

Earth Democracy:

Connecting Rights of Mother Earth to
Human Rights and Well-being of All



 *Navdanya*

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Human Rights and Well-being of All

Mother Earth Day

22nd April 2021



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Earth Democracy

An Introduction

Dr. Vandana Shiva

We are facing an existential crisis with multiple emergencies.

1 million species are threatened with extinction, with 200 going extinct every day. The present path humanity is on is clearly non sustainable because it is destroying life on Earth, the very infrastructure of life.

Non sustainable systems are emerging as a threat to the very survival of the human species.

Humans too are a threatened species.

The multiple crises and pandemics we face today – the health pandemic, the hunger pandemic, the poverty pandemic, the climate emergency, the extinction emergency, the emergency of injustice, exclusion and inequality, dispossession and disposability of large numbers of humanity – are all rooted in a world view based on the illusions of separation and superiority which deny interconnectedness and oneness.

These false assumptions are –

1. The transformation of **Terra Madre**, Mother Earth who is living and has rights, into **Terra Nullius**, the Empty Earth. The assumption that nature is dead inert matter, property to be owned and raw material to be extracted for profits. The denial that the Earth is living, she is Gaia, Pachamama, Vasundhara and that Mother Earth has Rights is the root cause of ecological destruction and violence against her.
2. **Eco Apartheid**, the assumption that humans are separate from nature, are her conquerors, masters, owners and the denial of the fact that we are part of nature, not separate from her. Apartheid is “apartness” or “separateness” in Afrikaans.
3. **Human Apartheid**, based on the false assumption that colonising man is separate from and superior to other cultures and most human beings, who are colonized, including the indigenous, the non-white and coloured, women, farmers, peasants and workers. The illusion of superiority leads to domination and discrimination on the basis of race, gender, religion, work. This false assumption of superiority is also used to enclose the commons that are cared for and shared by all members of a community. Enclosures allow the extraction and appropriation of resources that sustain all life, including human life.
4. **Anthropocentrism**, the assumption that humans are superior to other species which are reduced to objects to be owned, manipulated and exploited for

profits and control. And a denial that we are members of one Earth family and all living beings are sentient beings with integrity and rights.

If nature is dead and not living, Nature and the Earth have no rights. There are no ecological limits and no limits to extraction from nature. This is at the root of non-sustainability.

The anthropocentric assumption that humans are separate from nature and superior to other species who have no rights is not just a violation of the rights of our fellow beings but also a violation of our humanity and human rights. We are members of one Earth family, and our being human is predicated on our relations with Biodiversity and Living Seed, Land and Living Soil, Living Waters and Living Food. Human rights defined on the basis of separation and superiority makes “dominance” and “exploitation” appear natural to being human, when they are in fact constructs based on illusion of separation and superiority which have contributed to both non-sustainability and injustice.

Denial of nature’s rights leads to destruction of nature and a threat to the very conditions of human survival. In an ecologically interconnected world, denial of the rights of nature translates into denial of human rights. The same constructs that lead to violence against nature and her destruction become the basis of violence against fellow human beings. Non-sustainability and injustice are part of the same process.

This worldview of separation also engenders hierarchies and the illusion of superiority - of humans as superior to other species, men as superior to women, whites as superior to blacks and all coloured people, one faith as superior to the diversity of belief systems which have nourished cultural diversity. Separation and Superiority create structures of violence - violence against nature, violence against women, violence against every “other” defined as lesser beings with the objective of colonisation.

Colonisation is based on separation and superiority, the construction of Apartheid.

The mechanistic reductionist world view of nature as dead inert matter and mere raw material to be extracted was constructed by Descartes and Bacon to facilitate nature’s exploitation and promote colonialism and commercialization.

Bacon, who is called the Father of Modern Science, called this shift “The Masculine Birth of Time” with a deeply patriarchal concept of the project of reductionist mechanistic science.

Descartes made life and sentient beings disappear. Life is inert matter he declared. A mere machine.....

Locke justified the violent enclosures of the commons and the creation of private property as “improvement” of nature.....

(Ref: Shiva, Vandana. 1988. Staying Alive: Women, Ecology and Survival in India.

Penguin Random House and Kali of Women.

[https://www.penguinrandomhouse.com/books/537607/staying-alive-by-vandana-shiva/.](https://www.penguinrandomhouse.com/books/537607/staying-alive-by-vandana-shiva/))

(Ref: Shiva, Vandana. 2016. Biopiracy The Plunder of Nature and Knowledge. New Delhi: Kali for Women and Women Unlimited.

[https://www.penguinrandomhouse.com/books/539065/biopiracy-by-vandana-shiva/.](https://www.penguinrandomhouse.com/books/539065/biopiracy-by-vandana-shiva/)

Shiva, Vandana et al. 2020. Gates to a Global Empire: Over Seeds, Food, Health, Knowledge...and the Earth: A Global Citizen's Report.)

The paradigm of the “dead Earth” goes hand in hand with the scientific paradigm of mechanistic reductionism and a technological paradigm of mastery, control and engineering instead partnership, cooperation and cocreativity.

The first engineering was mechanical – the fossil fuel driven energy of the machine to displace human and animal energy, and the creative role of humans and animals in the maintaining the web of life.

The second engineering age was the age of chemical engineering- making chemicals from fossil fuels. IG Farben and the Poison Cartel began chemical engineering of gases to kill people in Hitler's concentration camps and the wars.

The Nuremberg trials were a trial of the IG Farben's crimes against humanity and the genocide.

The UN Declaration of Human Rights was humanity's recognition that all humans are equal and a commitment to never allow such violence based on the illusion of superiority to occur again.

The preamble of the Universal Declaration of Human Rights recognises

“the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world”

(Source: <https://www.un.org/en/about-us/universal-declaration-of-human-rights>)

After the wars, the war chemicals were turned into agrichemicals. The violence of the concentration camps now spread on our farms and communities. My own journey in agriculture began with the violence in Punjab and the genocide in Bhopal in 1984 when a pesticide plant owned by Union Carbide leaked and killed thousands. The tragedy has maimed and crippled hundreds of thousands, including unborn generations.

The spread of toxic chemicals whose primary objective is to kill living beings has led to an extinction crisis.

In the 1980s, the Poison Cartel mutated into the “life sciences industry” pushing the next engineering revolution - the genetic engineering of life itself, to modify and

manipulate living organisms, referred to as GMOs, genetically modified organisms. New GMOs are now being engineered through new tools mistakenly referred to as “gene editing”. Living organisms are complex, self organised, self-regulatory, evolutionary systems, not a word programme which can be cut and pasted. A change in one gene in one site has massive unpredictable impacts onsite and offsite. It “mangles” DNA

(Source:<https://futurism.com/neoscope/crispr-problem-mangles-dna-wasnt-supposed-touch/>.)

The Poison Cartel and the digital giants are converging to reduce life to software. They are driving “Digital Agriculture”, “Farming without Farmers” and “Food without Farmers”.

(<https://www.navdanya.org/bija-reflections/2021/04/10/reclaim-the-seed/>)

The planetary emergency is leading to new attempts at engineering at a planetary scale. Geo engineering is the latest example of the mechanical mind trying to “engineer” life on Earth.

(Source: <https://navdanyainternational.org/bill-gates-his-fake-solutions-to-climate-change/>; <https://navdanyainternational.org/publications/gates-to-a-global-empire/>)

The mechanical mind that denies and displaces nature’s creativity and intelligence and human creativity and intelligence goes hand in hand with an economic paradigm based on extractivism, disposability and profits which denies the ecological space to all beings.

As Carolyn Merchant wrote in the Death of Nature

“As a conceptual framework, the mechanical order had associated with it a framework of values based on power, fully compatible with the directions taken by commercial capitalism”

(Ref: Merchant, Carolyn. 1980. The Death of Nature: Women, Ecology, and the Scientific Revolution. 1st ed. Manhattan: Harper and Row.)

Selfishness and greed are celebrated as natural to being human, and are universalised instead of being recognized as the anti-nature, inhuman values cultivated and rewarded among a few privileged men by Capitalist Patriarchy.

Adam Smith’s 1776 book, “*An Inquiry into the Nature and Causes of the Wealth of Nations.*” (*Wealth of Nations*) written soon after the East India Company established its rule over India, falsely assumed that self-interest and competition as the basis of wealth creation. Greed was made the organising principle of society and presented as a law of nature, our very essence.

(Ref: Smith, Adam. 1776. *An Inquiry into the Wealth of Nature and Causes of the Wealth of Nations* (Vol. I-V). London: W. Strahan and T. Cadell.

https://www.ibiblio.org/ml/libri/s/SmithA_WealthNations_p.pdf.)

For Smith, competition is the 'desire that comes with us from the womb, and never leaves us, until we go into the grave.'

(Ref: Rasmussen, Dennis C. 2006. "Does 'Bettering Our Condition' Really Make Us Better Off? Adam Smith on Progress and Happiness." *The American Political Science Review* 100(3): 309–18. <https://www.jstor.org/stable/27644357>.)

What comes from the womb is the gift of unconditional giving and care, of love and life.

(Ref: Vaughan, Genevieve, ed. 2007. *Women and the Gift Economy: A Radically Different World View Is Possible*. Inanna. <https://www.inanna.ca/product/women-gift-economy-radically-different-world-view-possib/>.)

As Ronnie Lessem and Alexander Schieffer indicate "*if the fathers of capitalist theory had chosen a Mother rather than a single bourgeois male as the smallest economic unit for their theoretical constructions, they would not have been able to formulate the axiom of the selfish nature of human beings in the way they did*"

(Ref: Lessem, Ronnie, and Alexander Schieffer. 2010. *Integral Economics: Releasing the Economic Genius of Your Society*. London: Routledge.)

Mechanistic reductionism fragmented nature and atomised society. It reduced each species and every human being to an atom competing with all others for scarce resources. The assumption of scarcity and competition go hand in hand. Nature creates abundance. Human beings cocreate abundance when they work according to Nature's Laws and in cooperation with each other. Capitalist Patriarchy creates the illusion of scarcity to impose its extractive technologies and economic model, which create real scarcity in the form of the ecological crisis and poverty and hunger.

While writing "Origin of Species", Charles Darwin was influenced by Adam Smith. He reinforced Smith's assumption of Competition and Survival of the Fittest and made it the principle of Biology and Evolution, even though humans and other species survive through cooperation and mutuality. The fragmented, atomistic view of society was imposed on complex, interconnected living organisms and ecosystems. Each individual life form was assumed to be evolving in isolation competing with all others for scarce and shrinking resources creating the worldview of scarcity.

The mechanistic view of separation and atomisation was blind to the fact that the Earth and her resources are living, and humans as part of the Earth have the potential to regenerate resources, create wealth cooperatively in abundance and share it equitably. The mechanistic world view ignored the interconnectedness and widespread cooperation among species for mutual support and the gift of life. It was blind to the capacity of human beings and communities to take care of nature, regenerate her resources and create shared abundance.

Scientists are now finding out that cooperation shapes evolution, not competition. From the molecules in a cell, to organisms, ecosystems and the planet as a whole, cooperation and mutuality is the organising principle of life. Indigenous cultures have

always organized themselves as members of the Earth community working in cooperation to maintain the infrastructure of life and well-being.

The multiple emergencies are not separate. They are interconnected. And they have the same roots. Their solutions are also interconnected. The emergencies that threaten the very future of our species cannot be addressed by the same mindset that created them.

However even though the crises are interconnected, each crisis is treated as unrelated to others. There is a focus on symptoms, not the deeper root causes.

As Einstein said,

“We cannot solve our problems with the same thinking we used when we created them.”

We need a new way of thinking and living so humans and other species can continue to live and thrive.

As Wendell Berry said "... if we apply our minds directly and competently to the needs of the Earth, then we will have begun to make fundamental and necessary changes in our minds. ... We will see that war and oppression and pollution are not separate issues but are aspects of the same issue. Amid the outcries for the liberation of this group or that, we will know that no person is free except in the freedom of other persons and that our only real freedom is to know and faithfully occupy our place - a much humbler place than we have been taught to think - in the order of creation."

(Ref: Berry, Wendell. *“Think Little”*. In *Essays 1969-1990*. ed. Jack Shoemaker. The Library of America.)

Earth Democracy: Recognising the Rights of Nature, Respecting Human Rights

Earth Democracy is a world view, paradigm and practice that is based on the recognition that:

1. The Earth is living. The Living Earth is our Mother. She is **Terra Madre**, Mother Earth, Gaia, Pachamama, Vasundhara...Mother Earth has rights.
2. We are all members of the **One Earth Family**. We are part of the Earth, and not separate from her, not her masters. We are interconnected through the living currencies of breath, water and nourishment. We have a duty to protect the Earth’s Living Systems that provide us clean air, clean water and clean food.
3. We are part of **One Humanity on One Planet**. All humans are equal. Our diversity enriches life and cannot be made the justification for inequality and injustice. Future generations have a right to enjoy the gifts of the Earth. Present

generations have a duty of Earth Care to pass on the gifts of nature in their full diversity, integrity and purity.

4. Earth Democracy is based on **Living Economies, Living Democracies and Living Cultures** woven through the diversity in the web of life. Each life form supports and sustains all others in mutuality and cooperation and harmony. All living beings are sentient beings and have rights. All beings are creative and intelligent.

Living Economies are based on cocreativity and co production by humans as part of the Earth community, respecting the rights and integrity of all. In Earth Democracy the economy is a subset of ecology based on the laws of Mother Earth. We share the earth's gifts with others. Seed, biodiversity, water, food are commons. Participation as cocreators in the Earth's ecological processes to protect the commons and defend the common good is living democracy. Cultivating the culture of oneness with the Earth is Living Culture.

Earth Democracy is a world view, paradigm and practice that is based on the recognition that everything is interconnected, the Earth Is Living, the Earth has rights, that we have duties to care for the Earth, and regenerate her soil, seeds and biodiversity, her water and food systems. Our rights flow like a spring from our duties.

Earth democracy recognises that humans are part of the Earth and related to other beings. Human Rights are therefore connected to the Rights of the Earth and the Rights of other species.

Earth Democracy recognises that all human beings are equal and have the same rights, enshrined in the UN declaration of Human Rights and other conventions that have evolved to protect the Rights of Women, the Rights of Indigenous people, the Rights of Peasants and the Rights of the Child.

(UN declaration of Human Rights: <https://www.un.org/sites/un2.un.org/files/udhr.pdf>)

Rights of Women :

[https://www.un.org/womenwatch/daw/beijing/beijingat10/I.%20Human%20rights%20of%20women%20\(Sep%2009\).pdf](https://www.un.org/womenwatch/daw/beijing/beijingat10/I.%20Human%20rights%20of%20women%20(Sep%2009).pdf)

Rights of Indigenous People:

https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

Rights of Peasants: <https://www.geneva-academy.ch/joomlatools-files/docman-files/UN%20Declaration%20on%20the%20rights%20of%20peasants.pdf>

Rights of the Child:

https://www.childrensrights.ie/sites/default/files/submissions_reports/files/UNCRCE_english_0.pdf)

Earth Democracy recognises that all human beings are equal in rights, while they are diverse in their race and religion, their gender and cultures. Diversity is not inequality. Diversity goes hand in hand with democracy and the rights of all to their ecological space. Invading into the ecological space of other human beings on the false assumption of superiority and imposing uniformity is at the root of environmental injustice and economic inequality. Imposition of “sameness” and “uniformity” on a biologically and culturally diverse world unleashes violence against nature, her species, and diverse cultures.

All humans are ecologically equal but diverse in culture, race, religion and gender. We have the same rights to food and water, clean air and a safe and healthy environment.

Human beings, as part of the Earth have natural rights to be alive, well and healthy. The right to life is the right to breathe and have clean air, the right to water and freedom from thirst, the right to food and freedom from hunger, the right to a home, to belonging, to land, to the sustenance and livelihoods that soil and land provide.

Since we depend on nature for sustenance, destruction of nature translates into violation of human rights to food and water, life and livelihood.

All ecological problems have common roots in the denial of the Earth as a Living System, and violation of the limits her ecological cycles and processes put on human action.

