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## The Imperative of Redistribution in an Age of Ecological Overshoot: Human Rights and Global Inequality

### Introduction

We live in a world characterized by extreme economic inequality. The world's forty-two richest people hold more wealth than the poorest half of the human population.<sup>1</sup> Meanwhile, the real per-capita income gap between the Global North and the Global South has more than tripled since 1960.<sup>2</sup> While inequality is now widely recognized as a problem, legal scholars worry that our existing human rights framework offers little leverage against it. Philip Alston, the United Nations Special Rapporteur on extreme poverty and human rights, drew this conclusion in his 2015 report to the UN General Assembly: "At present, there is no explicitly stated right to equality, as such, under international human rights law."<sup>3</sup> He notes that the value of distributive equality—which would place some kind of cap on the wealth or income gap between rich and poor—is absent from the human rights regime.

Of course, certain dimensions of human rights nonetheless carry *implications* for income inequality—even if in a limited sense. For example, Article 1 of the Universal Declaration of Human Rights guarantees status equality, noting, "All human beings are born free and equal in dignity and rights."<sup>4</sup> Alston points out that the capacity of the poor to exercise or realize their rights "diminishes relatively, if not absolutely, as others become wealthier and gain greater political and economic power."<sup>5</sup> If income inequality compromises the principle of equality in dignity and rights, then we might say that Article 1 requires attention to income inequality.

We can also find implications for inequality in socioeconomic rights. Article 25 of the Universal Declaration recognizes that "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family [*sic*]."<sup>6</sup> Because billions of people around the world lack the resources they need to realize an adequate standard of living, Article 25 technically requires redistributing a portion of national or global income downward to the poorest.

But neither of these provisions requires *reductions* of income inequality, or any kind of limit on the gap between rich and poor. As soon as the basic status rights and socioeconomic rights of the poor are satisfied, there is nothing to stop the rich from accumulating more, widening the income gap yet further. As Samuel Moyn observes: "One could imagine one man owning everything—an absolute overlord—and he would not violate the current scheme of human rights, so long as everyone had their basic rights fulfilled. Even perfectly realized human rights are compatible with radical inequality."<sup>7</sup> We can see this issue at play in international development. The dominant model of poverty

reduction—supported, for example, by the World Bank—is to generate economic growth. While the majority of new income produced by growth is captured by the richest (the richest 1 percent captured 27 percent of new income from 1980 to 2016),<sup>8</sup> the hope is that a sufficient amount will “trickle down” to the poor. In other words, the dominant model seeks to improve the well-being of the poor (toward satisfying Article 25) precisely in the act of increasing the incomes of the rich—in other words, precisely in the act of producing inequality. I argue, however, that evidence about the relationship between economic growth and ecological breakdown calls this model into question, and challenges the notion that human rights offer no leverage against global inequality. Indeed, the evidence points strongly toward the opposite conclusion.

Recent research on planetary boundaries shows that human economic activity has transgressed critical thresholds in terms of biodiversity loss, chemical loading, land-use change, and global warming. Ocean acidification and freshwater use are two thirds of the way toward the planetary boundaries, relative to pre-industrial levels.<sup>9</sup> This overshoot is caused primarily by consumption in high-income countries and has a disproportionate impact on the world’s poorest people.<sup>10</sup> Climate change presents the most obvious example: while high-income nations have contributed 70 percent of historical emissions, the Global South suffers the brunt of the consequences. According to data from the Climate Vulnerability Monitor, the South bears around 82 percent of the total monetary costs of climate change, and suffers 98 percent of climate change–related deaths.<sup>11</sup> Given this effect, some have argued that ecological breakdown poses a threat to the human rights of the poor,<sup>12</sup> which is particularly apparent as climate change is projected to cause hunger to rise 20 percent by 2050, with crop yields declining across the Global South.<sup>13</sup>

As we will see, given the tight coupling of economic growth and environmental impact, aggregate global growth is not an adequate strategy for ending poverty. If we want to increase the incomes of the poor in order to satisfy their socioeconomic human rights as outlined in Article 25 (which I will focus on here), and want to do so without further *violating* their human rights with poverty-inducing climate change and ecological breakdown, then this effort will require shifting existing global income from the rich to the poor. In other words, approaching the problem through the lens of ecology makes clear that the existing human rights framework implies a challenge to global income inequality, requiring significant reductions in the income gap. My argument proceeds by establishing three key premises, which provide grounds for this conclusion.

### **Premise 1. Estimating the Poverty Gap**

The first step is to determine what it will take, in terms of income, for everyone in the world to have secure access to the resources required to realize the rights laid out in Article 25. To get there, we need to have a clear sense of the extent of global poverty. The conventional view on this issue begins with the international poverty line (IPL), which is set by the World Bank at \$1.90 per day, at 2011 Purchasing Power Parity (PPP). At this level, 897 million people were living in poverty as of 2012, the most recent year of reliable data.<sup>14</sup> That is about 13 percent of the world’s population. The “poverty gap” is about \$181.7 billion per year; in other words, that is how much it would require to bring all of the poor above the \$1.90 poverty line. From this perspective, the poverty problem—intractable though it may seem—appears to be solvable with relatively modest amounts of

foreign aid, rather than requiring a serious challenge to the status quo of global income distribution.

