

A Flame Against the Fire:

An Ecological Program for Revolutionary Movements

This document is the product of many years of movement organizing, research, and discussion among members of the Organization for a Free Society (OFS, www.afreesociety.org). An earlier version was adopted by organizational consensus in 2015; the current version is published with the consensus of the New York City OFS branch in December of 2019.

1) Ecological crisis is the product of the 1%. Ruling-class control of the Earth system as a whole, and the pillars of ruling-class power – the four horsemen of white supremacy, authoritarianism, patriarchy, and capitalism – create cascading impacts on every aspect of our lives, our children’s lives, and the survival of the human species as a whole. It is for both current and future generations that we must defeat the rapacious global ruling class, whose greed and destruction exceeds that of any social group in Earth’s history.

2) What do we mean by ecological crisis? The control of the 1% over the global economy and states ensures that ecological and human needs are subordinated to the quest for profits. Since the dawn of the modern industrial era in Western Europe, and particularly since the mid-twentieth century, the economic decisions of the 1% have produced a growing ecological crisis that in many parts of the world is already reaching catastrophic levels. The most serious reflection of this crisis is the breakdown of the climate, leading to intensified heat waves, fires, hurricanes, tsunamis, droughts, famines, floods, diseases, and displacement that devastate the most vulnerable populations. Climate disruption is joined by ecological crises in other areas, from ocean acidification to soil depletion to the loss of biodiversity. These crises all spring from the same source. Together they produce a vicious whirlwind of global genocide, killing hundreds of thousands of human beings each year and inaugurating the sixth great era of mass species extinction in Earth’s history.¹

3) What do we mean by climate crisis? Global warming is caused by the human emission of greenhouse gases (GHGs), especially carbon dioxide and methane, and by the destruction of the planet’s natural “sinks,” such as forests. The Earth’s climate system puts a definite time limit on the possibility to change social behavior before climate change threatens the very basis of human and other life. By most scientific estimates, we have about a decade to implement drastic changes in our economy.² It is necessary to decrease GHG emissions to “net zero” by 2050 if we are to keep global temperatures within 1.5 degrees Celsius of the pre-industrial global average.³ This time pressure

¹ Kevin Young, “Will Climate Change Make Family Separations the Norm?” *Truthout.org*, August 25, 2018, available at <https://truthout.org/articles/will-climate-change-make-family-separations-the-norm/>.

² *Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C Approved by Governments* (October 8, 2018), available at <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>.

³ Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: The Physical Science Basis, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (2007), available at

requires that we pursue immediate, major policy reforms, like a “Global Green New Deal” at both the national and planetary levels, as we work to abolish our capitalist economic system over the longer term.

4) The solutions chosen must reflect the needs of the most impacted people, while creating structures and incentives that can gain large-scale support and widespread adaptation. There are nearly 370 million Indigenous people and 2 billion desperately impoverished people worldwide whose lives are increasingly torn apart by the chaos of a rapidly heating planet. Those who receive the least benefit from the energy production that creates GHG emissions are the most harmed by the breakdown of the climate. Any solutions to ecological crisis must prioritize their needs. For instance, private corporations or governments must not be able to construct a “clean” hydroelectric dam on a river if it means disregarding the rights of rural communities who depend on access to that river and nearby lands. Similarly, Indigenous peoples who inhabit forest lands must have the power to decide whether or not carbon “offset” programs (in which polluters pay the inhabitants of forest lands in exchange for permission to emit more carbon) will be hosted on their lands, and must be able to exercise control over those programs at all stages of design and implementation.

5) The war within a breath. Each breath connects every living person to the carbon cycle. This cycle requires a delicate balance of different gases constantly passing through our limited atmosphere. For all of human history prior to the last 200 years, human activity could not directly influence this global gas exchange. Because of the impossibility of impacting this atmospheric space, people did not view the atmosphere as something that needed to be mediated through a common agreement. It was viewed as an inexhaustible global commons. By default, each person had an equal right to the use of this shared resource, and the use of the atmosphere was protected so that future generations would have the same rights to its use as the current generation.

6) Capitalist industry, originating in the Global North, has grown at such a rapid rate that it has effectively occupied the majority of the atmospheric space available for carbon emissions.⁴ Of the world’s 192 nation-states, the 39 top industrialized nations are the historic and current greatest emitters — accounting for 70% of historic emissions and 55% percent of current emissions.⁵ Overlapping with

<http://ipcc-wg1.ucar.edu/wg1/wg1-report.html>. See also James Hansen, et al., “Climate Change and Trace Gases,” *Philosophical Transactions of the Royal Society A* 365 (2007): 1925-54, available at

<https://pubs.giss.nasa.gov/abs/ha02210k.html>. These estimates are dated and are perhaps too conservative – an even more rapid reduction to net zero may in fact be necessary, as recent scientific reports have suggested (e.g., note 2 above).

⁴ The Global North refers to the world’s industrialized, or Annex 1, countries. These include Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, European Union, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, Great Britain and Northern Ireland, and the United States of America.

⁵ Tim Jones and Sarah Edwards, *The Climate Debt Crisis* (World Development Movement and Jubilee Debt Campaign, 2009), available at <https://eurodad.org/files/pdf/591da417bab79.pdf>. Data on historical emissions is taken from the World Resources Institute; see <http://cait.wri.org/>. Data on current emissions is from the U.S. Energy Information Administration; see <http://www.eia.doe.gov/environment.html>. See also Andrew Simms, *Ecological Debt: Global Warming and the Wealth of Nations*, second ed. (London: Pluto, 2009).

powerful ruling-class interests in these industrialized nations are the 90 corporate emitters responsible for almost two-thirds of total carbon and methane emissions since 1751.⁶

7) Ruling-class control has turned what used to be a global commons into an occupied territory.

