density, economic and social development, *etc.* Recall that, as per Brundtland, a development is only deemed sustainable if it “meets the needs of the present without compromising the ability of future generations to meet their own needs”. However, Daly has for example argued that “... the basic needs of the present should always take precedence over the basic needs of the future but the basic needs of the future should take precedence over the extravagant luxury of the present”.<sup>76</sup>

Seen in this light, the principle and politics of decoupling do not seem to be sufficient safeguards for intergenerational justice. To wit, regarding more particularly the example of the climate regime, necessary political, economic and social distinctions between types of ‘environmental bads’ should be made alongside questions of differentiated needs: *i.e.*, between ‘luxurious’ and ‘necessary’ emissions; between ‘avoidable’ and ‘unavoidable’ emissions; between emissions from historical over-consumption and from mere subsistence survival; between aviation fuel from a private jet carrying one person and

<sup>73</sup> UNEP IRP, Decoupling 2: A Report of the Working Group on Decoupling to the International Resource Panel. Ernst von Weizsäcker et al., 2014, accessed March 31, 2017, <http://www.unep.org/resourcepanel/Publications/AreasofAssessment/Decoupling/Decoupling2/tabid/133371/Default.aspx>.

<sup>74</sup> UN post-2015 SDGs, Goal No.8.

<sup>75</sup> *Ibid.*

<sup>76</sup> Herman E. Daly, *Beyond Growth, The economics of sustainable development*, (Boston: Beacon Press, 1996), 36.

making a two-hours roundtrip because of a top business meeting, and methane from a peasant's cow; *etc.*

As mentioned, in the current global climate jurisdiction, decoupling is operated through carbon trading. Namely, within the framework of the Kyoto Protocol, the latter creates economic value of pollution, that is, an 'economic good', through the enactment of dematerialized carbon market and its formal limits in the binding legislation. Consequently, thanks to this new market, the growth of immaterial carbon commodities is decoupled from actual resource use, including both the fossil fuels and the clean air and the atmosphere as exhaustible natural resources.

In public international law, the global atmospheric space could be looked at by analogy to the high seas. Historically, the dominant visions of the legal status of the high seas and its natural resources are as follows:

- (i) to identify it as *res communis*, making the high seas and its resources subject to freedom of the high seas principle and thus recognizing that the high seas could be used by any State capable of exploring and exploiting it; and
- (ii) to see the high seas as *res nullius*, basically implying the same as above plus a possibility of appropriation of the high seas and its resources through occupation on a 'first-come-first-served' basis.<sup>77</sup>

These two visions seem to lead to the same result regarding the exploration and exploitation of the high seas and its natural resources: *i.e.* these activities would be restricted to few actors who have the necessary technological and financial capacities. This, in turn, would only further exacerbate injustices between countries, especially regarding developing States.<sup>78</sup> Arguing from analogy, neither the sovereignty nor the freedom approach could provide for a minimally just legal framework for the global atmospheric space and its pollution problems.

In addition to prospects of appropriation and occupation through the tools of traditional international law, there is an extra possibility to make clean air and the atmosphere 'excludable' natural resources that are therefore appropriable. To wit, the Kyoto Protocol produces scarcity, realized through legal limits on use, as well as the regulation and enforcement of this scarcity of air.<sup>79</sup>

Based on the above, if in so doing the binding emissions cuts targets create a contractual relationship to the global atmospheric space, it remains a contract

<sup>77</sup> Based on Yoshifumi Tanaka, *The International Law of the Sea* (2nd edn, CUP, 2015) 178–179. <sup>78</sup> *Ibid.*, 179.

<sup>79</sup> Kevin Gray, "Property in Thin Air," *The Cambridge Law Journal* 50(2) (1991) 252.

whose terms and content are determined by historical and ongoing relations of purely formal equality, whereas the actual inequalities of all types persist.

The unequal nature of decoupling and subsequent carbon trading scheme in the global climate regime is open to criticism. First of all, criticism might come from the side of distributive justice theory (especially, egalitarian theory and the John Rawls' classic<sup>80</sup>). The latter theory suggests that it is not the historical differentials but per capital equal allocations that should be used in order to further adjust formally equal allocations to actual development demands of the global South.<sup>81</sup> However, in using the year 1990 as the GHG emissions baseline, the framework seems to ignore greater disparities in historical emissions and does not take into account the notion of the so-called ecological debt.

The concept of ecological debt emerged in the 1990s. Originally, it is a matter of debt which the developed countries owe to developing ones. More specifically, it is based on the argument of historically unequal ecological exchanges between the global North and South, exposed by Spanish economist Martinez-Alier, amongst others.<sup>82</sup> An unequal ecological exchange generally posits that the final price of goods and services that are produced in poorer countries and exported to the market of the global North is far from cover actual social and environmental costs of their production.<sup>83</sup> Consequently, even if in the past poorer countries have been polluting the atmosphere through excessive ecologically disastrous production of exports, a lot of this pollution might and should be directly attributable to the global North.

Even commitments to egalitarianism therefore do not seem to resolve all controversies surrounding how allocations are determined, calculated and distributed, *i.e.* in terms of space, time, or location. For even if emissions rights could be qualitatively and equitably allocated – what about the structural differences of the emitters (*viz.* class and racial differences, for example)?

All in all, the techniques of substitutability and especially the decoupling seem to reveal that a particular understanding of climate change as one of 'negative externalities' of post-war global economic model persists. Namely,

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<sup>80</sup> John Rawls, *A Theory of Justice (revised edition)*, (Oxford/New York: Oxford University Press, 1999).