This is the level of poverty that most have become accustomed to thinking about—and the level that informs the existing international development agenda and the Sustainable Development Goals (Goal 1). But the IPL has no empirical grounding, in terms of the income required to meet actual human needs, and scholars hold that it significantly underestimates the extent of the problem. The IPL is based on the national poverty lines of the world's lowest income countries. Yet it is difficult to assess how accurate these lines are, as many of them have been set using poor data, and, what is more, they tell us little about what poverty is like in even slightly better-off countries. In most developing countries, the IPL underestimates poverty when compared to national lines. In India, for example, national data show that the poverty rate is twice as high as the IPL suggests.<sup>15</sup> In Mexico and Sri Lanka, the figure is about ten times as high.<sup>16</sup> Recent research shows that, in many countries, \$1.90 is not sufficient for basic human health, or even survival. In India, a child living at this level has a 60 percent risk of being malnourished. In Niger, babies born at this level face an infant mortality risk of nearly 16 percent, which is five times higher than the world average.<sup>17</sup>

If \$1.90 is not sufficient to guarantee basic nutrition or infant survival, then we cannot claim that lifting people above this line means bringing them out of poverty. After all, the World Bank itself is careful to point out that the \$1.90 line is “deliberately conservative” and “too low to inform policy.”<sup>18</sup> Rahul Lahoti and Sanjay Reddy argue that people need about \$5.04 per day in order to achieve minimum basic nutrition alone, aside from other requirements.<sup>19</sup> The New Economics Foundation shows that people need about \$7.20 per day to reduce infant mortality down to the world average of 30/1,000, which is still five times higher than in developed countries.<sup>20</sup> Research by Peter Edward shows that in order to achieve normal human life expectancy of just over seventy years, people need between 2.7 and 3.9 times more than the IPL, or about \$7.40 per day,<sup>21</sup> what he calls the “ethical poverty line.” If we take these concerns seriously, and measure global poverty at the ethical poverty line of \$7.40 per day, we find that the poverty headcount is 4.2 billion people as of 2012,<sup>22</sup> more than 60 percent of the world's population. In other words, global poverty is a much more serious issue than we tend to assume.

Even the \$7.40 poverty line is conservative for our purposes here, however, as it is likely inadequate for people to achieve the full spectrum of basic human rights to food, water, shelter, health, education, and child survival as laid out in Article 25. Longitudinal studies demonstrate that a permanent escape from poverty can only be achieved with at least \$10 per day.<sup>23</sup> This conclusion is in keeping with arguments by Charles Kenny and Lant Pritchett, who suggest that the global poverty line should be as high as \$12.50 or even \$15 per day.<sup>24</sup> At the \$10 per day line, the global poverty headcount reaches just over 4.7 billion people, or roughly 67 percent of the world's population.

If we accept \$10 per day as a reasonable proxy for the fulfillment of Article 25, then we can conclude that the rights of 67 percent of humanity are being violated within the existing arrangement of the global economic system. What is more, the poverty gap at \$10 per day is roughly \$10.4 trillion per year—which is how much it would be required to satisfy Article 25.<sup>25</sup> This figure is much larger than we are accustomed to considering. To get a sense of the scale, consider that it is roughly 11 percent of global GDP, or 21.5 percent

of OECD GDP.<sup>26</sup> At this level, it is clear that the problem cannot be solved simply with a bit of aid. It requires a significant restructuring of the world economy.

## **Premise 2. Establishing Responsibility**

Having determined the resources necessary to satisfying Article 25, the next step is to establish responsibility for supplying these resources. The usual answer is that this responsibility falls primarily on national governments. Rich countries may give aid, but this support is out of benevolence rather than responsibility, and does not amount to an admission of culpability.

Global South countries do have the capacity to reduce poverty to a certain extent on their own. Hoy and Sumner calculate that, at the level of \$1.90 per day, three quarters of the global poverty gap could theoretically be eliminated by redistributing existing national resources (through progressive taxation of those earning above \$10 or \$15 per day, and by reallocating public finances from fossil fuel subsidies and surplus military spending toward direct cash transfers to the poor).<sup>27</sup> The problem with this approach is that it relies in part on redistributing income from the relatively poor (i.e., those earning, say, \$11 or \$16 per day) to the very poor. What is more, even the most dramatic approach to national redistribution that Hoy and Sumner identify (i.e., with taxes on incomes over \$10 per day) would only generate enough revenue to cover at most 17 percent of the global poverty gap.

One response is to conclude that, in light of this capacity deficit, the rights enshrined in Article 25 are nothing more than “manifesto” rights—ideals that cannot be feasibly fulfilled. This conclusion makes sense if we assume that (a) poverty is a purely endogenous problem, having to do with local or national policies, and that therefore the governments of poor nations bear sole responsibility for solving it; and (b) rich nations accumulated their wealth through purely endogenous processes, and therefore have no obligation to share it. In other words, the “manifesto rights” argument assumes that nations are bounded economic units, cut off from the rest of the world. This assumption has little validity given more than five hundred years of global economic integration, from the onset of colonialism to the trade system of today. We cannot hope to understand why 67 percent of humanity remains in poverty at a time of unprecedented global wealth without examining the broader geopolitical order. If we do, it becomes clear that the causes of poverty have more to do with the structure of the global economy than with domestic policies in poor countries.

