

Imperialism in the Anthropocene

Thursday 5 September 2019, by [CLARK Brett](#), [FOSTER John Bellamy](#), [HOLLEMAN Hannah](#) (Date first published: 1 July 2019).

On May 21, 2019, the Anthropocene Working Group, established by the Subcommision on Quaternary Stratigraphy of the International Commission on Stratigraphy, voted by more than the necessary 60 percent to recognize the existence of the Anthropocene epoch in geological time, beginning around 1950. It defined this new “chronostratigraphic” epoch as “the period of Earth’s history during which humans have a decisive influence on the state, dynamics, and future of the Earth System.” Anthropogenic change, beginning in the mid-twentieth century, was designated as the principal force in the accelerated evolution of the entire Earth System. The Anthropocene Working Group will proceed next to the designation of a specific “golden spike,” or stratigraphic location, standing for the Anthropocene in the geological record, with the aim of getting the new epoch officially adopted by the International Commission on Stratigraphy in the next several years. [1]

A strong international scientific consensus is thus emerging with respect to the designation of the new geological epoch of the Anthropocene—a term often said to have been “coined” by Paul Crutzen and Eugene Stoermer in 2000, though it first appeared in English decades earlier in “The Anthropogenic System (Period)” in *The Great Soviet Encyclopedia*. [2] The Anthropocene, in the scientific worldview, stands for both a quantitative and qualitative break with all previous geological epochs. Changes on a scale that can be seen as dividing major geological epochs, previously occurring over millions of years, are now taking place over decades or at most centuries due to human action. In this respect, the Anthropocene represents a sharp break from the relatively stable Holocene epoch of the last 11,000–12,000 years, the onset of which marked the end of the last ice age.

In the view of the Anthropocene Working Group and today’s Earth System scientists more generally, the advent of the Anthropocene epoch is the product of a Great Acceleration of economically driven change in the mid-twentieth century, associated with what is sometimes called by economists the “golden age” of capitalist growth after the Second World War. This led to the crossing of numerous planetary boundaries, generating various “anthropogenic rifts.” [3]

The mid-twentieth century was also a period of Cold War. Hence, one “primary marker” of the Anthropocene is “the artificial radionuclides spread worldwide by the thermonuclear bomb tests from the early 1950s.” [4] Among the epoch-making changes associated with the Great Acceleration are vast hockey stick-shaped increases in: fossil fuel combustion, carbon dioxide emissions, ocean acidification, species extinctions (and losses in biological diversity more generally), nitrogen and phosphorus cycle disruptions, freshwater depletion, forest loss, and chemical pollution. The result is a planetary ecological emergency or Earth System crisis. [5]

Today there can be no doubt about the main force behind this planetary emergency—the exponential growth of the capitalist world economy, particularly in the decades since the mid-twentieth century. Capital itself can be described as a social relation of self-expanding economic (commodity) value. Capitalism, or the *system of capital accumulation* based in class exploitation and conforming to laws

of motion enforced by market competition, recognizes no limits to its own self-expansion. There is no amount of profit, no amount of wealth, and no amount of consumption that is “enough” or “too much.” [6] In this system, the planetary environment is not viewed as a place with inherent boundaries within which human beings must live, together with Earth’s other species, but rather as a realm to be exploited in a process of growing economic expansion in the interest of unlimited acquisitive gain, most of which ends up in the hands of a very few. Businesses, according to the inner logic of capital, must either grow or die—as must the system itself.

Capitalism thus promotes a “madness of economic reason” that can be seen as undermining the healthy human metabolic relation to the environment. [7] The mere critique of capitalism as an abstract economic system, however, is insufficient in addressing today’s environmental problems. Rather, it is necessary also to examine the structure of accumulation on a world scale, coupled with the division of the world into competing nation-states. Our planetary problems cannot realistically be addressed without tackling the imperialist world system, or globalized capitalism, organized on the basis of classes and nation-states, and divided into center and periphery. Today, this necessarily raises the question of imperialism in the Anthropocene.