Violation of the integrity of species and ecosystems, the breaking of ecological limits and planetary boundaries, cultural integrity and diversity are at the root of multiple ecological emergencies the Earth is facing and social and economic emergencies humanity is facing.

Biodiversity, the diversity of species, their mutuality and interconnectedness, creates the web of life, maintains the living planet and the infrastructure of life. I call this nature’s economy, the biodiversity economy, and the living carbon economy. Plants through photosynthesis use the sun’s energy to convert carbon dioxide in the atmosphere into living carbon on which all life depends.

Climate Change is a result of disrupting the ecological and nutrition cycles of life. It is a result of shifting from a living carbon economy of care for the biosphere to a dead carbon economy of industrialism, mining 600 million years of fossil fuels buried underground by nature, and pumping them into the atmosphere as pollutants and Green House Gases into the atmosphere.

The emergencies humans face in terms of hunger and thirst, disease and pandemics are rooted in the ecological crises and the crises of injustice, inequality, and inhumanity.

The movement to recognise the Rights of Mother Earth began after the failure of the Copenhagen Climate Summit in 2009. The worst polluters announced they would

shift from legally binding emissions reduction targets to voluntary commitments. Eva Morales, the indigenous president of Bolivia said “we are not here to defend the rights of polluters but the Rights of Mother Earth”. He later organised a “People’s Summit on Climate Change and the Rights of Mother Earth” from which evolved the Draft Declaration of the Rights of Mother Earth, to supplement and complement the Universal Declaration of Human Rights.

(Universal Declaration of rights of Mother Earth:

<https://www.navdanya.org/site/Earth-university/universal-declaration-of-the-rights-of-Mother-Earth>)

We do not “give” Rights to Nature. Mother Earth “has” rights. We have to recognise, and live according to her laws . Mother Earth gives us life, she gives us natural rights to share her gifts, and ecological duties to protect and regenerate her. The Rights of Mother Earth become our duties .

We are alive because nature is alive. The Earth gives us life. She is not raw material for exploitation and profits. The ecological crises are rooted in the denial of the Earth as living. Environmental injustice and violation of human rights is rooted in the denial that we are part of the living Earth, that all humans have equal rights as Earth Citizens.

Earth democracy as a world view and practice allows us to recognise the connections between Rights of Mother Earth and Human Rights. It shows us to walk a path to protect both, and ensure the freedom and well-being of all.

A movement is growing to define violence against nature and violation of principles of ecological justice as a crime of Ecocide in international law. Across the world people are taking actions to prevent the damage to and destruction of ecosystems which are leading to the harming the health and well-being of species, including humans.

(<https://www.stopecocide.Earth/become>)

All for Nature, All from Nature- For the Well Being of All

While the consciousness of the Earth as living , the awareness of the Rights of Mother Earth, and the movement of environment justice is growing, the dominant system is extending and deepening the false assumptions of Ecological and Human apartheid and Anthropocentrism. The 1 % is offering the disease as the cure.

The new language of “Nature Based Solutions” continues this Anthropocentrism and instrumentalisation of nature. Nature continues to exist in the minds of the powerful only to solve their problems of extractivism and profit making. New proposals to address the ecological emergencies are neither sustainable, nor just. They deny both the Rights of Mother Earth and human rights of indigenous people, farmers, fisher folk, women, working people and the poor.

The language of “Half for Nature” continues Ecoapartheid. It continues to deny Rights of Nature and Human Rights. It denies integrity and rights of the ecological cultures whose forests, biodiversity and land are being appropriated for a new “green washed” extractive economy.

It is an anthropocentric denial of the reality that all life, all resources flow from nature. To protect Rights of Mother Earth and Human Rights, we need to protect the living economies of indigenous cultures. Instead of “Half for Nature” we need to recognize

“All for Nature, All from Nature-For the Well Being of All”

सर्वे भवन्तु सुखिनः

“*Sarve Bhavantu Sukhinaḥ*”

We are not separate from nature. And Nature is not divisible. Everything is interconnected. We cannot have a future where the 1% grabs all the planet’s resources, continuing on the path of separation and apartheid, resource extraction and pollution.



To say “Half for Nature” is ecologically and ethically flawed. It is ecologically flawed because it is based on the the Cartesian paradigm of separation and division, which is blind to the interconnectedness of the planet’s ecological processes.

Pesticides sprayed on farms reach the breast milk of women in Greenland.

(<https://www.washingtonpost.com/archive/politics/2004/04/11/poisons-from-afar-threaten-arctic-Mothers-traditions/89af6e09-c411-4b6f-bc97-4839963e9208/>)

We are one Earth Family on one planet, healthy in our diversity and interconnectedness.

The planet's health and our health are non-separable.

Invasions into the forests, the homes of diverse species and diverse cultures over the last 30 years of the rule of greed and globalisation has led to the emergence of new disease pandemics such as Sars, Ebola, Zika HIV, Nipa...

We can be linked worldwide through the spread of disease like the corona virus when we invade the homes of other species, manipulate plants and animals for commercial profits and greed, and spread monoculture. Or we can be connected through health and well-being for all by protecting diversity of ecosystems and protecting the biodiversity, integrity, self-organization (autopoiesis) of all living beings, including humans.

As Dr King reminded us,

“We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly.”

The fossil fuels burned by the rich in the North are causing the melting of Glaciers in the the Himalaya and threatening the lives of the small islanders.

[\(https://www.navdanya.org/bija-reflections/2021/02/08/4-decades-of-disasters-4-decades-of-warning/\)](https://www.navdanya.org/bija-reflections/2021/02/08/4-decades-of-disasters-4-decades-of-warning/)

(Ref: Shiva, Vandana, and Vinod Kumar Bhatt. 2009. Climate Change at the Third Pole. New Delhi.

<https://annalsofneurosciences.org/journal/index.php/annal/article/viewArticle/ans.0972-7531.2010.170112/859.>)

To say “Half for Nature” denies that the planet and her atmosphere is one. Fossil fuels and Green House Gas pollution by the rich is creating climate disasters for those who never contributed to Climate Change.

The rich and powerful have been Colonising the atmosphere since the beginning of industrialism. They continue to be the biggest polluters. The US is responsible for 40% excess emissions, the G8 or 85% and the Global North for 92%. The Global South is bearing the brunt of the climate disasters- floods, draughts, cyclones and hurricanes.

<https://inthesetimes.com/article/climate-change-wealthy-western-nations-global-north-south-fires-west>

[https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(20\)30196-0/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30196-0/fulltext))

In “Confronting Carbon Inequality” Oxfam reports

“The richest one percent of the world’s population are responsible for more than twice as much carbon pollution as the 3.1 billion people who made up the poorest half of humanity during a critical 25-year period of unprecedented emissions growth”.

(<https://www.oxfam.org/en/press-releases/carbon-emissions-richest-1-percent-more-double-emissions-poorest-half-humanity>)

<https://www.oxfam.org/en/research/confronting-carbon-inequality>)

While being the drivers of the problem of atmospheric pollution and climate change, the 1% are using the rhetoric of “Half for Nature” to green wash their next plan to grab the resources of the Earth and displace people, both through an economic model that treats people as disposable and replaceable by robots, drones and Artificial Intelligence, as well new attempts to make the poor bear the burden of “offsets” in their “Net Zero” economy.

(<https://www.foei.org/resources/publications/chasing-carbon-unicorns-carbon-markets-net-zero-report>)

<https://grain.org/en/article/6634-corporate-greenwashing-net-zero-and-nature-based-solutions-are-a-deadly-fraud>)

First they mined for coal, drilled for oil, fracked for gas, burning up 600 million years of nature’s work in fossilising her carbon. Now they want to mine the ecological functions and services of nature. This is “financialisation of nature”.

Carbon trade violates nature’s rights by denying integrity of the Earth’s ecological processes. The Earth does not exist for the billionaires so they can continue to exploit her to make limitless profits. The Earth is the basis of our lives and well-being. She creates the infrastructure for life through her complex, self organised ecological processes to create, sustain and regenerate life. Carbon trade is a violation of the rights of the Earth to her living carbon which is the basis of life.

Climate Change and all the existential crises are rooted in violating the ecological laws of life. They are systems of breaking the cycles of life by using technologies of extraction and domination, not technologies of maintaining and regenerating life, of giving and sharing.

Violent tools are rooted in a violent world view that presents the problems created by the rich and powerful as problems created by nature.

Henry Miller reminds us

“The world is not to be put in order. The world is in order. It is for us to put ourselves in unison with this order”.

Biodiverse, regenerative organic farming is based on the laws of nature and provides more food and nutrition for more people. It intensifies biodiversity and nutrition, health and well-being, not chemicals and poisons, disease and profits.

It is the proven path of increasing nutrition per acre by getting rid of poisons. It protects the land by conserving and regenerating the soil, biodiversity and water and the ecological cycles that maintain the Earth's climate.

Food is the currency of life. Growing food through Earth care is our ecological and ethical duty. Growing food according to the laws of the Earth creates the possibility to play our role as members of the Earth community, nourishing all life - of soil organisms, insects, bees and butterflies, birds and animals, including humans. The denial that we are part of the Earth, her living processes, her nutrition cycles is Eco apartheid.

This assumption of separateness from the very conditions of our being alive and our well-being is at the root of the violation of Earth Rights and Human Rights to life, to land, to food and water.

This Apartheid is accelerating and deepening as false solutions are offered to the planetary crises. By violating nature's limits and Ecological Laws, Earth Rights and Human Rights are further violated.

The idea of "Farming without Farmers" and "Food without Farms" are a continuation of the false assumption of Ecoapartheid - that we are separate from nature, we can live outside the Earth's Life Giving processes, and we have no duty to give back.
(<https://theecologist.org/2020/jan/24/rewilding-food-rewilding-farming>)

It is a denial of the disease burden caused by industrial agriculture and industrial ultra-processed food. Lab food is hyper processed food. Health is a continuum from the biodiversity in the soil, of our plants and in our gut microbiome. The recipe of farming without farmers and food without farms is a recipe for destroying the health of the planet and human health. When agriculture is reduced to growing chemical intensive, energy intensive, finance intensive monocultures of "raw materials" of Proteins and Carbohydrates for lab foods, both the soil and our gut are desertified. Destruction of biodiversity contributes to disease and sickness for the Earth and her beings, including humans.

(Ref: Mayer, Emeran A. 2016. "Feeding the Gut Microbiome."
<https://www.patagoniaprovisions.com/blogs/stories/feeding-the-gut-microbiome>
(April 16, 2021).)

To force this disease creating food and agricultural model on indigenous people and small farmers across the world, new conditionalities are being created through "net zero" "nature based solutions". If "feeding the world" through chemicals and dwarf varieties bred for chemicals was the false narrative created to impose the Green Revolution, the new false narrative is "sustainability" and "saving the planet".

Agriculture as Earth Care combines respect for the Earth with justice for farmers, their right to their resources- seeds, land, water, knowledge, the right to an

independent, sovereign livelihood and the right of all people to healthy, diverse, chemical free food , enshrined in the Right to Food and the Right to Health.

In the new “Net Zero” world, farmers will not be respected and rewarded as custodians of the land and caregivers, as Annadatas, the providers of our food and health. They will be not be paid a fair and just price for growing healthy food through ecological processes which protect and regenerate the farming systems as a whole. They will be paid for linear extraction of fragments of the ecological functions of the system which can be tied to the new “Net Zero” false climate solution based on a fake calculus, fake science allowing continued emissions while taking control over the land of indigenous people and small farmers. “Net Zero” is a new strategy to get rid of small farmers in first through “Digital Farming” and “Farming without Farmers” and then through the burden of fake carbon accounting.

Carbon Offsets and the new accounting trick of “net zero” does not mean zero emissions. It means the rich polluters will continue to pollute, and also grab the land and resources of those who have not polluted - indigenous people and small farmers - for carbon offsets.

Digital Giants like Gates are emerging as the new landlords shaping the future of agriculture.

"American agriculture today is being transformed as farmers employ new technologies and Big Data to help them manage their crops".

(<https://nypost.com/2021/02/27/why-bill-gates-is-now-the-us-biggest-farmland-owner/>)

Gates-linked Cottonwood Ag is one of the founding members of a new coalition of farmland owners, operators and environmental groups called Leading Harvest to impose one global monoculture of non-sustainable industrial agriculture on the world through is working to come up with “verifiable standards for sustainable farming” and create “a kind of sustainability seal of approval certifying that a given farm meets environmental standards”.

(<https://nypost.com/2021/02/27/why-bill-gates-is-now-the-us-biggest-farmland-owner/>)

An industrial, globalised food system is allowing farmers to receive only 1 to 5 % of what the consumer pays.

Instead of supporting systems that put small farmers , their seed, food and knowledge ensuring that farmers are paid fair prices for food they grow to nourish us, Gates wants to lock them into new systems and control and dependencies and push them to a zero budget economy where they receive nothing for the nourishment, food and health they provide society.

As the Leading Harvest group says “farmers will be paid for sustainability...There will be incentives for things like using less water, fewer chemicals, and storing more carbon”

(<https://nypost.com/2021/02/27/why-bill-gates-is-now-the-us-biggest-farmland-owner/>)

A global “seal” of approval based on fake science, fake economics of maximizing profits through extraction will create new data slavery for farmers. Instead of using their own heads and cocreating with the Earth, they will be forced to buy “Big Data” Instead of obeying the Laws of Mother Earth, they will be forced to obey algorithms created by Big Tech and Big Ag .

The Billionaires and the financial world are looking at carbon trade as the next big opportunity. Tom Goldtooth refers to it as Carbon Colonisation. Nnimmo Bassey calls it Carbon Slavery.

(<https://guardian.ng/opinion/environmental-justice-and-the-right-to-life-and-dignity/>)

The language of “decarbonisation” fails to recognise that ‘we are carbon based life forms’ (Andre Leu). Life is living carbon. Equating living carbon with dead fossil carbon is a false equivalence.

Further, this carbon reductionism ignores the fact that the “forests, lands, ecosystems are so much more than carbon stored in them. They are living, breathing ecosystems, cultural and spiritual sites, and life giving for millions of people across the planet”.

(<https://www.foei.org/resources/publications/chasing-carbon-unicorns-carbon-markets-net-zero-report>)

Conditionalities under any condition violate democratic principles and human rights. Farmers are guided by Earth care. The culture of Earth care needs to be respected and rewarded because it is centred on Rights of the Earth and Rights of all her children.

Conditionalities based on fake science, fake economics will not stop climate change , They will deepen environmental injustice and climate injustice . They will deepen the erosion of sovereignty and democracy which are the true basis of sustainability.

Conditionalities put on the non-polluters by the polluters who want to continue to pollute is unjust and ecologically, morally and ethically bankrupt. It is the contemporary equivalent of the “indulgences” received by the catholic bishops and priests in the 11th and 12th century .The church led by Pope Francis today recognizes that Pollution is a sin, and the “Cry of the Earth and the Cry of the Poor” is one pain .

(http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20201003_enciclica-fratelli-tutti.html)

“Polluter Must Pay” is an ecological principle in law. Polluters getting rewarded for the work for continuing to pollute while they appropriate the resources of small farmers and indigenous people is a crime against nature, small farmers and indigenous people.

Conditionalities based on fake science and fake solutions will accelerate the violence against the land, the Earth and the farmers. It will of course create new markets, new rents and new profits for the Billionaires.

(Ref: Gates, Bill. 2021. *How to Avoid a Climate Disaster: The Solutions We Have and the Breakthroughs We Need*. London: Allen Lane.

<https://www.penguin.co.uk/books/317/317490/how-to-avoid-a-climate-disaster/9780241448304.html>.

<https://navdanyainternational.org/bill-gates-his-fake-solutions-to-climate-change/>

Shiva, Vandana et al. 2020. *Gates to a Global Empire: Over Seeds, Food, Health, Knowledge...and the Earth: A Global Citizen’s Report.*)

In a world economy organised on the myth of limitless growth and limitless greed, there are no limits. There is a perpetual demand for more land to grow more commodities.

The Amazon is not being destroyed by her indigenous people. It is being invaded to grow GMO soya for biofuel and animal feed, not to grow food.