While space does not permit a comprehensive argument here, I will offer a few well-documented points that compel us to reconsider the question of responsibility. I have outlined the argument in greater detail elsewhere, and would direct readers to that more extensive research.<sup>28</sup>

1. *Colonialism*. The process of European colonialization effectively organized the world economy in a manner that facilitated the enrichment of the core nations of Western Europe while simultaneously impoverishing the global periphery.<sup>29</sup> This process was most prominent in two forms. First, enclosure: colonizers enclosed common lands and in many cases destroyed subsistence farming systems in order to establish cash crops for export to Europe. This policy left millions without access to land and livelihood. In India, to cite one example, thirty million people died of famine in the late nineteenth century because of British interventions in agricultural systems.<sup>30</sup> Second, unequal trade treaties: Europeans

used asymmetrical tariffs to undermine the domestic industries of their colonies and thus ensured that the latter would remain for the most part exporters of primary commodities and consumers of imported manufactures. This arrangement assisted the Industrial Revolution in Europe by securing Europe's access to raw materials and export markets, but made it very difficult for Global South countries to develop their own industrial economies.<sup>31</sup>

2. *Regime change.* After the end of colonialism, many newly independent nations in the Global South began to develop their economies using protective tariffs, import substitution, capital controls, and nationalization. In many cases, Western powers reacted to this development by intervening to end to such policies, which threatened their assets and restricted their ability to access raw materials, exploit cheap labor, and repatriate profits.<sup>32</sup> We can see this pattern most clearly in the Western-backed coups that deposed progressive, pro-poor leaders like Mohammed Mossadegh in Iran, Jacobo Arbenz in Guatemala, Patrice Lumumba in the Democratic Republic of the Congo, Salvador Allende in Chile, Thomas Sankara in Burkina Faso, and dozens of others, most of whom were replaced by dictatorships friendly to Western economic interests (such as Mobutu Sese Seko, Augusto Pinochet, etc.). Such interventions were most common from the 1950s through the 1980s, but the pattern continues today, as evidenced by the invasion of Iraq in 2003, the 2009 coup in Honduras, and the intervention in Libya in 2011.

3. *Structural adjustment.* Structural adjustment programs imposed by the International Monetary Fund (IMF) and World Bank—which forced developing countries to liberalize their economies and privatize public assets—caused per-capita income growth rates in the Global South to collapse. During the 1960s and 1970s, average per-capita income growth was 3.2 percent per year. During the structural adjustment period of the 1980s and 1990s, it was 0.7 percent per year. Robert Pollin calculates that Global South countries lost an average of \$480 billion in potential GDP each year as a result of structural adjustment.<sup>33</sup> During this period, some 1.4 billion people were added to the ranks of the poor.<sup>34</sup> Western banks and multinational companies, meanwhile, benefitted from access to new markets and new investment opportunities.<sup>35</sup> The imposition of structural adjustment was possible because rich countries control a commanding share of the voting power in the World Bank and the IMF, and the United States holds veto power over all major decisions. The Global South, despite having 80 percent of the world's population, has less than half of the vote.

4. *Trade.* The international trade system established in the 1990s tends to favor the interests of rich countries over poor ones. The United Nations estimates that tariff imbalances in the World Trade Organization cause Global South countries to lose more than \$700 billion each year in potential export revenues for industrial goods, and even more for agricultural goods.<sup>36</sup> New patent restrictions imposed by the TRIPS agreement cost poor countries another \$60 billion per year in extra licensing fees, and price many essential technologies and pharmaceuticals out of reach.<sup>37</sup> And then there is the issue of illicit financial flows—largely a consequence of trade liberalization. Global Financial Integrity estimates that \$1.1 trillion flows out of developing countries each year, mostly through fraudulent trade transactions by multinational corporations, often for the purposes of tax evasion.<sup>38</sup> Finally, there is the matter of “unequal exchange,” whereby the wages paid to Global South workers for goods produced for export abroad are artificially low compared to the real value of their labor on international markets, corrected for

productivity. Zak Cope calculates that Global South countries lose between \$2.8 and \$4.9 trillion per year due to unequal exchange.<sup>39</sup>

5. *Climate change.* When it comes to damages caused by climate change, the calculus of responsibility is clear. As mentioned, high-income nations are responsible for about 70 percent of the greenhouse gases that have been emitted since the beginning of the industrial revolution (about half of which comes from the United States), yet they bear only 12 percent of the total costs of climate change. According to the Climate Vulnerability Monitor, in 2010 the Global South lost \$571 billion due to drought, floods, landslides, storms, and wildfires. In the same year, the South suffered 400,000 deaths due to climate change, mostly related to hunger and communicable disease; 83 percent of these deaths happened in the countries that have the lowest carbon emissions in the world.<sup>40</sup>

While no one would deny that endogenous problems contribute to poverty in Global South countries, the structure of the global economy is a much more significant causal factor. Indeed, the imbalances inherent in the global economy become clear when we consider the distribution of global GDP growth. The *World Inequality Report* calculates that the poorest 60 percent of the world's population received only 18 percent of new income from growth from 1980 to 2016, while the richest 1 percent captured 27 percent of it.<sup>41</sup> In light of the foregoing, it seems reasonable to conclude that the governments of the world's rich countries, which created and sustain this order in their own interests, are actively violating the human rights of the poor. Building on an institutional view of human rights, we might argue—as Thomas Pogge has—that these countries have a responsibility to use their power to reorganize the economic order to ensure that as many people as possible have secure access to the resources necessary for achieving basic health and well-being as laid out in Article 25.<sup>42</sup>

### **Premise 3. Recognizing Ecological Limits to Growth**

Over the past forty years, the dominant approach for ending poverty—for example, that promoted by the World Bank and the UN Sustainable Development Goals (see Goal 8)—has been to rely on economic growth. The idea is that the yields of growth will trickle down to improve the lives of the world's poorest people. This strategy is popular in that it provides a politically palatable alternative to distributing existing resources more fairly. But the growth approach begins to appear questionable if we look at it through an ecological lens. David Woodward calculates that, given the existing distribution of income from GDP growth, it will take 207 years to end poverty at \$7.40 per day. Achieving this would require growing the global economy to 175 times its present size—extracting, producing, and consuming 175 times more commodities than we presently do. It is worth pausing to consider what this means. Even if such growth were possible, what would the consequences look like? In Woodward's words, "There is simply no way this can be achieved without triggering truly catastrophic climate change—which, apart from anything else, would obliterate any potential gains from poverty reduction."<sup>43</sup> If we use the \$10 per day poverty line, the figures look even more extreme.