Late Imperialism and the Anthropocene

Extra-high profits derived from imperialist rent, drained from the periphery or global South in the process of commodity production, as Samir Amin argued, have historically taken two forms: (1) exchange-value transfers, and (2) use-value transfers. [8] The latter can be seen as a process of ecological imperialism whereby the extraction of resources has often devastated poor countries, which have been faced with the expropriation (appropriation without equivalent or reciprocity) of the “free gifts of Nature to capital” to be found in their territories, along with the ecological costs of extraction. [9] According to Gyekye Tanoh, head of the Political Economy Unit of the Third World Network-Africa based in Accra, Ghana, recently released Bank of Ghana data show that,

of the \$5.2 billion worth of gold exported by foreign-owned mining interests from Ghana [from 1990 to 2002], the government received only \$68.6 million [in] royalty payments and \$18.7 million in corporate income taxes. In other words, the government received a total of less than a 1.7% share of the global returns from its own gold. Since these figures grossly underestimate the value of gold exports, the returns to Ghana would be much less. What’s even more shocking is that—based on the analysis of the Bank of Ghana—the share of wealth that goes to the communities directly impacted by the mining is 0.11%. [10]

Although gold is a particularly clear and dramatic example, such plunder is a general phenomenon present to various degrees in relation to nearly all natural resources—whether gold, guano, oil, coffee, or soybeans—that are systematically drained from the global South by multinational corporations. The result is to impose enormous ecological and economic losses on poor, dependent countries—a process examined over centuries in relation to colonialism and neocolonialism in the Americas in Eduardo Galeano’s *Open Veins of Latin America* [11]. Capitalist economic accounting, which measures exchange values but not use values, has served to disguise that portion of the imperialist rent associated with the expropriation of use values. [12] Hence, it is important to consider the full depth of the ecological robbery of the peoples of the periphery—an inherently violent process historically associated with “the extirpation, enslavement and entombment in mines” of populations in the periphery, which today is connected to other forms of expropriation and extreme exploitation, also violent in nature. [13]

In the twentieth and twenty-first centuries, imperialism has been characterized by the dominance of large, monopolistic corporations. This led V. I. Lenin to identify the imperialist stage of capitalism

with monopoly capitalism (while expressly recognizing that “colonial policy and imperialism” in a more general sense had also existed prior to this and even prior to capitalism). [14] In its most recent phase, since the 1970s, the imperialist system has taken the form of the growing dominance of monopoly-finance capital, representing a high level of globalization of production in the form of global commodity chains.

These global commodity chains are integrated with an accelerating long-term transfer of physical raw material resources from poor to rich nations with much larger “material footprints,” defined as “the global allocation of used raw material extraction to the final demand of an economy.” Utilizing material footprint analysis, it was found that, in 2008, 40 percent of total global raw material extraction was for the purpose of enabling trade in other countries. Some seventy billion tons of raw materials were extracted that year, the highest up to that point in all of history. Imports of raw material equivalents (embodied primary materials) in trade are highest per capita for rich economies, led by Japan, the United Kingdom, and the United States. The overall trend in the mature economies is toward a “process of externalization of resource-intensive processes,” making them more and more dependent on raw material-equivalent imports from the rest of the world. At the same time, about two-thirds of the total material flow in extracted resources associated with exports remains in the exporting countries primarily as processed wastes and auxiliary material flows, often generating considerable ecological damage, categorized as economic externalities. [15]

Although China is often designated as the country with the largest material footprint, drawing on the resources of the entire world, the picture that this conveys is false, given that China is by far and away a net exporter of primary materials in embodied (material footprint) terms. Such a development pattern, associated with global South countries generally, leaves these nation-states with outsized ecological costs while, in consumption terms, the benefits of the natural resources go mainly to the rich countries under conditions dominated by unequal ecological exchange. [16]

If ecological plunder has occurred over centuries through various modes of expropriation and exploitation imposed directly on colonies and neocolonies in the global South, the effects of ecological imperialism are also evident in relation to the global commons, that is, in the oceans and the atmosphere. Since the passage of the 1982 Law of the Sea, nearly half of the world’s ocean falls under the jurisdiction of nation-states, mostly within “exclusive economic zones.” Eighty-three countries, most of them small island nations, but also larger states like the United Kingdom and the United States, now have more ocean than land in their territorial jurisdictions. This has facilitated the expropriation of ocean resources. It has also given dominance in this realm to the leading imperialist nations, which have the capital and technology to plunder these resources. These core nations are also frequently able to seize control from and take advantage of peripheral states, particularly with the economic leverage provided by states’ increasing introduction of privatization regimes of ocean management. The result in recent years has been what is known as *ocean grabbing*, shutting out small nations and small fishers, and allowing multinational corporations to move in and overexploit both fisheries and seabed resources. Meanwhile, the International Seabed Authority allows states and corporations to exploit, for their own benefit, oil, natural gas, minerals, and precious metals in and under the seabed in international waters, despite the fact that these are ocean commons. [17]