Carbon emissions have effectively turned the atmosphere itself into a carbonic dictatorship, ruled by the elites of the Global North. As a result, the atmosphere now has much less space for the global majority to use fossil fuels in order to develop the same industries that have allowed longer life, a cleaner environment, and a higher standard of living for the people of the Global North. Without payment, agreement, or even acknowledgement, industrialized states have already exploited the atmospheric space that formerly belonged to all people. Social movement and civil society groups have been loudly decrying this injustice for over 30 years.⁷

8) Extraction and emissions. Emissions originating in developing nations are often created in the process of extracting resources controlled by multinational corporations and consumed by industrialized nations. Greenhouse gas emissions in Global South countries such as Nigeria and Venezuela are mostly due to oil production, but nearly two-thirds of the world's oil is consumed in Global North countries, including Europe and the United States.

9) Carbon from fight and flight. The developed world's vast militaries are an important factor contributing to the current disproportionate emissions in developed countries. The U.S. military is the world's single biggest consumer of fossil fuels: the Pentagon consumes about 274,000 barrels of oil per day. It emits more carbon than 154 world countries, and as much as the bottom 65 countries combined.⁸ However, it is not just the military that is the problem: more than 70% of commercial aviation emissions are the responsibility of northern countries.⁹ Yet international aviation and shipping corporations pay no taxes on their fuel and their emissions are completely unregulated.

10) Other capitalist sectors are responsible for most of the remaining GHG emissions. In the United States, for example, electricity generation accounts for 28% of emissions and the transportation sector accounts for 29%. The capitalist-dominated agricultural sector is also a major culprit: in addition to thriving on the commodification and mass slaughter of animals, it contributes 9% of U.S. emissions;

⁶ Richard Heede, "Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010," *Climatic Change* 122, no. 1 (2014): 229–41; Paul Griffin, *The Carbon Majors Database: CDP Carbon Majors Report 2017* (CDP Worldwide, 2017), both available at <http://climateaccountability.org/publications.html>. See also Kevin A. Baumert, et al., *Navigating the Numbers: Greenhouse Gas Data and International Climate Policy* (World Resources Institute, 2005), available at http://pdf.wri.org/navigating_numbers.pdf.

⁷ Karin Mickelson, "Leading Towards a Level Playing Field, Repaying Ecological Debt, or Making Environmental Space: Three Stories About International Environmental Cooperation," *Osgoode Hall Law Journal* 43, nos. 1-2 (2005): 137-70. See also María Luisa Robleto, *La deuda ecológica: Una perspectiva sociopolítica* (Santiago: Instituto de Ecología Política, 1990). The concept of ecological debt was first developed in 1990 by Latin American scholars associated with the Instituto de Ecología Política, in Santiago, Chile.

⁸ Calculated from data in the 2018 European Commission dataset available at <https://edgar.jrc.ec.europa.eu/overview.php?v=booklet2018>, and in Neta C. Crawford, "Pentagon Fuel Use, Climate Change, and the Costs of War," *Costs of War Project/Watson Institute for International & Public Affairs*, Brown University, June 2019, pp. 9, 13, available at <https://watson.brown.edu/costsofwar/papers/ClimateChangeandCostofWar>.

⁹ Jones and Edwards, *The Climate Debt Crisis*; George Monbiot, *Heat: How We Can Stop the Planet from Burning* (Boston: South End, 2009).

globally, the figure is 24%.¹⁰ Apologists for capitalism often argue that consumers, not capitalists, are the ones responsible for the climate crisis: by filling our cars with gasoline, they say, we are just as guilty as Exxon or BP. But consumers in a market economy face a very limited range of options – for instance, there is no option of traveling via solar-powered train from New York to Detroit. The lack of such an option is the result of decisions made by controllers of investment capital. The *real* decision-makers in the global economy could fit comfortably inside the Pentagon.

Preserving ecological systems

11) Detoxifying and restoring ecological systems in an equitable way. Equity is our foundational principle: equity among humans, among species, and across generations. To achieve equity, we must first recognize the existence of ecological debt, defined as the consumption of resources from within an ecosystem that exceeds that system’s regenerative capacity, which thus harms other people and other species. Internationally, Global North countries owe a tremendous debt to Global South countries for plundering resources, engaging in unfair trade and investment relationships, and discharging waste cost-free into the global biosphere. Historic climate debt refers to the past emissions that impact current hemispheric GHG levels, imperiling both current and future generations. Within the Global North and within the Global South, countries bear different degrees of responsibility and have different capabilities to reduce their GHG emissions; any global climate agreement must recognize that spectrum of responsibilities and capabilities.

12) Restoring balance to the climate by reducing GHG emissions to net zero by 2050, while ensuring that the poor and working people are at the forefront of our restructured low-carbon economy. We must cease emission of GHGs and begin the process of creating new, low-carbon infrastructure, like large-scale public transportation and solar power plants. A “Green New Deal” – meaning massive public investments in alternative energy production and in energy efficiency measures throughout the economy, which in the process will create millions of new jobs – is an indispensable piece of any serious reform strategy within particular countries. Governments of the world must, in proportion to their historic responsibilities and capabilities, devote massive new expenditures of money to economic conversion efforts, funded by new taxes on the wealthy, by cuts in military spending, and by the elimination of other public subsidies currently handed out to capitalists. Urgent necessities include, but are not limited to: the subsidization of wind and solar energy production and major public investments in energy efficiency; an immediate end to all subsidies to fossil fuels; the construction of public mass transit and of new “green infrastructure” (see below, paragraph 33); job retraining and employment programs for workers currently employed in carbon-intensive industries; and the planting of hundreds of billions of trees to draw carbon out of the atmosphere.¹¹ All of these

¹⁰ See EPA data at <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions> and <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data> (last accessed June 8, 2019).

