

Socialism and Ecological Survival

An Introduction

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The issue of survival can be put into the form of a fairly rigorous question: Are present ecological stresses so strong that – if not relieved – they will sufficiently degrade the ecosystem to make the earth uninhabitable by man? If the answer is yes, then human survival is indeed at stake in the environmental crisis. Obviously no serious discussion of the environmental crisis can get very far without confronting this question.

– BARRY COMMONER, *The Closing Circle* (1971)¹

Capitalism has brought the world to the edge of the abyss. We are rapidly approaching a planetary tipping point in the form of a climate Armageddon, threatening to make the earth unlivable for the human species, as well as innumerable other species. Such an absolute catastrophe for civilization and the human species as a whole is still avoidable with a revolutionary-scale reconstitution of the current system of production, consumption, and energy usage, though the time in which to act is rapidly running out.²

Nevertheless, while it is still possible to avoid irreversible climate change through a massive transformation in the mode of production, it is no longer feasible to circumvent accelerating environmental disasters in the present century on a scale never seen before in human history, endangering the lives and living conditions of billions of people. Humanity, therefore, is facing issues of ecological survival on two levels: (1) a still reversible but rapidly worsening Earth System crisis, threatening to undermine civilization as a whole and make the planet uninhabitable for the human species, and (2) accelerating extreme weather and other ecological disasters associated with climate change that are now unavoidable in the coming decades, affecting localities and regions throughout the globe. Social mobilization and radical social change are required if devastating near-term costs to people and communities, falling especially on the most vulnerable, are to be prevented.

Six decades after the threat of accelerated global warming was first raised by scientists, the situation has only gotten worse. In August 2021, UN secretary general António Guterres declared that it is “Code Red for Humanity.”³ His warning coincided with the UN Intergovernmental Panel on Climate

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Change's (IPCC) release of the *Physical Science Basis* report of Working Group I of its *Sixth Assessment Report* (AR6). In this report, five primary scenarios were provided with respect to climate mitigation. Among the most significant findings was that *even in the best-case scenario* (SSP1-1.9), requiring at this point nothing less than a rapidly escalating transformation of the entire global system of production and consumption, the world will surpass a 1.5°C increase in global average temperature after 2040, and will not get below that temperature again until the very end of this century.⁴

The second scenario (SSP1-2.6) points to an increase in global average temperature at the end of the century of 1.8°C (still well below the guard-rail of 2°C). The threat of irreversible planetary catastrophe is represented by the next three IPCC scenarios. The fifth scenario (SSP5-8.5) points to an increase in the global average temperature of 4.4°C (best estimate) – spelling the collapse of civilization and absolute disaster for the human species. To avoid such a prospect, given the direction in which the world is now headed, it is necessary to reverse “business as usual,” transcending the prevailing logic of an “unsustainable” capitalist system.⁵

At the same time, the IPCC report makes it clear that it is no longer conceivable to prevent accelerating climate disasters this century, even in the best-case scenario, in which an irrevocable planetary tipping point would be avoided. The decades immediately ahead will therefore see the proliferation of extreme weather events that will compound one another: heavy precipitation, megastorms, floods, heatwaves, droughts, wildfires, and failing monsoons. Sea-level rise will continue throughout this century and beyond, regardless of the actions taken by humanity – though the *rate* of sea-level rise can still be affected by the world's actions. Massive global crop failures are to be expected.⁶ Climate refugees will be in the hundreds of millions.⁷ All of this is further complicated by the fact that climate change is not the only planetary boundary that capitalism is currently crossing or threatening to transgress. Others include: the loss of biological diversity (marking the sixth extinction), ocean acidification, disruption of the nitrogen and phosphorus cycles, loss of ground cover (including forests), loss of freshwater resources, chemical pollution, and radioactive contamination.⁸

Up to now, the ecological, including ecosocialist, strategy with respect to climate change has focused almost entirely on mitigation, aimed at stopping greenhouse gas emissions, particularly carbon emissions, before it is too late. Yet, this general approach has all too often been rooted in a type of reformist environmentalism that does not seriously challenge the parameters of the present system, allowing the ecological crisis to deepen and expand. Mitigation – but today necessarily of a far more revolutionary character – still has to play the leading role in any global

climate strategy, since it is essential for the continuation of civilization and survival of the human species (and most of the known species on Earth). However, it is now also necessary, given the inevitable degradation of the earth this century, to *mobilize immediately for survival at the level of communities, regions, nations, and whole peoples*. The harsh reality is that during the next few decades, which according to even the IPCC's most optimistic scenario will involve breaching the 1.5°C threshold – at least for a time – humanity will inevitably see the proliferation of environmental catastrophes at all levels and throughout the planet. This requires that populations organize, plan, and create spaces of ecological sustainability and substantive equality designed to protect what Karl Marx called “the chain of human generations.”⁹

Self-mobilization of populations in order to protect lives, communities, and local and national environments, while carrying out revolutionary changes at all levels of existence as part of completely reorganizing production, consumption, and energy usage, now constitutes the pathway to ecological survival. Yet, this new strategic moment, in which mitigation has to be accompanied by environmental disaster management aimed at protecting populations in the community in the present as well as future, has not yet been fully mapped. A broad revolutionary ecological and socialist strategy has to be articulated that transcends the dominant liberal refrains of individual “adaptation” and “resilience,” which largely deny the realities of class, race, gender, and imperialism – along with the metabolic rift between capitalism and the environment.¹⁰

The only meaningful, radical approach to these unprecedented challenges and multiple levels of catastrophe is that of *socialism as a pathway to ecological survival*. It is now widely understood within natural science that the Holocene Epoch in the geological history of the earth of the last twelve millennia has ended and that the planet entered into the Anthropocene Epoch around 1950.¹¹ The Anthropocene Epoch is defined as the geological epoch in which *anthropogenic*, rather than *non-anthropogenic* factors (as in the entire prior history of the earth), now largely determine the rate of Earth System change. In what might be called the *Capitalinian Age*, the first geological age of the Anthropocene, the world is characterized by an Anthropocene crisis associated with “anthropogenic rifts” in the biogeochemical cycles of the planet, brought on by the Great Acceleration of the human impact on the planet under mature monopoly capitalism.¹² What is needed in these circumstances is the creation of a novel mode of production ushering in a new geological age of the Anthropocene (since the Anthropocene itself is now a permanent feature of geological history, as long as human civilization continues).

In a previous analysis, we dubbed this potential future geological age of the Anthropocene the *Communion Age*, standing for community, communal, and the commons. The advent of the Communion Age would mark the historical development of a new, higher, more sustainable human relation to the earth, one which could only come about through ecological, collective, and socialist action. This transition to the second age of the Anthropocene, transcending the present Capitalinian, must begin as soon as possible to protect lives, coordinate environmental disaster management strategies, and undercut the momentum associated with the accelerating trends of ecological disaster.¹³ Such revolutionary, socialist transformations constitute the necessary foundation for survival, moving forward in this century.

The Great Acceleration and the Great Ecological Revolt

The advent of the Anthropocene Epoch is associated in natural science with the Great Acceleration of economic impacts, energy use, and pollution, marking the changed physical relation to the environment arising from anthropogenic factors. However, the Great Acceleration and the advent of the Anthropocene also corresponded to the emergence of the modern environmental movement in the late twentieth and early twenty-first century, which might be seen as signifying the beginnings of a Great Ecological Revolt, still emerging on a planetary level in the present century.¹⁴

Modern environmentalism, or the ecological revolt of the post-Second World War years, is usually said to have begun in 1962 with the publication of Rachel Carson's *Silent Spring*. It is more accurate, however, to see its point of origin in the response to the disastrous U.S. thermonuclear test carried out under the code name "Castle Bravo" at Bikini Atoll in the Marshall Islands on March 1, 1954. The Castle Bravo hydrogen bomb test was intended to have a yield of no more than six megatons, but, due to an error of the scientists involved, it had an explosive power of fifteen megatons, about two and a half times what was expected and a thousand times that of the atomic bombs that the United States dropped on Hiroshima and Nagasaki. The detonation resulted in ten million metric tons of coral being radiated and absorbed into the fiery mushroom cloud that climbed over 100,000 feet into the air and spanned over seventy-five miles.¹⁵