Clearly growth is not an adequate poverty-reduction strategy without a considerable degree of redistribution. Slightly more progressive approaches call for growth that is skewed toward the world's poorest people. This approach is enshrined in the Sustainable Development Goals. Goal 10, the goal on inequality, states: "By 2030, progressively achieve

and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.”<sup>44</sup> This approach makes more sense, but it still has a flaw at its center.<sup>45</sup> It calls for ratcheting up the incomes of the poor through growth, but without placing any corresponding limits on the growth of the incomes of the rich. The assumption here, once again, is that we can increase aggregate global economic activity indefinitely. This assumption is not valid, however, given the existing overshoot of planetary boundaries and what we know about the tight coupling between GDP and ecological impact (and the limited potential for severing this link). We can see this most clearly by looking at trends in material footprint and CO<sub>2</sub> emissions.<sup>46</sup>

### *Material Footprint*

Global extraction and consumption of material resources has been rising steadily since the Industrial Revolution. Resource use, as measured by “material footprint” (a unit that captures the total weight of all material extraction and consumption, from fish to forests, minerals to metals), increased by a factor of eight during the twentieth century, growing at an average rate of 2 percent per year.<sup>47</sup> Since 2000, the rate of resource use has accelerated, averaging 3.4 percent per year.<sup>48</sup> Today, we are extracting and consuming eighty-five billion tons per year, and by 2030 we are projected to breach 100 billion tons per year.<sup>49</sup> To put these figures into perspective, ecologists say that a sustainable level of material use is about fifty billion tons per year.<sup>50</sup> Material footprint is regarded as a useful proxy for ecological impact; research by Van der Voet et al. finds that, at an aggregate level, a high degree of correlation (0.73) exists between the two.<sup>51</sup>

We can see the consequences of excess resource use in a number of key registers. Over the past sixty years, more than half of our planet’s tropical forests have been destroyed. Forty percent of agricultural soil is seriously degraded, mostly as a result of intensive industrial farming practices.<sup>52</sup> Around 85 percent of global fish stocks are over-exploited or depleted, and the same pattern can be seen across the living world: up to 140,000 species of plants and animals are disappearing each year due to our over-exploitation of the Earth’s ecosystems.<sup>53</sup> This rate of extinction is one hundred to one thousand times faster than before the Industrial Revolution—so fast that scientists have classed this as the sixth mass extinction event in the planet’s history, with the last one having occurred sixty-six million years ago.<sup>54</sup>

A direct relationship exists between GDP and resource use: the two rise together. During the twentieth century, resource use grew at a slightly slower rate than GDP, but since 2000 it has grown at a rate that outstrips GDP. Of course, some hope that strong policy measures might encourage investments in more efficient technologies and allow us to sever this relationship, so that GDP rises while resource use declines to sustainable levels—a process known as “absolute decoupling.” This assumption features in the “green growth” narrative of institutions like the World Bank, and sits at the center of the SDGs (Goal 8.4) as the dominant mechanism of “sustainable development.”<sup>55</sup> Unfortunately, however, there is no empirical evidence that absolute decoupling is possible on a global scale with existing rates of GDP growth (2–3 percent per year).

Three models have been published to examine this question—including one by the United Nations Environment Program (UNEP)—and all find that while high-efficiency measures (such as a global carbon tax and rapid technological innovation) can achieve



some relative decoupling of GDP from resource use (by at most 1 percent per year, according to UNEP), absolute decoupling remains out of reach. Even in best-case scenario conditions, the models show that continuing existing rates of GDP growth drives resource use up to between ninety-three and 132 billion tons by 2050.<sup>56</sup>

Part of this is because of the “rebound effect,” whereby efficiency improvements make resource use cheaper, thus triggering increased demand and wiping out some of the gains from efficiency. But it is also because efficiency improvements are bounded by physical limits. While technological innovation can improve resource efficiency in the short term, the rate of improvements tapers off over time so that continued GDP growth in the longer term drives total resource use back up. A recent study by Ward et al. examining this tendency concluded:

Decoupling of GDP growth from resource use, whether relative or absolute, is at best only temporary. Permanent decoupling (absolute or relative) is impossible for essential, non-substitutable resources because the efficiency gains are ultimately governed by physical limits. Growth in GDP ultimately cannot plausibly be decoupled from growth in material and energy use, demonstrating categorically that GDP growth cannot be sustained indefinitely. It is therefore misleading to develop growth-oriented policy around the expectation that decoupling is possible.<sup>57</sup>

### *CO<sub>2</sub> Emissions*

The other major dimension of ecological overshoot is CO<sub>2</sub> emissions. We have already breached the safe limit of CO<sub>2</sub> concentration in the atmosphere, which scientists say is about 350 ppm. We recently surpassed 400 ppm, which will likely lock in 1.5 degrees of global warming over preindustrial levels. On our present trajectory, we are likely to see three to four degrees of warming by the end of the century, even if we factor in countries’ pledges to cut emissions under the Paris Agreement.<sup>58</sup> This will mean rising seas, increased floods and droughts, crop collapse, epidemic disease, famine, and mass displacement. Global South countries will be hit hardest, particularly as changing weather patterns are projected to cause agricultural output to decline in areas like India and Sub-Saharan Africa. What is more, climate change is projected to have a dramatic negative impact on the global economy. According to Nicholas Stern, four degrees of warming will cost at least 5 percent of global GDP per year indefinitely, and possibly as much as 20 percent, with the Global South bearing the brunt of this impact.<sup>59</sup>