¹¹ Planting 500 billion trees on 0.9 billion hectares could reduce atmospheric CO₂ by some 25 percent. See Jean-Francois Bastin, et al., “The Global Tree Restoration Potential,” *Science* 365, no. 6448 (2019): 76-79.

imperatives require concerted action by the world's governments, though revolutionaries must also fight for worker and community control of new energy production, infrastructure, and employment programs.

13) Fighting for reforms *and* fighting capitalism. While capitalism must be abolished in order to restore full ecological balance, we can achieve all or most of the necessary cuts in GHG emissions in the short term through major policy reforms that transform our energy systems and force capitalists to alter their behavior. These reforms must include massive government spending to fund the transition to non-carbon energy (a Green New Deal), but also reforms to cut emissions at their source: carbon taxation, cap-and-trade programs, and restrictions on certain business activities. The amount of carbon being emitted globally needs to be capped immediately, with progressive reductions in that cap each year. We understand that the carbon trading mechanisms that are typically attached to cap programs present lucrative profit opportunities for certain capitalist sectors; however, caps are so critical that we won't reject those programs simply because they will facilitate the profits of some capitalists or because they don't put all polluters out of business – just as we would not reject an increase in workers' wages simply because it didn't abolish wage slavery. Movements should assess the value of climate reform policies according to the balance of forces in their local environments. If organizers have a choice of several different policies as a way of cutting state, regional, or national emissions, they should carefully weigh the different options based on three criteria:

- To what extent is a reform effective in mitigating the climate emergency and other ecological crises?
- Is the reform equitable, in the sense of shouldering polluters and the rich with the biggest costs? For instance, any carbon cap or tax program should always include a rebate mechanism that shields working-class consumers from polluters' efforts to pass along the costs.
- Does the reform put the movement in a position to win more, by empowering exploited and oppressed people and by undermining the power of polluters?

Generally speaking, carbon taxes or direct restrictions on emissions are preferable to cap-and-trade programs because they don't create a new market, but cap-and-trade will often be necessary as a short-term mitigation strategy so that we can buy time to build the power necessary to achieve more ideal policies. At the global level, cap-and-trade is likely to be the only realistic option for an emissions reduction agreement in the foreseeable future.¹² Given that capitalism is highly unlikely to end in the next decade, we must fight for these and other reforms if we want to live long enough to abolish the capitalist system.

14) Restoring the capacity of all ecological systems, including those with minimal climate impact. We must support ecology and the value of living systems whether or not humans engage with them. This support requires the cessation of the production of all toxins, hazardous wastes, and radioactive

¹² Robin Hahnel, "Left Clouds over Climate Change Policy," *Review of Radical Political Economics* 44, no. 2 (2012): 141-59. See also Robin Hahnel, *Green Economics: Confronting the Ecological Crisis* (Armonk, NY: M.E. Sharpe, 2011).

materials, and that all past and current producers be held strictly accountable to the people for detoxification and containment at the point of production. This includes our complete opposition to nuclear power, which is a false solution to the climate crisis and energy needs.

15) Growth is often disastrous, but *can* be good. Capitalism's cheerleaders put economic growth on a pedestal, as if growth were a solution to all our problems. Growth is often wrongly considered to be intrinsically good, even if it means the growth of something like the toxic waste industry, with its devastating impacts on working-class Black and Brown peoples. In reality, growth statistics ignore many vital indicators of well-being, such as the distribution of resources (i.e., inequality) and the consequences for the environment and human health. And in a market economy, economic actors have every incentive to grow *at the expense of* others, by shifting costs of their growth onto other people and other species. As many environmentalists such as the Degrowth movement have rightly pointed out, a great deal of economic growth is disastrous for both humans and the planet. However, it does not follow that growth is *inherently bad* for the environment. There is a crucial difference between economic *growth* and *throughput*. Throughput refers to the physical inputs from the natural environment (raw materials such as iron ore or top soil) that are used in production processes, plus the physical outputs of production such as airborne particulate matter and greenhouse gases that are released back into the natural environment, where they are absorbed in natural sinks. Economic growth is a measure of value, not of the quantity of material throughput. To be sure, business-as-usual economic growth has usually relied on increasing levels of throughput. Yet economic value and productivity *can* grow indefinitely while still protecting the environment and preventing climate change. Certain sectors like public transportation and renewable energy production will have to grow if we are to achieve net-zero carbon emissions.¹³ There is no reason that the economy as a whole – measured in terms of value – cannot also grow, even as throughput decreases and as particular industries are eliminated. This process is known as *decoupling*: the growth of the value of what we produce and a simultaneous decline in the quantity of throughput that we use to produce it.¹⁴

16) Working less is good for the Earth. However, the production of ever-greater economic value, and ever-increasing labor productivity, does not mean that material consumption should rise indefinitely. Instead, we should take advantage of increases in labor productivity by working fewer hours, thus substituting more leisure time for some of our material consumption. Doing so has ecological benefits, insofar as it reduces throughput. There is strong evidence that it can make us happier. Once people reach a certain level of material comfort, the correlation between increased consumption and well-being (i.e., happiness) weakens – that is, their basic needs are being met, and greater consumption yields diminishing returns with regard to their happiness. Working fewer hours, and consuming fewer goods, thus makes sense for both personal and ecological reasons. Still, *most* people in the world – the poor in the Global North, and most people in the Global South – have not yet reached this basic level of material comfort. Economic growth and increases in consumption are still very necessary if the world's

¹³ Sven Teske, et al., "Energy [R]evolution: A Sustainable Energy Outlook," *Energy Efficiency* 4, no. 3 (2011): 409-33, available at <http://www.greenpeace.org/international/Global/international/publications/climate/2010/fullreport.pdf>.