As United Nations Special Rapporteur on the Right to Food, Olivier de Schutter, declared in 2012, “‘ocean-grabbing’—in the shape of shady access agreements that harm small-scale fishers...and the diversion of resources away from local populations—can be as serious a threat as ‘land-grabbing.’” [18] Ocean grabbing is thus a process of enclosing the ocean commons. The Transnational Institute in 2012 determined that “large-scale fleets operating in territorial marine zones ‘capture’ resources from local fishers and the entire chain of people who rely on traditional fishing activities. The European Union’s (EU) fishing agreements with Morocco, Mauritius,

Mauritania and Pacific Island States, for example, are fostering this kind of dispossession.” [19] Global fishing fleets have doubled their capacity to 3.5 million vessels since the 1970s, but the 1 percent of these that are industrial ships account for up to 60 percent of the seafood catch. Small island countries often get a mere pittance for the sale of their fishing rights to international fleets. [20]

What is sometimes called the *atmospheric commons* reveals the historical consequences of imperialism in an entirely different way. Anthropogenic climate change induced mainly by cumulative carbon dioxide emissions since the Industrial Revolution has compelled the world community to adopt an implicit climate budget based on limits on carbon emissions, determined by maximum acceptable levels of carbon concentration in the atmosphere. This means finding a way to get back down to 350 parts per million (ppm) from the present 414 ppm of carbon dioxide concentration in the atmosphere, while staying at all costs below 450 ppm. The goal is to limit the increase in global average temperature over preindustrial levels to 1.5°C—with a 2°C increase (corresponding to 450 ppm) representing the final guardrail, beyond which climate change is likely to spin irreversibly out of control. In accordance with these parameters, the Intergovernmental Panel on Climate Change has recently called for net zero carbon emissions by 2050, which would give at least a 50 percent chance of limiting the increase of global average temperatures to 1.5°C.

At present, more than 60 percent of the allowable carbon under this budget—if the world is merely to seek to stay below a 2°C increase in global average temperature (equivalent to 450 ppm)—has been emitted to the atmosphere. Today’s business as usual puts the world on a trajectory to hit the trillionth metric ton of carbon, reaching the 2°C boundary—marking irreversible climate change—in 2035. [21] Carbon dioxide emissions are cumulative, so what matters is the amount that each country or region has contributed. The United States, Canada, Europe (and Eurasia), Japan, and Australia have together contributed around 61 percent of the total, as compared to 13 percent for China and India taken together. Russia accounts for another 7 percent, and world ship and air transport are 4 percent. The entire rest of the globe accounts for 15 percent of cumulative emissions. These disparities are only increased if consumption-based rather than production-based emissions are used. [22]

From the viewpoint of the global South, this means that the atmospheric space for the use of fossil fuels for their own development has already been taken up by the imperialist countries and very little remains for South countries to develop their own economies. In principle, the United Nations Climate Convention under the Kyoto Protocol had given much greater responsibility to wealthy countries to reduce carbon dioxide emissions, stipulating that the Annex I countries would drastically cut their emissions ahead of developing countries with fewer cumulative emissions. [23] Yet, U.S. emissions per capita have remained at about three times the global mean and its overall emissions continue to increase. Calculating the per capita shares of cumulative carbon dioxide emissions in 2012, the core capitalist countries had already exceeded their fair share by 568 billion metric tons, creating an enormous carbon debt or obligation to underdeveloped countries. [24]

Although the poles are warming faster than the low latitude regions of the globe, the effects at the mid- to low latitudes, especially dry regions, can be very severe. Global warming is hitting the hotter, low latitude, tropical and subtropical regions of the earth especially hard. Many low latitude countries are facing temperature increases that threaten to make them unlivable. Earth System conditions thus determine which global regions are most affected geophysically by climate change, with countries in the tropics and subtropics initially more vulnerable. Thus, one crucial study in *Environmental Research Letters* in 2011 declared: “Those countries affected most by the warming are not the ones that are most responsible for it. The fact that locally significant warming emerges first in [low latitude] countries with low emissions has no underlying economic or societal cause.” [25] As stated by climatologists James Hansen and Makiko Sato, “temperature rise itself

imposes a strong disproportionately large effect on low latitude countries.... Business-as-usual fossil fuel emissions result in some regions in the Middle East becoming practically uninhabitable by the end of the century." The subtropics are particularly vulnerable to drought intensification. In contrast, countries located at higher latitudes, which are generally wealthier, while affected by climate change-induced increases in storm intensity, droughts, and heat waves, may in some cases actually find their average temperatures moving more toward the global optimum. [26]

But if countries in hotter, low latitude regions are affected disproportionately by global warming, this is only made far worse by the fact that these countries are also generally poorer, which is the result of social-historical causes. One effect of climate change is therefore to exacerbate already existing global inequalities. The absolutely catastrophic effects of climate change are therefore expected to emerge first in the South. The North too is threatened, but, at least initially, to a lesser extent, due to both environmental and social factors. An analysis in *Nature* provided a benchmark estimate in which "average income in the poorest 40% of countries declines by 75% by 2100 relative to a world without climate change, while the richest 20% experience slight gains, since they are generally cooler." [27] Although the numbers might be questioned, the divergence in trends is obvious.