The Castle Bravo test released an enormous, unexpected level of radiation, with the fallout extending over 11,000 square kilometers. Traces of radioactive materials, which had entered the atmosphere and stratosphere, were detected all over the globe. Marshall Islanders on the inhabited atolls were covered with a fine, white-powdered substance (calcium precipitated from the vaporized coral) containing radioactive fallout. Decades after the Castle Bravo test, most of the children and many adults on

Rongelap Island had developed thyroid nodules, some of which proved malignant. The crew of a Japanese fishing boat, the *Lucky Dragon*, which at the time of the test was some eighty-two nautical miles from Bikini, well outside the official danger zone, were coated in radioactive fallout. By the time the boat reached Japan, members of the crew were already exhibiting radiation sickness, setting off a world alarm.¹⁶

The Dwight Eisenhower administration refused to release information on the effects of radioactive fallout and exposure in the face of the Castle Bravo disaster, downplaying the issue for almost a year. However, the veil that hid the fallout problem fell. Alarmed scientists immediately began to research the effects of radioactive fallout and how it was distributed by air, water, and living organisms throughout the global ecosystem. This work revealed how the operations of the Earth System resulted in fallout being concentrated in the Arctic, despite this region being far removed from where nuclear testing was taking place. It documented how iodine-131 adversely affected the thyroid gland. It detailed how plants and lichen absorbed strontium-90, which then moved throughout the food web, where this radioactive isotope was incorporated into bones and teeth, increasing cancer risks. These studies raised fears of a planetary ecological crisis, whereby the world's population would share a common environmental fate from the spread of radiation, threatening survival everywhere, as dramatized in fictional form in Nevil Shute's 1957 dystopian nuclear holocaust novel *On the Beach*.

All of this was to contribute to the inception of the Great Ecological Revolt or worldwide development of environmental movements. Disturbed by the spread of radionuclides in the biosphere, scientists began protesting against above-ground nuclear tests, led by such left/socialist figures as J. D. Bernal, Virginia Brodine, Barry Commoner, W. E. B. Du Bois, Albert Einstein, H. J. Muller, Linus Pauling, and Bertrand Russell.¹⁷ Reflecting on these issues, Leo Huberman, the editor of *Monthly Review*, remarked in 1957 that "time is running out.... The tests [of these bombs] are dangerous to the health of the world. We must make the movement to ban the bomb encompass not just the Left who are already aware of the dangers, but *all* of our countrymen."¹⁸

Commoner, a biologist and a pioneer in ecological thought, helped organize in 1958 the St. Louis Citizen's Committee for Nuclear Information (later the Committee for Environmental Information) that brought scientists and citizens together to share accurate information regarding nuclear issues and concerns, including the dangers of exposure to radioactive fallout. This group famously initiated the baby tooth study in 1958, which involved coordinating with community organizations to recruit participants to collect teeth from young residents in the region to

examine the absorption and prevalence of strontium-90. By 1970, approximately 300,000 teeth had been analyzed, revealing that the presence of strontium-90 in teeth rose in direct correspondence to an increase in atmospheric bomb tests, only to decline following the end of such above-ground tests. Given the rich findings, similar studies were done in other parts of the United States, Canada, and Germany, further documenting how radioactive isotopes were readily incorporated into specific parts of the body, contributing to an increase in childhood cancer.

Carson herself entered into this ecological movement initially through her concern over bioaccumulation (concentration of contaminants like radionuclides and other toxins within organisms) and *biomagnification* (the magnified concentration of contaminants at higher levels within the food chain). She offered an extensive analysis of the dangers that accompanied the widespread use of synthetic pesticides, explaining that the “chemical war,” poisoning, and ecological degradation were driven by “the gods of profit and production.”¹⁹

In the context of the Great Ecological Revolt, both before and after the publication of Carson’s *Silent Spring*, socialist environmentalists were generally distinguished by their more thoroughgoing critiques and far-reaching analyses of the fundamental threat that the capital accumulation system posed to the global environment, and by their insistence on the need for the formation of a revolutionary ecological movement for human survival.²⁰ Three classic works in this respect are Commoner’s *Science and Survival* (1963); Charles H. Anderson’s *The Sociology of Survival: Social Problems of Growth* (1976); and Rudolf Bahro’s *Socialism and Survival: Articles, Essays, and Talks 1979–1982* (1982).²¹ Commoner’s and Anderson’s books both addressed the multiple critical ecological thresholds, such as climate change, that were being crossed as a result of the profit-driven production system.²² The red-green theorist Bahro, building on the analysis of British Marxist historian E. P. Thompson, insisted in “Who Can Stop the Apocalypse?” that capitalism was leading to “exterminism,” or the systematic death of multitudes. He called for the mobilization of a massive, global ecological “conversion movement” aimed at transcending the system of capital accumulation.²³

As Commoner, Anderson, and Bahro all emphasized, there were two existential crisis tendencies facing humanity – a reality that remains true today. One is associated with the nuclear arms race and the threat of a global thermonuclear exchange, ushering in nuclear winter.²⁴ The other is the crossing of planetary boundaries, constituting a direct threat to ecological existence, due to the inherent drive of the system of capital accumulation in the Anthropocene. Six decades after the danger of accel-

erated global warming was first raised by scientists in the Soviet Union and the United States, the situation has only gotten progressively worse and more threatening, marking the complete failure of the capitalist environmental state in checking fossil capital.²⁵ The only answer is to build a strong socialist and ecological, or ecosocialist, movement locally and globally, that ensures the survival of populations and communities in the present while safeguarding the future of humanity and the earth.

Ecosurvival and Ecosocialism

Born in 1917, Commoner was a child of the Great Depression and of the socialist and communist movements of the time. He was strongly influenced by the mass movements supporting the Republican cause in the Spanish Civil War and by protests against lynchings in the U.S. South. Drawn early on to socialist, dialectical-materialist approaches to science, he was a close reader of Frederick Engels's *Anti-Dühring* and the *Dialectics of Nature*. He was to be a lifelong ecosocialist. He once declared, ironically, that "the Atomic Energy Commission made me an environmentalist."²⁶ In "To Survive on the Earth," the closing chapter of *Science and Survival*, Commoner warned:

As a biologist, I have reached this conclusion: we have come to a turning point in the human habitation of the earth. The environment is a complex, subtly balanced system, and it is this integrated whole which receives the impact of all the separate insults inflicted by pollutants. Never before in the history of this planet has its thin life-supporting surface been subjected to such diverse, novel, and potent agents. I believe that the cumulative effect of these pollutants, their interactions and amplification, can be fatal to the complex fabric of the biosphere. And, because man is, after all, a dependent part of this system, I believe that continued pollution of the earth, if unchecked, will eventually destroy the fitness of this planet as a place for human life.... I believe that world-wide radioactive contamination, epidemics, ecological disasters, and possibly climatic changes would so gravely affect the stability of the biosphere as to threaten human survival everywhere on the earth.²⁷

Commoner was deeply concerned with "the assault on the biosphere." Already in *Science and Survival*, he presented the basic nuclear winter hypothesis in which a general thermonuclear exchange would result, due to the lofting of smoke and soot into the stratosphere, in a drastic reduction in global average temperatures imperiling all of humanity.²⁸ In the same work, he pointed to climate change, warning of the effects of accelerated carbon dioxide accumulation in the atmosphere, the consequences of this on the biosphere, and the "catastrophic floods" arising from sea-level rise. "Control of this danger," that is, global warming, he observed in the mid-1960s, "would require the modification, throughout the world, of

domestic furnaces and industrial combustion plants.... Solar power, and other techniques for the production of electrical power which do not require either combustion or nuclear reactors, may be the best solution. But here...massive technological changes will be needed in all industrial nations.” Nevertheless, technology itself was not the answer. As Commoner went on to state, “technology has not only built the magnificent material base of modern society, but also confronts us with threats to survival which cannot be corrected unless we solve very great economic, social, and political problems.... Science can reveal the depth of this [ecological] crisis, but only social action can resolve it.”²⁹

In 1971, in the chapter on “The Question of Survival” in *The Closing Circle*, Commoner made a similar declaration, writing:

My own judgement, based on the evidence now at hand, is that the present course of environmental degradation, at least in industrialized countries, represents a challenge to essential ecological systems that is so serious that, if continued, it will destroy the capability of the environment to support a reasonably civilized human society.... One can try to guess at the point of no return – the time at which major ecological degradation might become irreparable.... It is now widely recognized, I believe, that we are already suffering too much from the effects of the environmental crisis, that with each passing year it becomes more difficult to reverse, and that the issue is not how far we can go to the brink of catastrophe, but how to act – now.³⁰