¹⁴ Robin Hahnel, "Environmental Sustainability in a Sraffian Framework," *Review of Radical Political Economics* 49, no. 3 (2017): 477-88; Kevin Young, "Ecologically Sustainable Growth Is Possible: An Interview with Economist Robin Hahnel," *Truthout.org*, July 7, 2016, available at <https://truthout.org/articles/ecologically-sustainable-growth-is-possible-an-interview-with-robin-hahnel/>.

non-affluent are to obtain what they need and deserve.

17) The problem isn't "too many people." We completely reject the neo-Malthusian argument that human population growth is a significant cause of global warming or other environmental destruction. Intelligent growth of human population can increase ecological diversity and resilience, and does not require increased carbon emissions or ecological degradation. This may simply require that more humans live in ecologically designed cities, and that more natural areas be kept wild to support the growth of diverse animal species.

18) Keep it in the ground. The mining and extractive industries produce GHG emissions as well as other disasters such as oil spills into the oceans and leaks of natural gas into groundwater drinking supplies. From mountaintop removal to hydraulic fracturing ("fracking"), we must end the great bulk of extractive industry and develop an economy based primarily on energy and goods that are readily available to society without sacrificing the long-term health of lands and oceans. In the short term, "keeping it in the ground" requires that we fight against all new fossil fuels extraction and infrastructure, that we work to shut down existing fossil fuels projects, and that we pursue strong governmental measures, such as robust carbon taxation and caps, that penalize fossil fuels production and incentivize sustainable alternatives.

19) End ruling-class control of the agricultural sector. We believe that food systems should generally be diverse and local, small to medium in scale, and always managed with a holistic understanding of environmental health and human well-being. Agroecology, Indigenous agriculture, and permaculture teach us that in nature, the more diverse a system is, the more likely it is to be successful. In building new agricultural systems we must prioritize land stewardship practices as much as simply growing food. We support rural and urban food sovereignty because all communities have the right to adequate accessible, affordable, and nutritious food. Land must belong to those who work it, while all community members, including farmers and non-farmers, have the right to collectively decide what food they eat, how it is grown, and who grows it. Farmers must be allowed and encouraged to grow foods in a way that maintains the health and quality of soil, land, and water. We oppose the use of agrochemicals and genetically-modified seeds, and the robbery of thousands of years of seed development by multinational corporations using intellectual property rights laws. Development of more local food systems necessitates the construction of a currently absent infrastructure, especially that which can connect small farmers with urban consumers.

20) The precautionary principle. As we struggle to mitigate the worst ecological crises, it may be necessary in the short term to make limited use of certain industries that presently cause major ecological and human harm, such as the chemicals, plastics, and metallic mining industries. These sectors currently operate with virtually no accountability to those affected by their activities. The problems caused by these industries are only solvable under a system of combined worker-and-consumer control of the industries. In the meantime, these industries must be forced to follow the "precautionary principle" for new research and technical development: that is, "if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific

consensus that the action or policy is not harmful, the burden of proof that it is not harmful falls on those taking an action.”¹⁵ Corporate leadership must be held criminally liable for all past, present, and future human harm and ecological debts.

Ecological rights, responsibilities, and reparations

21) A rights-based framework. A rights-based framework allows us to implement reparations for past harm in a globalized, participatory, and egalitarian way that builds on past successes of social movements and envisions a revolutionary transformation of global power relations. For us to address a problem as wide-ranging as the climate crisis, we need a coherent visionary international framework that can be applied across many countries and cultures with precision and impact. The framework of Greenhouse Development Rights exposes the oppressive nature of a global system in which people are imprisoned by poverty and passports while pollution is free to travel.

22) Reparations through GDR. The concept of Greenhouse Development Rights (GDR), like that of “human rights,” lays the ground for a radical shift in values through the use of a rights-based framework that already has been negotiated and has the force of treaty law in most of the world’s countries. GDR starts with a principle already articulated in the UN’s Framework Convention on Climate Change, wherein states commit themselves to “protect the climate system...on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.”¹⁶ GDR develops this principle into a nuanced, specific, and comprehensive plan for sustainable development that addresses many of the concerns raised by climate debt analysis.¹⁷

23) Varying responsibilities and capabilities. The GDR framework affirms the right to sustainable development for all. It recognizes this right through a collective effort-sharing scheme. The two key principles of the effort-sharing scheme are responsibility and capacity. *Responsibility* is defined as historic contributions to greenhouse gas pollution, excluding emissions associated with meeting basic necessities.¹⁸ *Capacity* is broadly defined as the ability to pay for mitigation and adaptation to global warming, without sacrificing necessities. GDR bases the level of income where responsibility and capacity begin on the income levels of the individuals within a given country, in a manner that takes explicit account of the unequal distribution of income within that country. This is very different from most other proposals, which rely on national per-capita averages. The acknowledgment of the impact of class within all countries allows a differentiation between luxury consumption and the consumption of necessities.¹⁹ The GDR framework captures the extent of inequality between Global North and South by encouraging the inclusion of an income threshold, below which there is no responsibility or

¹⁵ “The Precautionary Principle,” available at https://en.wikipedia.org/wiki/Precautionary_principle.