When the Earth and her people are not at the centre of the economy, but only profits are, ecological destruction and environmental injustice is the consequence.

Life, society and democracy are under threat. The planet and our lives are being destroyed by the brute force misleadingly called the economy. Both economy and ecology are derived from the Greek “*oikos*”, our home, the Earth. An economy that destroys our home is no longer economy. Violence to the Earth and violence against people is one violence. It is a war against the planet, the people and our future.

The Hopi describe the phenomenon of destroying everything that sustains a society as Powaqqatsi – “*an entity, a way of life, that consumes the life forces of beings in order to further its own life*”.

This is clearly in evidence today - we are dealing with a **destructive extractive system/force** that enriches the rich and those who control, and robs people of their rights, health and well-being. If we continue along this path, allowing corporations to keep extracting and degrading the planet and impoverishing its soils and citizens, our fragile web of life will be poisoned and broken, the diversity of species will be driven to extinction, people will lose all freedoms to their seed, to their food sovereignty, to their knowledge and decisions; all social relations will be ruptured and broken.

We cannot look for solutions to the emergencies the rich have created through their false assumptions, and their limitless greed.

We can sow the seeds of another future.

Solutions are emerging by returning to the Earth, in our minds, our lives, our relationships, the way we produce and consume. Earth democracy based on living economies, living democracies and living cultures allows us to protect the Rights of the Earth and human rights of the last person.

Justice and Sustainability are part of one interconnected process. Ecology and equity go hand in hand. Human Rights flow from the Rights of Mother Earth. We can shift from the emergency creating paradigm and economic model that is degenerating the Earth and our lives, to paradigms and practices that reduce our ecological foot print while expanding and deepening our hand print, heart print and head print, regenerating both Nature and Society, connected as One Earth Family through Cooperation and Mutuality, Compassion and Care.

As Gandhi said

“The Earth has enough for everyone’s needs but not for a few people’s greed”

Earth Rising

Ecological Actions for Earth Democracy

Globalization and corporate capitalism are characterized by the paradigm of separation and fragmentation, leading to a one-way extraction from nature and society that seeks only profit and leaves no room for cooperation, while sidelining ethical, cultural, and spiritual values and causing the crisis of Ecocide.

Our common survival now demands a unification of ecological actions towards living economies, living democracies and a food and agriculture system that sustain life on Earth.

Mother Earth's rights are also human rights, as human rights flow from the Earth which sustains us and gives us life.

We need to give back to the Earth through a relationship based on the reciprocity between soil and society, shifting away from linearity, extraction and ecocide, to circularity, cooperation and sharing.

This is the practice of Earth Democracy and it is also the practice of an ecological agriculture which maintains the web of life through the recognition of the intrinsic worth of all beings and embraces local communities in all their diversity.

Ecological Agriculture is Earth Care: The Bridge between Rights of Mother Earth and Human Rights

We are part of nature.

We are made of the same elements the Earth is made of- the panchmahabhutas - Earth, Water, Fire, Air and Space.

Living is the participation in the processes of the Living Earth.

We are air and breath. We are water. We are soil and the land. We are food.

The air, soil and biodiversity, water and food are the currencies of life that connect our life to the life of Mother Earth. Breath, water and food give us life.

We breathe the oxygen the plants create.

We drink the water the Earth circulates through the hydrological cycle, storing some in her aquifers and in the ground, some flowing in our springs, our streams, our rivers to the oceans, then evaporating to come down as dew, rain and snow.

We are nourished by the food the soil and Earth provide.

And it is through regenerating the soil, practicing the law of return; we become part of the great nutrition and food cycle that sustains life on Earth, including human lives.

When we see ourselves as members of one Earth family, other species are not objects to be manipulated, exploited or pushed to extinction but are our relatives, playing a vital role in maintaining and regenerating the web of life.

Our consciousness shifts from being masters and manipulators of life to being partners and cocreators within the web of life, conscious that we are not separate from the biodiversity, the soil, the water, but are part of the Earth, her systems, her processes, her life.

Our knowledge shifts from fragmenting and breaking nature's ecologically integrated living systems by developing violent technologies of extraction and invasion to becoming aware that nature is intelligent, her workings are ecological technologies, and our role is as cocreators.

As Buckminster Fuller has reflected

“In its complexity of design integrity, the Universe is technology. The technology evolved by man is thus far amateurish compared to the elegance of non-humanly contrived regeneration. Man does not spontaneously recognise technology other than his own. So he speaks of the rest as something he ignorantly calls nature”

It is by learning from the Earth we can regenerate the Earth.

We have to become students of Mother Earth, not try and dominate her.

When we practice agriculture in unison with the Earth's ecological processes aligned with the ecological laws of nature and the Earth, we evolve an agriculture of care for the land, for the soil. We participate in the processes of regenerating the seed and biodiversity, soil and water.

Regenerative Organic Farming/Agroecology: Following the Laws of Mother Earth, Creating Sustainability and Abundance

Rejuvenating and regenerating the planet through ecological processes has become a survival imperative for the human species and all beings. Central to the transition is a shift from fossil fuels and dead carbon, to living processes based on growing and recycling living carbon.

What we eat, how we grow the food we eat, how we distribute it, will determine whether humanity survives or pushes itself and other species to extinction.

When we farm with real knowledge of how to care for the Earth and her biodiversity, when we eat real food which nourishes the biodiversity of the Earth, of our cultures,

of our gut microbiome, when we participate in real and living economies that regenerate the well-being of all, we sow the seeds of our future.

The path to a future which protects the Rights of Mother Earth and Human Rights is made by walking with nature, co-creating and co-producing with diverse species, the living Earth and her complex web of life, with sensitivity, intelligence and care. This is the **path of life** which has sustained humanity in its diversity over millennia. Each community and culture has co-evolved its own distinctive path according to its climates, soils and biodiversity, and contributed to the diversity of food and farming systems.

The diversity of cultures of food and agriculture are united through the common and perennial principles on which life is based.

The first is the principle of diversity. Nature does not work on the principle of sameness, uniformity and monocultures. The natural world is a constant striving for diversity of expression. The cultural diversity of food and agriculture flows from nature's ways and her biodiversity. The monoculture of the mind and the imposition of uniformity on seeds, on farming, on diets, on knowledge systems, on economies, is a product of the colonising mind and fossil fuel industrialism based on extractivism. And it has resulted in the sixth mass extinction with species being pushed to extinction at 1000 times the natural rate.

The second principle is the “law of return” or giving back in gratitude, to maintain nature's ecological cycles of nutrients and water, which are nature's circular economies on which all life depends. Extractivism which grew with colonialism and the fossil fuel age, has disrupted nature's ecological cycles, contributing to the ecological emergency, the crisis of desertification and the water crisis, as well as the crisis of hunger and poverty.

Sharing the Earth's gifts in the commons is the third principle that flows from nature's laws. Since life is a web based on interconnectedness, no part of nature belongs to one species. Since food is the currency that weaves the web of life, food is a commons. In the paradigm based on nature's principles of how life works, food is not a commodity.

Today these common principles practiced by diverse schools of ecological agriculture – organic farming, permaculture, biodynamic farming, natural farming among many others - are referred to as Agroecology.

These principles have created food systems that have lasted over centuries, and sustained all life because they walk the path of life as laid by nature.

This is the future based on cocreating with nature, intensifying biodiversity instead of capital and chemicals. This is the path of regenerative agriculture with many names - organic, natural, permaculture, biodynamic. Ecological agriculture and regenerative food systems hold the potential of rejuvenating the land while creating abundance.

Biodiversity-intensive and poison-free agriculture regenerates biodiversity and rejuvenates the planet while producing more nutrition per acre. It shows the path to “Zero Hunger” in times of climate change.

(Source: Shiva, Vandana, and Vaibhav Singh. 2016. *Health Per Acre: Organic Solutions to Hunger and Malnutrition*. New Delhi: Navdanya/Research Foundation for Science Technology & Ecology. <http://www.navdanya.org/attachments/Health Per Acre.pdf>.)

All over the world, small farmers and gardeners are already implementing this agriculture: preserving and developing their soils, their seeds and practicing agro-ecology. They are feeding their communities with healthy and nutritious food while rejuvenating the planet. They are, thus, sowing the seeds of food democracy – a food system in the hands of farmers and consumers, devoid of corporate control, poisons, food miles and plastics. A food system that nourishes the planet and all humans.

If we return to the path of life, and abandon the path of death, we have a future. The path of farming with nature leads to the rejuvenation of the planet through rejuvenation of biodiversity, soil and water. A rejuvenation of small farms, the real farms with real people who care for the land, who care for life, who care for the future and who produce diverse, healthy, fresh, ecological and real food for all. Real food with integrity comes from real farmers with integrity working with the integrity of the Earth and ecological processes.

Organic farming takes excess carbon dioxide from the atmosphere, where it doesn't belong, and through photosynthesis, puts it back in the soil, where it does belong. It also increases the water holding capacity of soil, contributing to resilience in times of droughts, floods and other climate extremes.

The atmosphere and biosphere are non-separable, interconnected systems of Gaia, the Living Earth.

The destruction of the Earth's capacity to create, maintain and regenerate living processes that sustain life and the well-being for all is connected to the destruction of the human potential to live and meet our basic needs.

We cannot address climate change, and its very real consequences, without recognising the central role of the industrial and globalised food system, which contributes more than 50% to greenhouse gas emissions through deforestation, animals in concentrated animal feeding operations (CAFOs), plastics and aluminum packaging, long distance transport and food waste. We cannot solve climate change without small scale, ecological agriculture, based on biodiversity – living seeds, living soils, living water and local food systems. We can solve it with minimal food miles and without plastic packaging.

Ecological agriculture/agroecology has the potential to emerge as our most important path to defend the Rights of Mother Earth and defend the human rights of the last person.

Through ecological agriculture we reclaim our capacity to live in communities, both our local communities and the Earth community. Our planetary consciousness that we are interconnected as one humanity on one planet translates into ecological action of healing the Earth in our particular places on the Earth to which we belong.

Industrial Globalised Agriculture and Food Systems Violate the Rights of the Earth and Human Rights and are at the root of multiple emergencies

Farming is the science, technology and art of caring for the Earth, what matters is the health of the soil, the richness of diversity, the nourishment and quality of food, the beauty of the land, not the yield extracted as a commodity.

A tribal farmer in India, while leaving for his field said “I am going to beautify Mother Earth”.

“Industrial Agriculture has tended to look at the farmer as a “worker”- a sort of obsolete but not yet disposable machine - acting on the advice of scientists and economists. We have neglected the truth that a good farmer is a craftsman of the highest order, a kind of artist”- Wendell Berry

The measure of truth in life, as in food and farming, is nature, her living processes and her living intelligence based on autopoiesis and self organisation. The untruth of industrial agriculture and industrial food is the systemic violation of nature’s laws by external inputs which undermine and disrupt the self-organising capacity of life to renew and reproduce, and the imposing of false measures and false metrics.

Industrial agriculture is based on the myths and false assumptions of fossil fuel based mechanical philosophy and industrialism.

These myths include

1. The false assumption that the soil and seed are empty containers dependent on external inputs of fossil fuels, chemicals and capital that must be brought at high cost from corporations.
2. The false assumption that farmers have no knowledge and are empty minds and a denial of centuries of agroecological knowledge evolved by farmers.
3. The false assumption of pseudo-productivity which excludes high costs of external purchase inputs and treats farmers as the only input which must be reduced. This false logic leads to the dystopia of farming without farmers.
4. The false efficiency calculus that hides the 10 units of external energy used in industrial agriculture systems to produce one unit of food as energy. This is negative efficiency not higher efficiency. Factory farming increases the

negative efficiency by a factor of 10 ultra-processing further increases the energy waste and creation of entropy.

5. The false metric of yield is an extractive measure, measuring what can be extracted from the soil and the farmer, not the total nourishment circulating in food system, not the health of soil and people. Health per Acre and Nutrition per Acre are more authentic measures.
6. The false price of food based on monopoly and \$700 billion subsidies to agribusiness and false accounting .The Myth of Cheap food hides the high costs to the planet through ecological destruction, the high costs to farmers who are trapped in debt, and high health costs to consumers who are victims of food related chronic diseases. True Cost Accounting reveals the high costs of cheap food.
7. The false assumption that food is a commodity grown and traded for profits leads to a denial of the Right to Food and Right to Health.
8. The false assumption of “competition” and the denial of cooperation and food sovereignty.

Food is not a commodity. Food is nourishment. Food is Health. Agriculture is not an industrial production system for producing commodities through violent and careless technologies, treating the land as inert dead matter. Farmers are not disposable workers who can be substituted by machines and chemicals, drones and Artificial Intelligence. Farmers are caregivers. They are stewards and custodians of the seed, land, water and food.

And it is in good farming we can return to Mother Earth, care for her, give back to her in gratitude, and she will give in abundance.

The industrial path is based on fossil fuels and poisons. This path is **the path of violence against the Earth and people**. It goes against the principles of nature and life. It violates the principle of diversity and imposes monocultures and uniformity. It violates the principle of giving back and extracts from nature and farmers, disrupting ecological sustainability and social justice. It is the path to extinction and climate catastrophe, of destruction of small farms and displacement of farmers and the spread of hunger, malnutrition and chronic diseases.

We are facing a triple crisis that threatens our planet and our food system.

The first is the **ecological crisis**, including the disappearance of biodiversity and species, climate change, climate instability and climate extremes, soil erosion, land degradation, desertification, water depletion and pollution, environmental toxicity and the spread of toxics throughout the food system.

The second is the **public health crisis** of hunger, malnutrition, pandemics and the non-communicable chronic disease epidemic.

The third is the **crisis of livelihoods** of farmers, the epidemic of indebtedness and farmers’ suicides because of high cost inputs, and their displacement due to degradation of land, desertification, and disappearance of water.

All three crises are **interconnected**, though they are seen as separate. And the most significant contribution to all three crises comes from a fossil fuel intensive, chemical intensive, capital intensive system of **non-sustainable industrial agriculture** which is degrading the environment, public health, and farmers livelihoods.

The industrial agriculture path was paved by the Poison Cartel, the group of corporations including IG Farben and their collaborators which was created during the war to manufacture chemicals that can kill people.

The Poison Cartel had made millions in the economy of death in Hitler’s Germany and the war, and wanted to continue to make super profits. After the wars they redeployed war chemicals as agrichemicals – fertilisers, pesticides and herbicides. We were told we can’t have food without poisons. Consequently, in less than a century, industrial agriculture has eroded biodiversity, driven species to extinction, disrupted the planet’s climate systems, desertified soils, and destroyed water systems.

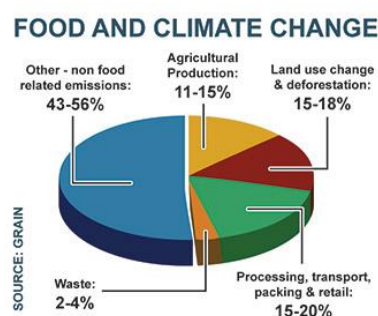
For a century, the Poison Cartel has engaged in a war against life on Earth, against democracy, against farmers and people’s **seed and food freedom**.

In the last few decades an industrial food system has been globalised and has become the most significant anthropocentric force, violating planetary boundaries, ecological limits and the Rights of Mother Earth. A non-sustainable food system is also an unjust food system, violating the human right to food and health, life and livelihood.

Food is the currency of life. It is the connection between us, the Earth, and other species that weave the web of life in cooperation and mutuality. We are part of the web of life which is a food web.

By destroying the web of life, the industrial food system is at the heart of the planetary crisis and the human crisis.

75% of the planetary destruction - soil, water, biodiversity - comes from **industrial agriculture**. This commodity-based fossil fuel intensive and chemical intensive agriculture and food system has contributed 50% of the greenhouse gas emissions which are causing climate havoc and threatening agriculture.



Industrial Agriculture has caused 75% of the destruction of soils, 75% of the destruction of water resources, and the pollution of our lakes, rivers and oceans.

Chemical agriculture does not return organic matter and fertility to the soil. Instead it is contributing to desertification and land degradation. It also demands more water since it destroys the soil's water-holding capacity. Industrial food systems have destroyed the biodiversity of the planet both through the spread of monocultures, and through the use of toxics and poisons which are killing bees, butterflies, insects and birds, leading to the sixth mass extinction.

