

Soil Not Oil

Vandana Shiva

Environmental Justice in an Age of Climate Crisis



THE CLIMATE CRISIS is at its roots a consequence of human beings having gone astray from the ecological path of living with justice and sustainability. It is a consequence of forgetting that we are earth citizens. It is acting like we are kids in a supermarket with limitless appetites for consumption and falsely imagining that the corporations that stock the supermarkets have unlimited energy warehouses. The real problem is the conflict between the economic laws that have reduced the planet and society to a supermarket where everything is for sale and the ecological laws that maintain the planet's ecological functions and social laws that distribute nature's goods and services equitably. The real problem is a global economy that has created a planetary ecological imbalance.

If these are the real problems, then the real solution cannot be replacing fossil fuels with other non-sustainable sources to power the same systems. The real solution must be to search for right living, for well-being, and for joy, while simultaneously reducing consumption. In Indian philosophy, right living is "dharma" – the bridge between resources, *arth*, and human needs, *kama*. Dharma is therefore based on the sustainable and just use of resources for fulfilling needs. Ecological balance and social justice are intrinsic to right livelihood, to dharma. "Dharanath dharma ucyat" – that which sustains all species of life and helps maintain harmonious relationship among them is "dharma." That which disturbs the balance of the earth and her species is "adharma."

Equity is about fair share. There are currently two paradigms of equity. One sets the overconsumption and waste of rich industrial societies as the model and measure of being human, being developed. Equity is presented as the entire world being pushed to that level of resource and energy consumption. However, this version of equity would need five

planets. This non-sustainable paradigm inevitably produces inequity. Shall we choose a non-sustainable paradigm in which we affirm an equal right to pollute or a sustainable paradigm in which we affirm an equal responsibility to *not* pollute?

Earth Democracy and ecological equity recognize that because the planet's resources and capacity to renew resources are limited, a reduction in energy and resource consumption of the rich is necessary for all to have access to land and water, food and fiber, air and energy. In an ecological paradigm, what works against Gaia works against the poor and works against future generations, and what works for Gaia works for the poor and for the future.

We need to define equity on the same ecological parameters locally and globally. If communities in India are resisting displacement and uprooting, if they define and experience their lives in the forest or small farms as the terms of their material and spiritual well-being, respecting their rights and freedoms is the first step toward equity. Equity needs to be grounded in the earth, in people's struggles and movements, not dropped in as an abstraction from remote conference halls. Those who would uproot farmers say the life of a peasant is "undignified." Those who would uproot indigenous people define life in a forest as "below the dignity line." Dignity is an experience and consequence of self-organization and sovereignty, of sufficiency and satisfaction. I have never found working the soil or lighting a wood fire lacking in dignity. It is disposability that robs people of their dignity and selfhood. That is why movements against displacement are so intense and widespread in contemporary India.

Real solutions will come from breaking free of the crippling world of mechanistic assumptions, industrial methods of producing goods with high energy and resource costs, and market mechanisms that make high-cost products appear cheap on supermarket shelves.

The eco-imperialist response to the climate crisis is to grab the remaining resources of the planet, close the remaining spaces of freedom, and use the worst form of militarized violence to exterminate people's rights and people themselves when they get in the way of an insatiable economy's resource appropriation, driven by the insatiable greed of corporations.

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*Five-year-old Kananka is part of the Amazon's Waorani community. Her "people of the forest" are semi-nomadic hunters and foragers, and need a large territory in order to maintain their traditional way of life. The Waorani only have access to about one-quarter of their original land base and even this area is threatened. The photo is taken from **Yasuni Green Gold: The Amazon Fight to Keep Oil Underground**. See page 11 for more on this book.*

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There is another response – that of Earth Democracy.

Earth Democracy recognizes that if the survival of our species is threatened, maintaining our ability to live on the planet is the only intelligent response. Chasing economic growth while ecosystems collapse is a sign of stupidity, not wisdom. Earth Democracy calls for a systemic and inclusive response to the climate crisis, not the fragmented and self-serving response that corporations and rich countries are making. Earth Democracy allows us to break free of the global supermarket of commodification and consumerism, which is destroying our food, our farms, our homes, our towns, and our planet. It allows us to re-imbed our eating and drinking, our moving and working, into our local ecosystems and local cultures, enriching our lives while lowering our consumption without impoverishing others. In Earth Democracy, everything is interconnected. To address the pollution of the atmosphere, we do not have to limit ourselves to changes in the atmosphere. We can change agriculture; we can change the way we design buildings and towns; we can change the way we shop.