¹⁶ As reflected in the preamble to the United Nations Framework Convention on Climate Change (UNFCCC), which notes that “the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs.” Intergovernmental Negotiating Committee for a Framework Convention on Climate Change, *United Nations Framework Convention on Climate Change* (1992), available at <http://www.un-documents.net/unfccc.htm>.

capacity, to address the issue of climate change. This ensures that a wealthy citizen of the Global South would not be allowed to hide behind an impoverished majority to avoid responsibility or capacity to mitigate climate change; conversely, the most impoverished minorities in wealthy Global North countries would not be forced to take on any responsibility for climate change, which the impoverished have no capacity to solve. The negotiable global poverty line decided on by the report *The Greenhouse Development Rights Framework: The Right to Development in a Climate Constrained World* is \$7,500 per year. Any individual making less than \$7,500 per year in income is not counted toward a given country's expected contribution to a global climate adaptation and mitigation fund.²⁰ National shares of the total contribution into a global climate adaptation and mitigation fund are determined by looking at individuals with incomes above \$7,500. Each nation must contribute to the costs of global climate mitigation and adaptation policy according to its responsibility (cumulative CO₂ emissions since 1990, excluding emissions corresponding to consumption below the threshold) and its capacity (the total number of individuals with income over the threshold). Movements must fight to greatly expand the paltry amount of climate-related financing currently pledged by Global North countries in the form of the UN's Green Climate Fund, and to ensure transparency and equity in the contribution and allocation of those funds.²¹ This global financing mechanism is one form of reparations for the Global South, which we should pursue alongside other forms of wealth/knowledge transfer, including but not limited to carbon offset programs (see paragraph 4) and the open-sourcing of the technology needed for survival in the Global South (paragraphs 35-36).

24) Open the borders, close the coal mines! GDR requires immigrant rights. Capitalist-induced climate chaos will likely be the biggest cause of human refugee flows in the decades to come.²² An application of the GDR framework that our members should promote in all political work is the creation and expansion of state and local Sanctuary movements for undocumented immigrants, such as those that emerged after the 2016 U.S. presidential election. The Sanctuary movement of the 1980s included community groups and churches that provided shelter, services, and political solidarity to Central American refugees, in defiance of the law. The movement sought to change federal immigration policy, which refused asylum to most Central Americans who fled nightmarish situations

¹⁷ Friends of the Earth International, *Climate Debt: Making Historical Responsibility Part of the Solution* (2005), available at <https://www.eldis.org/document/A21399>. See also Erik Paredis, et al., *The Concept of Ecological Debt: Its Meaning and Applicability in International Policy* (Gent: Academia Press, 2008)

¹⁸ Friends of the Earth International, *Climate Debt*; see also Paredis, et al., *The Concept of Ecological Debt*.

¹⁹ Mark A. Drumbl, "Poverty, Wealth, and Obligation in International Environmental Law," *Tulane Law Review* 76, no. 4 (2002): 843-960. According to Oxfam, in 2019 the world's richest 26 individuals controlled as much wealth as the world's poorest 3.8 billion. An estimated 1.1 billion lack clean drinking water, and 2.6 billion have no adequate sanitation.

²⁰ Paul Baer, et al., *The Greenhouse Development Rights Framework: The Right to Development in a Climate Constrained World*, rev. ed. (Heinrich Böll Foundation, Christian Aid, EcoEquity and Stockholm Environment Institute, 2008). For this and related publications, see <http://gdrights.org/>.

²¹ On the Green Climate Fund see Rachel M. Cohen, "Why We Have to Finance a Global Green New Deal – or Face the Consequences," *The Intercept*, June 24, 2019, <https://theintercept.com/2019/06/24/global-green-new-deal-climate-finance/>.

²² Natasha Lennard, "With Record Numbers of Displaced People, Deterrence Policies to Stop Their Movement Are Mass Murder," *The Intercept*, July 6, 2019, <https://theintercept.com/2019/07/06/migration-open-borders-deterrence-mass-murder/>.

in their home countries (situations created in very large part by U.S. imperialism in the region).²³ Climate-justice-oriented sanctuary programs of today should, as part of GDR implementation, provide state and city services to non-status immigrants and refuse to comply with the federal surveillance, arrest, detention, and deportation of non-status immigrants from countries in the Global South. These initiatives could be implemented and justified on the basis of taking responsibility for a locality's or state's share of climate debt, and could be pegged to each specific locality's responsibility for GHG emissions after 1990 and its income-based capacity to address the harm of climate change while still providing for necessities.²⁴ This provides a practical yet visionary way to join environmental and human rights concerns, strengthening both social movements' understanding and analysis. Such an initiative would provide concrete services to some of the most impoverished people in the Global North and allow for direct mitigation in the form of direct services and funding sent back to more impacted Global South countries. Use of the Sanctuary concept is one of the more useful ways in which a GDR framework can become part of a larger environmental justice analysis in U.S. communities. It would also contribute to educating people in the United States about climate debt and the need to actively support global climate justice.