For Commoner, the ultimate problem was the mode of production itself. As he stated in the introduction to the 1992 edition of *Making Peace with the Planet*, “If the environment is polluted and the economy is sick, the virus that causes both will be found in the system of production.”³¹

Anderson, who was deeply influenced by Commoner’s work, was a Marxian sociologist and political economist, author of *The Political Economy of Social Class* (1974). In the mid-1970s, he developed a powerful ecosocialist degrowth analysis, focusing on the planetary environmental crisis and issues of human ecological survival. His major work, *The Sociology of Survival*, argued that the alienated capitalist growth economy was destroying the environmental conditions of human existence. “The stakes involved in this crisis of survival,” he wrote, “are in the extreme sense nothing less than the physical continuation of human beings on the planet.”³²

Operating in the tradition of Paul A. Baran and Paul M. Sweezy’s *Monopoly Capital*, Anderson saw capitalism in its mature state as prone to economic stagnation, manifested in a tendency toward slower growth and higher levels of unemployment/underemployment and excess capacity. But stagnation (what Herman Daly was to call a “failed growth system”) in many ways only served to intensify the system’s thrust against the environment,

since a “stagnating capitalism is a doomed system and everything must be directed toward restoring growth, including industrial and technological innovation and change, regardless of need or impact.” Hence, a capitalism, prone to stagnation, becomes more intensively destructive of “earthly life,” relative to the level of output.³³ This has been partially confirmed by research on the effects of economic slowdowns on carbon emissions. Thus, empirical studies have shown that, as the capitalist economy declines in terms of overall output in recessions, carbon emissions do not decrease proportionately, but rather increase in intensity.³⁴

Focusing on the core ecological problem posed by the exponential accumulation of capital, Anderson argued: “With ever increasing speed and force, humanity presses forward upon the unknown limits of its own life-support systems. The breaking point, or a point of irreversible ‘no return,’ approaches in such major life-giving systems as the atmosphere, hydrology, nitrogen cycles, and photosynthesis. It is the nature of living systems to have threshold levels, meaning that things may appear to be going quite all right until virtually all of a sudden the system is in a state of irreversible decline.”³⁵

An important part of Anderson’s argument was the danger to human survival represented by climate change, in which he argued that “a mere two degrees centigrade increase” in average global temperature due to the concentration of carbon dioxide in the atmosphere “could destabilize or melt the polar ice caps, raising the ocean 50 meters and flooding coastal populations and agricultural areas.”³⁶ He insisted that in the rapacious capitalist growth economy “nothing grows faster in the growth of society than energy consumption” – a view that continues to be borne out in the twenty-first century, with the U.S. Energy Information Administration projecting in 2021 that world energy consumption will rise by 50 percent from 2020 to 2050, despite the urgent need to reach zero net carbon emissions by 2050.³⁷

A crucial aspect of Anderson’s argument was his emphasis on “environmental debt.”³⁸ Inherently unable to adopt a sustainable approach to nature, requiring relations of ecological reciprocity incompatible with its economic expropriation of the planet, capitalism was in effect drawing down the resources of the earth needed for human survival. As he cogently explained, referring to what is now known as Marx’s theory of metabolic rift: “Modern agriculture, charged Marx, is as guilty of soil exploitation as it is of labor exploitation; the capitalist extracts a fictitious surplus from the soil by taking more wealth out than he restores. Thus, just as workers produce more value than they are paid in return, and thus perform unpaid labor, so has nature been forced to yield up its capital

stock at a rate far in excess of actual or restorative costs. The unpaid costs to the environment underlie the ecological challenge to survival.”³⁹

For Anderson, the extraction and depletion of resources was even more evident in the underdeveloped nations of the third world or Global South, given imperialistic relations. Resources in the periphery of the capitalist world system were expropriated without any concern for restoration or reciprocity, at the same time that the economic surplus generated in those countries was siphoned off by the rich countries in the capitalist core. In the case of poor, underdeveloped countries, therefore, growth remained necessary, but it was also crucial to implement a more “balanced growth” in the periphery and internationally, organized on a socialist, equitable, and sustainable basis aimed at addressing real needs. Here, growth is related to advancing human social development, establishing social relations with nature that mend ecological rifts, and preventing further “environmental debts.”⁴⁰ Such a transformation necessitated strongly confronting capital.

Monopoly capitalism, for Anderson, was a system of economic and ecological waste in both production and consumption. It included a massive sales effort, which penetrated into the production process, high levels of military spending, and financial speculation – all of which reinforced its unsustainable tendencies and intensified its wasteful operations. Science and technology themselves took alienated forms. This generated “an openly exploitative and destructive science and technology geared toward the maximization of surplus wealth and the minimization of immediate financial cost.”⁴¹ The result was an anti-ecological system, which became more unecological the further accumulation proceeded. Growth beyond a certain “point, particularly artificially forced growth, may be seen to reverse previous progress, destroying the foundation upon which a socialist society and culture could be constructed.” Nevertheless, there was no possibility of a shift away from growth/accumulation by capitalism itself, since to “give up growth” would be to “give up everything that really matters to the capitalist class *qua* class.”⁴²

The critique of unlimited capitalist economic growth, for Anderson, did not mean that “social growth” or human development could not continue. “Growth becomes what it must become: social growth.... True socialism provides the conditions for growth in knowledge, art and literature, music, science and technology, ties with nature, sociality, individuality, bodily activity and spiritual appreciation – available for all and pursued with everyone’s well-being and personal dignity in mind.”⁴³

“Socialism and survival,” in Anderson’s view, were “in effect, synonymous.” But survival was not simply about preserving human existence; it

was also about the quality of that existence, and for this too socialism was required. Such a view stressed not only the “danger inherent in existing economic, technological, environmental, resource, population, and agricultural conditions...but also...the kind of social reconstruction” crucial to overcoming capitalism’s existential ecological crisis. Ecological survival means a thoroughgoing transformation of the mode of production. “The manner in which people organize their materially productive activities,” in other words, their metabolic relations with nature, he explained, constitutes “the crucial linkage between the social quality of life people experience and the reproductive viability of the physical life-support system.” Above all, this requires the “liberation of time,” both work time and leisure time, so they promote human development and sustainability, and neither are aimed at profits. The breakdown of the “work-leisure dichotomy” is essential since it is “the heart of the growth system.”⁴⁴

A socialist dissident from East Germany who became a leader of the red-green movement within West Germany, Bahro articulated in his *Socialism and Survival* a sense of real urgency associated with the need to stop the planetary devastation and deepening social contradictions brought on by the “so far unstoppable process of capital accumulation.”⁴⁵ Capitalism, he contended, raises the question of survival, which only an ecological, socialist, peace movement, involving a new material and spiritual relation to the earth, can solve.⁴⁶

For Bahro, following Thompson’s earlier analysis, exterminism meant the destruction of industrial civilization along with human multitudes. “To express the extermination thesis in Marxian terms,” he wrote:

one could say that the relationship between productive and destructive forces is turned upside down. Like others who looked at civilisation as a whole, Marx had seen the trail of blood running through it, and that “civilisation leaves deserts behind it.” In ancient Mesopotamia it took 1500 years for the land to grow salty, and this was only noticed at a very late stage, because the process was slow. Ever since we began carrying on a productive material exchange with nature, there has been this destructive side. And today we are forced to think apocalyptically, not because of culture-pessimism, but because this destructive side is gaining the upper hand.⁴⁷

Capitalism, precisely because its motor and purpose are found in the process of endless, exponentially increasing capital accumulation, can only proceed down the exterminist path. Hence, there is “no Archimedean point [no place to stand with which to move the world] within existing institutions which could be used to bring about even the smallest change of course.” Turning to G. W. F. Hegel, Bahro explained that the prevailing “economic principle of surplus-value production” means that social ad-

vance is defined in the narrowest of quantitative criteria associated with the gains of capital. Significantly, “Hegel used to speak in such cases of a ‘bad infinity,’ by which he meant a process which involved no more than adding 1 to 1, and did not lead in its own context to a decisive qualitative leap. This kind of progress must cease for the share of the earth’s crust that can be ground up in the industrial metabolism is limited, despite all possible and senseless expansion, if the planet is to remain habitable.”⁴⁸