93% of crop diversity has been pushed to extinction through industrial agriculture.

Microbial, insect, plant and animal species form the foundation of our food supply.

In spite of its vital importance for human survival, biodiversity is being lost at an alarming rate, as 200 species disappear daily with the spread of capital intensive, chemical intensive industrial agriculture. This poison-based, monoculture-based industrial agriculture is the biggest driver of species extinction from birds and bees, to forests (the Amazon) to soil organisms and vital species in our gut flora. It is wiping out the diversity of crops we grew and ate. Humans ate more than 10000 species of plants before industrial globalized agriculture.

Commodification of food has reduced the crops cultivated to a dozen globally traded commodities.

(Ref: Navdanya International. 2013. *THE LAW of the SEED*. Florence: Navdanya International. <https://www.navdanya.org/attachments/lawofseed.pdf>.)

Industrial agriculture is producing nutritionally empty toxic 'food' commodities. Not only do they lack in nutritional content, but they do not feed people. 90% of corn and soya goes to biofuel and animal feed. This toxic industrial food system is contributing to hunger, malnutrition, and chronic disease.

Contrary to the myth that small farmers and their agroecological systems are unproductive and should be wiped out, and we should leave the future of our food in the hands of the Poison Cartel which increases agricultural productivity and food production, industrial agriculture produces only 20% of the food we eat using 75% of the land. In reality small farmers are providing 80% of the food eat using just 25% of the resources that go into agriculture.

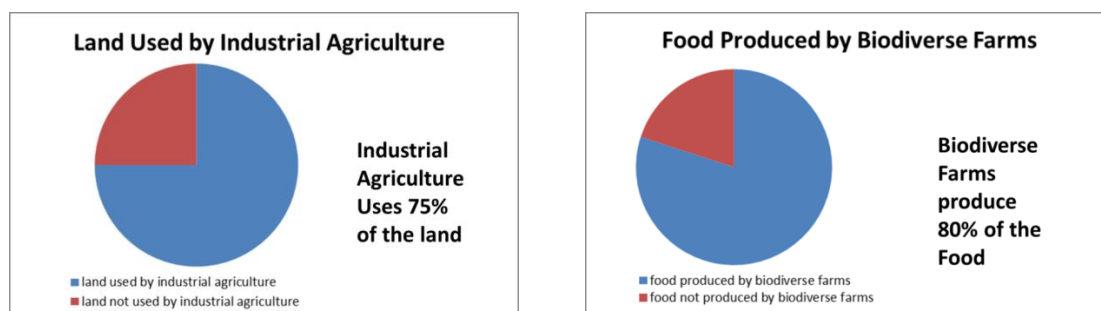
(Source: FAO. 2014. *The State of Food and Agriculture*. Rome: Food and Agriculture Organization of the United Nations. <http://www.fao.org/3/a-i4036e.odf>)

(<https://climateandcapitalism.com/2018/01/07/who-will-feed-world-industrial-ag-or-peasant-food-webs/>)

Not only does industrial agriculture use 75% of the land, it has destroyed 75% of the soil, water and biodiversity.

At this rate, if the share of industrial agriculture and industrial food in our diet is increased from 20% to 30%, we will have a dead planet, one with no life and no food.

On the other hand the small ecological farms feeding us today will feed us tomorrow by regenerating the soil biodiversity and water, and the climate system



While ‘we feed the world’ is the rhetoric of the Poison Cartel, industrial agriculture has pushed one billion people into permanent hunger, with half the hungry being farmers. In India, every fourth Indian is hungry, every second child is malnourished. More than 3 billion suffer from food-related chronic diseases. Small farmers who care for the Earth and our health through growing real food that nourishes us are going extinct. Farming with poisonous chemicals means debt and displacement of peasants and small farmers, leading to the unprecedented epidemic of farmers’ deaths and suicides in India and the refugee crises from Africa, Syria and other vulnerable countries.

(<https://www.navdanya.org/site/living-food/colonialism,-globalisation-are-at-the-roots-of-ecological-emergency,-farmers-distress>)

A billion people are permanently hungry in this system, a crisis that has been deepened during the pandemic.

(<http://www.fao.org/state-of-food-security-nutrition/en/>)

Intensive industrial agriculture is also creating a health crisis, by producing nutritionally empty toxic commodities. More than 2 billion people suffer from food related diseases. Pandemics also have their roots in the limitless expansion into forests by agrobusiness to grow commodities.

(<https://www.navdanya.org/bija-reflections/2020/03/18/ecological-reflections-on-the-corona-virus/>)

<https://navdanyainternational.org/wp-content/uploads/2019/01/Manifesto-Food-for-Health-Cibo-per-la-Salute.pdf>)

This path of food and farming leads to a dead planet, with poisons and chemical monocultures spreading, farmers committing suicide due to debt, children dying for lack of food, people dying because of pandemics and chronic diseases exacerbated by the nutritionally empty, toxic commodities sold as “food”. Over and above this, climate havoc is wiping out conditions for human life on Earth.

Industrial agriculture and ultra-processed food also contributes to 75% of food related **chronic diseases**.

Poisons in our food and environment are having a major effect on our children's health including ADHD, autism, lack of physical coordination, bipolar/schizophrenia spectrum of illnesses, depression and obesity, and leading to non-contagious chronic diseases such as liver and kidney damage, reproductive problems, birth defects, cancer, developmental neurotoxicity, endocrine disruption.

The industrial system is now pushing fake food – laboratory made meat, lab milk, lab cheese, lab fish, even lab made breast milk.

And even as industrial agriculture brings the planet and our economies to collapse, it is re-inventing its future based on “fake farming” with “fake food”, with more chemicalisation and more GMOs, more mechanisation and driverless tractors, Digital Agriculture, surveillance drones and spyware. Farming without farmers, farming without biodiversity, farming without soil is the vision of those who have already brought us to the brink of catastrophe and will further accelerate ecological collapse. Farming without farmers is farming without care for the Earth. Digital agriculture and Artificial Intelligence is denying the knowledge and intelligence of the farmers and of the biodiversity they co create and coevolve with.

The industrial path has been paved with fake knowledge that external inputs are necessary.

The first external input was chemical fertilisers, which have destroyed soil fertility, and synthetic pesticides, which have created more pests.

The second external input was adding toxic Bt and herbicide resistant Roundup Ready genes to seeds through genetic engineering (GMOs).

The third external input that is now planned is to fill our minds with data, to empty our minds of sovereign knowledge and living intelligence.

There is also now an attempt to displace real food with fake food and real economies based on ecology with fake economies of “zero budget”.

Brushing aside centuries of sustainable agriculture knowledge and practice, Gates is promoting Digital Agriculture in partnership with the Poison Cartel.

The myths of the Green Revolution are being continued in Gates Ag One.

(<https://navdanyainternational.org/publications/gates-ag-one-the-recolonisation-of-agriculture/>)

Digital agriculture is getting linked to false sustainability solutions through a new calculus of “net zero” for which the Earth and farmers will pay twice over. The

polluters will continue to pollute and destroy the land and farmers. They will then use conditionalities to control farmers to offset their pollution.

Instead of correcting the false assumptions of industrial agriculture to prevent the ecological, social and health emergencies, recognizing that small biodiverse farmers produce more and are regenerative solutions to climate change ,respecting the Seed, Food and Land Sovereignty that farmers and ecologists are calling for, Big Ag, Big Tech ,Big Finance wants to further fragment farming, further extract from nature , further centralise control, further destroy biodiversity to further expand large farms that are ecologically, economically and energetically inefficient and net negative energy systems, and further promote a fake science of sustainability. Having created the pandemic and the chronic disease emergency through chemical and ultra-processed food , the dystopian vision of Big Tech and Big Ag is to make food disappear from our minds, our bodies , our farms . Instead agriculture will be reduced to producing carbohydrates and proteins as “raw material” for fake food.

As Bob Reiter, Bayer’s head of research and development at the company’s crop science division said “in order for plant based companies to produce at scale and succeed they need efficient sources of amino acids and carbohydrates which will bring them around to row crops that can be tilled and cultivated by machinery”

(Bellon T., Bayer sees potential future business in plant-based meat market, August 2019, Reuters, <https://in.reuters.com/article/bayer-agriculture-food/bayer-sees-potential-future-business-in-plant-based-meat-market- idINKCN1UR5SL>)

The evidence is clear . Chemical monocultures produce less food and nutrition at higher cost . Biodiverse ecological farmers produce more with less , and produce healthier , more nutritious food .

(<https://www.nature.com/articles/s41893-021-00699-2>)

The Future of Food cannot be based on the industrial system that is destroying the planet, small farms and our health .It is based on Farming with Nature and Cultivating the Future.

(<https://navdanyainternational.org/wp-content/uploads/2019/11/The-Future-of-Food-March-2020.pdf>)

Our work in Navdanya has shown that food sovereign farmers practicing regenerative organic agriculture, fair trade and local circular economies can grow more food using zero chemicals, conserve more water by shifting to water prudent nutritionally dense foods like millets and organic farming and increase farmers’ incomes by stopping the haemorrhage for costly chemicals and being locked into unfair corporate controlled trade.

(Ref: Shiva, Vandana, and Andre Leu. 2018. Biodiversity, Agroecology, Regenerative Organic Agriculture: Sustainable Solutions for Hunger, Poverty and

Climate Change. Westville Publishing House.)

Farmers need freedom, justice and fairness. Navdanya farmers are earning 10 times more than chemical commodity producing farmers by defending their Seed Freedom, Food Freedom and Economic Self-reliance.

People need Healthy Food.

The Earth is crying for care.

And so we have a clear choice in front of us.

We can either choose between real knowledge or fake knowledge, real food or fake food, real economy as the economy of life or fake economy that only focuses on corporate profits while destroying life on Earth.

If we continue on the destructive path laid by the Poison Cartel, we close our future.

Shifting from a greed-based and violence-based paradigm of competition and producing food, to thinking and living cooperatively and nonviolently with fellow humans and nature has become an ecological and social imperative.

Regenerative ecological agriculture based on the laws of the Earth and the science of agroecology is the path to regenerate the planet, our food our health and our economies. It is the time tested bridge connecting the Rights of Mother Earth to Human Rights.

Living Seed and Biodiversity

Industrial Agriculture Violating Earth Rights

1. Seed declared as a machine and a corporate invention through Patents on Seed and breeders Rights (IPRs) violating the right of the seed to its self-organisation and renewability
2. Biodiversity of Living seed reduced to raw material and stored in gene banks to extract genes, traits, and make digital maps. Seed made non-renewable through GMOs, Terminator technologies violating the Right of Seed to be
3. Monocultures of industrial seed displace biodiversity, destroying the web of life and its integrity, creating pests, disease and weeds
4. The Earths' rights to her biodiversity and web of life is violated when Chemicals, toxics and GMOs push biodiversity of plants, insects and birds to extinction

Industrial Agriculture Violating Human Rights

1. Farmers' duty to protect the Earth Family violated
2. Farmers' rights to practice biodiversity, ecological agriculture violated by imposing Green Revolution monoculture, GMOs, Chemicals, and Digital Agriculture
3. Farmers' varieties declared "primitive" and made illegal
4. Farmers' rights to save and share seeds made illegal
5. Farmers' rights as breeders denied and made illegal
6. Farmers' Rights to breed nutritious, climate resilient varieties denied and made invisible

Living Seed and Biodiversity

Ecological agriculture Fostering Earth Rights

1. Seed is living, Seed has rights.
2. Living Seed is renewable, it multiplies
3. Living seed nourishes soil biodiversity and is nourished by it.
4. Living seed sustains. Biodiversity intensive agriculture supports biodiversity of species including insects which perform ecological functions of pest control.
5. Biodiversity Rich farms and gardens based on living seed support pollinators which support the plants and renew living seed.

Ecological Agriculture Fostering Human Rights

1. Indigenous Cultures have coevolved with biodiversity and are custodians and biodiversity experts and have Biodiversity rights.
2. Farmers are breeders and cocreators of Seeds with biodiversity.
3. Farmers have a duty and a right to save, share, use, breed, and sell Seeds.
4. Farmers have a right to save, propagate and regenerate their indigenous varieties which are nutritionally rich and climate resilient.
5. Framers have a right to practise biodiverse, regenerative, agriculture to increase nutrition per acre and their income.

Land, Living Soil and Climate

Industrial Agriculture Violating Earth Rights

1. Rights of land as Terra Madre, Mother Earth, Gaia, Vasundhara violated
2. Rights of Living soil as a Living system violated
3. Chemicals and synthetic fertilisers violate the right of living soil by killing soil organisms and destroying the soil food web
4. Dead Carbon as fossil fuels and fossil fuel based agriculture and globalised food systems emit 50% of the Green House Gases (GHGs) and violate Gaia's climate systems and Planetary Boundaries
5. Violation of the Rights of the Earth and the biosphere to create, regenerate and increase Living Carbon which is life

Industrial Agriculture Violating Human Rights

1. Violence against indigenous people and small farmers by grabbing their land
2. Violence against rural communities by displacing them through land grab and desertification, creating a pandemic of displaced people and refugees denying people the right to a home and livelihood
3. Violation of Rights of farmers to life and livelihood and forced separation from Mother Earth by industrial agriculture trapping farmers in debt, driving them to suicide and grabbing their land
4. Violation of Rights of people to a stable climate and freedom from climate disasters and emergencies

Land, Living Soil and Climate

Ecological Agriculture Fostering Earth Rights

1. Rights of Mother Earth respected and protected through an agriculture based on Earth care

2. Rights of living soil respected through regeneration based on the "Law of return"

3. Organic farming regenerates the living soil by feeding soil organisms and the soil food web

4. Organic soils and biodiverse farming recycle Carbon and Nitrogen, heal the broken Carbon and Nitrogen cycles and have the potential to draw down the emissions over a decade

5. Biodiverse organic farming and regenerative agriculture intensify photosynthesis and the creation of a living Carbon and recycling to maintain Earth's Ecological and nutrition and hydrological cycles

Ecological Agriculture Fostering Human Rights

1. Indigenous people and small farmers' rights to lands protected through ecological agriculture

2. Ecological agriculture reverses desertification, farmers' distress and rural distress and protects the Rights of farmers to stay home rooted in their land

3. Ecological agriculture based on seed sovereignty and internal inputs frees farmers of debts and distress and increases their livelihood and income security

4. Ecological agriculture reduces and mitigates emissions and increases climate adaptation and resilience and contributes to climate justice

Living Water

Industrial Agriculture Violating Earth Rights

1. Industrial chemical agriculture is water intensive and water wasteful. 75% of the water is used for industrial agriculture. Damming rivers and mining ground water for intensive irrigation violating the Rights of living waters to renew themselves, leading to dead rivers, ground water, famine, salinization and water logging
2. Industrial agriculture based on chemical fertilisers, pesticides and herbicides is polluting the water violating the right of living water to be free of pollution
3. Industrial agriculture does not replenish the organic matter in the soils destroying the water holding capacity of soil and depriving water its rights to be stored in the living soil

Industrial Agriculture Violating Human Rights

1. Industrial agriculture violates the Rights of farmers to their water commons and their duty to conserve and rejuvenate water
2. Industrial agriculture denies citizens of their right to water by diverting it into intensive irrigation and creating a water crisis
3. Pollution from chemicals and toxics in industrial agriculture destroys access to clean drinking water and causes diseases
4. Destruction of surface and ground water, and soil moisture contributes to desertification of soil, destruction of livelihoods and creation of water refugees

Living Waters

Ecological Agriculture Fostering Earth Rights

1. Ecological Agriculture is based on respect of Rights of Living Waters using water within limits of Ecological renewal and sustainability
2. Ecological Agriculture is based on the diversity of climate and crops evolving agricultural systems adapted to the availability of water, e.g. millets in dry lands and rice in water abundant regions
3. Ecological agriculture reduces water use by increasing soil moisture through organic methods