This divergence in fates between the global North and South, strongly impacted by the imperialist dimensions of the metabolic rift, is already making itself felt. An article by Noah S. Diffenbaugh and Marshall Burke, "Global Warming Has Increased Economic Inequality," in the *Proceedings of the National Academy of Sciences*, May 14, 2019, indicated that "there is growing evidence that poorer countries or individuals are more negatively affected by a changing climate, either because they lack the resources for climate protection or because they tend to reside in warmer regions where additional warming would be detrimental to both productivity and health." The combination of environmental and social factors suggests that there are some "warming-induced penalties in poor countries, along with warming-induced benefits in some rich countries." [28] The complexity of climate conditions, and the multiplicity of dangers attending abrupt climate change, suggest that while poor countries in the South will experience catastrophic effects, the threats to the countries in the North are by no means negligible. Still, the most important factor in determining differential outcomes is undoubtedly the social one, related to the greater wealth and hence access to resources of the North.

Other climate change factors also point to greater impact in the global South than the North. Small island developing states, thirty-seven of which are members of the United Nations and another fifteen of which are classified as mere territories, are all endangered by sea-level rise, as are low-lying and often densely populated coastal nations such as Bangladesh and Vietnam. [29] The loss of "water towers" associated with mountain glaciers and headwaters that behave as reservoirs, storing water during winter and releasing it slowly in the summer, will have the greatest impact in the Indian subcontinent and China where as many as a billion or more people may have their water supply diminished by the melting of the Himalayan glaciers. [30] Climate change could disrupt the monsoons with enormous, but unpredictable, consequences. Tropical forests with their great diversity of life and their importance for regional and global climate stability are especially vulnerable to warming.

Given the reality of imperialism, the main response by the economic and military power structures in the North to this climate rift, pointing to more serious vulnerabilities to climate change in the global South than in the global North, has been mainly twofold: (1) to explore how these vulnerabilities in the South create new global security issues, and (2) how they might be exploited so as to increase imperial dominance. This is most obvious in the case of the United States, where the new grand strategy of the Donald Trump administration is one of global "energy dominance" through the expansion of fossil fuel production and the use of this to leverage greater geopolitical and

geo-economic power. [31] The U.S. military, meanwhile, is preparing for a host of new vulnerabilities, related in particular to oil and water, and for interventions to secure U.S. global hegemony in these changing circumstances. Economic and military interests are working together to strategize means for securing global value and resource chains, so as both to strengthen Fortress America and secure its supply lines—working as well with its junior partners in the triad, Europe and Japan. This strategic repositioning of imperialism in the Anthropocene can best be seen by examining the race for control of natural resources in two areas: fossil fuels and water.

Energy Imperialism

In 2018, John Lehman, secretary of the navy in the Ronald Reagan administration, reflecting on the two major wars fought by the United States in the Middle East at the close of the twentieth and the opening of the twenty-first century, declared: “You don’t want to fall into the trap of the left and say that we only went into Iraq for their oil but depending [on] how you phrase it, the costs [of these wars] can be attributed to the strategic dependence we have on Gulf oil.” [32] In other words, the issue, according to Lehman, was not just the immediate rewards from additional oil production—a naive view he attributed to the left—but the defense of an entire imperial economic system based on fossil fuels.

Today, following the fracking revolution, the United States is officially pursuing a strategy of total energy dominance in what is seen as a global competition for fossil fuels, against a backdrop of planetary ecological disruption. [33] The role of climate change in altering the conditions of U.S. imperial dominance permeate U.S. military and security discussions. And while global warming itself is not mentioned in the official 2017 *National Security Strategy* document of the United States, its very absence, coupled with the insistence on defending U.S. “sovereignty” with respect to fossil fuels and the criticism of “antigrowth” approaches to fossil fuel energy, point to its overriding significance in the Anthropocene crisis even there. [34]