For Bahro, “the enormous ecological destabilisation” in the Global South “is primarily a symptom of western structural penetration into ‘indigenous’ social and natural conditions.”⁴⁹ The result of this global capitalist exterminist expansion is “a crisis of human civilisation in general. There has never been anything comparable in the whole past history of our species on the earth.” In fact, “exterminism is expressed in the destruction of the natural basis of our existence as a species.”⁵⁰ The control exerted by the system over the working class is a product of capitalism’s ability constantly to create an internal dependence of workers on the system, which the combined ecological and economic crisis is now weakening. But the movement of resistance that is needed has to be organized primarily through the merger of the ecological and peace movements and their relation to the working class, rather than on traditional productivist grounds. Ecology, given the scope and depth of the planetary crisis and the undermining of the conditions of life, becomes the common material ground “affecting more people in their existential interests than in any other contradiction.”⁵¹

To advance on a path of sustainability and survival therefore would mean a revolutionary break with the logic and institutions of capitalism, out of which the ecosocialist transition was to emerge. Capitalism, in Bahro’s view, was not all inclusive, in the sense that it is often depicted in contemporary ideology as constituting the entirety of the present-day world. It continued to have an external area, which, as in the conception of Arnold Toynbee, gave rise to an “external proletariat” occupying the periphery and precarious parts of the capitalist world. This existed alongside the “internal proletariat” of the advanced capitalist world, which, by definition, was never fully incorporated within the system.⁵²

“The oldest stratum of civilisation involved in the present crisis,” Bahro argued, following Engels, “is that of patriarchy, with ten millennia behind it.”⁵³ Many of the distinctive tendencies of contemporary civilization, including forms of oppression, thus run deeper than present-day capitalism. There were cultural and spiritual resources that were resistant to capitalist exterminism. All of this created the potential that “the capitalist industrial system” could be “driven back and destroyed by an

unstoppable manifold movement of humanity,” defined in ecological and socially reproductive more than “purely economic terms.”⁵⁴

A central reality of capitalism, in this view, was the inability of the capitalist state itself to change course or to reverse the ecological devastation generated through its own operations. The capitalist state governed by industrial and financial interests, Bahro wrote, “is obviously so very much wedded to exterminism that it doesn’t permit itself to be used as an emergency brake.... No government which could be constituted on the present ‘place’ of the state [within the existing socioeconomic order] could be anything but a bad emergency government.”⁵⁵ The essence of the problem was the juggernaut of capital itself, which the capitalist state only sought to accelerate, never to apply the brakes, heading therefore toward a collision with the earth. This, he said, would especially impact “the marginalised and excluded, those with their backs to the wall, [who] now [however] have an unbeatable ally in this very wall that they have their backs against. This wall is formed by the limits of the earth itself, against which we really shall be crushed to death if we do not manage to brake and bring to a halt the Great Machine that we have created before this finally bumps against it.” The answer clearly could not be seen as lying in a capitalist “emergency state,” which would only make things worse for the vast majority, and for the earth itself, but in a revolutionary “salvation government” in which the material struggle for survival coupled with the struggle for human liberation – the end of alienation and the focus on essential human needs – would generate a new emergent reality.⁵⁶

However, this revolutionary ecological critique offered by socialist ecologists, premised on the rejection of capitalism’s relentless destruction of humanity and the earth, and therefore on the linking of the struggle for survival to the struggle for human freedom, did not come to dominate the environmental movement – even though it played a critical role in the ecological struggles of the time. The environmental movement, and even much of ecosocialist thought, in the tamer periods that followed the initial revolt, gravitated toward a radical reformism, in which the full urgency of the struggle for survival was forgotten, despite the rapidly accelerating planetary ecological crisis. A stage of environmental denialism – not of the whole environmental problem but of its worst threats and their inherent relation to capitalism – set in on the left. Hence, the understanding of the existential crisis stemming from the ecological deficits of capitalism that thinkers such as Commoner, Anderson, and Bahro raised – not apocalyptically, but in terms of an ecosocialism of survival demanding revolutionary social change – is now needed more than ever.

Existential Crisis Now!

The IPCC reports, representing the world scientific consensus with respect to climate change, serve to illuminate how the imperatives of capitalism are pushing the world into the inferno looming before us. The more optimistic IPCC scenarios, those resulting in a growth of global average temperature this century of well below 2°C, point to the actions necessary to reach net zero carbon emissions (as well as reducing other greenhouse gas emissions), thus avoiding irrevocable climate change. The remaining scenarios, representing the continuation of “business as usual,” depict how the ongoing accumulation of greenhouse gases in the atmosphere will drive an increase in the average global temperature, resulting in abrupt changes in the Earth System that undermine the conditions of life for humanity and other species. Unfortunately, the capitalist “business-as-usual” trends persist, pointing to hellish consequences. Thus, with each new IPCC report, the situation is ever more dire, and the possibility of pulling away from disaster requires ever more revolutionary change, given both the increasing physical scale of the problem and the diminishing time scale. This represents the existential crisis that now lies before the entire world.

In the best-case scenario (SSP1-1.9) provided by the *Physical Science Basis* assessment in part 1 of AR6, written by Working Group I, global average temperature, as we have seen, is expected to surpass a 1.5°C increase above pre-industrial levels after 2040, rising to 1.6°C, and not declining below the 1.5°C threshold again (returning to 1.4°C) until the end of the century. But in order for this scenario to hold, global carbon emissions must peak within a few years, with net zero emissions achieved by 2050. Still, even in this scenario – the most optimistic one now provided by the IPCC – the world will continue to experience the propagation of extreme weather events, heavy precipitation, flooding, drought, heatwaves, wildfires, glacial melting, and sea-level rise, which will affect every region of the earth, while threatening billions of people.⁵⁷

The IPCC’s *Impacts, Adaptation and Vulnerability* assessment, written by Working Group II of AR6, released in February 2022, documents the observed consequences of climate change so far, detailing the vulnerabilities and projected risks in the coming decades. The “Summary for Policymakers” of Working Group II highlights the range of changes in the Earth System, which have already increased the risks that much of humanity experiences and which are decreasing the quality of existence in general. Among the “observed impacts,” it is emphasized that “human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts and related losses and damages to nature and people, beyond natural climate variability.... Across sectors

and regions, the most vulnerable people and systems are observed to be disproportionately affected. The rise in weather and climate extremes has led to some irreversible impacts as natural and human systems are pushed beyond their ability to adapt.”⁵⁸

Heat- and drought-related conditions have increased tree mortality and wildfires. The warming of the ocean has resulted in “coral bleaching and mortality” and the “loss of kelp forests.” Half of the species considered are already migrating toward the poles or moving to higher elevations. Climate change is also increasing irreversible conditions such as species extinctions. In comparison to previous estimates in prior assessments, “the extent and magnitude of climate change impacts are [now] larger.”⁵⁹

Climate change is negatively affecting both the physical and mental health of people. For example, “extreme heat events have resulted in human mortality and morbidity”; “the occurrence of climate-related food-borne and water-borne diseases has increased”; “the incidence of vector-borne diseases has increased from range expansion and/or increased reproduction of disease vectors”; and “animal and human diseases, including zoonoses, are emerging in new areas.” Populations around the world are experiencing greater trauma from extreme weather events. They are also contending with “climate-sensitive cardiovascular and respiratory distress” due to “increased exposure to wildfire smoke, atmospheric dust, and aeroallergens.” Heatwaves are amplifying air pollution events. Climate change and extreme weather events are reducing “food and water security.” It is estimated that up to 3.6 billion people currently reside in places “that are highly vulnerable to climate change,” which is contributing to the overall humanitarian crisis.⁶⁰

The “Summary for Policymakers” report of Working Group II of AR6 is clear that the current socioeconomic system that organizes production and consumption is unsustainable, “increasing exposure of ecosystems and people to climate hazards.” In fact, “unsustainable land-use and land cover change, unsustainable use of natural resources, deforestation, loss of biodiversity, pollution, and their interactions, adversely affect the capacities of ecosystems, societies, communities and individuals to adapt to climate change.” Short-term interests, focused on increasing profits, drive poor management of resources, habitat fragmentation, pollution of ecosystems, and overall ecological degradation.⁶¹