Ecological Agriculture Fostering Human Rights

1. Ecological agriculture is based on water Democracy, Rights of all beings to clean and free water for life
2. Communities manage water as commons
3. Ecological agriculture rejuvenates living waters in the rivers, tanks, the ground and in the soil
4. Ecological agriculture is pollution free and in fact creates clean water through soil filtration (e.g. Munich city pays the farmers to practice organic farming since it is cheaper than the city removing pesticides from the water provided to the city)
5. Biodiverse Ecological Agriculture promotes water prudent crops like millets, mixed cropping and cover crops that conserves soil moisture, increasing biomass to be returned to the soil as organic water increasing the water holding capacity of the soil (1% organic matter conserves 160000 litres per hectare)
6. By using less, conserving more and rejuvenating ecological agriculture reverses the water crisis and protects the Rights to Water

Living Food and Health

Industrial Agriculture Violating of Earth Rights

1. Industrial agriculture is chemical intensive and dependent on toxics. Industrial chemical intensive agriculture disrupts the ecological food web thus violating the Rights of the Earth
2. The poisons used in the industrial agriculture poison and pollute ecosystems, organisms and species causing disease and driving them to extinction
3. Industrial agriculture is invasive and based on maximising extraction of resources for production of commodities, leading to destruction of forests and leading to diseases and pandemics like Ebola, SARS etc.
4. Industrial agriculture is the single biggest driving force threatening planetary health, climate change, species extinction, desertification and water emergency
5. The latest state of industrial agriculture is proposing to remove humans from the food web and deepening the separation of humans and nature and promoting fake food which will further disrupt the Earth's food system and food cycles and deepen Ecoapartheid and Human Apartheid

Industrial Agriculture Violating Human Rights

1. Industrial agriculture is designed to create scarcity and hunger by dispossessing small farmers and putting profits above people. This is the violation of Rights of food
2. Industrial agriculture produces nutritionally empty toxic commodities leading to nutritional deficiencies
3. Industrial chemical intensive agriculture is responsible for most chronic diseases that have exploded in the last few decades
4. The chemicals used in industrial agriculture are also chemicals that kill people. Pesticide poisoning is leading to 200,000 deaths annually. Most cancers are related to toxics in our food and environment. 1 out of every 6 deaths is a Cancer death. In 2018, 9.5 million people died with cancer worldwide
5. Industrial food systems based on ultra-processed foods are increasing chronic diseases. This is a violation of Human Rights to pollution free, healthy and nutritious and safe food
6. The hyper industrialisation of agriculture, of “farming without farmers” and “farm free” hyper-processed lab food will further aggravate the chronic disease epidemic and deny farmers the Right to care for Earth and the Right to Feed their communities with healthy, biodiverse and organic real food

Living Food and Health

Ecological Agriculture Fostering Earth Rights

1. Regenerative Ecological agriculture is based on respect for the soil food web and maintaining its integrity
2. Biodiversity intensive organic farming intensifies biodiversity conservation and ecological functions of biodiversity, thus, regenerating the living food system
3. Ecological agriculture rejuvenates the health of the planet by healing the broken nutrition cycles
4. Food is the currency of life and all beings have a right to food. Ecological agriculture distributes healthy toxic free nourishing food through the food web and web of life
5. Regenerative organic agriculture rejuvenates the health of soil by returning food to the soil food web

Ecological Agriculture Fostering Human Rights

1. Ecological agriculture produces more food using fewer resources and increases Nutrition and Health per Acre
2. Ecological agriculture based on biodiversity produces more food available to more people defending the Right to Food and Right to Health
3. Regenerative organic agriculture feeds soil, increases nutrition in the soil and therefore the nutrition in the plants that feed us
4. “*Let food be thy medicine*”- Hippocrates. Biodiversity is health. By conserving and regenerating biodiversity, ecological systems improve the health of our gut microbiome, reversing metabolic diseases and rebuilding human health and protect the Right to Health

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UNIVERSAL DECLARATION OF RIGHTS OF MOTHER EARTH

Preamble

We, the peoples and nations of Earth:

considering that we are all part of Mother Earth, an indivisible, living community of interrelated and interdependent beings with a common destiny;

gratefully acknowledging that Mother Earth is the source of life, nourishment and learning and provides everything we need to live well;

recognizing that the capitalist system and all forms of depredation, exploitation, abuse and contamination have caused great destruction, degradation and disruption of Mother Earth, putting life as we know it today at risk through phenomena such as climate change;

convinced that in an interdependent living community it is not possible to recognize the rights of only human beings without causing an imbalance within Mother Earth;

affirming that to guarantee human rights it is necessary to recognize and defend the rights of Mother Earth and all beings in her and that there are existing cultures, practices and laws that do so;

conscious of the urgency of taking decisive, collective action to transform structures and systems that cause climate change and other threats to Mother Earth;

proclaim this Universal Declaration of the Rights of Mother Earth, and call on the General Assembly of the United Nation to adopt it, as a common standard of achievement for all peoples and all nations of the world, and to the end that every individual and institution takes responsibility for promoting through teaching, education, and consciousness raising, respect for the rights recognized in this Declaration and ensure through prompt and progressive measures and mechanisms, national and international, their universal and effective recognition and observance among all peoples and States in the world.

Article 1. Mother Earth

(1) Mother Earth is a living being.

(2) Mother Earth is a unique, indivisible, self-regulating community of interrelated beings that sustains, contains and reproduces all beings.

(3) Each being is defined by its relationships as an integral part of Mother Earth.

- (4) *The inherent rights of Mother Earth are inalienable in that they arise from the same source as existence.*
- (5) *Mother Earth and all beings are entitled to all the inherent rights recognised in this Declaration without distinction of any kind, such as may be made between organic and inorganic beings, species, origin, use to human beings, or any other status.*
- (6) *Just as human beings have human rights, all other beings also have rights which are specific to their species or kind and appropriate for their role and function within the communities within which they exist.*
- (7) *The rights of each being are limited by the rights of other beings and any conflict between their rights must be resolved in a way that maintains the integrity, balance and health of Mother Earth.*

Article 2 Inherent Rights of Mother Earth:

- (1) *Mother Earth and all beings of which she is composed have the following inherent rights:*
- (a) *the right to life and to exist;*
 - (b) *the right to be respected;*
 - (c) *the right to regenerate its bio-capacity and to continue its vital cycles and processes free from human disruptions;*
 - (d) *the right to maintain its identity and integrity as a distinct, self-regulating and interrelated being;*
 - (e) *the right to water as a source of life;*
 - (f) *the right to clean air;*
 - (g) *the right to integral health;*
 - (h) *the right to be free from contamination, pollution and toxic or radioactive waste;*
 - (i) *the right to not have its genetic structure modified or disrupted in a manner that threatens its integrity or vital and healthy functioning;*
 - (j) *the right to full and prompt restoration the violation of the rights recognized in this Declaration caused by human activities;*
- (2) *Each being has the right to a place and to play its role in Mother Earth for her harmonious functioning.*
- (3) *Every being has the right to well-being and to live free from torture or cruel treatment by human beings.*

Article 3. Obligations of human beings to Mother Earth

- (1) *Every human being is responsible for respecting and living in harmony with Mother Earth.*
- (2) *Human beings, all States, and all public and private institutions must:*
- (a) *act in accordance with the rights and obligations recognized in this Declaration;*
 - (b) *recognize and promote the full implementation and enforcement of the rights and obligations recognized in this Declaration;*
 - (c) *promote and participate in learning, analysis, interpretation and communication about how to live in harmony with Mother Earth in accordance with this Declaration;*
 - (d) *ensure that the pursuit of human well-being contributes to the well-being of Mother Earth, now and in the future;*

- (e) establish and apply effective norms and laws for the defence, protection and conservation of the rights of Mother Earth;
- (f) respect, protect, conserve and where necessary, restore the integrity, of the vital ecological cycles, processes and balances of Mother Earth;
- (g) guarantee that the damages caused by human violations of the inherent rights recognized in this Declaration are rectified and that those responsible are held accountable for restoring the integrity and health of Mother Earth;
- (h) empower human beings and institutions to defend the rights of Mother Earth and of all beings;
- (i) establish precautionary and restrictive measures to prevent human activities from causing species extinction, the destruction of ecosystems or the disruption of ecological cycles;
- (j) guarantee peace and eliminate nuclear, chemical and biological weapons;
- (k) promote and support practices of respect for Mother Earth and all beings, in accordance with their own cultures, traditions and customs;
- (l) promote economic systems that are in harmony with Mother Earth and in accordance with the rights recognized in this Declaration.

Article 4. Definitions

- (1) The term “being” includes ecosystems, natural communities, species and all other natural entities which exist as part of Mother Earth.

INTERCONNECTED SPACE OF RIGHTS

Human Rights flow from the Rights of Mother Earth

Article 3 on Obligations of human beings to Mother Earth and **Universal Declaration of Human rights** connect rights of Mother Earth and Human Rights .

Universal Declaration of Human rights : Human Rights have to be seen as a subset of rights Mother Earth since human beings are part of the Earth Family.

Article 1 of the UDHR states that “All human beings are born free and equal in dignity and rights.” Even Article 3 states, “Everyone has the right to life, liberty and security of person.” This “everyone” includes all the member of the Earth Family.

Article 3 of the UDHR states that: “Everyone has the right to life, liberty and security of person.” This “everyone” includes all the member of the Earth Family which includes all the species and microorganisms.

- (e) establish and apply effective norms and laws for the defence, protection and conservation of the rights of Mother Earth;
- (f) respect, protect, conserve and where necessary, restore the integrity, of the vital ecological cycles, processes and balances of Mother Earth;
- (i) establish precautionary and restrictive measures to prevent human activities from causing species extinction, the destruction of ecosystems or the disruption of ecological cycles;
- (j) guarantee peace and eliminate nuclear, chemical and biological weapons;
- (k) promote and support practices of respect for Mother Earth and all beings, in accordance with their own cultures, traditions and customs;

Article 24 on Right to Health, Water, Food, Environment states that:

“2. States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures:

(c) To combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution.”

The provision of “adequate nutritious foods” and “clean drinking-water” and “taking into consideration the dangers and risks of environmental pollution” are all crucially connected to the health of our soils.

Respect for the living soil is part of inculcating respect for the natural environment. Understanding how the soil is alive and how it connects to all the other cycles of nature like the water cycle is part of understanding the natural environment inhabited by the children and thus, is at the core of the type of education envisioned by Article 29.

All human beings depend on the environment in which we live. A safe, clean, healthy and sustainable environment is integral to the full enjoyment of a wide range of human rights, including the rights to life, health, food, water and sanitation.

Without a healthy environment, we are unable to fulfil our aspirations.

Healthy and living soil is key to living food, healthy Environment and Health. Right to healthy and living soil is inherent to “right to life”.

Other covenants that uphold the Human Right to Life connect to the Rights of Mother Earth , since we depend on Mother Earth for our life

- **International Covenant on Civil and Political Rights** says, “*every human being has an inherent right to life.*”
- **International Convention on Economic, Social and Cultural rights**, 1966 says, “*these rights derive from the inherent dignity of the human person.*”
- **Indian Constitution in its Article 21 states** “*No person shall be deprived of his life or personal liberty except according to a procedure established by law.*”
-

The Bolivian constitution in Article 7. (RIGHTS OF MOTHER EARTH) states:

I. Mother Earth has the following rights:

1. **To life:** The right to maintain the integrity of living systems and natural processes that sustain them, and capacities and conditions for regeneration.
2. **To the diversity of life:** It is the right to preservation of differentiation and variety of beings that make up Mother Earth, without being genetically altered or structurally modified in an artificial way, so that their existence, functioning or future potential would be threatened.
3. **To water:** The right to preserve the functionality of the water cycle, its existence in the quantity and quality needed to sustain living systems, and its protection from pollution for the reproduction of the life of Mother Earth and all its components.
4. **To clean air:** The right to preserve the quality and composition of air for sustaining living systems and its protection from pollution, for the reproduction of the life of Mother Earth and all its components.
5. **To equilibrium:** The right to maintenance or restoration of the interrelationship, interdependence, complementarity and functionality of the components of Mother Earth in a balanced way for the continuation of their cycles and reproduction of their vital processes.
6. **To restoration:** The right to timely and effective restoration of living systems affected by human activities directly or indirectly.

7. To pollution-free living: The right to the preservation of any of Mother Earth's components from contamination, as well as toxic and radioactive waste generated by human activities.

Ecuadorian constitution in Article 71 states: “*Nature, or Pacha Mama, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes.*”

All of these diverse rights (Constitutional rights, rights in International Covenants, rights for Nature) are interconnected rights and can become the starting point to embodying the Paradigm of the Rights of the Earth Family, connecting the Rights of Mother Earth and Human Rights .

This paradigm of right has three main characteristics which we see at play in the commons:

1. **Interconnected**

The interconnected space of rights, responsibilities and duties is the commons. This sense of separate-ness and lack of seeing how all these rights are interconnected, is the reason why countries end up intervening militarily in other countries like Afghanistan, Kosovo etc. in the name of human rights. Once we see everything in relationship with another, like how it is in the commons, only then will we be able to move into a future of peace and sustainability.

2. **Anna Swaraj is a natural right**

Food is the most basic right of all living beings. As soon as one is born, the right to food is naturally exercised. The cause and effect of nature takes care of it. No one should be fighting and struggling for this right. B. Kneen puts it well: “*as for food, human beings are no different than any other organism in requiring reliable nutrition to maintain life. Yet, humans, I dare say, are the only organisms to come up with the idea of a right to food, which transforms a human necessity into a legal claim to be granted by some authority or other. There are no legal or government bodies for all the other organisms to appeal to for rights, including the right to food.*”

Therefore, Anna Swaraj is the most natural right there is. The right to food is a right borne out of us being ecological creatures. And the commons have always ensured that.

3. **Rights always exist with responsibilities**

Responsibility has to do with the fact that we exist in a related-ness. Our reality is to be in relationship with every life form around us. Marcelo Saavedra-Vargas who is an indigenous Aymara from Bolivia says that they don't have a concept of rights but “*have notions that talk about our existence as integral parts of a dynamic set of relationships and responsibilities. For example, (we have the idea of) Suma Qamana, which sort of translates into 'living and coexisting well.'*”

These natural rights of the earth family are the rights for *Suma Qamana*. And inherent to these rights are the responsibilities that each one of us takes to live and co-exist well together.

This is also what the Commons have always embodied. People have lived well together, in peace and harmony and continue to live that way in some parts of the world.

The struggle for the future is this interconnected struggle for the Commons.

For the Rights of the Earth Family.

For Vasudhaiva Kutumbukam.

Earth Democracy

LIVING SEED

The seed embodies life itself.

Corporations have sought to commodify and take control over this living element through laws and patents that give them ‘intellectual property’ and ‘breeders rights’ over the seed, and through seed laws that extend the industrial criteria of uniformity on farmers’ and open pollinated varieties of seed.

These legal instruments prohibit the free exchange of seed between farmers, and their ability to breed, save and distribute seeds.

At the global level, this legal arsenal includes the Trade Related Intellectual Property Rights (TRIPs) Agreement of the World Trade Organization, which provides for ‘protection’ of plant varieties through patents.

Despite calls from India and the African Group of nations to revoke the ability to patent any life forms, the mandatory review of the TRIPs has been subverted by governments under the influence of corporations.

The clauses in the TRIPs were written by Monsanto.

When those that need to be regulated write the laws to get absolute power and ownership over seed (which is life itself) while absolving themselves of ecological and social responsibility, it is not just a crisis for food and agriculture, it is a crisis for democracy.

The dominant system of seed related laws fails to understand the nature of the seed as the embodiment of the evolutionary process of nature over millennia, and of farmers over thousands of years. It does not take into account, or allow for, the vibrant, holistic and ecological system that gives rise to diversity and resilience.

Owning life by claiming it to be a corporate invention is both ethically and legally wrong. Living organisms are self-organising, self-evolving, sovereign beings. Artificially adding a toxic gene into a living element should be considered a pollution, not a creation.

Seed Sovereignty and Seed Freedom

Indian’s Patent laws exclude life forms and seeds from patentability .