25) GDR and green energy production. Revolutionary organizations should engage in study and analysis of global sites with maximum green energy potential, and should support working-class control of production and conscious implementation of GDR at these strategic sites or in concert with their displaced migrant populations. The Earth system has areas that are ideal for the capture and use of non-carbon-based energy. These diverse areas include areas of extreme wind potential, volcanic regions, areas with geothermal potential, and desert regions with high solar potential. Some examples include the Isthmus of Tehuantepec in Oaxaca, Mexico, where a very productive prevailing wind is constant because of a continental break in the mountainous geography; volcanic regions like Hawaii, which have massive potential for geothermal energy; and certain deserts, like the Sahara, that have extremely high potential for solar energy. It is important that revolutionaries fight for Indigenous and working-class feminists to drive the development and use of these resources in order to ensure a just and revolutionary transition to non-carbon-based energy globally. This program could be applied locally or nationally by analyzing conditions and the balance of forces in each region.²⁵ This framework allows revolutionaries to, in the words of Errico Malatesta, “snatch from the government and capitalists all the improvements of the political and economic order such that they make conditions of struggle less difficult for us and increase the number of those who struggle consciously.”²⁶ Because of the huge harm done to Mexico by U.S. economic, military, and environmental policies, and given the large

²³ Joseph Huston, “Sanctuary Cities: A Constitutional Primer,” *Dartmouth Law Journal* 6 (2008): 211-16, available at <http://www.dartmouthlawjournal.org/articles/211-216.pdf>; Pioneer Valley Workers Center, *Poor Huddled Masses Not Welcome: A Brief History of U.S. Immigration Policy* (2018), available at <https://pvworkerscenter.org/wp-content/uploads/2019/01/A-Very-Brief-History-of-Immigration-May-2018.pdf>. See also the New Sanctuary Movement: <http://www.newsanctuarymovement.org>.

²⁴ Kevin L. Doran, “U.S. Sub-Federal Climate Change Initiatives: An Irrational Means to A Rational End?” *Virginia Environmental Law Journal* 26, no. 1 (2008): 189-226. See also Chris Wold, et al., *Climate Change and the Law* (LexisNexis, 2009), 828.

²⁵ Jerry Jenkins, *Climate Change in the Adirondacks: The Path to Sustainability* (Ithaca: Cornell University Press, 2010), 157.

²⁶ Quoted in Federação Anarquista do Rio de Janeiro, “Society of Domination and Exploitation: Capitalism and State,” February 10, 2012, available at <http://anarkismo.net/article/21910>.

number of Mexican and Chicana people in the United States, this strategy could also extend to specific campaigns for climate refugee status for Mexican immigrants.

26) Break the chain. The organizational implementation of a GDR framework requires active support for various related movements and campaigns. For instance, it could involve campaigns targeting banks and insurance companies linked to the fossil fuels industry, campaigns that force universities and pension funds to divest from fossil fuels, and worker organizing throughout the supply chain connected to the fossil fuels industry. It could also involve a movement for radical transparency, which would encourage whistle-blowing early in the planning of any major climate-impacting industrial project. This could involve the creation of a “ClimateLeaks” web-based secure leaking platform, similar to WikiLeaks or *The Intercept*.

27) Eco-feminism versus the patriarchal domination of nature. An eco-feminist and queer/trans-liberationist lens must be central to our movements, and women and queer/trans people must exercise core leadership within those movements. This is so for two reasons. First, the Western worldview that humans are separate from nature springs in part from patriarchal ideology, which has considered nature as something to be conquered and used rather than respected. We reject this patriarchal view of nature, wherein we all have the privileges vis-à-vis the Earth that men in Western societies enjoy vis-à-vis other genders. We must re-value and redistribute the feminized labor that is invisibilized in today’s world, as another central part of the effort to support families and communities in confronting crisis and scarcity. We reject classical value dichotomies of man/nature, man/woman, mind/body, culture/nature, and all other historical and conceptual dynamics that have led to, or justified, the systematic domination of both women and nature.

28) Who suffers. The second reason why an eco-feminist and queer/trans-liberationist lens must be central to our movements is that the destruction of our Earth and inhabitants due to war and capitalism disproportionately impacts the autonomy, economic well-being, and personal health of women and queer/trans people. Patriarchy, heteronormativity, and trans oppression strongly condition how ecological crisis is experienced, and so movements for ecological justice must confront those phenomena directly. We must especially raise the voices and knowledge of the Indigenous women and two-spirited peoples who have been the ones who cared for this land, which was stolen from them. In many Indigenous cultures the women and two-spirited peoples are the ones who hold and pass on the environmental knowledge. Eco-feminism must be anti-war, anti-colonial, and anti-capitalist, and queer/trans-liberationist. It is vital that we critically analyze our histories and present positions when doing this work, so as to not uphold the white supremacy, heteronormativity, cis-normativity, middle-class bias, and support for imperialism that have been so prevalent in the feminist movement.

29) Gendered reparations. Our ecological justice work must extend beyond the returning of land and include how the years of contamination have affected the general and reproductive health of women. This is what the Native Youth Sexual Health Network calls “environmental violence.”²⁷ The development of capitalist industry has harmed women’s right to sexual autonomy, sexual health, and a

²⁷ Native Youth Sexual Health Network:

www.nativeyouthsexualhealth.com/environmentalviolenceandreproductivejustice.html.

life free of violence. The growth of extractive industries has entailed increased sexual violence and exploitation of women and two-spirited peoples, as well as more intense social and psychological stressors. Reparations might take many forms, including social programs specifically targeting these groups, in addition to the GDR framework outlined above.