The general approach in the U.S. military and strategic community is to see climate change as a “threat multiplier,” associated with such facts as: political instability, negative effects on food availability and prices, water and energy shortages, spread of disease, extreme weather emergencies, mass migration, disruption of maritime transport, economic collapse in vulnerable nations, and increased threats to economic global supply chains—particularly in strategic materials. [35] The prevailing viewpoint is one of looking outward from Fortress America and its various global bastions, encompassing the United States (and Canada); its military bases overseas of which there are more than six hundred; its dependencies; its European and Japanese so-called allies; the Greater Middle East, where it has been in perpetual war for almost three decades; and its various critical supply lines. [36]

As early as 2003, a report commissioned by the Pentagon on abrupt climate change declared that it was necessary to “create vulnerability metrics” as to which countries would be hit hardest by climate change in order to make it possible for the United States to act effectively in safeguarding its own geostrategic interests. It was suggested that, under these circumstances, relatively well-off populations with ample natural resources and food producing capabilities, such as the United States and Australia, would be likely driven to build walls and “defensive fortresses” around themselves to keep massive waves of would-be immigrants out, no doubt in the name of defending their national sovereignty. [37] As the report explained,

violence and disruption stemming from the stresses created by abrupt changes in the climate pose a different type of threat to national security than we are accustomed to today. Military confrontation may be triggered by a desperate need for natural resources such as energy, food, and water rather than conflicts over ideology, religion, or national honor. The shifting motivation for confrontation

would alter which countries are most vulnerable and the existing warning signs for security threats. [38]

As the world's carrying capacity declines under harsh climatic conditions, the authors of the report indicated that warfare would become more widespread, producing increased dangers of thermonuclear conflagration.

The military and security literature in the United States has continued to promote this general strategic outlook, affirming the reality of climate change while focusing on the means of advancing U.S. global hegemony in the context of the current planetary emergency. Implicit in this is the recognition that the United States will be less directly hit initially than most of the rest of the world by the effects of global warming. Washington can then concentrate on using its global economic, political, and military power in these circumstances of growing worldwide chaos and catastrophe to advance its own agenda of full-spectrum dominance.

In this respect, the U.S. military, imperial state, and economy remain tightly linked to the major U.S. fossil fuel corporations. This has led to the development of a new strategy of energy imperialism, in which U.S. preeminence in the control of world energy and a commitment to maximal fossil fuel extraction have been placed at the center of today's national security objectives. With the fracking revolution, U.S. production of oil and gas rose massively, causing the Barack Obama administration to remove regulations limiting the export of U.S. crude oil. Between 2015 and 2018, U.S. crude oil exports increased fourfold and its liquid natural gas exports increased by thirty-five-fold. The United States in 2018 exported two million barrels of crude oil a day, making it one of the world's leading oil exporters. At the same time, decreased dependence on oil imports has allowed it to impose stringent economic sanctions on major oil powers to which it is opposed, such as Venezuela, Iran, and Russia. [39]

The Trump administration has sought to remove all regulatory restrictions that would limit the expansion of the fossil fuel industry. This has resulted in a vast expansion in fossil fuel production and infrastructure, with the United States emerging as the leading fossil fuel producer of both oil and natural gas in the world. Even as debates are taking place on a Green New Deal in the United States and in the world as a whole, oil- and gas-pipeline expansion globally has tripled since 1996, with over half of the ongoing pipeline expansion projects (and over a third if measured by pipeline length) located in North America, connecting points of extraction with refineries and export terminals. Oil- and gas-pipeline expansion plans (preconstruction and construction) in North America currently amount to \$232 billion (over \$600 billion globally), with total oil and gas infrastructure expansion in excess of \$1 trillion for North America and \$2.9 trillion globally. [40]

The U.S. pipeline boom is directed at exports since the expansion of oil and gas extraction is far more than can be absorbed by domestic consumption. Under a Current Policies Scenario (or business as usual), by 2040 world demand for natural gas relative to 2017 prices is projected to rise by 55 percent, while oil demand is expected to increase by 26 percent. Globally, "banks, equity investors, and bondholders are in the process of placing over \$600 billion in bets on an expanded pipeline system [which includes over 300 pipelines in development globally] with an expected lifespan of 40 years or more." [41]

According to Ted Nace, lead author of a Global Energy Monitor report on the *Pipeline Bubble*, "these pipelines are locking in huge emissions for 40 to 50 years at a time, with the scientists saying we have to move in 10 years. These pipelines are a bet that the world won't get serious about climate change, allowing the incumbency of oil and gas to strengthen." [42] The pipeline infrastructure creates a path dependency, ensuring investment and support for burning fossil fuels, dramatically shortening the climate horizon associated with the trillionth metric ton of carbon. In the United

