

# Mother Earth

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*Special Issue*

## Environmental Ethics



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School of Environment and Disaster Management

Ramakrishna Mission Vivekananda Educational and Research Institute

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*Swami Vivekananda founded the Ramakrishna Mission and is the living inspiration of RKMVERI. Vivekananda had profound thoughts on the ethical issues interfacing three dimensions of Nature – Matter, Mind and Spirit.*



*Swami Vivekananda  
12 January 1863- 4 July 1902*

*On the occasion of his birthday this Special Issue of Mother Earth on Environmental Ethics is dedicated to him.*



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**MESSAGE FOR THE SPECIAL ISSUE OF E-MAGAZINE  
'MOTHER EARTH'**

The following opening lines of the Foreword to a book on Relativistic Quantum Field Theory by S.S. Schweber, written by his teacher and mentor, Nobel laureate Hans Bethe, comes to my mind while writing this message for the e-magazine's special issue 'Mother Earth': "It is always a joy to see one's children grow up and to see that they can do things that their parents do not any longer understand. This book is a good example."

Under the dynamic leadership of Dr PG Dhar Chakrabarti, the Head of the Department of Environment & Disaster Management (EDM) and Swami Vivekananda Chair Professor, this Department has been striving to motivate and inspire its students and faculty to explore emerging fields of the subject of environment. 'Environmental Ethics' is one such field that deserves special and urgent attention in the present day. Anthropocentric attitude that man developed in the Western culture, science and politics, needs to be urgently replaced by the Indian approach of harmony and peace engendered through an ecocentric approach to Nature and beyond, cultivated over the millennia of its existence by Indian civilization through deification of Nature and worshipping it with reverence as a mother. Only when man realizes that Nature and his own existence are inextricably interrelated and hence interdependent as child to its mother, will he embrace Nature with deep love and reverence, joyfully celebrate Nature's diversity, variety and beauty. Man's attitude to Nature needs to undergo such a metamorphosis for which the ancient Indian thought and weltanschauung are the *sine qua non*. As Arnold Toynbee, the famous British historian has said: "It is already becoming clear that a chapter which had a western beginning will have to have an Indian ending if it is not to end in the self-destruction of the human race." The 'nemesis' of Nature is looming large everywhere. The wake-up siren has already sounded.

Will man heed this urgent call to wake up and behave or will he, as William Shakespeare lamented long ago in this immortal verse,

But man, proud man, drest in a little brief authority,  
Most ignorant of what he's most assur'd;  
His glassy essence, like an angry ape,

Plays such fantastic tricks before high heaven, as make the angels weep,

refuse to listen to the voice of Mother Nature and invite ruin of the human race as Toynbee bemoaned? Time alone will tell. But it is the duty of the educated youth of our country to awaken the world to its urgent ecological concern towards Nature. In this the scholars and students of Vivekananda University's EDM Department have, I believe, a pivotal role to play. It is heartening that they are taking a small but unmistakable step in this direction by conceiving the e-magazine, 'Mother Earth'. May good sense prevail in all human hearts to restore peace on this beautiful earth is the prayer of

Place: Belur Math

Date: 10 January 2024

**Swami Atmapriyananda  
Pro-Chancellor**

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# ENVIRONMENTAL ETHICS IN THE PHILOSOPHY OF SWAMI VIVEKANANDA

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**E**nvironmental ethics as an academic discipline emerged in the west in the early nineteen seventies when environmentalists started urging philosophers to consider the ethical issues of environmental problems - polluting rivers, denuding forests, vanishing species, depleting natural resources, rising temperature, and toxic air, water and soil - and the differential impacts these have had on the bio-sphere of the species and the socio-political sphere of regions, countries, and communities.

Swami Vivekananda's brief and hectic mission in our planet, towards the close of nineteenth and beginning of twentieth century, had hardly encountered these problems and issues, yet he had the vision to appreciate the depth of the issues of environmental ethics, and provide solutions, reimagining the ancient philosophical thoughts of India in the contexts of modern science, that are even more relevant today.

Vivekananda's ideas on environment are not structured in any treatise; these are scattered in his numerous writings and lectures, in different contexts, that may apparently look disconnected, but there is fundamental unity in his thoughts.

## **Three dimensional view of nature**

Swami looked nature as three soul – the physical, the mental is a kind of progression – ‘a part in matter, the finer in mind Atman’.<sup>1</sup>

Apparently countering the ethics wrote, “To be in harmony with How did man build this house? nature? No. By fighting against struggle against nature that conformity with it.”<sup>2</sup> This signify that humans, among all with the power of mind to unravel resources for its benefit.

Human mind transformed the spectacular and wonderful east. Echoing anthropocentrism, Swami wrote, “... before the creation of man, nature was changing the trees, plants, and other animals by slow and gentle degrees, but when man came on the scene, he began to effect changes with rapid strides. He continually transported the native fauna and flora of one country to another, and by crossing them various new species of plants and animals were brought into existence”.<sup>3</sup>

But opposing the anthropocentric idea of superiority of the homo sapiens Vivekananda emphasized “...the whole universe is one constantly changing mass of matter, in which all forms of existence are so many whirlpools”.<sup>4</sup> He wrote, “...from the protoplasm at one end to the perfect man at the other, and this whole



dimensional – matter, mind and and the spiritual world – which tapering existence, the thickest and the finest in soul, the

of ecocentrism, Vivekananda nature means stagnation, death. By being in harmony with nature. It is the constant constitutes human progress, not struggle and non-conformity living species, are endowed the laws of nature and use its

material world and created civilizations of the west and the

<sup>1</sup> Complete Works of Swami Vivekananda, Advaita Ashram, Kolkata, 1989, Volume-2, page 16

<sup>2</sup> Ibid, Volume-5, page 104

<sup>3</sup> Ibid, Volume-1, page 109

<sup>4</sup> Ibid, Volume-1, page 149

series is one life. In the end we find the perfect man, so in the beginning it must have been the same. Therefore, the protoplasm was the involution of the highest intelligence. You may not see it but that involved intelligence is what is uncoiling itself until it becomes manifested in the most perfect man”.<sup>5</sup>

### One Life lies at the core

This idea of ‘One Life’ lies at the core of Vivekananda’s philosophy of environmental ethics. One Life brings three dimensions of nature - matters, minds and soul – together for better understanding of their interrelationship. There is life in air, water and soil in as much these sustain life. There are manifestations of different forms of life in plants, animals, and insects. There is an underlying unity in the lives of all matters and species. “The difference between man and man, between angels and man, between man and animals, between animals and plants, between plants and stones” Vivekananda wrote “is not in kind, because everyone from the highest angel to the lowest particle of matter is but an expression of that one infinite ocean, and the difference is only in degree. I am a low manifestation, you may be a higher, but in both the materials are the same.”<sup>6</sup>

The realization of life in every animate and inanimate object is the foundation of love, of empathy, of doing no harm to others, and of doing everything for protection and conservation. “Why should I love everyone?” asked Swami, and he answered, “Because they and I are one....there is this oneness, this solidarity of the universe from the lowest worm that crawls under our feet to the highest beings that ever lived – all have various bodies but one Soul”.<sup>7</sup> This is an affirmation of the ‘solidarity of the universe’- a cosmocentric environmental ethics based on mutually enriching relationship between humanity and nature.