In Earth Democracy, solutions will not come from the corporations and governments that have raped the planet and destroyed peoples' lives. Solutions are coming from those who know how to live lightly, who have never had an oil addiction, who do not define the good life as "shop till you drop," but rather define it as looking after the living earth and their living community. Those who are being treated as disposable in the dominant system, which is pushing the planet's ecosystems to collapse and our species to extinction, carry the knowledge and values, the cultures and skills, that give humanity a chance for survival.

To mitigate and adapt to climate change we need to stop the assault on small farmers and indigenous communities, to defend their rights to their land and territory, to see them not as remnants of our past but as the path for our future.

Earth Democracy begins and ends with Gaia's laws – the law of renewability, the law of conservation, the law of entropy, the law of diversity. In Earth Democracy, all beings and all peoples are equal, and all beings and all communities have rights to the resources of the earth for their sustenance.

In Earth Democracy, the solution to the climate crisis begins with the cultures and communities who have not contributed to it.

Earth Democracy is based on equal rights of all beings to ecological space, including atmospheric space. The

atmosphere is an ecological commons. Climate justice demands that this commons not be enclosed by a handful of polluters. Climate justice also demands that people be compensated for the impact of climate chaos caused by the actions of others. But above all, climate justice demands that every person, every community, every society have the freedom to create and defend economies that cause no harm to the climate or to other people.

To prevent climate chaos and to avoid further increases in emissions we must stop the coercion of trade liberalization and rewrite the rules of trade to favor the local. WTO rules and World Bank structural adjustment programs are robbing sustainable local economies and sustainable communities of their freedom to be sustainable. Compelling them to import food from thousands of miles away and preventing them from having safeguards that protect the local are – in terms of climate change – ecological crimes.

Earth Democracy generates a radical shift in our paradigms and in our patterns of production. It offers real solutions to resource exhaustion, peak oil, climate change, disposability of people, and the erosion of democracy.

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Climate change and the two carbon economies: Biodiversity vs Fossil Fuels

Reductionism seems to have become the habit of the contemporary human mind. We are increasingly talking of climate change in the context of "the carbon economy." We refer to "zero carbon" and "no carbon" as if carbon exists only in fossilized form under the ground. We forget that the cellulose of plants is primarily carbon. Humus in the soil is mostly carbon. Vegetation in the forests is mostly carbon. It is living carbon. It is part of the cycle of life.

The problem is not carbon *per se*, but our increasing use of fossil carbon that was formed over millions of years. Today the world burns 400 years' worth of this accumulated biological matter every year, three to four times more than in 1956. While plants are a renewable resource, fossil carbon for our purposes is not. It will take millions of years to renew the earth's supply of coal and oil.

Before the industrial revolution, there were 580 billion tons of carbon in the atmosphere. Today there are 750 billion tons. That accumulation, the result of burning fossil fuels, is causing the climate-change crisis. Humanity needs to solve this problem if we are to survive. It is the other carbon

economy, the renewable carbon embodied in biodiversity, that offers the solution.

Our dependence on fossil fuels has broken us out of nature's renewable carbon cycle. Our dependence on fossil fuels has fossilized our thinking.

Biodiversity is the alternative to fossil carbon. Everything that we derive from the petrochemical industry has an alternative in the realm of biodiversity. The synthetic fertilizers and pesticides, the chemical dyes, the sources of mobility and energy, all of these have sustainable alternatives in the plant and animal world. In place of nitrogen fertilizers, we have nitrogen-fixing leguminous crops and biomass recycled by earthworms (vermi-compost) or microorganisms (compost). In place of synthetic dyes, we have vegetable dyes. In place of the automobile, we have the camel, the horse, the bullock, the donkey, the elephant, and the bicycle.

Climate change is a consequence of the transition from biodiversity based on renewable carbon economies to a fossil fuel-based non-renewable carbon economy. This was the transition called the industrial revolution.