Between now and 2040, it is absolutely necessary to keep warming below the 1.5°C threshold (or at the very worst *well below* 2°C), otherwise the climate-related “losses and damages” to both ecosystems and society will dramatically multiply. Surpassing this threshold will result in extreme and high risks associated with biodiversity loss, a dramatic de-

cline in snowmelt water availability for irrigating crops, a severe reduction in above-ground and groundwater availability, declining health of soils, widespread food insecurity, flooding of “low-lying cities and settlements,” accelerated proliferation of disease risks, even more intense and frequent weather events, and extensive heatwave conditions. “Many natural systems are near the hard limits of their natural adaptation capacity,” whereby additional warming will result in irreversible changes that undermine essential ecosystem services that support life. The overall damages, threats, and problems “will continue to escalate with every increment of global warming.” It will only become more and more difficult to intervene and manage the compounding risks that will cascade throughout the world, depending on the magnitude of the overshoot.⁶²

Hence, the “Summary for Policymakers” of Working Group II in AR6 focusing on *Impacts, Adaptation and Vulnerability* concludes that “there is a rapidly narrowing window of opportunity” to forge a radically different future. It warns that

It is unequivocal that climate change has already disrupted human and natural systems. Past and current development trends...have not advanced global climate resilient development.... Societal choices and actions implemented in the next decade determine the extent to which medium- and long-term pathways will deliver higher or lower climate resilient development.... Importantly climate resilient development prospects are increasingly limited if current greenhouse gas emissions do not rapidly decline, especially if 1.5°C global warming is exceeded in the near term.⁶³

The leaked scientific-consensus draft of the “Summary for Policymakers” by Working Group II of AR6, received by the French news agency Agence-France Presse in June 2021, included the following statement: “We need transformational change operating on processes and behaviours at all levels: individual, communities, business, institutions and governments. We must redefine our way of life and consumption.” This transformation requires coordinated action, massive public mobilization, political leadership and commitment, and urgent decision-making to change the global economy and support an effective and accelerated mitigation-adaptation strategy.⁶⁴ Unfortunately, such action has been consistently thwarted by capital and global political leaders, who managed to remove the statement from the final published Working Group II report, where it is nowhere to be found.

In May 2022, the carbon dioxide concentration in the atmosphere measured 421.37 parts per million, marking a new high. Peter Tans, a climate scientist at the National Oceanographic and Atmospheric Administration, explained that in “this last decade, the rate of increase has never been higher, and we are still on the same path. So we are going in the wrong di-

rection at maximum speed.”⁶⁵ As climate breakdown accelerates, the conditions of life are rapidly deteriorating, creating numerous health problems, some of which manifest as corporeal rifts, undermining bodily existence.⁶⁶

Corporeal challenges, which could be viewed as indications of a corporeal rift in which climate change disrupts human bodily functions, have received additional attention given the brutal heatwaves and record-breaking temperatures in India and Pakistan in spring 2022. On May 1, the temperature in Nawabshah, Pakistan, was 49.5°C (120.2°F). What made this heatwave, along the coasts and the Indus River Valley in these countries, particularly unbearable was that it was accompanied by high levels of humidity.⁶⁷ Together, these can create dangerous levels of heat stress, which can result in death. This issue is particularly important to consider in regard to global warming, as climate change increases heat and the amount of water vapor in the atmosphere. Furthermore, warmer air holds more moisture, making humidity worse. Heat and humidity are additive, generating conditions in the form of wet-bulb temperatures (combining both normal, dry-bulb temperature and humidity) that exceed the capacity of people to survive. One of the important issues, under such conditions, is that nighttime temperatures are also high, making it difficult or impossible for the body to recover partially overnight – worsening the situation. This is part of the reason that, as heatwaves progress, it becomes increasingly difficult for people to function physically.

In the article “The Emergence of Heat and Humidity Too Severe for Human Tolerance,” published in *Science Advances*, Colin Raymond, Tom Matthews, and Radley M. Horton explain that what are called dry-bulb temperatures, measurements obtained from an ordinary thermometer, are not adequate in ascertaining the dangers to human health associated with heat stress.⁶⁸ Instead, it is necessary to measure the wet-bulb temperature – heat and humidity. This is obtained by placing a wet cloth on the thermometer and blowing air on it. Human beings cool themselves or shed their metabolic heat at high temperatures via sweat-based latent cooling. But once the wet-bulb temperature reaches 35°C (or 95°F), this cooling mechanism ceases to be effective. Under such conditions, human beings are not able to cool themselves by sweating, even if they are in the shade, wearing little clothing, and drinking plenty of water. When outside and exposed to such wet-bulb temperatures for six hours, even young, healthy individuals will perish from this heat stress. In humid regions, and for populations whose physical conditions are less than optimal, it is possible for lives to be threatened even with lower wet-bulb temperatures, between 26°C and 32°C, as was the case in the heatwaves that hit Europe in 2003 and Russia in 2010, killing thousands of people, especially the elderly and other vulnerable populations.⁶⁹

Raymond and his colleagues stress that “extreme heat remains one of the most dangerous natural hazards” and “a wet-bulb temperature...of 35°C marks our upper physiological limit.” Thus, it is not possible simply to adapt to progressively warmer temperature, when heat and humidity surpass the point of what is survivable. These worrying wet-bulb temperature conditions are occurring a few hours at a time in coastal and major river regions of South Asia, the Middle East, Mexico, and Central America. Such conditions are likely to become more regular and to last longer in these regions over the next few decades, or even years, with even more deadly consequences, while spreading across larger terrestrial stretches, rendering parts of the world uninhabitable. In the second half of the century, if “business-as-usual” trends continue, the likely consequences are too horrific to imagine.⁷⁰

Nevertheless, in the opening scene of *The Ministry for the Future*, the science-fiction novelist and socialist Kim Stanley Robinson tries to imagine what could happen to human beings under the unbearable heat and humidity associated with wet-bulb temperatures. The population of a town in India is suffering from an intense heatwave. People are panicking, immersing themselves in the lake, trying to cool down, but to no avail, as the water provides no relief. It is noted that the people are being poached. Before too long, the lake is filled with corpses – “all the children were dead, all the old people were dead.”⁷¹ It is a hellish scene, but it captures the gravity of exterminism that is unfolding and the urgency of the fight for survival. This is the sobering reality of the current ecological moment, as the leaked draft of the “Summary for Policymakers” of Working Group II stated (though this was removed, probably by governments, from the published report): “Life on Earth can recover from a drastic climate shift by evolving into new species and creating new ecosystems. Humans cannot.”⁷²

The Structural Crisis of Capital and the Failure of Environmental Reform

The failure of capital to face up to the rapidly increasing ecological crisis, even as the earth as a home for humanity is fast approaching an irreversible tipping point, is often attributed to the growth of neoliberalism, as if this were simply a contingent fact of history determined by political swings and policy changes.⁷³ The advance of neoliberalism, however, was itself a response of the capitalist system to the insurmountable structural crisis of capital that first emerged in the mid-1970s, leading to the restructuring of this system. This included not only the reduction of the relative autonomy of the state, but also the restructuring of the capital-labor relation through the globalization of production and the financialization of the system.⁷⁴ In these changed circumstances, the centrality of what was

dubbed the “environmental state,” introduced as the capitalist system’s response to the deepening environmental crisis, experienced an early death. It was to be replaced under neoliberalism by a more diffuse system of “environmental governance,” involving both the private and public sectors, ensuring that the accumulation of capital always took complete precedence over the sustainability of the natural environment.⁷⁵

The initial Great Ecological Revolt of the early post-Second World War years was largely radical in inspiration, strongly critical of capitalism, drawing its strength from the grassroots, and raising the essential question of human survival. However, these radical environmental challenges to the system were soon contained and co-opted through the rise to prominence of the capitalist environmental state, allowing the Great Acceleration of economic impacts on the environment to expand largely unhindered. The notion of the environmental state stood for a patchwork system of environmental regulations and statutory laws introduced by the state within the limits allowed by the powers that be, thereby precluding any major challenges to the process of capital accumulation. The dominant state-directed environmental reformism that emerged in these years, combating isolated cases of extreme pollution and environmental degradation at the local level, was commonly presented in received ideology as a logical outgrowth of capitalist modernization, viewed as an extension of the logic of the welfare state. Capitalism, it was claimed, followed a path whereby environmental spending increased at higher levels of economic development, ameliorating the negative effects of growth.⁷⁶

All of this has proved to be a dangerous illusion. The environmental state as a central actor within the system was at best a very short-term affair, soon overshadowed by the structural crisis of capitalism that emerged only a few years later by the mid-1970s. The economic restructuring of the late 1970s and early ’80s was a response to the deepening stagnation of capital accumulation, evident in a slowdown in economic growth and rising unemployment/underemployment and idle capacity.⁷⁷ Although there was no solution to the economic malaise of the mature capitalist economies, the ruling class was able to extend its power, in a context of “disaster capitalism,” through the promotion of a more predatory system that brought the state more firmly within the rules of the market.⁷⁸ These developments were accompanied by the globalization of production and the financialization of the economy, ushering in a new phase of globalized monopoly-finance capital, made possible in part by new systems of communication and surveillance.