Art 3j of the Indian Patent Act clearly states that plants, animals and seeds are not inventions, hence not patentable

“plants and animals in whole or in any part thereof other than microorganisms; but including seeds, varieties, and species, and essentially biological processes for production or propagation of plants and animals”.

Countries like India introduced a Clause in the Trade Related Intellectual Property Rights (TRIPS) Agreement of GATT that allows countries to determine plant variety protection through *sui generis systems* and not opt for the patent regime or UPOV. India evolved her own *sui generis system* The Plant Variety Protection and Farmers Rights Act which recognizes that farmers are breeders and Farmers Rights have to be protected.

Art 39 of the Plant Variety Protection and Farmers Rights Act which states -

“A farmer shall be deemed to be entitled to save, use, sow, re-sow, exchange, share or sell his farm produce including seed of a variety protected under this Act in the same manner as he was entitled before the coming into force of this Act”

This Act was used when Pepsi sued Indian farmers for Saving potato seeds. Since Art 39 protects farmers rights to save, use, sow and resow seeds, Pepsi was forced to withdraw its case against Indian farmers.

The Convention on Biodiversity , the Nagoya Protocol , and the Cartagena Protocol on Biosafety are international legal instruments for protecting biodiversity and the seed , upholding sovereignty of countries and communities .

https://library.wmo.int/index.php?lvl=author_see&id=125

<https://bch.cbd.int/protocol/text>

<https://www.cbd.int/abs/text/>

The Law of the Seed puts diversity and democracy, sustainability and people’s rights, at the centre of the scientific and legal frameworks that govern the seed, in place of the current trend of monocultures and monopolies, uniformity and privatization, corporate control and criminalization of bio- diversity and famers. The Law of The Seed aims to bring back biodiversity and recognition of farmers’ rights, to bring back democratic systems in society to shape laws as well as knowledge.

The Law of the Seed puts at its centre Seed Freedom – the freedom of the seed, of farmers and of citizens – in place of the illegitimate freedom of corporations to claim the genetic wealth of the planet as their property, and criminalize citizen freedoms.

The freedom to save and exchange seed is vital in our time characterized by multiple crises – the biodiversity crisis, the water crisis, the food crisis, climate crisis, and the economic crisis, all of them part of a single crisis: a crisis of ethics and values.

The Law of the Seed comes out of an ecological and democratic imperative for the long term future of the planet and of its inhabitants.

Healthy seeds are key to healthy food and healthy food.

Right to healthy seeds is inherent to “right to life”.

The Law of the Seed seeks to protect this most fundamental element of life. At the heart of the Law of the Seed is the freedom of the seed, of farmers and of citizens. It aims to bring back biodiversity, health, and to restore democratic systems within our society.

THE LAW OF THE SEED

Part 1 – Conservation of agricultural biodiversity

Article 1 - Overall objective of diversity

Legislation shall not run against the overall objective of conservation and enrichment of diversity.

Article 2 - Genetic erosion

The current trend of genetic erosion in plant genetic resources for food and agriculture, either among species, within species or at varietal levels, shall be reverted. Action shall be taken to minimise and, ultimately, eliminate the causes of genetic erosion.

Article 3 - Plant genetic resources as commons

Plant genetic resources for food and agriculture shall be considered as commons.

Article 4 - Surveys and inventories of plant genetic resources for food and agriculture

Surveys and inventories of plant genetic resources for food and agriculture, and the relevant information and traditional knowledge associated to it, shall be carried out.

Article 5 - “Ex situ” conservation of plant genetic resources

Public institutions shall conserve genetic resources for food and agriculture. Due attention shall be given to its adequate documentation, characterization, regeneration and evaluation. Access to these collections shall be made freely available for all, provided that there is no intention to appropriate them.

Article 6 - On farm conservation of plant genetic resources

On farm conservation means the conservation of plant genetic resources in the field and land of farmers; on farm conservation and use of plant genetic resources for food and agriculture shall be encouraged and supported, through, inter alia, publicly funded programmes.

Article 7 - “In situ” conservation

In situ conservation of wild crop relatives and wild plants for food production shall be promoted, including in protected areas, by supporting, inter alia, the efforts of indigenous and local communities.

Article 8 - Absence of restrictions for the use and production of plant genetic resources by farmers

Nothing in the present law can be interpreted as meaning the restriction of use and production of plant genetic resources by farmers in their location of origin.

Part 2 – Plant breeding and Seed Production

Article 9 – Farmers as breeders

Farmers, and local and small breeders, especially women, have been plant breeders and seed producers throughout agricultural history; Farmers have bred for diversity, quality and resilience, as opposed to the paradigm which privileges Distinctiveness, Uniformity, and Stability (DUS)

Article 10 - Technology and Breeding

Scientific plant breeding must lead to the enhancement of biodiversity, the enlargement of the genetic base of cultivated crops and the protection of traditional farmers' varieties.

Article 11 - Research programs

Public research programs shall give priority, inter alia, to:

- *Understanding farmers' knowledge of breeding;*
- *Broaden the genetic base of crops and increase the range of genetic diversity available;*
- *Promote the use of local and locally adapted crops, varieties and underutilized species;*
- *Strengthen the capacity to develop varieties particularly adapted to concrete social, economic and ecological conditions, including marginal areas;*
- *Enhance and conserve plant genetic resources by maximizing intra- and interspecific variation for the benefit of farmers, especially those who generate and use their own varieties and apply ecological principles to maintain soil fertility and to combat diseases, weeds and pests;*
- *Gather knowledge and information of underutilised crops and wild relatives of food crops.*

Article 12 - Promotion of agro-ecological, participatory and evolutionary plant breeding programs

Public plant breeding programs must respect the environmental and cultural farming context and therefore include, and give priority to, agro-ecological methods, participatory research methods and participatory-evolutionary breeding programs. For this Law of the Seed these terms should be understood as follows:

Agro-ecological methods are the ones that apply the ecological science to the study, design and management of sustainable agro-ecosystems; these methods require as few agrochemicals and energy inputs as possible, and instead rely on ecological interactions and synergisms between biological components, to produce the mechanisms that will enable the systems to boost their own soil fertility, productivity and crop protection;

Participatory plant breeding (PPB) refers to a methodology that collectively involves farmers, scientists, extension staff, seed producers, consumers, traders, NGOs, etc., in a gender inclusive manner, for the development of new crop varieties;

Participatory–evolutionary breeding is a methodology where a crop population, coming from a wide range of crosses or from mixtures, is left evolving for an indefinite amount of time in a multitude of individual locations, allowing farmers to continuously extract, evaluate and develop specifically adapted varieties.

Part 3 – Farmers' Rights

Article 13 – Farmers' rights

Farmers' rights to freely breed and produce, save and exchange, share or sell shall be fully recognised in accordance with the freedom of trade and commerce under national and international law, in particular with:

- *the Protection of Plant Varieties and Farmers' Rights Act 2001 of India*
- *Article 9 on Farmers' Rights of the International Treaty on Plant Genetic Resources for Food and Agriculture,*

and shall be interpreted in this context and shall be fully respected and implemented both at national and international levels. Recognition of the contribution of local communities and indigenous and farmers' rights, referred to in Article 9 of the international treaty, can also be achieved through systems of collective ownership of local varieties implemented by the public at the regional level and/or local level.

Article 14 - Right to Exchange

The gift or exchange of seed of any variety, or its placing on the market, shall be governed by the principles of seed sovereignty. Farmers, seed savers and gardeners cannot be prosecuted or criminalized for any activity related to exchange of seeds and plant reproductive material belonging to the public domain.

Article 15 - Absence of administrative burden

For the handling of varieties and plant reproductive material belonging to the public domain, no registration, payment of fees, traceability, certification, or any kind of administrative burden shall be required from private or public operators. The expression "belonging to the public domain" means not protected by any kind of intellectual property right.

Article 16 - Labelling

Seeds and plant reproductive material belonging to the public domain and placed on the market, may only be subject to labelling rules, set by farmer communities themselves, regarding denomination, simple botanical description, characteristics of germination, and guarantee of sanitary quality, reasonable varietal and specific purities. Labels must be clear, true and not confusing. Informal exchanges shall not be submitted to compliance with any labelling rule.

Article 17 - Packaging

Seeds and plant reproductive material belonging to the public domain shall not be required to comply with any packaging rule other than the one relating to labelling.

Article 18 - Farmers' rights as consumers

Farmers have a right to safe, reliable, affordable, diverse seed and to freely reproduce plant material exchanged with other farmers or small breeders. Monopolies that prevent farmers from having choices violate farmers' rights. All sales of seeds by corporations shall be governed by biosafety regulations.

Part 4 – Intellectual Property Rights

Article 19 - Patents and Conventional breeding

For all plants that are not engineered by transgenesis in genetic engineering, breeding processes shall constitute 'essentially biological processes for the production of plants' and as such be excluded from patenting. Products derived from conventional plant breeding and all conventional plant breeding methods, and breeding material used for conventional plant breeding shall be excluded from patenting.

Article 20 - Whole content approach

In assessing inventions and patent applications for compliance with the exclusion provision of Article 20, the whole content of the specification of the patent application shall be considered, not only the claims.

Technically unavoidable pre-process steps and technically unavoidable post-process steps and/or unavoidable post-process uses of the products are considered to constitute part of the content of the specification, even if they are not explicitly included in the specification and/or the claims of a patent application.

Article 21 - Misappropriation of traditional knowledge and genetic resources through patenting

Misappropriation of traditional knowledge and genetic resources through patenting in bad faith or gross negligence shall constitute infringement of Ordre Public and shall be sanctioned accordingly by dismissal of patent applications and/or by revocation of patents.

Article 22 - Digital libraries of traditional knowledge & biological resources

Digital libraries of traditional knowledge and biological resources shall be promoted and introduced in each country of origin of these knowledge and resources.

These digital libraries shall qualify as public institutions and shall remain in the public domain.

The content of these digital libraries shall be legally binding for the patent authorities of all countries and shall therefore be consulted as state of the art by these authorities when assessing novelty, inventive step and sufficient disclosure of inventions in their examination and prosecution work.

Article 23 - Opposition to patent applications by authorities of the country of origin

Notwithstanding the rights of any other legal entities, the competent authorities for intellectual property in the countries of origin of traditional knowledge & biological resources shall be entitled to initiate, within or outside the respective countries of origin, appropriate legal procedures in opposition to unlawful patent applications and unlawfully granted patents for such traditional knowledge & biological resources.

Article 24 - Duty of disclosure of the source of biological material

The sources of biological material and traditional knowledge shall be explicitly disclosed in any patent application procedure based on, or making use of, such material.

Concealing or falsifying such source of material in bad faith or gross negligence shall constitute fraud on the patent authority and be sanctioned by dismissal of the patent application and/or revocation of the patent in its entirety.

Universal declaration on Right to Seed

UNDROP recognizes the rights to biodiversity and seeds of peasants and other people working in rural areas in articles 19 and 20. The right to seeds is defined as the right to save, use, exchange and sell their farm-saved seeds and propagating material, as well as to maintain, control, protect and develop their own seeds and traditional knowledge (arts. 19.1 and 19.2). Rural people further have the right to participate in the making of decisions on matters relating to the conservation and sustainable use of plant genetic resources for food and agriculture (art. 19.1 .c) and to equitably participate in sharing the benefits arising from the utilization of such resources (art. 19.1. b).

Article 19 states that:

Peasants and other people working in rural areas have the right to seeds, in accordance with article 28 of the present Declaration, including:

(a) The right to the protection of traditional knowledge relevant to plant genetic resources for food and agriculture;

(b) The right to equitably participate in sharing the benefits arising from the utilization of plant genetic resources for food and agriculture;

(c) The right to participate in the making of decisions on matters relating to the conservation and sustainable use of plant genetic resources for food and agriculture;

(d) The right to save, use, exchange and sell their farm-saved seed or propagating material.

2. Peasants and other people working in rural areas have the right to maintain, control, protect and develop their own seeds and traditional knowledge.

3. States shall take measures to respect, protect and fulfil the right to seeds of peasants and other people working in rural areas.

4. States shall ensure that seeds of sufficient quality and quantity are available to peasants at the most suitable time for planting and at an affordable price.

5. States shall recognize the rights of peasants to rely either on their own seeds or on other locally available seeds of their choice and to decide on the crops and species that they wish to grow.

6. States shall take appropriate measures to support peasant seed systems and promote the use of peasant seeds and agrobiodiversity.

7. States shall take appropriate measures to ensure that agricultural research and development integrates the needs of peasants and other people working in rural areas and to ensure their active participation in the definition of priorities and the undertaking of research and development, taking into account their experience, and increase investment in research and the development of orphan crops and seeds that respond to the needs of peasants and other people working in rural areas.

8. States shall ensure that seed policies, plant variety protection and other intellectual property laws, certification schemes and seed marketing laws respect and take into account the rights, needs and realities of peasants and other people working in rural areas.

Article 20

1. States shall take appropriate measures, in accordance with their relevant international obligations, to prevent the depletion and ensure the conservation and sustainable use of biodiversity in order to promote and protect the full enjoyment of the rights of peasants and other people working in rural areas.

2. States shall take appropriate measures to promote and protect the traditional knowledge, innovation and practices of peasants and other people working in rural areas, including traditional agrarian, pastoral, forestry, fisheries, livestock and agroecological systems relevant to the conservation and sustainable use of biological diversity.

3. States shall prevent risks of violation of the rights of peasants and other people working in rural areas arising from the development, handling, transport, use, transfer or release of any living modified organisms.

UNDROP also spells out concrete measures that states are required to take to ensure rural people's rights to biodiversity and seeds.

There are a range of different denominations that peasants and indigenous peoples use when referring to their seeds, depending on the region and the local context. The term "variety" is widely used by rural people, but does not imply that peasant or indigenous seeds respond to the same criteria that have been established to define an industrial/commercial variety, namely the criteria of distinctiveness, uniformity and stability (DUS), which is at the heart of the UPOV Convention. Some researchers have proposed to refer to peasant and indigenous "populations" instead, in order to underline the fundamentally evolutionary character of rural people's seeds.

- *support peasant seed systems and promote the use of peasant seeds and agrobiodiversity (art. 19.6)*
- *ensure that agricultural research and development integrates the needs of rural people,*
- *ensuring their active participation in the definition of priorities and the undertaking of research and development, and increase investment in research and the development of crops and seeds that respond to their needs (art. 19.7)*

- *ensure that seed policies, plant variety protection and other intellectual property laws, certification schemes and seed marketing laws respect and take into account the rights, needs and realities of rural people (art. 19.8);*
- *take appropriate measures to promote and protect the traditional knowledge, innovation and practices of rural people, including their management systems (art. 20.2);*
- *Protect rural people from violations of their rights arising from the development, handling, transport, use, transfer or release of any living modified organisms (art. 20.3).*

Earth Democracy

LIVING SOIL

“Let what I dig from thee, O Earth, rapidly spring and grow again. O Purifier, let me not pierce through thy vitals or thy heart.” – The Atharva Veda

Both ecological science and ancient wisdom teaches us that all life depends on soil.

Living Soil is a complex food web, teeming with life. One cubic meter can hold 5,000 earthworms, 50,000 insects and mites, and 12 million roundworms. One gram can contain 30,000 protozoa, 50,000 algae, 400,000 fungi and billions of bacteria. This life in the soil is what rejuvenates soil fertility, and makes nutrients available to plants to support our agriculture.

Yet the agricultural industry adopted the myth that synthetic fertilisers can increase food production independent of soil life – that they remove the ecological limits to food production. This myth is supported by the construct of yield – a measure of the weight of the commodity that leaves the farm. It is not a measure of the nutritional value of food produced from the land, nor does it take account of the condition of the land after harvest.

The use of artificial fertilisers has resulted in the death of soil life and reduced soil fertility. Nutrition per acre has decreased. The cycling of carbon and nitrogen through the soil has been disrupted. The hydrological cycle is affected. Chemical agriculture needs ten times more water to produce the same amount of food as organic farming, contributing to water scarcity and desertification, and creating dead zones in the ocean through pollution. Over time, the impoverishment of the soil and soil life leads to increasing reliance on greater volumes of chemical fertilisers, impoverishing farmers and creating famines and food crises. This is the exact opposite of what the myth promised to create.