Vivekananda blasted the western concept of freedom of mind, as “the mind and the will are within time, space, and causation, the same as so-called matter; and that they are therefore bound by the law of causation. We think in time; our thoughts are bound by time; all that exists, exists in time and space. All is bound by the law of causation.”<sup>8</sup> It is only the soul that is free, “the soul — ever free, boundless, eternal — through aeons and aeons is manifesting itself more and more through its instrument, the mind.”<sup>9</sup> It is the soul that has struggled against laws of nature to become free and enlightened to understand the essential unity in life and embrace all life as one.

The material world of air, water and soil – the atmosphere, the hydrosphere and the lithosphere – enable the biosphere (plants, animals and insects) to survive and grow, and together the eco-system facilitate the humans to exist, create and expand the anthroposphere. Some of the natural wonders of the material world – forests, rivers, mountains, and oceans – have provided the beauty and solitude for the development of the spiritual world.

Swami Vivekananda had some of his life changing spiritual experiences on the laps of nature in forests, mountains and oceans. In forests he found ‘unlimited kindness and benevolence that makes no demands for its sustenance and extends generously the products of its life activity; it affords protection to all beings, offering shade even to the axe-man who destroys’.<sup>10</sup> In the ‘clear and bluish, sweet and ice-cold charming water of the Ganga in Rishikesh, he could count the fins of fishes five yards below the surface’<sup>11</sup>. On the rocks off the coast of Kanyakumari, in the confluence of the Indian Ocean, Bay of Bengal and the Arabian

<sup>5</sup> Ibid, Volume-5, Page-204-05

<sup>6</sup> Ibid, Volume-1, Page 364

<sup>7</sup> Ibid, Volume-2, Page 413-14

<sup>8</sup> Ibid, Volume-2, Page 369

<sup>9</sup> Ibid, Volume-2, Page 370

<sup>10</sup> Ibid, Volume-5, Page 412

<sup>11</sup> Ibid, Volume-5, Page 414

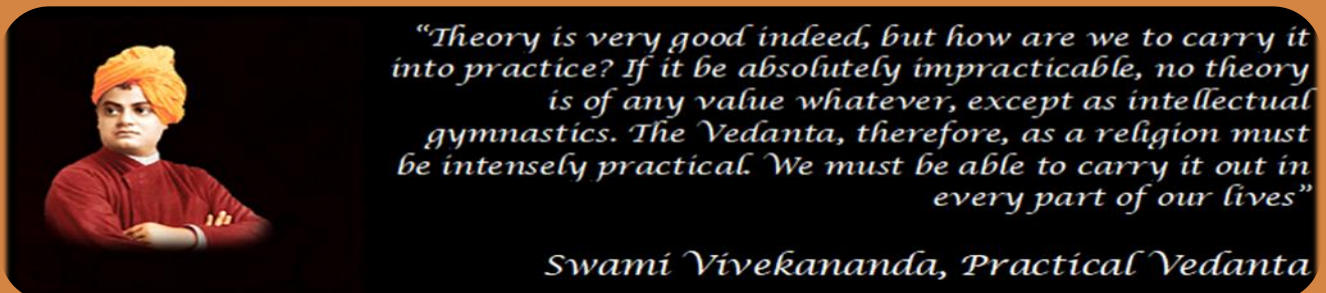
Sea, he received his enlightenment. On the mountain trails in Kashmir and Almora he had some of his most intense spiritual experiences.

### Practical Vedanta

Vivekananda's philosophy of unity of life across matters, mind and soul, is embedded in his philosophy of Practical Vedanta which is a reimagining of the ancient Sanskrit texts of Upanishad, in the contexts of modern life. 'The fictitious differentiation between religion and the life of the world', said Swami 'must vanish, for the Vedanta teaches oneness — one life throughout. The ideals of religion must cover the whole field of life, they must enter into all our thoughts, and more and more into practice,'<sup>12</sup>

He said: "conceptions of the Vedanta must come out, must remain not only in the forest, not only in the cave, but they must come out to work at the bar and the bench, in the pulpit, and in the cottage of the poor man, with the fisherman that are catching fish, and with the students that are studying."<sup>13</sup>

Practical Vedanta is the science and art of achieving enlightenment of the soul that sees divinity in every object. This need not necessarily be the monopoly of the ascetic; it can be achieved by the common man through knowledge, devotion and self-less service (Jnana, Bhakti and Karma Yoga), and concentration or Raja Yoga, according to the capacity and contexts of men and women in their day to day lives and activities.



Swami Vivekananda founded the Ramakrishna Mission to practically demonstrate how Practical Vedanta can be practiced. The Mission has a glorious history of more than 125 years of self-less service to humanity.

Practical Vedanta is essentially a religious philosophy, but given the focus on the practical aspects of the philosophy in the life and activities of common people, the tenets of this philosophy need to be mainstreamed into every walk of life. Three powerful messages that Practical Vedanta have for environmental ethics are:

- a) Every abiotic and biotic matter has an intrinsic value of its own and are not meant to be subservient to any other object, including the human beings, and there is a fundamental responsibility to ensure that these are protected and conserved to the extent possible. Hence we should not only protect plants, animals and insects, but also use air, water and soil and other natural resources in a sustainable manner;
- b) Human mind provides an edge to the homo sapiens over other creatures of nature, but mind is not neutral and are conditioned by time and space and subject to laws of causation of nature, and hence we need to go beyond mind to our soul or spirit to find solutions to the ethical issues of life. Mind may be rational, but it may also be irrational considering the interests it has to serve in space and time.
- c) Ethical issues are best served when there is integration of knowledge, commitment and action – when we believe whole heartedly what we know to be true and we act selflessly on what we believe to be true so that there is no gap between knowledge and action, between profession and practice.

These messages can be applied to find ways out of some of the challenging contemporary issues of environmental crisis on which there are explosions of knowledge, plethora of declarations but hardly any meaningful action for solutions.