By the 1990s, even those proponents of capitalist ecological modernization, who were the most enthusiastic cheerleaders of the environmental

state, were forced to point to the counter-pressures being imposed on it by capital; while more recently, they have acknowledged its virtual demise.⁷⁹ In the context of this rapid decline of the state-directed system of environmental regulation (the environmental state), the notion of environmental governance was introduced as the new reform-oriented concept to take its place. Environmental governance was meant to refer to the much greater role assumed by private interests, including corporations, corporate foundations, non-governmental organizations, international financial institutions, and intergovernmental organizations in determining the realm of environmental regulation, which, in many areas, such as various certification processes, carbon markets, and the financialization of nature/conservation, generated new markets for capital accumulation, legitimated in terms of so-called green capitalism.⁸⁰ The environmental *nation-state* (a notion that in the international context represented a further distancing from the concept of the domestic environmental state) was seen as subject to *intergovernmental* agreements such as the 2015 Paris Accord on climate change.⁸¹

Nonetheless, the phases of limited environmental reform, presided over initially by the capitalist environmental state and more recently by so-called environmental governance under direct corporate and ruling-class dominance, have seen the acceleration of the destruction of the earth as a home for humanity. According to the world scientific consensus, ecological catastrophes, on scales never before seen by humanity, are now fast approaching. Marginal attempts by the present political-economic system to address the planetary ecological emergency have proven entirely ineffectual since the capitalist juggernaut always takes priority. The world is now on a runaway train to disaster, rapidly approaching the edge of the cliff. As Engels once remarked, capitalism is ruled by “a class under whose leadership society is racing to ruin like a locomotive whose jammed safety-valve the driver is too weak to open.”⁸² The ruin, when it comes, will be ecological as well as political-economic and will fall most heavily on the vulnerable and future generations.

This deadly trajectory is evident everywhere, underscoring the failure of capitalist ecological reform. According to the *UN Emissions Gap Report 2021*, the present voluntary national climate pledges of countries in accordance with the Paris Agreement would generate a 2.7°C increase (66 percent probability) in global average temperature this century, as opposed to the well-below 2°C increase, which is the goal of the accords, and far above the scientific-consensus goal of 1.5°C, which is the most important threshold for planetary climate security.⁸³ Presently, there are more than four hundred ongoing fossil fuel extraction projects in process in the world (40 percent of which have not yet commenced extraction), currently advanced by

corporations and supported by governments, known as “carbon bombs.” Each of these represents at least one gigaton of carbon emissions, which, if they are all carried out, “will exceed the global 1.5°C carbon budget by a factor of two.”⁸⁴ There is no sign anywhere that the necessary limits will be imposed by capitalism to protect the planetary environment. Rather, the signs all point to the opposite as a frenzy for fossil fuels is developing. The G7 leading capitalist countries, meeting in May 2022, agreed eventually to “phase out” “unabated coal” but put forward no date for doing so, with the discussion dominated instead by the need for vast new fossil fuel sources in the context of the Ukraine War, setting aside all climate objectives.⁸⁵

Perhaps the greatest single example of the collective duplicity of governments within the dominant capitalist world system in the face of the planetary ecological emergency is the rewriting of the scientific-consensus “Summary for Policymakers” of Working Group III in the IPCC’s AR6 report on *Mitigation*, published in April 2022. A comparison of the scientific-consensus version of the “Summary for Policymakers,” leaked in August 2021, with the later published version, which was censored and completely rewritten by governments in consultation with corporate lobbyists – carried out in line with the IPCC process – demonstrates a complete betrayal of science and humanity. The collective pronouncements of the scientists on the need to: (1) eliminate all coal-fired plants worldwide this decade, in order to avoid greatly surpassing the 1.5°C target; (2) carry out immediate, rapid transformational change in the political-economic regime affecting production, consumption, and energy use; (3) shift to low-energy solutions; (4) implement plans for “accelerated mitigation”; and (5) support mass social movements against climate change rooted in the most vulnerable sectors of society, advancing a radical just transition – were all removed from the report. All criticisms of the “vested interests,” including the term *vested interests* itself, were erased from the report. Flatly contradicting the scientific-consensus “Summary for Policymakers,” the redacted governmental-consensus report went so far as to claim that the number of coal-fired plants could be increased due to the promise of carbon capture and sequestration – a view that the scientists had rejected.

Governmental leaders also eliminated statements in the scientific-consensus “Summary for Policymakers” regarding how: (1) the wealthiest 10 percent of the global population are responsible for around ten times the greenhouse gas emissions of the poorest 10 percent (despite the fact that this was a very conservative estimate of the emissions gap); (2) the top 1 percent of air travelers account for 50 percent of aviation-based emissions; and (3) some 40 percent of the emissions from developing countries are linked to export production for core nations.⁸⁶

Indeed, the entire critique of the fossil capital regime presented in the scientific-consensus “Summary for Policymakers” was excluded by governments in the interest of keeping the accumulation process, the motor of the capitalist system, going. In nearly every line of the final, published “Summary for Policymakers” by Working Group III of AR6, the *Mitigation* report, the betrayal of the global population by the world’s governments is present, as the latter, operating together, eviscerated the IPCC’s scientific consensus, undermining any meaningful actions and policies. When the *Mitigation* report was published in April 2022, Guterres remarked that the current moment is one of “climate emergency,” marked by “a litany of broken climate promises,” constant “lies,” and “empty pledges [by the vested interests] that put us firmly on track towards an unlivable world.”⁸⁷ The consequence of this is to further promote what Engels called “social murder,” but now on a planetary scale, threatening the entire chain of human generations.⁸⁸

The U.S. federal government’s prioritization of capital accumulation, including that of the fossil fuel industry, over not only human lives in the present, but the future of humanity as a whole, is evident in the nonstop battles of the Barack Obama, Donald Trump, and Joe Biden administrations against the federal lawsuit of *Juliana vs. the United States*, in which twenty-one young plaintiffs have challenged the U.S. government for wrongfully promoting the fossil fuel industry in violation of what is known as the public trust doctrine within the common law, affirmed in a famous 1892 decision involving the Illinois Central Railroad company, as applicable to the U.S. Constitution. Applying the public trust doctrine to the federal government, the lawsuit declares that the executive and legislative branches in Washington knowingly violated the public trust with respect to climate change by allowing the undermining of the “survival resources” on which the lives of people in the present and future depend, putting human survival in question. As Oregon District Court judge Ann Aiken ruled in 2016, “I have no doubt that the right to a climate system capable of sustaining human life is fundamental to a free and ordered society.” *Juliana vs. the United States* is based on the presumption that statutory law with respect to the climate is too narrow and is not enforced, requiring that the federal government be mandated on constitutional grounds to cease its support of the fossil fuel industry.⁸⁹

In response, successive Democratic and Republican administrations have done everything they could to stop this lawsuit, which has been subject to more “exceptional legal tactics” (including “six rulings on the notorious shadow docket,” where legal opinions are not published and the justice’s votes are not made public) than any other federal lawsuit in history. The Biden administration Department of Justice has made it evident that it will

use every procedural tool available to arrest the progress of the lawsuit, killing it at the earliest opportunity.⁹⁰ The goal is to allow the fossil fuel industry to continue to accumulate and expand by preventing any obligation of the U.S. federal government to protect the present and future of humanity.