The only way to farm sustainably is to farm according to nature’s ‘law of return’ – returning organic matter to the soil to feed the soil biology and build up soil nitrogen and other nutrients. Soils high in organic matter, supported by biodiversity of flora and fauna, are more resilient to drought and climate extremes. They take carbon out of the atmosphere, storing it in plants and in the soil. It is through care for the soil, and the living organisms within the soil, that we produce nutritious, healthy foods, prevent the pollution of our water, air and soils, and thus build the health of people and of the environment.

The last century has been dominated by an industrial agricultural model that came out of the war industry and focussed on chemicals and fossil fuels. It has destroyed soil, uprooted farmers, produced ill-health, and created waste at every level. It is a major culprit in the destruction of land, water and biodiversity and contributes significantly to greenhouse gases and large scale unemployment.

The Law of the Soil is the Law of Return – of giving back. Earth Democracy recognises the Earth and our dependence on her. The future of humanity depends on how we care for the land and the soil – as the very foundation for our health and the well-being of our society.

Soil, Not Oil: Biodiversity and Regenerative Agroecology for addressing Climate Change and Healing the Planet’s Broken Ecological Cycles

Climate chaos, climate instability, climate change are the most dramatic expressions of the human impact on planet earth. While the earth’s own climate has gone through various stages of warming and cooling, the present trend towards warming, and the related destabilization of climate systems and weather patterns, is clearly human induced. It is both nature and human beings who are now suffering the impact of intensification of drought, floods, cyclones and hurricanes, the melting of snow and ice and the intensification of the water crisis. Tragically it is those who have contributed the least to greenhouse gas emissions who are bearing the brunt most. In India, communities in the high Himalayas who have lost their water resources as glaciers melt and disappear, peasants in the Ganges basin whose crops have failed because of drought, coastal and island communities who face new threats of sea level rise and intensified cyclones.

50% of all greenhouse gas emissions responsible for Climate Change come from a fossil fuel, chemical intensive industrial globalised system of agriculture.

In soil, lies the solution.

The last century has been dominated by an industrial agricultural model that came out of the war industry and focused on chemicals and fossil fuels.

It has destroyed the soil, uprooted farmers, produced ill-health, created waste at every level, including 30% of food waste.

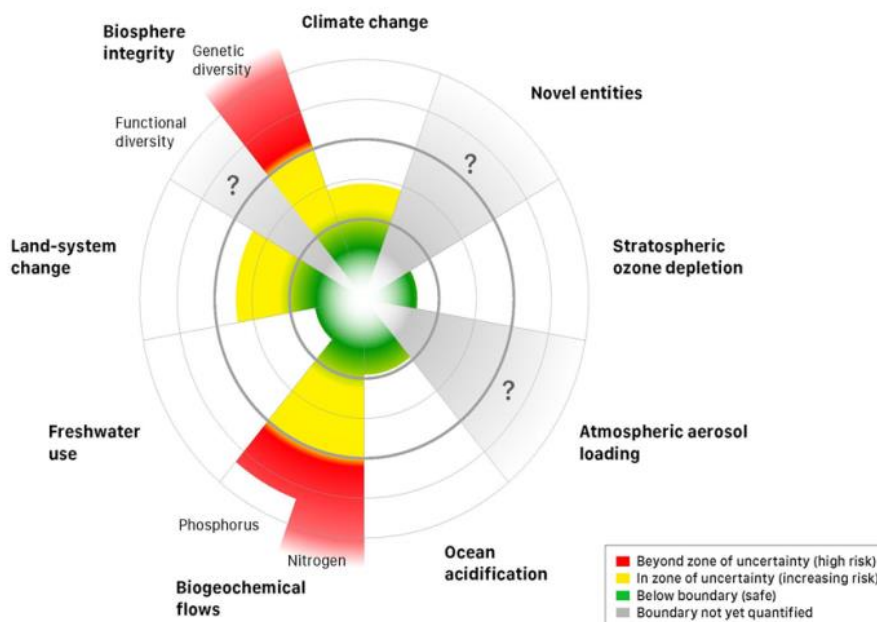
It is a major culprit in the destruction and erosion of water, land and biodiversity, as well as greenhouse gases and large scale unemployment. It extracts the fertility of the soil and the value created by farmers and gives nothing back. Farmers are being forced to spend up to 10 times more than they can earn, using 10 times the energy than they can produce as food.

The future of humanity is based on how we care for the soil and the land. The well-being of the soil shapes the wealth and well-being of society. A non-sustainable and violent relationship with the land is creating violence in society. Reducing nature to resources for exploitation for economic growth, and not assessing the costs of the extractive economy, has brought humanity to the brink.

Earth Democracy recognises the Earth and our dependence on her. It is about awareness and gratitude. Human rights flow from our duties to protect the land and the Earth.

The land and the Earth are inviting us to participate in a grand renewal and restoration of humus, and through it the potential of our humanity.

Navdanya's practice and research over the past 3 decades has shown that by conserving and intensifying biodiversity in agro-ecosystems, we produce more food and nutrition, we increase farmers' incomes, we regenerate the soil, the water, the biodiversity, and we help reverse climate change by reversing the buildup of carbon and nitrogen in the atmosphere and absorbing them in the soil where they enhance the ecological functions of soil biodiversity. Through plants and organic soils we heal the broken carbon and nitrogen cycles which are contributing to climate change.



The linear extractive agriculture system based on fossil fuels is rupturing ecological processes and planetary boundaries, those of biodiversity integrity, genetic diversity, and the biochemical nitrogen and phosphorous cycles. All three overshoots are rooted in the chemical intensive, fossil fuel intensive industrial model of agriculture.

By intensifying biodiversity and following nature's law of return we have regenerated the soil food web which is the source of recycling of nutrients, including the nutrient cycles that connect soils and plants to the atmosphere.

Soil, Not Oil: Ecological Regeneration to repair broken cycles

On the Navdanya farm, organic matter has increased up to 99%, Nitrogen has increased up to 100%, Zinc has increased 14 %, Magnesium has increased 14%. They have been produced by the billions and millions of soil microorganisms that are in living soils. Healthy soils produce healthy plants. Healthy plants are then able to nourish humans with no external inputs.

On the other hand, chemical farming has led to a decline in soil nutrients, which translate into a decline in the nutritional content of our food and a further disruption of the carbon and nitrogen cycle.

Showing effect of continuous farming on Soil under Organic and Chemical mode

Nutrient	Change under Chemical Farming	Change under Organic Farming
Organic Matter	-14%	+29-99%
Total Nitrogen (N ₂)	-7-22%	+21-100%
Available Phosphorous (P)	0%	63%
Available Potassium (K)	-22%	+14-84%
Zinc (Z)	-15.9-37.8%	+1.3-14.3%
Copper (Cu)	-4.2-21.3%	9.4%
Manganese (Mn)	-4.2-17.6%	14.5%
Iron (Fe)	-4.3-12%	1%

Climate vulnerability and seeds of resilience in times of climate chaos

The Indian subcontinent is the most vulnerable to climate change. through loss of glaciers and snows, floods, heavy rains, cyclones, floods, tsunamis and tidal surges, and droughts.

Navdanya and farmers save, conserve, multiply and distribute seeds of resilience and climate resilient crops that farmers have bred down the ages. These are essential in helping to rejuvenate agriculture after climate catastrophes have struck such as cyclones, tsunamis, flash floods and droughts and people have lost their lives, homes and land. Seeds saved by farmers and seed producers, help families to recover from environmental disasters and rebuild their means of livelihood.

Universal declaration on Living Soil, Environment and Climate change

Article 1 on Right to Mother Earth states that:

(5)..... all beings are entitled to all the inherent rights recognised in this Declaration without distinction of any kind, such as may be made between organic and inorganic beings, species, origin, use to human beings, or any other status.

Living soil is a home for millions of living micro-organism. Degrading it with chemicals, synthetic fertilisers and polluting is a violation of the Article 1 (6), which States that:

Just as human beings have human rights, all other beings also have rights which are specific to their species or kind and appropriate for their role and function within the communities within which they exist.

Earth Democracy

LIVING WATER

“Water has encircled the rugged earth as if in an embrace. The earth does not understand the innermost mysteries of the ocean. Water does not grow crops but in its absence, the earth would not have one blade of grass.” – Tagore

Throughout history, water sources have been held as sacred, worthy of reverence and awe. Water is a gift of nature. Water is the gift of life.

It is essential for our survival. Not only does it constitute a significant portion of our own bodies, through water, soil is hydrated and plants grow, giving rise to life. In turn, the organic matter from plants and other living beings return to the soil, making it more resilient to erosion and increasing its water holding capacity.

The significance of water is recognised in the Urdu word ‘ab’. ‘Ab’ is at the core of ‘Abadi’ (human settlement). It defines place: Punjab is the land of five rivers; Doab is the land between the Ganga and the Yamuna.

Water is a commons. It is the ecological basis for all life. Its sustainability and equitable allocation depend on cooperation among community members.

However, there is a growing momentum towards the privatisation of water resources.

John Locke’s treatise on property in the 17th century, the freedom of the individual to own, through labour, the land, forests and rivers, has been used as a basis to legitimise individual property rights that erode the commons and destroy the earth.

Giant water projects, such as big dams, have shifted water control from communities to central governments. In most cases, these projects benefit the powerful – construction companies, industries and commercial farmers – and dispossess the weak. Through the rhetoric of privatisation, we see increasing intervention by the state in water policy, and the subversion of community control over water resources.

In the pursuit of profit and economic growth, governments have sold water rights to industries and corporations, without ensuring the appropriate responsibility and accountability for maintaining that resource in a clean and natural state. The pollution of rivers through the leaching of synthetic fertilisers and erosion has created dead zones in our oceans, killing marine and aquatic life and fundamentally damaging the natural hydrological cycle.

Water Democracy

There are nine fundamental principles that underpin water democracy:

1. Water is nature's gift

We receive water freely from nature. We owe it to nature to use this gift in accordance with our sustenance needs, to keep it clean and in adequate quantity. Diversions that create arid or waterlogged regions violate the principles of ecological democracy.

2. Water is essential to life

Water is the source of life for all species. All species and ecosystems have a right to their share of water on the planet.

3. Life is interconnected through water

Water connects all beings and all parts of the planet through the water cycle. We all have a duty to ensure that our actions do not cause harm to other species and other people.

4. Water must be free for sustenance needs

Since nature gives water to us free of cost, buying and selling it for profit violates our inherent right to nature's gift and denies the poor of their human rights.

6. Water must be conserved

Everyone has a duty to conserve water and use water sustainably, within ecological and just limits.

7. Water is a commons

Water is not a human invention. It cannot be bound and has no boundaries. It is by nature a commons. It cannot be owned as private property.

8. No one holds a right to destroy

No one has a right to overuse, abuse, waste, or pollute water systems. Tradable-pollution permits violate the principle of sustainable.

9. Water cannot be substituted

Water is intrinsically different from other resources and products. It cannot be treated as a commodity.

Water has Natural Rights

Throughout history and across the world, water rights have been shaped both by the limits of ecosystems and by the needs of people. In fact, the root of the Urdu word *abadi*. Or human settlement is *ab*, or water, reflecting the formation of human settlements and civilization along water sources. The doctrine of riparian right-the natural right if the dwellers supported by a water system, especially a river system, to use water-also arose from this concept of *ab*. Water has traditionally been treated as a natural right-a right arising out of human nature, historic conditions, basic needs, or notions of justice. Water rights as natural rights to do not originate with the state; they evolve out of a given ecological context of human existence.

As natural rights, water rights are usufructuary rights; water can be used but not owned. People have a right to life and the resources that sustain it, such as water. The necessity of water to life us why, under customary laws, the right to water has been accepted as a natural, social fact:

“The fact that right over water has existed in all ancient laws, including our own *dharmasastras* and the Islamic laws, and also the fact that they still continue to exist as customary laws in the modern period, clearly eliminates water rights as being purely legal rights, that is rights granted by the state or law. Chattarpati Singh, "Water and Law" (n.d.)”

(Ref: Shiva, Vandana. 2002. Water Wars: Privatization, Pollution and Profit. Pluto Press.)

Universal declaration on Right to Water

The right to water entitles everyone, without discrimination, to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use.

Article 11, paragraph 1, of the Covenant specifies a number of rights emanating from, and indispensable for, the realization of the right to an adequate standard of living “including adequate food, clothing and housing”. The use of the word “including” indicates that this catalogue of rights was not intended to be exhaustive. The right to water clearly falls within the category of guarantees essential for securing an adequate standard of living, particularly since it is one of the most fundamental conditions for survival.

Committee on Economic, Social and Cultural Rights underlined that the drafting history of the International Covenant on Economic, Social and Cultural Rights and the wording of its *article 12 (2)* acknowledged that the right to health extended to the underlying determinants of health, including access to safe drinking water and sanitation.

International human rights treaties entailing specific obligations related to access to safe drinking water and sanitation

- The Convention on the Elimination of All Forms of Discrimination against Women, adopted in 1979 (art. 14 (2))
- International Labour Organization (ILO) Convention No. 161 concerning Occupational Health Services, adopted in 1985 (art. 5)
- The Convention on the Rights of the Child, adopted in 1989 (arts. 24 and 27 (3))
- The Convention on the Rights of Persons with Disabilities, adopted in 2006 (art. 28)

Key aspects of the right to water

• The right to water contains freedoms. These freedoms include protection against arbitrary and illegal disconnections; prohibition of unlawful pollution of water resources; non-discrimination in access to safe drinking water and sanitation, notably on the basis of land or housing status; non-interference with access to existing water supplies, especially to traditional water sources; and

ensuring that personal security is not threatened when accessing water or sanitation outside the home.

- The right to water contains entitlements. These entitlements include access to a minimum amount of safe drinking water to sustain life and health; access to safe drinking water and sanitation in detention and participation in water- and sanitation-related decision-making at the national and community levels.

In its general comment No. 15, the Committee on Economic, Social and Cultural Rights clarified the scope and content of the right to water by explaining what is meant by sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses.

- The water supply for each person must be sufficient and continuous to cover personal and domestic uses, which comprise water for drinking, washing clothes, food preparation and personal and house- hold hygiene.

The right to water therefore covers access to water to sustain life and health and to meet basic needs and does not entitle individuals to an unlimited amount of water.

Water services must be affordable to all. No individual or group should be denied access to safe drinking water because they cannot afford to pay.

The link between the right to water and other human rights

Access to safe drinking water is a fundamental precondition for the enjoyment of several human rights, including the rights to education, housing, health, life, work and protection against cruel, inhuman or degrading treatment or punishment. It is also a crucial element to ensure gender equality and to eradicate discrimination.

While the adequacy of water required for the right to water may vary according to different conditions, the following factors apply in all circumstances:

(a) *Availability*. The water supply for each person must be sufficient and continuous for personal and domestic uses.¹² These uses ordinarily include drinking, personal sanitation, washing of clothes, food preparation, personal and household hygiene.¹³ The quantity of water available for each person should correspond to World Health Organization (WHO) guidelines.¹⁴ Some individuals and groups may also require additional water due to health, climate, and work conditions;

(b) *Quality*. The water required for each personal or domestic use must be safe, therefore free from micro-organisms, chemical substances and radiological hazards that constitute a threat to a person's health.¹⁵ Furthermore, water should be of an acceptable colour, odour and taste for each personal or domestic use;

(c) *Accessibility*. Water and water facilities and services have to be accessible to everyone without discrimination, within the jurisdiction of the State party. Accessibility has four overlapping dimensions:

- (i) *Physical accessibility*: Water, and adequate water facilities and services, must be within safe physical reach for all sections of the population. Sufficient, safe and acceptable water must be accessible within, or in the immediate vicinity, of each household, educational institution and workplace.¹⁶ All water facilities and services must be of sufficient quality, culturally appropriate

and sensitive to gender, life-cycle and privacy requirements. Physical security should not be threatened during access to water facilities and services;

(ii) Economic accessibility: Water, and water facilities and services, must be affordable for all. The direct and indirect costs and charges associated with securing water must be affordable, and must not compromise or threaten the realization of other Covenant rights;

(iii) Non-discrimination: Water and water facilities and services must be accessible to all, including the most vulnerable or marginalized sections of the population, in law and in fact, without discrimination on any of the prohibited grounds; and

(iv) Information accessibility: Accessibility includes the right to seek, receive and impart information concerning water issues.