<sup>12</sup> Swami Vivekananda, Practical Vedanta, Part-1, Page 1

<sup>13</sup> Ibid, Page 5

# ENVIRONMENTAL ETHICS AND THE RE-AWAKENING OF A NEW WORLD-VIEW IN MAN-NATURE-UNIVERSE RELATIONSHIP

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**E**nvironmental ethics is a methodical exposition of the moral relation that humans bear with the natural world. This area of study emerged as an academic discipline under the aegis of Applied Ethics in West during 1970s. Different theories of environmental ethics suggest different answers to the question of human obligations and responsibilities toward environment. Some philosophers are of the opinion that our obligations toward environment are only indirect and could best be understood in terms of the relationship that we owe to other humans. Such outlook toward environment is termed as ‘anthropocentric’, which suggests that our moral obligations toward the natural world are only indirect. Emission of greenhouse gases, depletion of ozone layer, melting of Arctic ice, massive flood, etc., could thus be looked upon as serious fallout of the anthropocentric or human-cantered approach.



“To love the whole universe is possible only by way of loving the Samasthi—the universal—which is, as it were, the one unity in which are to be found millions and millions of smaller unities.”

*The Complete Works of Swami Vivekananda* 2018, Vol 3, p.92,  
Mayavati:Advaita Ashrama)

The shortcomings of human-centered approach toward nature made philosophers seriously rethink as well as revise the standards of ethical principles. As a result, there emerged another theory of environmental ethics called ‘non-anthropocentric’, with an enlarged scope of ethics including humans’ moral obligation towards plants and animals. Controversies relating to ethical treatment of animals and threatened existence of plant and animal species are well known issues of non-anthropocentric ethics. By realizing that life itself in any



form is valuable and the only criterion of moral standing, biocentric ethics (the word ‘biocentric’ means ‘life-centered’) does not encourage moral hierarchy. Biocentrists, however, face challenges that arise more from ecological point of view as it remains quite difficult to ascertain whether species or ecosystems could be included within the discussion of biocentric ethics. Hence, theories of environmental ethics do not end here. Further developments in the field of environmental ethics talk of a paradigm shift of focus from individual living things to collections or ‘wholes’. Ecocentric ethics claim ecological wholes such as ecosystems or species as well as non-living natural objects to have direct moral consideration.

Aldo Leopold (1887-1948) is the most influential figure in the development of ecocentric environmental ethics. In the essay, ‘The Land Ethic’ Leopold urges us to expand of the field of ethical concern “to include soils, waters, plants, and animals or collectively, the land” (DesJardins 2013, p.181). This outlook is holistic and all-inclusive. The spirit of such holistic approach, though highly metaphysical, engenders a profound philosophical outlook, a new *weltanschauung* (world-view) of mankind wherefrom no component of Nature is excluded.<sup>14</sup>

In keeping with the spiritual traditions of the East, particularly India, the Deep Ecology norm of self-realization goes beyond the modern Western understanding of *self* as an “isolated and narrow competing egos” (Devall and Sessions 1985, p.67). These traditions of the East teach us to identify ourselves with the rest of the universe through expansion of consciousness, which engenders biocentric equality inextricably related to the idea of all inclusive Self-realization. This is in fact the re-awakening of a new world-view in Man-Nature-Universe relationship.

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- Devall, B. and Sessions, G. (1985) *Deep Ecology*. Salt Lake City: Gibbs M, Smith, Inc. Peregrine Smith Books.
- The King James Version (KJV) of the Old Testament of the Holy Bible*. New York: Tree-Country church of Christ. Available at <http://www.christistheway.com>

*“What God has given is called Nature, to follow Nature is called Tao; to cultivate Tao is called Culture. When joy, anger, sadness and happiness are experienced to the proper degree it is called Harmony. The inner self is the correct foundation of the world and Harmony is the way. When a man has achieved Harmony, the heaven and the earth are orderly and myriad of things are nourished and grow thereby” — Confucius*

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<sup>14</sup> “But ask now the beasts,  
and they shall teach thee;  
and the fowls of the air,  
and they shall teach thee;  
Or speak to the earth,  
and it shall teach thee;  
and the fishes of the sea  
shall declare unto thee.” (KJV, *Job* 12:7-8, p.446)

# **ENVIRONMENT UPDATES**

## **GLOBAL CONFERENCES ON ENVIRONMENT AND DISASTER MANAGEMENT**

October - December 2023

### **25th Meeting of the CBD Subsidiary Body on Scientific, Technical, and Technological Advice (SBSTTA 25) and Resumed 15th Meeting of the CBD Conference of the Parties - 15 to 20 October 2023**

Ten months after adopting the Kunming-Montreal Global Biodiversity Framework (GBF), delegates met to provide expert advice on the scientific, technical, and technological aspects of GBF implementation. At the resumed 15th meeting of the Conference of the Parties (COP), delegates conducted elections and discussed the date and venue of COP 16.

### **35th Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP35) - 22 to 27 October 2023**

Delegates committed firmly to addressing threats to both the ozone layer and the global climate, designating a significant portion of the replenishment of the Multilateral Fund to the implementation of the Kigali Amendment, which will phase out hydrofluorocarbons (HFCs) and bring down global temperatures.

### **5th Meeting of the Conference of the Parties to the Minamata Convention on Mercury - 30 October to 3 November 2023**

Parties took crucial steps toward eliminating mercury pollution, including by adopting decisions on new dates to phase out mercury-added products including cosmetics, strengthened ties with Indigenous Peoples, the Convention's first effectiveness evaluation, and a threshold for mercury waste, which will help countries avoid becoming dumping grounds for mercury-contaminated wastes.

### **77th Meeting of the CITES Standing Committee - 6 to 10 November 2023**

Delegates faced with 77 agenda items, with over 101 related documents spanning some 2,700 pages, were unable to complete the entire agenda, but were able to make recommendations on 11 compliance cases, establishment of the CITES Global Youth Network, seizure reporting on big cats, monitoring elephant poaching, and stockpiling timber.

### **3rd Session of the Intergovernmental Negotiating Committee to Develop an International Legally Binding Instrument on Plastic Pollution, Including in the Marine Environment (INC-3) - 11 to 19 November 2023**

As concerns about the scourge of plastic pollution mount worldwide, delegates shared their views on the "full life cycle of plastic," with some favoring measures addressing plastic production, and others favoring downstream measures to eliminate plastic waste. Still, others focused on how best to ensure lasting design standards for plastic products.