In order to avoid breaching the carbon budget for 2C, we need to reduce global emissions by 4 percent per year.<sup>60</sup> The existing plan is to realize this goal by rapidly decarbonizing economic activity. Unfortunately, there is no evidence that this can feasibly be accomplished quickly enough against a background of continued economic growth, as growth drives energy demand up and therefore makes a rapid transition to clean energy more difficult. If we continue to grow global GDP at its present rate of 3 percent per year, then decarbonization must occur at a rate of 7.29 percent per year. For perspective, this rate of decarbonization is more than two times faster than even high-efficiency models project is possible (namely, 3 percent per year).<sup>61</sup> It is also nearly double the rate of decoupling projected by the C-ROADS tool (4 percent per year) under the most aggressive abatement policies, with high subsidies for renewables and nuclear power, plus high taxes

on fossil fuels. In other words, the rate of decarbonization required to prevent dangerous climate change is out of scope, if we assume continued economic growth.

Some have claimed that technology will help resolve this problem. The mitigation scenarios included in the IPCC's Fifth Assessment Report (AR5) assume that we can continue with business-as-usual growth, including in high-income nations, and still be safe from climate change so long as we employ negative-emissions technology to pull carbon back out of the atmosphere later in the century. The dominant negative-emissions proposal is known as BECCS: bio-energy with carbon capture and storage. The idea is to develop large tree plantations that will absorb carbon out of the atmosphere, harvest them for biomass and burn it in power stations to create energy, while capturing the carbon that the power stations produce and storing it underground. But BECCS is highly controversial among climate scientists, who point out that the technology has never been tested at scale, and is unlikely to be available within the necessary timeframe. What is more, to work, BECCS requires land equivalent to three times the size of India, which would reduce space available for food crops and exacerbate biodiversity loss and chemical loading.<sup>62</sup>

The European Academies' Science Advisory Council now advises that we cannot legitimately rely on negative emissions technologies in pathways for staying under 2C.<sup>63</sup> Research by Holz et al. finds that if we rule out widespread use of negative emissions technologies, the required rate of decarbonization for meeting the Paris Agreement is "well outside what is currently deemed achievable, based on historical evidence and standard modelling."<sup>64</sup>

\* \* \*

In sum, we can conclude that: (a) absolute decoupling of GDP from resource use is unlikely to be achieved on a global scale over the long term, and (b) the rate of decarbonization required to stay within the 2C carbon budget is infeasible—if we continue with global economic growth. The maximum projected rates of resource decoupling and decarbonization suggest that it is possible to use strong policy measures to reduce resource use, and to reduce emissions quickly enough to reach the Paris targets, but only in the context of a zero-growth economy. Therefore, aggregate global economic growth is not a legitimate option for reducing poverty if we want to avoid ecological breakdown.

### **Conclusion: The Redistribution Imperative**

If aggregate growth is not an option, the only alternative strategy for ending global poverty is to redistribute existing resources from rich countries to poor countries, recognizing the significant historical and contemporary responsibility that the leaders and governments of the former bear for the plight of the latter.

One conceptually simple way to imagine this—just for the sake of illustrating the argument—is to cap global GDP at its present level and then shift a portion of it from the global rich to the global poor to an extent sufficient to cover the \$10.4 trillion poverty gap and satisfy Article 25. There are various ways that one might identify the "global rich" here. To account for the geopolitical history outlined in Premise 2 above, one might choose to target some constellation of former colonial powers, the nations that hold the greatest shares of voting power in the World Bank and IMF, the nations of the Paris Club that

exercise power through international debt, or the members of the OECD that exercise disproportionate power in international trade and financial flows.

If this approach is taken, the burden of transfers should of course fall on the richest individuals within those countries—those who have crafted and benefitted most from the inequitable economic order discussed in Premise 2—without harming middle- and low-income earners, so that it would have no negative impact on human well-being in rich nations. For example, transfers could be funded by progressive taxation on top incomes.

An alternative approach would be to target top incomes directly, such as the richest 1 percent, regardless of what nation they live in. This is an elegant approach in that (a) the majority of the global 1 percent are, in any case, domiciled in the high-income nations implicated in Premise 2; and (b) it would also target national elites and political leaders in the Global South who have benefited from—and often even encouraged—the economic policies identified in Premise 2. According to the World Inequality Report, in 2011 the richest 1 percent of the world's population captured nearly \$18.7 trillion (PPP) in income, with an average annual income of around \$266,000.<sup>65</sup> Using progressive taxation on the 1 percent to fund transfers adequate to cover the poverty gap would increase the incomes of the poor by an average of \$2,189 per person while decreasing the incomes of the richest by an average of \$147,000 per person. This would significantly reduce global inequality as well as national inequality, and yet would still leave the richest with an average annual income of \$119,000 (thirty-three times higher than the poverty line).