States alone, the natural-gas output made possible by these pipelines, either under construction or in the preconstruction stage, would add over half a billion metric tons of carbon dioxide each year by 2040, above 2017 levels. [43] ExxonMobil, the leading U.S. oil multinational, has declared that it plans on pumping 25 percent more oil and gas in 2025 in its world operations than it did in 2017. [44]

It is on the back of this expansion of oil and natural gas production and pipelines that the Trump administration has erected its new imperialist strategy of global energy dominance in defiance of all concerns over climate change. As Trump declared in June 2017: “We will be dominant. We will export American energy all over the world, all around the globe,” especially Asia. The fossil fuel industry had saved U.S. “sovereignty.” U.S. energy policy is to expand not only oil and gas production but coal production worldwide. The United States, he declared, was working on financing overseas coal plants in Ukraine and elsewhere. [45]

The U.S. *National Security Strategy* document released in December 2017 insisted that “energy dominance”—giving the United States the central position in all aspects of global energy production and consumption, based on “unleashing” its abundant fossil fuel resources—was the key to economic growth and to “countering an anti-growth energy agenda that is detrimental to U.S. economic and energy security interests.” [46] Michael Klare notes: “From the White House perspective, the U.S. is engaged in a momentous struggle for global power with rival nations and, it is claimed, the country’s abundance of fossil fuels affords it a vital edge. The more of those fuels America produces and exports, the greater its stature in a competitive world system, which is precisely why maximizing such output has already become a major pillar of President Trump’s national security policy.” This “militarization of energy policy” is not occurring so much in ignorance of climate change or of the advent of the Anthropocene, as based on a bet that fossil fuels are the means to increased imperial power, overriding all other considerations, and need to be locked in so that no alternative-energy revolution is possible. [47] Humanity be damned.

On May 28, 2019, the U.S. Department of Energy issued a press release rebranding natural gas as *freedom gas* and referring to its carbon dioxide molecules as “molecules of U.S. freedom.” [48]

Water Imperialism

One of the most immediate and profound impacts of climate change for people around the world is the acceleration of the global water cycle caused by excessive greenhouse gases (trapping heat/energy) in the atmosphere. Essentially, as science writer Richard A. Kerr put it, since 1950 “wet places have been getting wetter while dry places got drier.” [49] More violent storms and excessive precipitation in the form of flooding heightens the risk to agriculture in wet regions. The growing threat of extreme, long-term drought in many other regions of the world, the fact that the majority of the world’s agricultural lands suffer from high levels of soil degradation and loss, and the displacement of people due to such anthropogenic ecological disasters are indicative of a renewed expansion of dust-bowlification at an unprecedented pace and scale. [50]

While deforestation is a well-known contributor to climate change, it also has direct effects on the world’s hydrological cycle. Forests are critical components of the world’s water cycle and are responsible for providing life-giving rainfall to regions around the world. Widespread deforestation results in the loss of “giant rivers of water in the air”—formed from the water vapor released into the atmosphere by the world’s vast forests as trees and other plants exhale through their foliage moisture drawn from the ground via complex root systems.

Fred Pearce writes: “As we shave the planet of trees, we risk drying up these aerial rivers and the lands that depend on them for rain. A growing body of research suggests that this hitherto neglected

impact of deforestation could in many continental interiors dwarf the impacts of global climate change. It could dry up the Nile, hobble the Asian monsoon, and desiccate fields from Argentina to the Midwestern United States.” [51]

In the present imperial economic context, the impact of the acceleration and disruption of the global water cycle on everyday water availability and food production is severe enough to contribute to hunger levels rising once again, especially in Latin America and most of Africa. [52] In fact, while Bain and Company recently reported that in 2019 “the luxury goods market continues to shine” with “gourmet food and fine dining...up 6%,” severe hunger is currently higher than in 2014 in every region except North America and Europe. [53] Unusually dry conditions in Central America are partly responsible for the migrants heading north to the United States.