### **28th Meeting of the Conference of Parties to UNFCCC – Dubai, United Arab Emirates - 30 November to 13 December 2023**

Parties adopted a decision operationalizing the new loss and damage fund and several parties announced pledges for its initial capitalization. But negotiations were difficult on the other central outcomes: the first Global Stocktake, the Global Goal on Adaptation, the mitigation work programme, just transition pathways, and climate finance. COP-28 failed to reach any agreement or road map for phasing out or even phasing down coal or any other fossil fuel like oil and gas, but it suggested 8 pathways for reducing GHG emission. 118 countries signed Global Renewables and Energy Efficiency pledge to triple the world's green energy capacity to 11,000 GW by 2030, thereby, reducing the reliance on fossil fuels in generating energy. India and China did not sign the pledge. COP-28 adopted 7 Common Adaptation Goals with specific nationally determined targets. COP-28 failed to reach any binding agreement to limit GHG emission for limiting temperature rise to 1.5 °C. Left to countries to their nationally determined contributions, it is now almost certain that average global surface temperature shall exceed the Paris Agreement goal of 2 °C above compared. UNFCCC Executive Secretary Simon Stiell summed up the spirit of the outcome of COP-28 with his closing speech: *"Whilst we didn't turn the page on the fossil fuel era in Dubai, **this outcome is the beginning of the end**..... Now all governments and businesses need to turn these pledges into real-economy outcomes, without delay."*

*"One touch of nature makes the whole world kin" – William Shakespeare*

## DISASTER UPDATES

October – December 2023

As per the global database on disasters maintained by the EM-DAT 117 disasters struck different parts of the world during the last quarter of 2023, in which 4026 persons lost their lives and 1.33 million people were affected. The following is an overview of the most important disasters during the period



**Herat Earthquake, Afghanistan:** On October 7, 2023, two earthquakes with a magnitude of 6.3 struck Herat Province of Afghanistan. The first earthquake struck at 11:11 AM followed by the second shock 31 minutes later. These earthquakes left at least 2,000 people dead and 1,000 others injured. A large number of houses were damaged, affecting 249,000 people



**Sikkim Flash Flood:** On 4 October 2023, heavy rains caused the glacial South Lhonak lake in Sikkim, a state in northeastern India, to breach its banks, causing a glacial lake outburst flood. The flood reached the Teesta III Dam at Chungthang at midnight, before its gates could be opened, destroying the dam in minutes. 178 people were killed and 88400 people were affected.



**Kenya Flood:** Kenya experienced widespread flooding caused by enhanced rains on the third and fourth weeks of October 2023 marking the beginning of the rainy season in Kenya (October – December). The rainy season was characterized by heavy storms that caused flooding, flash floods, and increased river levels. 170 people were killed and 5000000 people were affected.



**Nepal earthquake:** On 3 November a 6.4-magnitude earthquake struck isolated areas of Jajarkot in western Nepal that caused widespread damages of housing and infrastructure resulting in 153 fatalities and over 338 injuries. More than 3 lakh people were affected due to damage of house and disruption of essential services.



**Gansu Earthquake, China:** The Gansu Earthquake, China 2023 was a devastating natural disaster that occurred on **December 18, 2023** at around **23:59**. The earthquake had a magnitude of **5.9** and struck Jishishan County, in Gansu Province, causing severe damage to buildings, roads, and infrastructure, and triggering landslides and power outages. The earthquake also resulted in **151 fatalities** and **982 injuries**. **15700 people** were affected.



**Tanzanian Flood:** At least 86 people died and 800 injured after torrential rains triggered deadly flash floods and landslides in northern Tanzania. Tanzania's President Samia Sululu Hasan, who was in Dubai attending the COP28 climate conference, cut short her trip to attend to the crisis following the disaster



**Guatemala Flood and Landslides:** A landslide occurred in the Las Calaveras neighbourhood of Guatemala City on 22 November, following heavy rains and flood, resulting in 86 casualties and damages to houses affecting 123325 people.



# SWAMI VIVEKANANDA AND ENVIRONMENT EDUCATION

**Dr. Sudipta Tripathi**

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Swami Vivekananda, a key figure in the introduction of Indian philosophies of Vedanta and Yoga to the Western world, emphasized the connectivity of human beings and nature. While he did not explicitly focus on environmental education, his teachings contain principles that align with the goals of environmental awareness.

Some aspects of Swami Vivekananda on environment education are:

1. **Unity of Existence:** The unity and interdependence of all living things were important ideas for Swami Vivekananda. The ecological principle, which emphasizes the interdependence of all elements in an ecosystem, is similar to this theory. The significance of acknowledging and honoring the interdependence of all living forms is frequently emphasized in environmental education.
2. **Respect for Nature:** Swami Vivekananda talked about having respect for all living things. He held that nature should be respected and should be seen as a manifestation of God. Environmental education promotes sustainable methods to safeguard the environment by helping people to grow a feeling of responsibility and respect for the natural world.
3. **Harmony with Nature:** This concept aligns with the environmental education goal of fostering a harmonious relationship between humans and the natural environment. It promotes sustainable living practices that do not harm the delicate balance of ecosystems.
4. **Service to Humanity:** Swami Vivekananda emphasized selfless service to humanity. Environmental education often incorporates the idea of serving the planet by taking actions that contribute to ecological sustainability. This can involve activities like conservation efforts, waste reduction, and adopting eco-friendly lifestyles.
5. **Education for Holistic Development:** Swami Vivekananda advocated for education that focuses on holistic development, encompassing physical, mental, and spiritual aspects. Environmental education also promotes a holistic understanding of the world, encouraging individuals to consider the ecological, social, and economic dimensions of environmental issues.

Integrating Swami Vivekananda's ideas into educational programmes can contribute to fostering a deeper understanding of the interconnectedness between humanity and the environment, promoting sustainable and responsible living. In addition, Swami Vivekananda did not address present-day environmental issues specifically, but his teachings can serve as a spiritual and philosophical basis that motivates people to embrace eco-friendly attitudes and behaviours. By incorporating his principles into environmental education, we can develop a more comprehensive understanding of our connection with the natural world.

*"It is a struggle against nature, and not conformity to nature that makes man what he is". —  
Swami Vivekananda*



# ENVIRONMENTAL ETHICS AND CLIMATE JUSTICE: EVOLUTION, PROGRESS, AND FUTURE PERSPECTIVES

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Environmental ethics and climate justice have evolved significantly over the years, reflecting changes in societal attitudes, scientific understanding, and the urgency of addressing environmental challenges. Here's an overview of their past evolution, progress, and future perspectives:

## Past Evolution:

**Pre-20th Century:** Early ethical considerations were often anthropocentric, focusing on human interests with little regard for the environment. Indigenous cultures had embedded ecological wisdom and respect for nature, but these were often marginalized.