This is just a thought experiment, of course—in reality it would be more complicated to work out given the complexities of historical responsibility—but the point is clear: if aggregate global growth is not an option, the fulfillment of basic human rights under Article 25 requires a significant redistribution of existing income, which would necessarily lead to a reduction of inequality. Of course, such income transfers would not address the ultimate *causes* of the poverty problem. To do that, we would have to make the global economy fairer for the world's majority in the first place. This would require interventions such as putting an end to tax evasion and illicit financial flows; renegotiating trade agreements to allow poor countries to use tariffs and subsidies; democratizing the World Bank, IMF, and WTO; abolishing structural adjustment conditions on finance; decommodifying life-saving medicines and essential technologies; introducing a global minimum wage, and so on.<sup>66</sup> Over time, the effect of such changes would be similar: a shift of existing global income from rich countries to poor countries, from the global rich to the global poor, and a corresponding decrease in global income inequality.

In conclusion, given (a) research on planetary boundaries and the dangers of ecological overshoot; and (b) the empirical limits to our ability to decouple GDP from ecological impact; it is clear that aggregate global growth is not an adequate strategy for ending poverty, and that satisfying basic human rights as outlined in Article 25 requires significant reductions in global income inequality. If we want to improve the incomes of the poor—which we must do if we are to satisfy their human rights—and if we want to do so without further *violating* their human rights with poverty-inducing ecological breakdown and climate change, then we will have to do so by redistributing existing global income more fairly.

This is not to say that this course of action is politically plausible; on the contrary, it would surely encounter fierce resistance from those who benefit from existing patterns of

distribution. Rather, the point of the argument is simply to note that in an era of ecological overshoot, the minimum floor laid out in the existing human rights framework is sufficient to compel global income redistribution on a scale that would yield dramatic and lasting reductions in inequality.

## NOTES

1. Oxfam, *Reward Work Not Wealth* (Oxford: Oxfam International, 2018).
2. See Jason Hickel, *The Divide: A Brief Guide to Global Inequality and its Solutions* (London: William Heinemann, 2017); Jason Hickel, "Is Global Inequality Getting Better or Worse? A Critique of the World Bank's Convergence Narrative," *Third World Quarterly* 38, no. 10 (October 2017): 2208–22.
3. United Nations Special Rapporteur on Extreme Poverty and Human Rights, Report of the Special Rapporteur on Extreme Poverty and Human Rights, U.N. Doc A/70/274, August 4, 2015.
4. Universal Declaration on Human Rights, Gen. Ass. Res. 217A (III), December 10, 1948.
5. Report of the Special Rapporteur on Extreme Poverty 2015, 13.
6. Universal Declaration of Human Rights, art. 25.
7. Samuel Moyn, "Human Rights and the Age of Inequality," *OpenDemocracy.net*, October 27, 2015, <https://www.opendemocracy.net/openglobalrights/samuel-moyn/human-rights-and-age-of-inequality> (accessed June 4, 2018).
8. Facundo Alvaredo et al., *World Inequality Report: Executive Summary* (Paris: World Inequality Lab, 2018), 9.
9. Johan Rockström et al., "A Safe Operating Space for Humanity," *Nature* 461, no. 7263 (September 2009): 472–75; Will Steffen et al., "Planetary Boundaries: Guiding Human Development on a Changing Planet," *Science* 347, no. 6223 (February 2015): 736–46.
10. Daniel W. O'Neill et al., "A Good Life for all within Planetary Boundaries," *Nature Sustainability* 1 (February 2018): 88–95, 88.
11. DARA, *Climate Vulnerability Monitor: A Guide to the Cold Calculus of a Hot Planet*, 2nd ed. (Madrid: DARA International, 2012).
12. Mary Robinson, "Why Climate Change is a Threat to Human Rights," filmed May 2015, TED Video, 21:43, [https://www.ted.com/talks/mary\\_robinson\\_why\\_climate\\_change\\_is\\_a\\_threat\\_to\\_human\\_rights](https://www.ted.com/talks/mary_robinson_why_climate_change_is_a_threat_to_human_rights) (accessed June 5, 2018).
13. John Vidal, "Climate Change Will Hit Poor Countries Hardest, Study Shows," *The Guardian*, September 27, 2013, <http://www.theguardian.com/global-development/2013/sep/27/climate-change-poor-countries-ipcc> (accessed June 5, 2018).
14. According to the World Bank's PovcalNet, <http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx> (accessed June 5, 2018).
15. "Poverty in India 2.5 Times the Official Figure: Study," *NDTV*, February 20, 2014, <http://www.ndtv.com/india-news/poverty-in-india-2-5-times-the-official-figure-study-551445> (accessed June 5, 2018); Vishnu Prashad, "Making Poverty History," *Jacobinmag.com*, November 2014, <https://www.jacobinmag.com/2014/11/making-poverty-history/> (accessed June 5, 2018).
16. Alberto Cimadamore, Gabriele Koehler, and Thomas Pogge, eds., *Poverty and the Millennium Development Goals: A Critical Look Forward* (London: Zed Books, 2016); World Bank, *Entering the 21st Century: World Development Report 1999/2000* (New York: Oxford University Press, 1999), 237.
17. Adam Wagstaff, "Child Health on a Dollar a Day: Some Tentative Cross-country Comparisons," *Social Science and Medicine* 57, no. 9 (November 2003): 1529–38.
18. This first statement comes from the explanation of the poverty lines on PovcalNet. The original statement was phrased in terms of 2005 PPP. I have expressed it here in terms of 2011 PPP equivalents. World Bank, "FAQs: Global Poverty Line Update," *worldbank.org*, September 30, 2015, <http://www.worldbank.org/en/topic/poverty/brief/global-poverty-line-faq> (accessed June 5, 2018).
19. Rahul Lahoti and Sanjay Reddy, "\$1.90 per Day: What Does It Say?" *Institute for New Economic Thinking*, October 6, 2015, <https://www.ineteconomics.org/ideas-papers/blog/1-90-per-day-what-does-it-say?p=ideas-papers/blog/1-90-per-day-what-does-it-say> (accessed June 5, 2018).
20. David Woodward and Saamah Abdallah, *How Poor is Poor? Toward a Rights-Based Poverty Line* (London: New Economics Foundation, 2010).
21. Peter Edward, "The Ethical Poverty Line: A Moral Quantification of Absolute Poverty," *Third World Quarterly* 37, no. 2 (2006): 377–93.
22. According to World Bank figures accessed via PovcalNet, <http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx> (accessed April 11, 2018); see also, Jason Hickel, "The True Extent of Global Poverty and Hunger: Challenging the Good-News Narrative of the Millennium Development Goals," *Third World Quarterly* 37, no. 5 (2016): 1–19.
23. Luis F. López-Calva and E. Ortiz-Juarez. "A Vulnerability Approach to the Definition of the Middle