Not only has the U.S. federal government put capital accumulation and the fossil fuel industry before human life as a whole, promoting social murder on a global scale, or exterminism, it has also neglected to take proactive and comprehensive action to protect the population, particularly the most vulnerable, in the face of accelerating ecological catastrophes. The U.S. government's program of disaster relief is based in the Federal Emergency Management Agency (FEMA). But FEMA at present is underfunded and geared primarily to protecting high-end private property, thus leaving the mass of the population with little or no protection – and without any coordinated programs aimed at reducing risk associated with environmental disasters. Under the Obama administration, proposals were made, as articulated by FEMA director Craig Fugate, to put FEMA on a fully capitalist basis along the lines of the private insurance industry, complete with deductibles. FEMA assistance was thus to be determined largely by whether the private insurance industry had decided to ensure a given structure, an approach that would inevitably have a detrimental effect on the poor.⁹¹

With record-breaking hurricanes, wildfires, and other extreme weather disasters presenting themselves in 2020, coupled with the COVID-19 pandemic, FEMA and the U.S. government in general, as explained by *Scientific American*, proved itself utterly incapable of addressing the growing natural and epidemiological disasters. This brought “into stark relief problems of capacity and inequity – [with] people of color and low-income communities” getting “hit disproportionately hard.” “All emergency agencies” in the United States taken together do little in advance to prepare for disasters, while FEMA programs have been shown to “entrench and exacerbate inequities because they focus on restoring private property. This approach favors higher income, typically majority white areas with more valuable homes and infrastructure over people of color and low-income communities, which are disproportionately affected by disaster and least able to recover from it.” A precondition of FEMA disaster relief is “cost matching,” which systematically and structurally favors wealthier over poorer communities. The comprehensive failure of the United States to address the COVID-19 pandemic, resulting in more than a million deaths, is a manifestation of the complete lack of an infrastructure, including public health facilities, equipped to cope with disasters in general, particularly where the most vulnerable populations are concerned. Instead, the capitalist system has enshrined the principle of the devil take the hindmost.⁹²

Ecological Civilization or Exterminism

In the 1860 edition of his *Trades' Unions and Strikes*, the English Chartist and trade unionist Thomas Joseph Dunning wrote:

Capital is said by this reviewer [in the *Quarterly Review*] to fly turbulence and strife, and to be timid, which is very true; but this is very incompletely stating the question. Capital eschews no profit, or very small profit, just as Nature was formerly said to abhor vacuum. With adequate profit, capital is very bold. A certain 10 per cent. will ensure its employment anywhere; 20 per cent. certain will produce eagerness; 50 per cent. positive audacity; 100 per cent. will make it ready to trample on all human laws; 300 per cent., and there is not a crime at which it will scruple nor a risk it will not run, even to a chance of its owner being hanged. If turbulence and strife will bring a profit, it will freely encourage both. Smuggling and the slave-trade have amply proved all that is here stated.⁹³

It is this innate drive of capital, trampling over all other social considerations, already depicted by Dunning in the nineteenth century, that helps explain why, even in the face of the certain ruination of contemporary civilization, humanity, and to a considerable extent life as a whole, capital nonetheless proceeds down that same road of creative destruction. It is not deterred from burning all existing fossil fuel reserves, and thus the heating up of the climate, as long as the short-term profits are ample. Its “solutions” to the environmental crisis increasingly take the form of the financialization of nature, aimed at buying up the “environmental services” of the entire planet, operating under the senseless presumption that if there is a global ecological crisis it is due to the failure to incorporate nature fully into the market.⁹⁴

Consequently, a whole new revolutionary ecological civilization and mode of production, dedicated to sustainable human development, one in which the associated producers regulate the metabolism between humanity and nature, is now necessary for survival and for life. This requires revolutionary transformative actions to mitigate climate change, in order to protect the planet as a safe place for human habitation and life in general. But in seeking to protect the earth as a home for the future of the chain of human generations, it is also necessary to protect current generations. At issue today is not only the long-term issue of the survival of humanity as a species, but also the more immediate imperative of ensuring the lives and living conditions of twenty-first-century populations, including whole communities, nations, and peoples, and especially those whose lives and living conditions are most exploited, precarious, and vulnerable.

This *two-level movement*, to protect the earth both as a home for humanity (and innumerable other species) well into the future and for the defense of

human communities in the present, is most fully addressed in the world today, though not without contradictions, in those societies with a more socialist bent.⁹⁵ It is socialist, post-revolutionary societies that are better able to resist the logic of capital, despite the continuing dominance of the capitalist world economy, by introducing ecological as well as economic planning, and facilitating alternative forms of social metabolic reproduction. We can see this in Cuba, which has developed an ecosocialist model of degrowth, in the sense, designated by Don Fitz, of a society that embodies “a reduction of unnecessary and destructive production by and for rich countries (and people),” that “exceeds the...growth of production of necessities by and for poor countries (and people).”⁹⁶

Cuba has not only repeatedly been designated by international indicators as the most ecological nation on the earth, but also as the one most prepared for disasters. Cuba in 2017 was “the only country in the world with a government-led plan (Project Life, or *Tarea Vida*) to combat climate change” based on a century-long projection. In September 2017, Maria, a category 5 hurricane, hit Puerto Rico, a U.S. colony, resulting in almost three thousand deaths. In that same month, Irma, another category 5 hurricane, hit Cuba, causing only ten deaths. Cuba’s low mortality was the result of comprehensive disaster protection measures introduced from the beginning of its revolution and built into the entire structure of the society. Cuba put in place a national plan to protect the population from COVID-19 prior to the first death there from the pandemic. It has developed highly effective COVID-19 vaccines, which have been used to vaccinate its entire population and to help other countries at low cost.⁹⁷

In terms of the wider issues of climate change, Cuba, rather than following the dominant capitalist strategy of promoting maximum energy usage and simply converting to “alternative” energies (which are also extremely damaging to the environment at higher levels of energy generation), has chosen energy conservation, seeking to minimize both energy usage and the resultant negative effects. As Cuban energy advisor Orlando Rey Santos has observed: “One problem today is that you cannot convert the world’s energy matrix, with current consumption levels, from fossil fuels to renewable energies. There are not enough resources for the panels and wind turbines, nor the space for them. There are insufficient resources for all this. If you automatically made all transportation electric tomorrow, you would continue to have the same problems of congestion, parking, highways, heavy consumption of steel and cement.”⁹⁸

In “Cuba Prepares for Disaster,” Cuban analyst Fitz explains that “a poor country with a planned economy can design policies to reduce energy use. Whatever is saved from [energy efficiency] can lead to less or low-en-

ergy production, resulting in a spiraling down of energy use. In contrast, in accordance with the well-known Jevons Paradox, competition drives capitalist economies toward investing funds saved from EE [energy efficiency] toward economic expansion resulting in perpetual growth” and mounting ecological contradictions. As Fitz goes on to observe: “What is amazing is that Cuba has developed so many techniques of medical care and disaster management for hurricanes and climate change, despite its double impoverishment from colonial days and neocolonial attacks from the U.S.,” including the permanent embargo imposed by Washington as a form of economic siege warfare.⁹⁹ Cuba’s Special Period, following the demise of the Soviet Union and its fossil fuel subsidies to Cuba, forced Havana, faced also with a tightening U.S. embargo, to develop agroecology and urban farming at very high levels, resulting in Cuba’s eco-revolutionary transformation into a model of sustainable human development.¹⁰⁰

Cuba’s successes in promoting sustainable human development fed the anti-communist ire of Washington. Relying on new means of financial warfare, the Trump administration introduced 243 additional financial sanctions directed at Cuba, while the Biden administration extended those further. This generated increased shortages in food and other basic items, made worse by the COVID-19 pandemic. In July 2021, popular protests emerged in Cuba for the first time in a generation. The increases in global food prices, accompanied by wheat shortages, in early 2022, associated with the pandemic, profiteering, and the Russia-Ukraine War, have only exacerbated these conditions.¹⁰¹ This crisis has resulted in critical debates in Cuban society that, while intense, are mostly taking place *within the revolution* rather than outside of it, suggesting that Cuba will continue to carry out a process of socialist construction and reconstruction that will defy all those who are seeking its demise.¹⁰²

Venezuela’s Bolivarian Revolution, although in a different way than Cuba, has also moved toward an ecological society, promoting communes that put resources and production back in the hands of associated producers, ensuring that basic needs are met. Government resources are being transferred to communes and organized communities in both rural and urban areas with the objective of enhancing food security and sovereignty partly through such agencies as the Pueblo a Pueblo (or People to People) Plan, promoting an “assembly culture, planned consumption and participatory democracy.” All of this points in the direction of ecosocialism.¹⁰³

Although still one of the world’s largest polluters, the Chinese economy has made rapid ecological advances, in line with its goal – outside the capitalist framework – of promoting an *ecological civilization*, a concept that originated with socialist environmentalists in the final decades of the Soviet