**Mid-20th Century:** The publication of Rachel Carson's "Silent Spring" in 1962 marked a turning point, raising awareness about the environmental impact of human activities, particularly the use of pesticides. This era saw the emergence of environmentalism, with a focus on the conservation and preservation of natural resources.

**Late 20th Century:** The 1970s witnessed the establishment of Earth Day and the formation of environmental organizations like Greenpeace. The concept of "deep ecology" emerged, advocating for an ecocentric perspective that values all forms of life.

## Progress:

**1980s-1990s:** Environmental ethics evolved to include discussions on sustainable development, acknowledging the need for a balance between human development and environmental conservation. Global environmental agreements such as the Montreal Protocol (1987) and the Rio Earth Summit (1992) highlighted international cooperation.

**2000s-2010s:** Climate change became a focal point, with the Intergovernmental Panel on Climate Change (IPCC) providing scientific assessments. The concept of climate justice gained prominence, emphasizing the ethical dimensions of climate change and its disproportionate impact on vulnerable communities.

**Late 2010s-2020s:** Greta Thunberg's activism and movements like Fridays for Future brought unprecedented attention to the climate crisis, especially among younger generations. The Paris Agreement (2015) marked a global commitment to limit global warming, recognizing the ethical imperative to protect vulnerable nations.

## Future Perspectives:

**Integration of Environmental Ethics into Policy:** Continued efforts to integrate ethical considerations into policymaking, ensuring decisions prioritize environmental sustainability and justice.

**Intersectionality and Inclusivity:** Recognition of the intersectionality between environmental issues and social justice, addressing the disproportionate impacts on marginalized communities.

**Technological Solutions:** Advancements in technology for sustainable development, renewable energy, and carbon capture to mitigate environmental degradation.

**Education and Awareness:** Ongoing education and awareness campaigns to foster a sense of environmental responsibility among individuals, communities, and nations.

**Global Cooperation:** Strengthening international cooperation to address environmental challenges collectively, acknowledging that climate change is a shared global responsibility.

**Legal Frameworks:** Development and enforcement of robust legal frameworks that hold individuals, corporations, and nations accountable for environmental harm.

In summary, the evolution of environmental ethics and climate justice reflects a growing understanding of the interconnectedness between human activities and the health of the planet. The future involves addressing these issues holistically, combining ethical considerations, technological innovation, and global cooperation to create a sustainable and just world.

*“Earth provides enough to satisfy every man’s need, but not every man’s greed” — Mahatma Gandhi*

## VISION OF SWAMI VIVEKANANDA ON 'SUSTAINABILITY' AND 'ECO-SPIRITUALITY'

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**D**harma is a Sanskrit word that means 'religion'. In Hinduism, it refers to the natural order of moral duties that help people understand and practice harmony between nature and humanity. This quest leads to the formation of a cosmological awakening that involves transcending the universe. The importance and applicability of this new consciousness are positive signs for promoting global humanism in the 21st century. The primary monistic philosophy of the Hindu tradition, known as Vedanta, acknowledges that everything is essentially reality and that all life is fundamentally one. This oneness naturally manifests itself in a reverence for all things. Concerns about the 'environment' and 'sustainability' are present in both traditional 'Hindu' communities and their avant-garde fringe groups of emerging religious movements. Through his programs at the Ramakrishna Mission and his more scientific interpretation of the Vedanta and Yoga philosophies, Swami Vivekananda (1863–1902) had already brought these concerns to light. In his four lectures at the World Parliament of Religion in Chicago in 1893, he framed the idea of the global family and union within the context of environmental consciousness. He portrayed Hinduism as a tradition that upholds universal unity.

The principle of 'sustainable development' requires the current generation to use environmental resources in a way that does not harm the ability of future generations to meet their own needs. To achieve this, we must also consider eco-spirituality or reverence and revelation. Development should not destroy the natural and spiritual assets of our cultural heritage that future generations would also want to cherish. The spirit of sustainability is to act in ways that help others and to understand the deeper nature of things - the cosmic integrity that is ultimately the sanctity of life. This involves leading a way of life and taking actions that realize the intrinsic value they serve. This is the need of the hour - to care for the Earth and us, as Rolston proclaimed in 1988. Identifying one's geographical location on a blank map was a challenge a century ago. Today, we are philosophically perplexed by what has long been mapped as a moral vacuum. Since the roots of ecological trouble are largely religious, the solution must be essentially religious. We must re-think and re-feel our nature and destiny.

According to Swami Vivekananda, nature only has a system by which our minds interpret a variety of phenomena; there is no objective law. He also believed that ethical values are the moral force behind the sustainable existence and progress of humanity and that religion is the essence of spirituality, not dogmas or rituals. He emphasized the importance of interfaith harmony, peace, and universal brotherhood, and saw dharma as the inherent order of right action in service to God. He also bridged the gap between realization and revelation and encouraged people to recognize themselves as the creators and embodiments of the universe.

Sustainability and eco-spirituality are connected to Swami Vivekananda's philosophy. In line with the fundamental ideas of sustainability, which emphasize the interdependence of ecological systems and the significance of taking into account the well-being of all living things, he underlined the interconnectedness of all living things. In his speech, Swamiji discussed the importance of having a reverence for nature and the divine presence in all facets of creation. This promotes environmental stewardship and care by acknowledging the intrinsic value of the natural world and fostering sustainability. The spiritual aspect of life and the connection between the spiritual and material realms are emphasized in Vivekananda's teachings. His focus on the divinity inherent in all creation resonates with eco-spirituality, which unites environmental consciousness and spiritual principles. Swami Vivekananda also promoted the idea of selfless service (Seva) to humanity, which can be expanded to include service to the environment. This idea encourages conscientious and responsible actions that improve the health of both people and the environment. Furthermore, Swami Vivekananda promoted religious harmony by acknowledging that various spiritual paths ultimately lead to the same ultimate truth. This can be expanded to include the concept of harmony with nature in the context of sustainability, taking into account the different methods and customs that support a more environmentally friendly and sustainable way of living. Ultimately, the idea of responsible living can be linked to Swami Vivekananda's emphasis on self-realization and the discovery of one's inner potential. People are urged to live in balance with the natural world, understanding the effects of their decisions on the ecosystem. While Swami Vivekananda did not specifically address the modern concepts of sustainability and eco-spirituality, his teachings offer a philosophical framework that can be used to understand and apply these ideas in light of the ecological issues we face today.

# NAVIGATING THE MORAL COMPASS

## ETHICAL DIMENSIONS OF GLOBAL ENVIRONMENTAL ISSUES

Anamika Sarkar

The delicate dance between humanity and the planet has reached a critical juncture, forcing us to confront the ethical dimensions of global environmental issues. As our actions stave across ecosystems, ethical questions loom large, challenging us to reassess our responsibilities, consider the rights of future generations and non-human entities, and grapple with the intricate balance between environmental protection and human progress. In this exploration, we unravel the complex tapestry of ethical considerations that intertwine with the global environmental crisis.