- Class,” *Journal of Economic Inequality* 12, no. 1 (March 2014): 23–47; Andy Sumner, Arief Anshory Yusuf, and Yangki Suara, “The Prospects of the Poor: A Set of Poverty Measures Based on the Probability of Remaining Poor (or Not) in Indonesia” (Bandung: Working Papers in Economics and Development Studies, Department of Economics, Padjadjaran University, 2014).
24. Charles Kenny, “Why Ending Extreme Poverty Isn’t Good Enough,” *Bloomsgburg Businessweek*, April 29, 2013, <https://www.bloomberg.com/news/articles/2013-04-28/why-ending-extreme-poverty-isnt-good-enough> (accessed June 5, 2018); Lant Pritchett, “Who is Not Poor? Proposing a Higher International Standard for Poverty” (Washington, DC: Center for Global Development, Working Paper 33, November 1, 2003).
  25. According to World Bank figures accessed via PovcalNet. <http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx> (accessed April 11, 2018).
  26. Assuming global GDP (PPP current international \$) in 2011 of \$94.505 trillion, and OECD GDP (PPP current international \$) in 2011 of \$48.27 trillion.
  27. Chris Hoy and Andy Sumner, “Gasoline, Guns, and Giveaways: Is there New Capacity for Redistribution to End Three Quarters of Global Poverty?” (Washington, DC: Center for Global Development Working Paper 433, August 2016).
  28. Hickel, *Divide*.
  29. Immanuel Wallerstein, *The Modern World-System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century* (Berkeley: University of California Press, 2011).
  30. Mike Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (London: Verso, 2002), 7.
  31. For the role of colonization in enabling Europe’s Industrial Revolution, see Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (Princeton, CT: Princeton University Press, 2009); Sven Beckert, *Empire of Cotton: A Global History* (New York: Vintage, 2015). For the negative impact colonial trade rules had on the domestic industries of colonies, see Ha-Joon Chang, *Kicking Away the Ladder: Development Strategy in Historical Perspective* (London: Anthem Press, 2002).
  32. Noel Maurer, *The Empire Trap: The Rise and Fall of U.S. Intervention to Protect American Property Overseas, 1893–2013* (Princeton, NJ: Princeton University Press, 2013).
  33. Robert Pollin, *Contours of Descent: U.S. Economic Fractures and the Landscape of Global Austerity* (Brooklyn, NY: Verso, 2005), 165.
  34. According to World Bank figures accessed via PovcalNet, at the \$10 poverty line (comparing survey results at 1981 and 2002), <http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx> (accessed April 11, 2018).
  35. David Harvey, *A Brief History of Neoliberalism* (Oxford: Oxford University Press, 2007), 30.
  36. United Nations Conference on Trade and Development, *Trade and Development Report* (Geneva: United Nations, 1999), IX and 143.
  37. Meena Raman, “WIPO Seminar Debates Intellectual Property and Development,” *Our World is Not For Sale*, May 3, 2005, <http://notforsale.mayfirst.org/en/article/wipo-seminar-debates-intellectual-property-and-development> (accessed June 4, 2018).
  38. Dev Kar and Joseph Spanjers, “Illicit Financial Flows from Developing Countries: 2004–2013” (Washington, DC: Global Financial Integrity, 2015).
  39. Zake Cope, *Divided World, Divided Class: Global Political Economy and the Stratification of Labour Under Capitalism* (Montreal: Kersplebedeb, 2012), 254–56.
  40. DARA, *Climate Vulnerability Monitor*.
  41. Alvaredo et al., *World Inequality Report*.
  42. Thomas Pogge, *World Poverty and Human Rights* (Cambridge, UK: Polity, 2008).
  43. David Woodward, “How Progressive is the Push to Eradicate Extreme Poverty?,” *The Guardian*, June 7, 2013, <https://www.theguardian.com/global-development/poverty-matters/2013/jun/07/eradicating-poverty-shift-in-focus> (accessed June 4, 2018).
  44. Transforming Our World: The 2030 Agenda for Sustainable Development, Gen. Ass. Res. 70/1, October 21, 2015.
  45. Jason Hickel, “Is it Possible to Achieve a Good Life for all within Planetary Boundaries?” *Third World Quarterly* 40, no. 1 (2018): 1–17.
  46. The following summarizes data and conclusions I have developed elsewhere in more detail: Jason Hickel and Giorgos Kallis, “Is Green Growth Possible?” *New Political Economy* (2019).
  47. Fridolin Krausmann et al., “Growth in Global Materials Use, GDP and Population During the 20th Century,” *Ecological Economics* 68, no. 10 (August 2009): 2696–705.
  48. Stefan Giljum et al., “Global Patterns of Material Flows and Their Socio-Economic and Environmental Implications: A MFA Study on all Countries World-Wide from 1980 to 2009,” *Resources* 3, no. 1 (2014): 319–39.
  49. The figure of eighty-five billion tons comes from *materialflows.net* (accessed March 5, 2019). For the future projection, see Thomas Weidmann et al., “The Material Footprint of Nations,” *Proceedings of the National Academy of Sciences of the United States of America* 112, no. 20 (2015): 6271–76.
  50. Monika Dittrich et al., “Green Economies around the World: Implications of Resource Use for Development and the Environment” (Vienna: Sustainable Europe Research Institute, 2012); Arjen Y. Hoekstra