In this new Dust Bowl era, pollution, unsustainable water withdrawals (especially for agricultural, industrial, and energy production), inadequate and failing infrastructure, deforestation, and the melting of the world’s mountain glaciers—the apex of the world’s water towers—compound the threats of freshwater and food scarcity. [54] A 2016 study published in *Science Advances* indicated that already “about 66% [of the global population] (4.0 billion people) lives under severe water scarcity...at least 1 month of the year.... The number of people facing severe water scarcity for at least 4 to 6 months per year is 1.8 to 2.9 billion.... Half a billion people face severe water scarcity all year round.” [55]

Further adding to the woes of the most vulnerable are those profiting from the misery imposed on millions by the pursuit of accumulation without end. Recognizing the return potential of controlling the dwindling resources most critical for life, “corporations and investors in wealthy countries are buying up foreign farmland and the freshwater perks that come with it.” The United States is one of the leading countries in this regard. Recent trends in international land deals indicate that investors “don’t grab land in places without access to water,” as geographer Wendy Wolford put it. In recent decades, about 66 percent of these purchases were in countries with high levels of hunger. Environmental scientist Paolo D’Odorico, who has helped document these neocolonial trends, said that “in many of these countries, the sum of the water being grabbed would be enough to eliminate malnourishment.” [56]

This situation is clearly untenable for billions of people on the planet, leading even Trump to recognize that “water may be the most important issue we face for the next generation.” [57] It is no wonder under these conditions that, as scholars of international affairs from George Washington University write, water problems are an “accelerator of violence” and “scholarly literature and intelligence forecasts have also raised doubts that water stress will continue to engender more cooperation than conflict.” [58] A report by the Center for Climate and Security outlines the struggle for control of the world’s limited freshwater and the “weaponization of water” as “epicenters of climate and security” in “the new geostrategic landscape of the Anthropocene.” In other words, they are critical issues for global security, impacted by a rapidly changing climate and affecting regions around the world. [59]

In the face of all of this, foreign-policy analysts have focused on “who controls the tap” and urged a more aggressive approach to securing U.S. strategic interests with respect to water, integrating government and private-sector efforts in regions around the world and taking leadership against the encroachment of competitors like China. They highlight the centrality of water and the control of key freshwater sources to leveraging soft power and consolidating hegemony in regions, especially under conditions of increased water scarcity. [60] Of particular concern is control of the world’s water towers or mountain glaciers and headwaters that account for more than half the world’s freshwater. These water resources are critical ecologically, socially, and economically because “all the major rivers of the world have their headwaters in highlands and more than half of humanity

relies on freshwater that accumulates in mountain areas.” [61] China’s control of the Tibetan plateau and the potential conflict with India over infrastructure projects that divert water from downstream users are particular concerns. Analyst Troy Sternberg writes that “in transboundary environments water infrastructure exemplifies assertion of hegemonic rights and control” and “the future of water towers very much reflects a power game, both in terms of who is able to control and manipulate the water, and whether or not this actor can rebuff any challenge from downstream users.” [62]

As water scarcity increases and glacier retreat and disappearance hasten under climate change, the stakes will only be higher in contests for control of the larger repositories of freshwater in the world’s highest peaks. The downstream impacts of glacier shrinkage indicate that the scale of potential changes is enormous. More than 1.4 billion people rely on water from the Ganges, Indus, Brahmaputra, Yangtze, and Yellow rivers as well as the upstream snow and ice reserves that feed them. Not all of these rivers, however, appear to be equally subject to the effects of climate change, with the Brahmaputra and Indus basins most directly affected. [63]

In 2012, the U.S. Office of the Director of National Intelligence released an intelligence community assessment report on *Global Water Security*, outlining particular risks and opportunities of interest to the United States in regard to river basins around the world. It highlights the threat of increased water problems in countries “important to the United States,” which will hamper economic growth and U.S. policy objectives. The report also outlines the opportunities these problems present for the United States, whose expertise and technology will be sought to address water problems, and for U.S. businesses that will profit from increased agricultural exports to regions made less self-sufficient due to freshwater scarcity. It is stressed that “active engagement by the United States to resolve water challenges will improve US influence and may forestall other actors achieving the same influence at US expense.” [64]

The emphasis on “water as an opportunity” is a prominent theme in the 2017 *Global Water Strategy* released by the Trump administration, which notes that “water is an entry point to advance core democratic values.” Engaging in international water issues, it is indicated, is a profit-making opportunity for the private sector and an avenue through which to “encourage global institutions and organizations to promote best policies and approaches aligned with U.S. interests.” Water crises are deemed as important opportunities to promote U.S. interests through strategic foreign aid and assistance. [65]

Despite the strategy outlined by the current U.S. administration, Wilson Center analysts and others suggest the U.S. government is not doing enough. They propose that “to enable such strategic direction on hydro-diplomacy, the president should establish a public-private Center for Water Conflict Prevention. This would mobilize a unified government approach while leveraging the private sector to harness the economic opportunities created.” Such coordination through an established center would, they argue, create “hope and potential opportunity for shifting the water-related balance of power in critical regions.” The same analysts argue that the inevitable consequence of not implementing full-throttle engagement with water issues, especially in the context of climate change, is the decline of the U.S. position. They warn that “if left unchecked, the effects of climate change on Asia’s water security could drive China’s neighbors to align more closely with the country that controls the tap. This alignment could both undermine U.S. presence in the region and drive the region toward a multipolar leadership structure that favors China. Defense and security policymakers ignore the implications of water security in Asia at their peril.” [66]