Global environmental issues encompass a spectrum of challenges, from the looming spectre of climate change to the silent erosion of biodiversity and the pervasive impact of pollution. These issues transcend borders, demanding a collective response grounded in ethical principles.

### **The Responsibility of Developed and Developing Countries:**

The ethical discourse begins with a reflection on the responsibility borne by developed nations and the imperative for developing countries to navigate a sustainable path to progress. Developed nations, often the historical contributors to environmental degradation, carry an ethical burden to lead the charge in reducing their impact. Simultaneously, developing nations grapple with the ethical challenge of meeting the right to development while minimizing environmental harm. It is a shared responsibility that transcends geopolitical boundaries, requiring a harmonious collaboration for a sustainable global future.

### **The Rights and Interests of Generations, Animals, and Ecosystems:**

Ethical considerations extend beyond human-centric perspectives, embracing the rights and interests of present and future generations, non-human animals, and ecosystems. The ethical imperative to protect the planet for future generations prompts reflection on inter-generational justice, balancing short-term gains with the enduring health of the environment. The intrinsic value of biodiversity underscores the ethical obligation to preserve ecosystems, recognizing the interconnectedness of all living entities.

### **Balancing Environmental Protection with Development, Justice, and Well-being:**

The intricate dance between environmental protection and human development unfolds against the backdrop of ethical challenges. Striking a balance between economic development and environmental preservation demands ethical reflection, prompting a reassessment of priorities. Environmental justice becomes a moral imperative as vulnerable communities bear the brunt of environmental degradation. The ethical responsibility extends to policies that prioritize both environmental protection and societal welfare, fostering a symbiotic relationship between the health of the planet and the well-being of its inhabitants.

### **The Role of Scientific Uncertainty, Risk Assessment, and Precautionary Principle:**

Navigating the ethical maze of global environmental issues requires addressing scientific uncertainty, risk assessment, and the precautionary principle. As decisions are made in the face of uncertainty, ethical considerations come to the forefront. The precautionary principle becomes a guiding light, urging policymakers to err on the side of caution, acknowledging the potentially irreversible consequences of unchecked actions. The ethical responsibility lies in transparent decision-making processes that incorporate scientific knowledge while acknowledging the limitations of our understanding.

### **Conclusion:**

In the tapestry of ethical considerations surrounding global environmental issues, a call to action echoes. The urgency of addressing these dimensions is not just a plea for the health of the planet but a moral imperative for the collective well-being of humanity and the diverse ecosystems we cohabit. As we grapple with the challenges ahead, let our decisions be guided by an ethical compass, recognizing the interconnectedness of all life and our shared responsibility to navigate a path toward a healthy, sustainable, and just world. The journey may be arduous, but the ethical imperative is clear: the time for action is now.

*“Never doubt that a small group of committed citizens can change the world; indeed, it is the only thing that ever has” — Margaret Mead*

# BETWEEN ANTHROPOCENTRISM AND ECOCENTRISM

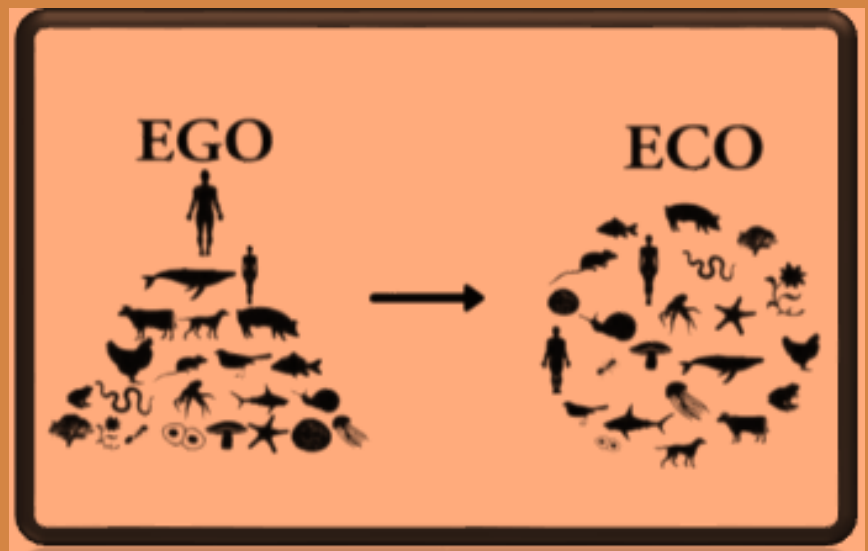
Ashis Sarkar

Anthropocentrism refers to the superiority of humans as compared to animals could be independent of an environmental ethic of preservation of natural resources because natural resources are valuable to humans.

**Eco centrist** is an environmental ethic that redefines our relationship with the natural world by emphasizing the intrinsic value of all living beings and ecosystems. It challenges anthropocentrism, urging a shift toward a more holistic, interconnected, and ethically conscious approach to environmental stewardship.

Anthropocentrism, the perspective that places human interests and well-being at the centre of ethical considerations, has played a significant role in shaping environmental ethics. This philosophical stance has both informed and challenged the way humans perceive and interact with the natural world. Anthropocentrism has been a prevailing worldview, grounded in the belief that humans hold a superior moral status, granting them the authority to prioritize their own needs and desires over the well-being of the environment.

This human-centric approach has historical roots, with religious and philosophical traditions often emphasizing humanity's dominion over nature. The Bible, for example, articulates the idea of humans having dominion over the Earth, contributing to an anthropocentric worldview. One of the key criticisms of anthropocentrism lies in its role in environmental degradation. By prioritizing human interests, this perspective has historically justified the exploitation of natural resources, deforestation, and pollution. The pursuit of economic growth and technological advancement, often driven by anthropocentric values, has resulted in the depletion of ecosystems and the loss of biodiversity.



However, anthropocentrism is not a monolithic concept, and nuances exist within this ethical framework. Some argue for a "soft" anthropocentrism that acknowledges the intrinsic value of nature, not solely for its utility to humans but also for its inherent worth. This more tempered approach attempts to reconcile human interests with environmental conservation, recognizing the interconnectedness of ecosystems and the services they provide to humanity.

Critics of anthropocentrism advocate for alternative ethical frameworks that prioritize non-human entities and ecosystems. Biocentrism, for instance, asserts that all living beings have intrinsic value, not solely determined by their utility to humans. This perspective challenges the anthropocentric hierarchy and calls for a more inclusive ethical consideration of the natural world.