30) “No decisions about us without us.” We will only achieve ecological and climate justice when the flow of resources through our communities is run by the communities themselves, democratically, each with an educated and well-informed civic body, and in constant consultation with other communities affected by ecological degradation or proposed solutions to it. Decisions regarding land use must be made by peoples who live on the land (see also paragraph 4 above). Directly democratic communities must transform urban and rural land use so that industrial and residential neighborhoods will be more integrated and less toxic.

31) Confronting white supremacy. We must end the explicit or implicit white supremacy involved in every facet of the environmental crisis, from everyday decisions about industrial land use in cities to the fact that nonwhite people are far more likely to die from climate-related disasters. This requires support for ethnic, racial, and national self-determination as a vehicle for community empowerment and decision-making. Pluri-nationalism, intercommunalism and Indigenism are visionary ideals that demonstrate how to combine the integrity of national and ethnic communities with the knowledge of interconnection and solidarity of all peoples and the ecology that supports life.

32) Drawing on Indigenous knowledges. Indigenous peoples’ contribution to ecological and national survival is indispensable for our work. As Guillermo Bonfil Batalla writes, “In Indian civilization, ... [the human being is] part of an indivisible cosmos and fully aware of [her] harmonious relationship with the universal order of nature. She neither dominates nor tries to dominate. On the contrary, she exists within nature as a moment of it...Traditionalism thus constitutes a potent weapon in the [Indigenous] civilization’s struggle for survival against colonial domination.”²⁸ While Indigenous cultures are complex and not without contradictions, they nonetheless offer positive visions of how human populations can make informed, reconstructive, and day-to-day choices about production. In requiring that our society account for the full costs and benefits of economic and social choices, we look to Indigenism as a coherent practice and positive vision of how future populations can make informed reconstructive choices about levels of production and consumption, duration of work, self-reliance, energy use and harvesting, stewardship, pollution, land rights, conservation, and consumption. As Ward Churchill explains, “Indigenism offers an antidote...a vision of how things might be that is based on how things have been since time immemorial, and how things must be once again if the human species, and perhaps the planet is to survive much longer. Predicated in a synthesis of the wisdom attained over thousands of years by Indigenous land-based peoples around the globe – the Fourth World, or as Winona LaDuke puts it, “The Host world on which the first, second and third worlds all sit at the present time” – Indigenism stands in diametrical opposition to the totality of what

²⁸ Guillermo Bonfil Batalla, *México Profundo: Reclaiming a Civilization* (Austin: University of Texas Press, 1996), accessed from <https://nuevaconstituyente.org/wp-content/uploads/2016/11/mexico-profundo-guillermo-bonfil-batalla.pdf>.

might be termed “Eurocentric business as usual.”²⁹ This implies an ongoing project of struggle and engagement with the UN Declaration on the Rights of Indigenous People.³⁰ Drawing from Indigenism and other currents of ecological thought, we embrace an expansive ecological vision in which the Earth itself is understood as a living system.³¹

Building a green, participatory, and sustainable economy

33) Ecological economics. An *economy* is the means of production, consumption, allocation, and disposal of resources in any society. In order for society to thrive sustainably, we must have an economy that maximizes the ecological rights of those people who come after us, while ensuring that we all attain a fulfilling, bountiful, and joyful existence throughout our lives. The economy must be designed to fulfill these intergenerational needs. To avoid much of the ecological harm that is attendant to waste in society, useful objects should be designed with the understanding that decay is a natural process, and they should include a “cradle-to-cradle” engineering approach that designs objects to become part of something new after their disposal. For example, green infrastructure is the incorporation of natural processes into human activity, while grey infrastructure is a system that does not incorporate natural processes. Most sewage systems are examples of grey infrastructure, and are increasingly harmful due to population growth and astronomical costs of updating these systems. There are many forms of green sewage systems that use ecological systems to turn human waste into the food and habitat of other creatures. In this way, over time, global society can ensure a zero-waste approach to economics, where everything used is designed from birth through cycles of decay.

34) Supportive ecology. This requires an understanding that the economy should support the ecology that humans engage with, leave some areas untouched by humans, and provide for human needs and the fulfillment of new potentials. We must foster a consciousness of ecological connection and responsibility so that future generations understand and respect the ecological precautionary principle and are also well prepared to decide policies regarding animal rights, vegetarianism, or other matters that transcend sustainability, consistent with their ecological preferences and with their broader agendas for other social and economic rights.

²⁹ Ward Churchill “I am an Indigenist: Notes on the Ideology of the Fourth World,” undated, available at https://homepage.smc.edu/delpiccolo_guido/Soc34/Soc34readings/I%20Am%20Indigenist.pdf.

³⁰ Hari M. Osofsky, “The Inuit Petition As A Bridge? Beyond Dialectics of Climate Change and Indigenous Peoples’ Rights,” *American Indian Law Review* 31 (2007): 675-97. See also Ruth Gordon, “Climate Change and the Poorest Nations: Further Reflections on Global Inequality,” *University of Colorado Law Review* 78 (2007): 1559-1624; Randall S. Abate, “Climate Change, the United States, and the Impacts of Arctic Melting: A Case Study in the Need for Enforceable International Environmental Human Rights,” *Stanford Environmental Law Journal* 43 (2007): 3-76.

³¹ Christopher D. Stone, *Should Trees Have Standing? Law, Morality, and the Environment*, third edition (New York: Oxford University Press, 2010). See also James Lovelock’s “Gaia Hypothesis”: https://en.wikipedia.org/wiki/Gaia_hypothesis. Such ideas, of course, strongly echo the spiritual traditions and cosmovisions of millions of Indigenous peoples for whom the Earth itself is sacred.