While climate change, combined with peak oil and the end of cheap oil, is creating an ecological imperative for a post-oil, post-fossil fuel, postindustrial economy, the industrial paradigm is still the guiding force for the search for a transition pathway beyond oil.

That's because industrialization has also become a cultural paradigm for measuring human progress. We want a post-oil world but do not have the courage to envisage a postindustrial world. As a result, we cling to the infrastructure of the energy-intensive fossil fuel economy and try and run it on substitutes such as nuclear power and biofuels. Dirty nuclear power is being redefined as "clean energy." Non-sustainable production of biodiesel and biofuel is being welcomed as a "green" option.

Humanity is playing these tricks with itself and the planet because we are locked into the industrial paradigm. Our ideas of the good life are based on production and consumption patterns that the use of fossil fuels gave rise to. We cling to these patterns without reflecting on the fact that they have become a human addiction only over the past 50 years and that maintaining this short-term, non-sustainable pattern of living for another 50 years comes at the risk of wiping out millions of species and destroying the very conditions for human survival on the planet. We think of well-being only in terms of human beings, and more accurately, only in terms of human beings over the next 50 years. We are sacrificing the rights of other species and the welfare of future generations.

To move beyond oil, we must move beyond our addiction to a certain model of human progress and human well-being. To move beyond oil, we must reestablish partnerships with other species. To move beyond oil, we must reestablish the other carbon economy, a renewable economy based on biodiversity.

Renewable carbon and biodiversity redefine progress. They redefine development. They redefine "developed," "developing," and "underdeveloped." In the fossil fuel paradigm, to be developed is to be industrialized – to have industrialized food and clothing, shelter and mobility,

ignoring the social costs of displacing people from work and the ecological costs of polluting the atmosphere and destabilizing the climate. In the fossil fuel paradigm, to be under-developed is to have non-industrial, fossil-free systems of producing our food and clothing, of providing our shelter and mobility.

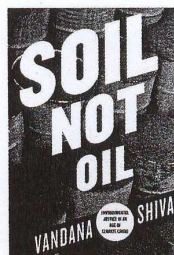
In the biodiversity paradigm, to be developed is to be able to leave ecological space for other species, for all people and future generations of humans. To be underdeveloped is to usurp the ecological space of other species and communities, to pollute the atmosphere, and to threaten the planet.

We need to change our mind before we can change our world. This cultural transition is at the heart of making an energy transition to an age beyond oil. What blocks the transition is a cultural paradigm that perceives industrialization as progress combined with false ideas of productivity and efficiency. We have been made to believe that industrialization of agriculture is necessary to produce more food. This is not at all true. Biodiverse ecological farming produces more and better food than the most energy- and chemical-intensive agriculture. We have been made to falsely believe that cities designed for automobiles provide more effective mobility to meet our daily needs than cities designed for pedestrians and cyclists.

Vested interests who gain from the sale of fertilizers and diesel, cars and trucks, have brainwashed us to believe that chemical fertilizers and cars mean progress. We have been reduced to buyers of their non-sustainable products rather than creators of sustainable, cooperative partnerships – both within human society and with other species and the earth as a whole.

The biodiversity economy is the sustainable alternative to the fossil fuel economy. The shift from fossil fuel-driven to biodiversity-supported systems reduces greenhouse gas emissions by emitting less and absorbing more CO₂. Above all, because the impacts of atmospheric pollution will continue even if we do reduce emissions, we need to create biodiverse ecosystems and economies because only they offer the potential to adapt to an unpredictable climate. And only biodiverse systems provide alternatives that everyone can afford. We need to return to the renewable carbon cycle of biodiversity. We need to create a carbon democracy so that all beings have their just share of useful carbon, and no one is burdened with carrying an unjust share of climate impacts due to carbon pollution. ♀

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Questions

1. What is the "real problem" according to the author?
2. What is the solution she proposes?
3. How does the Indian philosophy of dharma come into play?
4. What is the problem of using the rich industrial societies to measure equity and model being human?
5. Why is a reduction in energy and resource consumption of the rich necessary?
6. What is Earth Democracy and who are the people that come up with these solutions?
7. Carbon is a natural part of the cycle of life. So why is it a problem?
8. Why is biodiversity crucial for our success?
9. Why is the biodiversity economy a "sustainable alternative to the fossil fuel economy?"