Eco-centrism takes a broader stance by asserting the intrinsic value of the entire ecosystem, including non-living elements. It emphasizes the interconnectedness and interdependence of all components within an ecosystem, urging a shift away from human-centric ethics towards a more holistic understanding of environmental well-being. In navigating the role of anthropocentrism in environmental ethics, a balanced approach is essential. Recognizing the importance of human well-being while acknowledging the intrinsic value of nature is crucial for achieving sustainable and ethical environmental practices.

This requires a paradigm shift in how societies conceptualize progress, moving beyond purely anthropocentric measures such as economic growth to encompass broader indicators that consider ecological health and resilience. Practical applications of a more balanced environmental ethic can be seen in various conservation and sustainability initiatives. The shift towards renewable energy, the promotion of biodiversity conservation, and the implementation of circular economy principles exemplify efforts to reconcile human interests with a more ecologically sensitive approach.



# RIGHTS OF NATURE, DUTIES OF HOMO SAPIENS

Riyanka Das

The concept of the “Rights of Nature” emphasizes the intrinsic worth of ecosystems and their freedom to continue existing, flourish, and change. This contradicts the conventional anthropocentric viewpoint, which prioritizes human concerns. It imposes a moral responsibility on humans to fulfil their environmental responsibilities.

The traditional legal framework, which views nature as property, does not align with the concept of the right of nature; rather it permits continued exploitation of natural resources as private property of individuals, companies or State. There are growing concerns that just as human beings have their rights that are enshrined in constitutional and legal systems, nature should also have their rights that need to be recognised and protected.

28 countries have already recognized rights of nature in their constitutional and legal system. Ecuador became the

world’s first country to constitutionally recognize the rights of nature in 2008. Bolivia passed the first-ever ‘Law of the Rights of Mother Earth’ in 2010. New Zealand granted legal personhood status to the River Whanganui in 2017. Colombia gave the Amazon River the right to legal protection in 2018. Australia introduced the ‘Rights of Nature and Future Generations Bill 2019’. Uttarakhand High Court granted Ganga, Yamuna and the interconnected glaciers the same legal status as humans (this was revoked by the Supreme Court).



In April 2010, People’s World Conference on Climate Change and the Rights of Mother Earth was organised in Ecuador, attended by over 35,000 participants from around the world. It adopted the Universal Declaration of the Rights of Mother Earth was proclaimed on 22 April 2010 (Mother Earth Day). Article 1 of the Declaration defines Mother Earth as a ‘unique, indivisible, self-regulating

community of interrelated beings that sustains, contains and reproduces all beings’.

Article 2 enumerates the **Rights of Mother Earth**, which include the right to life and to exist; the right to regenerate its bio-capacity and to continue its vital cycles and processes free from human disruptions; the right to maintain its identity and integrity as a distinct, self-regulating and interrelated being; the right to water as a source of life; the right to clean air; the right to integral health; the right to be free from contamination, pollution and toxic or radioactive waste; the right to not have its genetic structure modified or disrupted in a manner that threatens its integrity or vital and healthy functioning; and the right to full and prompt restoration the violation of the rights recognized in this Declaration caused by human activities;

Article 3 lists out **Duties of Homo Sapiens**, States and institutions to Mother Earth. These include duties to

- act in accordance with the rights and obligations recognized in this Declaration;
- promote and participate in learning, analysis, interpretation and communication about how to live in harmony with Mother Earth in accordance with this Declaration;
- ensure that the pursuit of human wellbeing contributes to the wellbeing of Mother Earth;
- establish and apply effective norms and laws for the defence, protection and conservation of the rights of Mother Earth; and
- guarantee that damages caused by human violations of the inherent rights recognized in this Declaration are rectified and that those responsible held accountable for violation of Mother Earth.

Although the Declaration is yet to be accepted by the UN and its members there is growing movement around the world that the rights of Mother Earth and duties of human beings must be recognised universally.

# LEAVING NO ONE BEHIND

Pinanki Das

Human civilization has made tremendous progress over the five millennia of recorded history. From the animal based pastoral life to the land based agricultural and fossil fuel based industrial economy to the technology based post-industrial society, systems of production and consumption, habitation and communication, health and education, trade and commerce have undergone revolutionary changes, generating wealth and creating edifices of magnificent civilizations in the east and the west.

Despite all these spectacular achievements there are widespread deprivations and injustices. There are poverty and hunger, malnutrition and disease, illiteracy and homelessness, violence and conflicts. More than 800 million people in the world are hungry, almost all them in developing countries, with South Asia having the largest number of 277.2 million and Africa 246.2 million. Hunger is caused not by any scarcity of food, but by the inability of the poor to purchase the food. Poverty is caused by unemployment or underemployment which is created as much due to lack of capability and skill as inadequate opportunities of economic growth, which again is related to the manner in which political economy is organised nationally and globally.

If the world of deprivations is mainly concentrated in developing countries, the world of discriminations and inequalities are spread out in every country among various groups along income, wealth, gender, age, ethnicity, religion and other divisions. Discrimination against women is pervasive in every society in every sphere – education, health care, employment and decision making. Increasing violence against women around the world is symptomatic of the deteriorating standards of safety and security of women. There are age related discriminations that militate against protection of rights of persons in some age groups, such as children, adolescents and old people. There are deeper rooted discriminations in every society based on race, caste, language and religion, which cannot be eliminated so easily despite constitutional guarantees for equal rights, legal protection against atrocities and even affirmative actions.



In this backdrop 2030 Agenda for Sustainable Development declared: *“We are determined to take the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path. As we embark on this collective journey, we pledge that no one will be left behind”*.

‘Leave No One Behind (LNOB) has emerged as the dominant philosophy of sustainable development to ensure that fruits of development reach everybody, that deprivations from the basic necessities of life are ended for ever, that all forms of discriminations are removed and that justice is done to all.

LNOB captures three intertwined concepts of Equality, Non-discrimination and Empowerment that are enshrined in the principles of UN Charter, grounded in the Universal Declaration of Human Rights and embedded in many global frameworks, conventions and agreements committing nations to safeguard rights of the poor, homeless, women, children, disabled, aged, minorities, migrants and refugees in every corner of the world.

The trinity of Equality, Non-discrimination and Empowerment are woven into 17 Sustainable Development Goals and its 163 targets. Some of these goals include: ‘end poverty in all its form everywhere’ (SDG-1), ‘end hunger, achieve food security and improved nutrition’ (SDG-2), ‘ensure healthy lives and promote well-being for all at all ages’ (SDG-3), ‘ensure inclusive and equitable quality education for all’ (SDG-4), ‘achieve gender equality and empower all women and girls’(SDG-5), ‘ensure availability of water and sanitation for all’(SDG-6), ‘ensure access to affordable, reliable, sustainable and modern energy for all (SDG-7), ‘promote full and productive employment and decent work for all’ (SDG-8).