Union, and that has now taken on Chinese characteristics.¹⁰⁴ Although still a developing country in the sense of having a low per capita income relative to the developed capitalist states, China has set 2060 as its target to reach zero net carbon emissions. Meanwhile, it has become the world leader in solar power – both production and consumption – and in reforestation/afforestation. China was able to protect its population from the COVID-19 pandemic, with 4 deaths per million as of June 4, 2022, versus 3,087 deaths per million in the United States. With only 10 percent of the world’s arable land and 20 percent of the global population, China currently produces 25 percent of the world’s grain. In the decade from 2003 to 2013, China increased its total grain output by about 50 percent. Most farms are largely organized on a semi-communal, cooperative basis, with the land held in common and distributed among producers by the community. From 2013 to 2019, the number of towns with state-managed cooperatives in rural China increased from 50 percent to 95 percent, as part of the revitalization of the countryside, contributing to the elimination of extreme poverty in the country.¹⁰⁵

The global struggle for sustainable human development can also be seen in places within the advanced capitalist core, including the United States, where considerable opposition is exhibited in some locations to the dominant logic of the political-economic system. Cooperation Jackson, based in Jackson, Mississippi, is engaged in a revolutionary, transformative project, as part of building ecosocialism, in order to protect and advance the survival of existing communities and to create an “ecologically regenerative,” sustainable future. Kali Akuno, the co-founder and co-director of Cooperation Jackson, explains that the continuing realities of racial capitalism have led to extreme forms of inequality, control of knowledge by private capital, and uneven development, whereby Jackson, Mississippi, has largely been organized around resource extraction to serve capital accumulation for distant vested interests. This exploitative system “is rapidly destroying all of the vital, life giving and sustaining systems on our planet.”¹⁰⁶ Thus, it is urgent to forge an alternative productive system.

Through collectively organizing, mobilizing, and working with “structurally under- and unemployed sectors of the working class, particularly from Black and Latino communities,” Cooperation Jackson seeks to “replace the current socio-economic system of exploitation, exclusion and the destruction of the environment with a proven democratic alternative.” It promotes a radical form of social organization built on equality, cooperation, worker democracy, and environmental sustainability, aimed at providing meaningful work through living-wage jobs, while reducing racial and other inequities, and building the public wealth of the community. This is all seen as part of a “transition to ecosocialism.”¹⁰⁷

Cooperation Jackson has as its goal collectively owning and controlling the means of production. Akuno explains that this involves “control over processes of material exchange and energy transfer,” including the “processes of distribution, consumption, and recycling and/or reuse” to ensure that the social metabolism operates within natural limits and advances “sustainability and environmental justice.”¹⁰⁸ Through self-organization, self-determination, and self-management, human beings will gain social control over their productive lives, allowing them democratically and collectively to make decisions focused on how to meet human needs, rather than those of capital. This approach serves as the basis on which to “upend” the dictates of the exploitive class-hierarchical system. It seeks to eliminate the artificial scarcity, rooted in waste, destruction, and inequality imposed by capital, generating the potential for abundance, while remaining “within ecological limits.” Human interactions with nature need to be focused on conservation and “preservation of the environment and ecology,” fixing and “repairing the damage done,” while creating new efforts to “regenerate the bounty of life on our planet, in all its diversity.”¹⁰⁹

Despite the extreme capitalism promoted by U.S. corporations, the wealthy, and the servile state, which constitutes its environment, Cooperation Jackson has begun and plans to implement a series of concrete, integrative projects that serve as the means to accomplish their larger goals. This includes forming a non-profit, community land trust, focused on removing as much land as possible from “the capitalist market,” in order to “decommodify” it. Under these conditions, the community serves as the steward. It also establishes a basis with which to help block gentrification processes that have been premised on expanding capital accumulation at the expense of the local community. This revolutionary transformation involves creating an alternative currency, a system of mutual credit, and “community-controlled financial institutions ranging from lending circles to credit unions,” in order to expand the overall capacity and support of citizens.

Building on these foundations, Cooperation Jackson has gone on to establish urban farm co-ops, a restaurant/grocery store, and a lawn-care team. Compost from the store and lawns is used as fertilizer on the farms, returning important nutrients to the soil as part of metabolic restoration. There are plans to create a series of cooperatives focused on housing, recycling, construction, child care, retrofitting homes, and solar energy. All of these efforts are organized as “non-reformist reforms” to improve the quality of people’s lives, expand the power of the citizens, and confront capital, by subverting its very logic and operations. The goal is to foster “the development of a non-capitalist alternative” that will “socialize every

step of the productive process required to create, distribute, and recycle a product,” forging “collective ownership and democratic management,” and increasing “the effective scale and scope of the solidarity economy.”¹¹⁰ Rather than promoting fashionable ideas of “resilience,” which fail to challenge the dominant system, Cooperation Jackson can be regarded as a microcosm of ecological and social revolt, as part of the struggle for survival while advancing sustainable human development and ecosocialism.

The most radical and comprehensive strategy with respect to the planetary ecological emergency emanating from North America is the Red Nation’s *The Red Deal: Indigenous Action to Save Our Earth*. In the words of the Red Nation:

Rather than taking an explicitly conservationist approach, the Red Deal instead proposes a comprehensive, full-scale assault on capitalism, using Indigenous knowledge and tried-and-true methods of mass mobilization as its ammunition.... We must be straightforward about what is necessary. If we want to survive, there are no incremental or “non-disruptive” ways to reduce emissions. Reconciliation with the ruling classes is out of the question. Market-based solutions must be abandoned. We have until 2050 to reach net-zero carbon emissions. That’s it. Thirty years. The struggle for a carbon-free future can either lead to revolutionary transformation or much worse than what Marx and Engels imagined in 1848, when they forewarned that “the common ruin of the contending classes” was a likely scenario if the capitalist class was not overthrown. The common ruin of entire peoples, species, landscapes, grasslands, waterways, oceans, and forests – which has been well underway for centuries – has intensified more in the last three decades than in all of human existence.¹¹¹

Survival in these terms requires the growth of what could be called an *environmental proletariat*, bringing together the global revolt against the capitalist expropriation of nature and exploitation of labor, thereby uniting the struggles over the economy and the earth. This means learning from Indigenous, colonized, and historically enslaved peoples while embracing issues of social reproduction. A revolt by the world’s environmental proletariat conceived in these terms, in which hundreds of millions, even billions, of people will inevitably take part, is destined to come about in the coming decades as a result of the struggle for ecological survival. It will lead to new microcosms of existence and an assault on the macrocosm of capital and its state. But this struggle can only succeed in the end if it takes the form of a revolutionary transformation directed at the creation of a socialist ecological civilization, drawing on the rich reservoirs of human knowledge and community. In the words of the great Irish revolutionary James Connolly: “We only want THE EARTH.”¹¹²

Notes

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- This is the clear implication of the "Summary for Policymakers" of the IPCC Working Group III report on *Mitigation* in its Sixth Assessment Report, in the form written by scientists and reflecting the scientific consensus. However, the published version of this report, after being redacted by governments—reflecting not the scientific consensus but the governmental consensus—erased all radical social conclusions by the IPCC scientists. On this, see "Notes from the Editors," *Monthly Review* 74, no. 2 (June 2022).
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The [capitalist] system contains no braking mechanism other than periodic economic breakdowns; the individual units of which it is composed – the separate capitals – must respond to relatively short-run prospects on pain of elimination; there is nothing in the system that lends itself to or is compatible with long-range planning of a kind that would be absolutely essential to the implementation of an effective ecological program.

It is precisely in this respect that socialism represents a decisive break with capitalism, and I would argue that this is true not only of the ideal models that the socialism movement has produced over the years but also of the actually existing socialism of today....

If and when the time comes that a socialist country is able to reorder its priorities from catching up and defense to protection and preservation of the environment – seen as the life-and-death questions they are rapidly becoming – it cannot be excluded in advance that the planning system can be adapted to serve the needs of the new situation.

This is the reason it is so important that actually existing socialism should survive its present crisis. There are no guarantees, but at least it is a system with a potential that capitalism totally lacks. If all the existing socialist countries take the capitalist road in the present conjuncture, so much time will have been lost that it may be too late for civilized humanity to restore the necessary conditions for its own survival.

– PAUL M. SWEETZ,
"Socialism and Ecology," *Monthly Review* (September 1989)

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