35) Empowering the working class to dismantle the extractive capitalist economy and create a society built on self-management and participatory decision-making. Ecological economics requires public and democratic ownership of the means of production, and the creation of a global fund for mitigation and adaptation to climate change, including creative commons or open sourcing of all related patents and intellectual property rights, with a focus on the rapid transfer of appropriate technology to the Global South and Indigenous peoples globally.

36) Democratizing the means of production and survival. A powerful weapon in the hands of the global working class is cooperative, class-conscious control of the means of production. We will eliminate the dependence on a globalized industrial chain for the production of all global necessities. We will abolish intellectual property regimes because they impose a de facto fee on consumers, encourage corporate monopolization of production, and impede ecological production. They must be replaced with the creation of easy-to-use machinery produced near the point of use. This shift will involve the transition of all industrial technology to a participatory, open-source hardware and software framework, inspired by Open Source Ecology's "global village construction set" project. This new open-source technology will be designed to serve the consumption needs of cooperatively organized, local communities around the world.³² These needs will include, for example, the efficient, affordable, and durable construction of housing based primarily on locally-sourced materials.³³

37) Revolutionary democracy in the form of councils. The workplaces driving this ecological growth strategy must be collective enterprises where producers form *workers' councils*, associations in which each worker has decision-making input in proportion to the degree they are affected by each decision. These workers' councils could be "nested" in multiple federations at different levels of industry, because at each level different decisions pertaining to production, consumption, allocation, or waste management affect people in varying ways, contingent upon situational context.³⁴ Far from being mechanical conveyor belts for static information, the councils are spaces of dynamic communal deliberation and debate, "carrying and interchanging the opinions, the intentions, the will of the groups of workers."³⁵ *Consumers' councils* are a necessary complement to workers' councils, in that they facilitate the planning of production and distribution and ensure that public needs beyond the realm of the individual workplace are adequately represented in decision-making processes.³⁶

³² J. M. Pearce, et al., "3-D Printing of Open Source Appropriate Technologies for Self-Directed Sustainable Development," *Journal of Sustainable Development* 3, no. 4 (2010): 17-29, available at <http://www.ccsenet.org/journal/index.php/jsd/article/view/6984/6385>. The Global Village Construction Set (GVCS) – a free set of the 50 most important machines that it takes for modern life to exist – includes everything from a tractor, to an oven, to a circuit maker: <https://www.opensourceecology.org/>.

³³ Christina Priavolou, "The Emergence of Open Construction Systems: A Sustainable Paradigm in the Construction Sector?" *Journal of Futures Studies* 23, no. 2 (2018): 67-84, available at <https://blog.p2pfoundation.net/emergence-of-open-construction-systems/2019/02/10>. See also Vasilis Kostakis, et al., "The Convergence of Digital Commons with Local Manufacturing from a Degrowth Perspective: Two Illustrative Cases," *Journal of Cleaner Production* 197, no. 2 (2018): 1684-93, available at <http://dx.doi.org/10.1016/j.jclepro.2016.09.077>.

³⁴ For example the Symbiosis Network: <https://www.symbiosis-revolution.org>

³⁵ Anton Pannekoek, *Workers' Councils* (Oakland: AK Press, 2003), 45. See also the "participatory economics" framework first developed by Michael Albert and Robin Hahnel: <http://www.participatoryeconomics.info/introduction>.

38) Democratizing investment. The various ecological crises facing the world make clear the urgent need for democratization of decisions about economic investment. Achieving a truly green, sustainable economy requires that the tyranny of private investors be abolished in favor of working-class control over investment capital. This could be implemented through the creation of new cooperative union- or worker-controlled global banking arrangements. These could take the form of a “bank of the South” that utilizes cooperative revolving credit for productive property, or a democratic and egalitarian global cryptographic currency, specifically for climate adaptation (a type of “climate” crypto currency/Stellar/freicoin and GDR blockchain infrastructure).

39) Resilience. In the short term this means that we must contribute to local resilience infrastructure and rapid response networks to encourage locally-led, anti-racist, feminist, class-conscious disaster response. This resilient response requires appropriate participatory and secure communication systems built on free open-source platforms utilizing robust encryption.³⁷ All organizational members must understand these technologies and their proper deployment in disaster response and organizational work.

40) “Science for the people.”³⁸ In the mid-term, organized revolutionaries must support impoverished and oppressed communities in the construction of local participatory democracy projects. An essential focus of those projects should be popular and accessible science education. This requires a struggle for Internet-supported, high-tech, low-skill, collaborative popular education dedicated to empowering these communities with ecological engineering skills and other knowledge, so that they may build their own community-controlled and -constructed industrial machinery within an overall strategy of working-class resource control based on the “open source ecology” model.

³⁶ Kali Akuno & Ajamu Nangwaya, *Jackson Rising: The Struggle for Economic Democracy and Black Self Determination in Jackson, Mississippi* Daraja Press(2017) See also <https://cooperationjackson.org/>

³⁷ In the current moment the systems that best fulfill this need are the Tails operating system (<https://tails.boum.org/>), Signal messaging (Signal.org), Briar messaging (<https://briarproject.org/>), Riot.im, and the Internet through the Tor anonymity network, <https://www.torproject.org/>.

³⁸ See Alyssa Botelho, Daniel S. Chard, and Sigrid Schmalzer, eds., *Science for the People: Documents from America's Movement of Radical Scientists, 1969-1989* (Amherst: University of Massachusetts Press, 2018). See also Clifford D. Conner, *A People's History of Science: Miners, Midwives, and "Low Mechanicks"* (New York: Nation, 2005).