<sup>81</sup> Paul Baer, Glenn Fieldman, Tom Athanasiou and Sivan Kartha, "Greenhouse Development Rights: Towards an Equitable Framework for Global Climate Policy," *Cambridge Review of International Affairs* 21(4) (2008): 649.

<sup>82</sup> See different interventions of the conference «La dette écologique», 5 and 6 June 2014, Centre d'Etudes Juridiques et Politiques (CEJEP), University of La Rochelle, accessed April 13, 2017, <http://cejep.univ-larochelle.fr/COLLOQUE-La-dette-ecologique>.

<sup>83</sup> *Ibid.*

this understanding of climate change as an object and a problem in ‘scientific’ and ‘technical’ universal terms is a necessary precondition for construction of various ownership rights and mechanisms of management and trading to come up as a ‘solution’. This specific conceptualization of distributional climate justice seems to be based on at least three interlinked premises:

- (i) the ultimate givers of norms and receivers of rights and obligations regarding climate justice are still States;
- (ii) climate change is a problem of externalities, that is, of the fact that legal regulation or market relations simply did not initially extend to the particular domain of environment, thus creating a specific regulatory construction that separates economic growth from actual resource use, and proposes to compensate the loss of exhaustible natural resources with investments in technology and knowledge, so as to provide an ongoing equivalent income – thus only justifying and legitimizing the over-exploitation of natural resources; and
- (iii) climate change is a current and future problem equally incumbent on the entire humanity.

## 5 General Concluding Remarks

Prevailing discourses and practices of sustainability and international environmental law seem to be permeated with dichotomist conflicts between economy and ecology, profit and prudence, the risk-taking of the present and the security of the future. Indeed, the question of what can be considered sustainable in reference to society oscillates between very different, sometimes even opposite, models – either striving to attain sustainability through improving flexibility or, quite the contrary: guaranteeing stability and overall distributive justice. However, few of relevant models and arguments look at the past events and structural inequalities along the lines of social, race, class and gender differences, as well as geographical location.

The notion of sustainable development has brought the nexus ‘nature-justice’ back into politics by forging a link between sustainability and inter-generational equity concerns. Quickly, however, sustainability surpassed its initial Brundtland-style limitation to nature-related policies, and has become a buzzword applicable to almost any policy realm – and especially the market economy. Just as in the variety of contexts where it is applied, there also seems to be a rather varied understanding of what sustainability means and stands for.

In the global context, the sustainability debate plays into the larger power play perspective. The international climate regime is one of the most relevant examples. Those who own the discourse and manage to pursue a certain vision of sustainability, safe climate, our ‘common’ sustainable development goals, the law applicable to the climate change, etc., affect the agenda-setting and regulatory outcomes in line with the interests and objectives they represent. In effect, since geographical, social and local contexts and concerns differ significantly, the internationally-defined sustainability goals, climate change mitigation targets, etc. can work as a Trojan Horse for less privileged and influential. Hence, what is sustainable for Western Europe will not always be sustainable for the East. The way sustainability is thought of in the North will be far from its understanding in the South. Whether an actor is a peasant, an industrial, a fossil-fuels exporter, a developed or developing country, a coastal or land-locked State, etc. will affect strategic and/or national conceptualization of sustainability and connected concepts, as well as the local reception of transnational sustainability-based rules and targets. This can have paradoxical, often contradictory outcomes – for past, current and future generations of humans and nature.

The tendency of a limitless world is captured in the paradigm of current global economic model based on an underlying assumption that economic growth and free trade simultaneously improve global welfare and address distributive justice concerns.<sup>84</sup> The offered solutions, such as substitutability and decoupling, however, do not resolve, but instead transpose, spatially and temporally, the problem of climate change.

Seen from the perspective of intergenerational justice, the problem of climate change, and in particular, current attempts to regulate the GHG emissions reveal the inadequacy of combined market-based and traditional international law strategies in the face of endless economic growth on the one hand, and persistent population growth on the other, both implying ever-rising energy consumption and natural resources depletion.

As a way forward, the ideas of a wider narrative and practices of contemporary environmentalism and sustainability should change. To wit, today’s approach to climate change as an issue to be solved by international environmental law and policies precludes us from addressing it from a more pluralistic and inclusive perspective that spreads far beyond the universality of State form, an international environmental treaty, the paradigm of sustainable economic growth and ensuing cost-benefit analysis resulting into market-based

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<sup>84</sup> See e.g. Carlarne, “Delinking ...”, 13.

efforts. Instead, if we seek to follow the path of intergenerational climate justice, we should think how to focus more on differentiated environmental ‘bads’ and differentiated economic needs: on a ‘macro’ level, *i.e.* between more and less industrialized countries, but also on a ‘micro’ level – namely, between citizens of different classes and races within each country, inhabitants living in the countryside against those living in urban areas, as well as all other, non-human, forms of life of our planet.

This shift in perspective will hopefully allow us to think of sustainability and climate change differently – that is, in a manner, which is more consistent with the intergenerational justice as a concept of mutual recognition, pluralism and non-domination.

### **Author Note**

Views and errors are mine. Comments and suggestions are most welcome at: [anna.aseeva@graduateinstitute.ch](mailto:anna.aseeva@graduateinstitute.ch) / [anna.aseeva@sciencespo.fr](mailto:anna.aseeva@sciencespo.fr).