Yet, while U.S. foreign-policy and security analysts, such as Marcus D. King and Julia Burnell, discuss “The Weaponization of Water in a Changing Climate” and point out that the “U.S. intelligence community suggests that as water becomes scarcer, states may begin employing water as an interstate ‘weapon,’” the notion that the United States as the leading imperial power might

engage in such actions is left out of consideration altogether. Nevertheless, Washington is in full support of Saudi Arabia's war in Yemen where it has weaponized water in one of the most water-scarce countries in the world, repeatedly bombing dams, reservoirs, and sanitation facilities, leaving nineteen million people in the country without clean water. [67]

While the foreign-policy establishment hones in on the world's water, and the potential regional, national, and subnational conflicts that now seem likely, at the local level, water and earth defenders are murdered with impunity in record numbers by the henchmen of some of the core industries at the center of the world's water crisis: agribusiness, the oil and mining industries, poachers, and loggers. [68]

Extinction Rebellions

The failure to put the issue of imperialism in the Anthropocene at the center of its analysis is the greatest weakness of the Western ecological movement. It is often acknowledged that the effects of climate change and the crossing of planetary boundaries in general are having their greatest effects on the global South, where millions are already suffering from climate change. This is often connected to global inequality and to the long history of colonialism and imperialism. It is also recognized that the detrimental effects of global warming are magnified by global inequality. Finally, it is often understood on the left that climate change is a planetary issue and requires a global rising of humanity to overcome the capitalist power structure that is driving it. [69] Nevertheless, there is very little consciousness at present that imperialism, representing the global rift inherent in the world capitalist system, is an *active force* organized against ecological revolution, seeking to lock in the fossil fuel system and the current regime of maximal environmental degradation and human exploitation. Twenty-first-century imperialism is, in this sense, the exterminist phase of capitalism.

All of this points to the fact that any critique of capitalism that does not include imperialism is insufficient to confront our current epochal crisis. To be sure, any realistic attempt to face up to the crisis of the Anthropocene must begin with a general critique of capitalism as a system that puts the accumulation of capital before all else. It is this that constitutes the root of today's planetary climacteric, necessitating an anticapitalist movement devoted to ecological sustainability and substantive equality—that is, to socialism. The fact that capitalism is a threat to human survival makes it obsolete as a social system.

However, while the critique of capitalism is the starting point, the analysis cannot simply stop there; it must confront the reality of generalized monopoly-finance capital now operating on a world scale and the deep, systematic division of the world into center and periphery, global North and global South—a division only worsened by climate change. It is in this larger imperialist context that capitalism exists as an actual historical system in the twenty-first century, and it is this that must be opposed.

In these new no-analogue historical conditions, an emergent "species consciousness" is rapidly arising, based on the identification with humanity as a whole and even with other species, as described by famed psychologist Robert J. Lifton in his book, *The Climate Swerve*. [70] It is this sense of a shared global material reality—arising in dialectical form alongside new revanchist nationalistic movements associated with the very same epochal crisis—that has proven to be a major motivating factor behind Britain's Extinction Rebellion movement and the student strikes throughout Europe. It is increasingly understood, especially by the young, that the rich nations have a historic responsibility for climate change along with the greatest capacity to stop it and requiring the fewest sacrifices, and that this involves nothing less than the fate of the earth and humanity as a whole. Lifton calls the new "species consciousness" a "swerve" after the philosophy of indeterminacy and freedom of the great ancient materialist philosopher Epicurus—the significance of whose thought in

this respect was first recognized by Karl Marx. [71]

But such a swerve, focusing on the needs of working humanity as a whole, if it is to come to fruition, must recognize that capitalism in its most concrete, most intensive, and most deadly form is the imperialist world system, and can only truly be countered in those terms. It follows that there can be no ecological revolution in the face of the current existential crisis unless it is an anti-imperialist one, drawing its power from the great mass of suffering humanity. The global ecological movement must thus be a movement for the unification of the oppressed, emanating from innumerable Extinction Rebellions, and leading to the first true International of the world's workers and peoples. The poor shall inherit the earth or there will be no earth left to inherit.

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P.S.

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Footnotes

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