- and Thomas O. Wiedman, "Humanity's Unsustainable Environmental Footprint," *Science* 344, no. 6188 (June 2014): 1114–17.
51. Fridolin Krausmann et al., "Growth in Global Materials Use, GDP and Population during the 20th Century," *Ecological Economics* 68, no. 10 (August 2009): 2696–705; Ester Van der Voet, Laurant van Oers, and Igor Nikoli, "Dematerialization: Not Just a Matter of Weight," *Journal of Industrial Ecology* 8, no. 4 (2004): 121–37.
52. Ian Sample, "Global Food Crisis Looms as Climate Change and Food Shortages Bite," *The Guardian*, November 3, 2007, <https://www.theguardian.com/environment/2007/nov/03/food.climatechange> (accessed June 4, 2018).
53. George Monbiot, "The Great Riches of our Seas have been Depleted and Forgotten," *The Guardian*, September 7, 2012, <http://www.theguardian.com/environment/georgemonbiot/2012/sep/07/riches-seas-depleted-forgotten> (accessed June 4, 2018); Stuart L. Pimm et al., "The Future of Biodiversity," *Science* 269, no. 5222 (August 1995): 347–50; Gerardo Ceballos et al., "Biological Annihilation via the Ongoing Sixth Mass Extinction Signaled by Vertebrate Population Losses and Declines," *Proceedings of the National Academy of Sciences* 114, no. 30 (2017): E6809–E6096.
54. Gerardo Ceballos et al., "Accelerated Modern Human-Induced Species Losses: Entering the Sixth Mass Extinction," *Science Advances* 1, no. 5 (June 2015), E1400253, <http://advances.sciencemag.org/content/1/5/e1400253> (accessed April 12, 2018).
55. World Bank, *Inclusive Green Growth: The Pathway to Sustainable Development* (Washington, DC: World Bank, 2012).
56. Dittrich, "Green Economies," 69; Heinz Schandl et al., "Decoupling Global Environmental Pressure and Economic Growth: Scenarios for Energy Use, Materials Use and Carbon Emissions," *Journal of Cleaner Production* 132, no. 20 (September 2016): 45–56; Stefan Brigezu et al., *Assessing Global Resource Use: A Systems Approach to Resource Efficiency and Pollution Reduction* (Paris: United Nations Environment Programme, 2017).
57. James Ward et al., "Is Decoupling GDP Growth from Environmental Impact Possible?" *PLoS one* 11, no. 10 (2016): 1–9.
58. United Nations Framework Convention on Climate Change, Adoption of the Paris Agreement, FCCC/CP/2015/Rev.1, December 12, 2015, <https://unfccc.int/resource/docs/2015/cop21/eng/lo9r01.pdf> (accessed June 4, 2018).
59. Nicholas H. Stern et al., *Stern Review: The Economics of Climate Change*, vol. 30 (Cambridge: Cambridge University Press, 2006).
60. PricewaterhouseCoopers International Limited, "The Low Carbon Economy Index," [www.pwc.co.uk](http://www.pwc.co.uk), <https://www.pwc.co.uk/services/sustainability-climate-change/insights/low-carbon-economy-index.html> (accessed April 19, 2018).
61. Heinz Schandl et al., "Decoupling Global Environmental Pressure."
62. Kevin Anderson and Glen Peters, "The Trouble with Negative Emissions," *Science* 354, no. 6309 (October 2016): 182–83; Pete Smith et al., "Biophysical and Economic Limits to Negative CO<sub>2</sub> Emissions," *Nature Climate Change* 6, no. 1 (January 2016): 42–50; Sabine Fuss et al., "Betting on Negative Emissions," *Nature Climate Change* 4, no. 10 (October 2014): 850–53.
63. European Academics Science Advisory Council, "Negative Emissions Technologies: What Role in Meeting Paris Agreement Targets?" (Halle, Germany: EASAC, 2018).
64. Christian Holz et al., "Ratcheting Ambition to Limit Warming to 1.5 C—Trade-Offs Between Emission Reductions and Carbon Dioxide Removal," *Environmental Research Letters* 13, no. 6 (June 2018): 064028.
65. The report finds that the 1 percent captured 21 percent of global income in 2011, and that global income (national income, world) in that year was \$89.2 trillion in constant 2017 U.S. dollars, PPP. 21 percent of that is \$18.7 trillion; Alvaredo et al., *World Inequality Report*, fig. 2.1.9. In the same year, the population was 7.018 billion, meaning that the 1 percent comprised 70.18 million individuals. While the currency units here are not exactly the same as the 2011 PPPs used by the World Bank to calculate the poverty gap, they are similar enough to be meaningfully compared.
66. Hickel, *Divide*, 253–78.