General legal obligations

While the Covenant provides for progressive realization and acknowledges the constraints due to the limits of available resources, it also imposes on States parties various obligations which are of immediate effect. States parties have immediate obligations in relation to the right to water, such as the guarantee that the right will be exercised without discrimination of any kind (*art. 2, para. 2*) and the obligation to take steps (*art. 2, para. 1*) towards the full realization of *articles 11, paragraph 1, and 12*.

Specific legal obligations

The right to water, like any human right, imposes three types of obligations on States parties: obligations to respect, obligations to protect and obligations to fulfil.

(a) Obligations to respect

The obligation to respect requires that States parties refrain from interfering directly or indirectly with the enjoyment of the right to water. The obligation includes, inter alia, refraining from engaging in any practice or activity that denies or limits equal access to adequate water; arbitrarily interfering with customary or traditional arrangements for water allocation; unlawfully diminishing or polluting water, for example through waste from State-owned facilities or through use and testing of weapons; and limiting access to, or destroying, water services and infrastructure as a punitive measure, for example, during armed conflicts in violation of international humanitarian law.

The Committee notes that during armed conflicts, emergency situations and natural disasters, the right to water embraces those obligations by which States parties are bound under international humanitarian law. This includes protection of objects indispensable for survival of the civilian population, including drinking water installations and supplies and irrigation works, protection of the natural environment against widespread, long-term and severe damage and ensuring that civilians, internees and prisoners have access to adequate water.

(b) Obligations to protect

The obligation to protect requires States parties to prevent third parties from interfering in any way with the enjoyment of the right to water. Third parties include individuals, groups, corporations and other entities as well as agents acting under their authority. The obligation includes, inter alia, adopting the necessary and effective legislative and other measures to restrain, for example, third parties from denying equal access to adequate water; and polluting and inequitably extracting from water resources, including natural sources, wells and other water distribution systems.

Where water services (such as piped water networks, water tankers, access to rivers and wells) are operated or controlled by third parties, States parties must prevent them from compromising equal, affordable, and physical access to sufficient, safe and acceptable water. To prevent such abuses an effective regulatory system must be established, in conformity with the Covenant and this general comment, which includes independent monitoring, genuine public participation and imposition of penalties for non-compliance.

(c) Obligations to fulfill

The obligation to fulfil can be disaggregated into the obligations to facilitate, promote and provide. The obligation to facilitate requires the State to take positive measures to assist individuals and communities to enjoy the right. The obligation to promote obliges the State party to take steps to ensure that there is appropriate education concerning the hygienic use of water, protection of water sources and methods to minimize water wastage. States parties are also obliged to fulfil (provide) the right when individuals or a group are unable, for reasons beyond their control, to realize that right themselves by the means at their disposal.

The obligation to fulfil requires States parties to adopt the necessary measures directed towards the full realization of the right to water. The obligation includes, inter alia, according sufficient recognition of this right within the national political and legal systems, preferably by way of legislative implementation; adopting a national water strategy and plan of action to realize this right; ensuring that water is affordable for everyone; and facilitating improved and sustainable access to water, particularly in rural and deprived urban areas.

Core obligations

In general comment No. 3 (1990), the Committee confirms that States parties have a core obligation to ensure the satisfaction of, at the very least, minimum essential levels of each of the rights enunciated in the Covenant. In the Committee's view, at least a number of core obligations in relation to the right to water can be identified, which are of immediate effect:

- (a) To ensure access to the minimum essential amount of water, that is sufficient and safe for personal and domestic uses to prevent disease;
- (b) To ensure the right of access to water and water facilities and services on a non-discriminatory basis, especially for disadvantaged or marginalized groups;
- (c) To ensure physical access to water facilities or services that provide sufficient, safe and regular water; that have a sufficient number of water outlets to avoid prohibitive waiting times; and that are at a reasonable distance from the household;
- (d) To ensure personal security is not threatened when having to physically access to water;
- (e) To ensure equitable distribution of all available water facilities and services;
- (f) To adopt and implement a national water strategy and plan of action addressing the whole population; the strategy and plan of action should be devised, and periodically reviewed, on the basis of a participatory and transparent process; it should include methods, such as right to water indicators and benchmarks, by which progress can be closely monitored; the process by which the strategy and plan of action are devised, as well as their content, shall give particular attention to all disadvantaged or marginalized groups;

- (g) To monitor the extent of the realization, or the non-realization, of the right to water;
- (h) To adopt relatively low-cost targeted water programmes to protect vulnerable and marginalized groups;
- (i) To take measures to prevent, treat and control diseases linked to water, in particular ensuring access to adequate sanitation.

Earth Democracy

LIVING FOOD

“Everything is food. Everything is something else’s food.” – Ancient Upanishad

“Let food be thy medicine.” – Hippocrates

In Ayurveda, food is called ‘sarvasadha’ the medicine that cures all disease. Grown organically, in living soils, with methods that support biodiversity and the health of our environment, nutrient-rich, chemical-free food is the basis for our health.

Yet industrial food systems, supported by chemical agriculture, have demoted food to a basic commodity. This reductionist paradigm separated food into its nutrients, and then substituted fake ingredients that can be constituted in a lab. The combination of agrichemicals, synthetic ingredients and industrialized agriculture and food processing contributes to both the environmental crisis and the global epidemic of chronic disease.

Non-communicable chronic diseases are killing people globally at an incredible rate. Almost 10 million people die from cancer annually; 1.7 million from diabetes, a metabolic disorder linked to diet. These diseases also significantly increase the risks of infectious disease like corona virus.

Maladapted modernity has resulted in toxic environmental pollutants and nutritionally poor diets, often commercially produced. The resulting consequences for our health force people into health care systems to treat disorders that should be prevented through good nutrition and a healthy environment. This occurs at great cost to both individuals and society.

The global health care costs related to diabetes was estimated at US\$1.31 trillion in 2015; it is estimated that the costs of cancer treatment will be \$2.5 trillion by 2050.

The beneficiaries of this system of disease and treatment are corporations; the merger of Bayer and Monsanto implies the same corporations whose chemicals and destruction of the environment cause disease are profiting from the treatment of those diseases.

Governments need to take cancer and chronic disease as seriously as they have the COVID-19 corona virus. This means taking action to ban chemicals that cause harm, including carcinogens like glyphosate. It means taking action against agricultural

systems that pollute and destroy our environment. And it means holding the Poison Cartel accountable for the harm they have done.

Health for all beings is based on protecting the Earth and her ecological processes, recognising that health is a continuum: from the soil and its microbiology, to plants and food, to our gut biome. Ecological, chemical-free agriculture needs to be part of the rejuvenation of public health.

In these times of global pandemic, we need to take a holistic approach to the prevention and treatment of disease. We need to harness the momentum to take back our food sovereignty and deglobalize the industrial food system based on chemically supported monocultures. We need to create and maintain local agricultural systems that produce nutrient rich, organic food; reduce our ecological footprint; and create biodiversity in our farms, our foods, our gut biome and in our environment.

Universal declaration on Right to Food and Right to Health

Food and nutrition insecurity continues to pose a serious global challenge. Food insecurity—defined as a “situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life

Food and nutrition security as an underlying determinant of health

FAO conceptualizes food security as having four dimensions that should be fulfilled simultaneously: the physical *availability* of food, the economic and physical *access* to food, the body’s *utilization* of the nutrients found in food, and the *stability* of the previous three dimensions over time.

Human rights offer universal frameworks to advance global justice for food and nutrition security. Instrumental to human dignity, rights seek to address basic needs and frame individual entitlements to uphold a universal moral vision.

The UDHR, ICCPR, and ICESCR, adopted separately by the UN General Assembly and referred to collectively as the “International Bill of Human Rights”—form the normative basis of the human rights system from which the human right to food and the human right to health would evolve as interconnected rights under international law.

The right to food and health clearly defined

As defined by International Covenant on Economic, Social and Cultural Rights (ICESCR),

Article 11—“the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions,” with states “recognizing the fundamental right of everyone to be free from hunger” and including specific obligations “to ensure an equitable distribution of world food supplies in relation to need.”

Article 12—“the right of everyone to the enjoyment of the highest attainable standard of physical and mental health,” including specific obligations on states to take all steps “necessary for the improvement of all aspects of environmental and industrial hygiene” and for “the prevention, treatment and control of epidemic, endemic, occupational and other diseases”

The UN Committee on Economic, Social and Cultural Rights (CESCR, the legal body charged with drafting official interpretations of, and monitoring state compliance with, the ICESCR issued a series of General Comments to provide authoritative interpretation of the norms inherent in these rights: in 1999 on the right to adequate food and in 2000 on the human right to health.

In focusing on the right to food, General Comment 12 found under *article 11* of the ICESCR:

- The right to adequate food is realized when every man, woman and child, alone or in community with others, have physical and economic access at all times to adequate food or means for its procurement
- Focused on the “adequacy” of food, the CESCR connected food to health in a way that implicates a diet containing “a mix of nutrients for physical and mental growth, development and maintenance, and physical activity,” concluding that “every State is obliged to ensure for everyone under its jurisdiction access to the minimum essential food which is sufficient, nutritionally adequate and safe, to ensure their freedom from hunger.”

To reflect a modernized right to health commensurate with an understanding of determinants of health, General Comment 14 interpreted article 12 of the ICESCR to find that:

“the right to health embraces a wide range of socio-economic factors that promote conditions in which people can lead a healthy life, and extends to the underlying determinants of health, such as food and nutrition, housing, access to safe and potable water and adequate sanitation, safe and healthy working conditions, and a healthy environment.”

The CESCR thereby included “an adequate supply of food and proper nutrition” under the right to health, linking the quantity and quality of food necessary for a healthy diet and thereby articulating a core state obligation “to ensure access to the minimum essential food which is nutritionally adequate and safe, to ensure freedom from hunger to everyone.”

The right to food and right to health is a human right

The right to food and right to health is a human right. It protects the right of all human beings to live in dignity, free from hunger, food insecurity and malnutrition. The link between the right to food and other human rights. Human rights are interdependent, indivisible and interrelated. This means that violating the right to food may impair the enjoyment of other human rights, such as the right to health, education or life, and vice versa.

The health emergency has shown that right to health is a fundamental right, health is a commons and a public good.

Links between the right to food and other human rights

The right to health. Nutrition is a component of both the right to health and the right to food. When a pregnant or breastfeeding woman is denied access to nutritious food, she and her baby can be malnourished even if she receives pre- and post-natal care. When a child is suffering from diarrhoeal disease but denied access to medical treatment, it cannot enjoy an adequate nutritional status even if he or she has access to food.

The right to life. When people are not able to feed themselves and face the risk of death by starvation, malnutrition or resulting illnesses, their right to life would also be at stake.

The right to water. The right to food cannot be realized if people lack access to safe drinking water for personal and domestic uses, defined as 6 water for drinking, washing clothes, food preparation and personal and household hygiene.

The right to education. Hunger and malnutrition impair children's learning abilities and may force them to drop out of school and work instead, thus undermining their enjoyment of the right to education. Moreover, to be free from hunger and malnutrition, individuals need to know how to maintain a nutritious diet and have the skills and capacity to produce or obtain food as a livelihood. Thus access to education, including vocational education, is essential for the enjoyment of the right to food.

The right to information. Information is crucial for the right to food. It enables individuals to know about food and nutrition, markets and the allocation of resources. It strengthens people's participation and free consumer choice. Protecting and promoting the right to seek, receive and impart information thus facilitates the enjoyment of the right to food.

The right to food and health is a legal right

The right to food and health is protected under international human rights and humanitarian law and the correlative state obligations are well-established under international law.

The Universal Declaration of Human Rights recognizes, in the context of an adequate standard of living, that:

Article 25 *Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, ..."*

Following these definitions, all human beings have the right to food that is available in sufficient quantity, nutritionally and culturally adequate and physically and economically accessible.

The three main elements of the right to food are: availability, adequacy, and accessibility of food.

Availability refers to enough food being produced for both the present and the future generations, therefore entailing the notions of sustainability, or long-term availability, and the protection of the environment.

Adequacy refers to the dietary needs of an individual which must be fulfilled not only in terms of quantity but also in terms of nutritious quality of the accessible food. It also includes the importance of taking into account non-nutrient-values attached to food, be they cultural ones or consumer concerns.

Accessibility (economic) implies that the financial costs incurred for the acquisition of food for an adequate diet does not threaten or endanger the realization of other basic needs (e.g housing, health, education). Physical accessibility implies that everyone, including physically vulnerable individuals, such as infants and young children, elderly people, the physically disabled, the terminally ill, and persons with persistent medical problems, including the mentally ill, should be ensured access to adequate food.

Article 2(1, 2) 11 of the ICESCR, states agreed to **take steps to the maximum of their available resources to achieve progressively the full realization of the right to adequate food.** States also acknowledged the essential role of international cooperation and assistance in this context.

Article 2 (1) of the International Covenant on Economic, Social and Cultural Rights provides:

Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and cooperation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights

recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.

Article 2(2) of the ICESCR, governments agreed to guarantee that the right to food will be exercised without discrimination on grounds of race, colour, sex, language, age, religion, political or other opinion, national or social origin, property, birth or other status. The **principle of non-discrimination** is a cardinal principle of international law. It plays a major role in the full realization of the right to food not only at normative level, but also at practical level. As such, the Right to Food Guidelines recommend establishing food insecurity and vulnerability maps and the use of disaggregated data to identify

any form of discrimination that may manifest itself in greater food insecurity and vulnerability to food insecurity, or in a higher prevalence of malnutrition among specific population groups, or both, with a view to removing and preventing such causes of food insecurity or malnutrition. (Guideline 13)

Article 11 of the International Covenant on Economic, Social and Cultural Rights provides:

1. The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions. The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international cooperation based on free consent.

2. The States Parties to the present Covenant, recognizing the fundamental right of everyone to be free from hunger, shall take, individually and through international cooperation, the measures, including specific programmes, which are needed:

(a) To improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, by disseminating knowledge of the principles of nutrition and by developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilization of natural resources;

(b) Taking into account the problems of both food-importing and food-exporting countries, to ensure an equitable distribution of world food supplies in relation to need.

FAO supports its member States in taking seven practical steps to implement the right to food:

1. Identify hungry people, whose right to food is not realized
2. Assess existing policies and programmes
3. Develop strategies for an enabling environment and assistance measures
4. Improve institutional coordination and functioning
5. Review and strengthen the legal framework
6. Monitor progress over time with a human rights focus
7. Ensure effective recourse for violations of the right to food

In the current reform process of FAO, the right to food is an “organizational result” within the FAO strategic framework.

The right to food gives rise to legal obligations of states:

It is generally accepted that the right to food implies three types of state obligations – the obligations to respect, protect and to fulfil.

The **obligation to respect** requires governments not to take any measures that arbitrarily deprive people of their right to food, for example by measures preventing people from having access to food.

The **obligation to protect** means that states should enforce appropriate laws and take other relevant measures to prevent third parties, including individuals and corporations, from violating the right to food of others.

The **obligation to fulfil** (facilitate and provide) entails that governments must pro-actively engage in activities intended to strengthen people's access to and utilization of resources so as to facilitate their ability to feed themselves. As a last resort, whenever an individual or group is unable to enjoy the right to adequate food for reasons beyond their control, states have the obligation to fulfil that right directly.

The Right to Food Guideline 8.1 further states

States should facilitate sustainable, non-discriminatory and secure access and utilization of resources consistent with their national law and with international law and protect the assets that are important for people's livelihoods. States should respect and protect the rights of individuals with respect to resources such as land, water, forests, fisheries and livestock without any discrimination. Where necessary and appropriate, States should carry out land reforms and other policy reforms consistent with their human rights obligations and in accordance with the rule of law in order to secure efficient and equitable access to land and to strengthen pro-poor growth. Special attention may be given to groups such as pastoralists and indigenous people and their relation to natural resources.