Every member country of the United Nations is committed to the philosophy of LNOB. *Saka Sath Sabka Vikas* is a kind of Indian adaptation of LNOB. There has been some progress in achieving these goals, although there are significant challenges, which can be overcome with concerted efforts of all stakeholders and organisations – government, non-government and inter-government.

# PRINCIPLE OF WATER ETHICS

Sangita Saha

## *“A Moral Need for Our Blue Planet is Adopting Water Ethics”*

The principle of water ethics revolves around the ethical considerations and responsible behaviour concerning water management, use, and conservation. Water is a fundamental resource for life, and ethical principles help guide individuals, communities, and governments in making decisions that prioritize the well-being of both current and future generations, as well as the ecosystems that depend on water.

Some key principles of water ethics are:

1. **Equity and Access:** Ensure fair and equitable access to water resources for all people, regardless of socio-economic status, ethnicity, or geographical location. Recognize water as a basic human right and work towards universal access to clean and safe drinking water.
2. **Sustainability:** Promote sustainable water management practices that consider the long-term health and viability of water sources. Avoid over-extraction and depletion of aquifers, and encourage the use of water resources in a way that ensures their availability for future generations.
3. **Stewardship:** Emphasize the responsible and careful stewardship of water resources. Encourage individuals, communities, and organizations to adopt practices that minimize water waste, pollution, and negative impacts on aquatic ecosystems.
4. **Collaboration:** Foster cooperation and collaboration among different stakeholders, including governments, communities, industries, and environmental organizations. Recognize that water issues often transcend political boundaries and require collective efforts to address.
5. **Economic efficiency:** Promote efficient and sustainable use of water resources in economic activities. Encourage industries and businesses to adopt water-efficient technologies and practices to minimize waste and environmental impact.
6. **Climate Resilience:** Recognize and address the impacts of climate change on water availability and quality. Develop strategies to enhance the resilience of water systems in the face of changing climatic conditions.
7. **Education and Awareness:** Promote education and awareness about water issues, encouraging a sense of responsibility and informed decision-making among individuals and communities.



By adhering to these principles, societies can strive for a more ethical and sustainable approach to water management, balancing the needs of human populations with the protection of ecosystems and the environment.

*“A nation that destroys its soils destroys itself” — Franklin D. Roosevelt*

## JUSTICE FOR ANIMALS

Ditsa Maity

The principle of ahimsa is the fundamental belief behind the respect for animal rights in Buddhism, Hinduism, and Jainism. According to Hinduism, animals and humans both possess souls and after a sentient being dies, they can either be reborn as humans or as animals. As a result of these beliefs, many Hindus choose to follow vegetarianism, while the Jain doctrine, with its strict interpretation of the doctrine of ahimsa, mandates vegetarianism. Likewise, vegetarianism and the prohibition of animal killing are practices of Mahayana Buddhism.

As per philosopher Martha Nussbaum, animal justice involves allowing animals to live their lives freely. Unfortunately, human activities are directly putting animals in danger. The habitats of big land animals are shrinking, while whales and dolphins are being choked by plastic debris in the ocean. The noise from oil drilling is contaminating the sea, and air pollution is suffocating migratory birds in the sky.

Since we are the only intelligent species on Earth, we believe that we have the right to use the planet for our own sustenance and claim parts of it as our own. However, despite their circumstances being similar to ours, we refuse to grant other animals the same rights. They, too, have to make the most of their lives since they also found themselves here. Non-human animals are present everywhere, even though our increasingly urbanized world makes it harder to see them. Humans often breed animals in laboratories or industrial farms, where they are frequently probed, poked, and exploited for human benefit.

Human-animal conflict has become a growing concern in India for the protection of wild animals. It has been reported by the government that 222 elephants died due to electrocution between 2018-19 and 2020-21. Additionally, 197 tiger deaths are under investigation, and between 2019 and 2021, 29 tigers were killed by poaching. As a result of conflicts with animals, elephants caused the deaths of 1,579 people in three years: 585 in 2019-20, 461 in 2020-21, and 533 in 2021-22. Odisha had the highest number of deaths at 332, followed by Jharkhand with 291 and West Bengal with 240. In contrast, only 125 people were killed by tigers in reserves between 2019 and 2021, with Maharashtra accounting for nearly half of these deaths at 61.

One way to deal with exploitation of animals is through animal protection. Animal protection, in general, refers to stopping, reducing, or eliminating the harm that people cause to animals. There are three categories of animal protection: Wild animal protection, which aims to keep wild animals safe and allow them to thrive in their natural habitats. Animal welfare aims to protect animals under human control through laws and advocacy efforts, whether in settings such as farming, research, or companion animals.

World Animal Protection, an organization that has been active for over 55 years, inspires people all over the world to protect animals. The group works with businesses to ensure that the animals under their care are treated humanely, collaborates with governments and other relevant parties to stop the trade, capture, or killing of wild animals, and advocates for improved care for animals raised for food.

India, the seventh-largest nation on Earth and home to some of the planet's most biologically diverse areas is home to both domestic and wild animals. Of the 36 hotspots for biodiversity, four are in India. The primary piece of animal welfare law in India is the Prevention of Cruelty to Animals Act, of 1960, which acknowledges that animals can experience both physical and mental suffering and applies to “all living creatures”. Constitution of India commands all citizens to “have compassion for living creatures”. PETA India, founded in 2000, educates the public and policymakers about animal abuse while fighting for the rights of animals and encouraging respect for all animals. Education and awareness about the rights of animals must be spread far and wide to strengthen the system of protection and justice to animals.



# UNVEILING SOIL HEALTH'S CRUCIAL ROLE IN THE ONE HEALTH PARADIGM

Nidrothita Modak

“The health of soil, plants, animals, and man is one and indivisible”- Albert Howard

The One Health paradigm recognizes the interconnectedness of human health, animal health, and environmental health. While discussions around One Health often focus on infectious diseases that can be transmitted between animals and humans, soil health plays a crucial and often underestimated role in this holistic framework. Here's why soil health is essential in the One Health paradigm:

**Nutrient Cycling and Food Security:** Healthy soils are essential for nutrient cycling, ensuring that plants receive the necessary nutrients for growth. This, in turn, influences the nutritional content of the crops we consume. Nutrient-rich food supports both human and animal health, contributing to overall well-being and reducing the risk of malnutrition.

**Microbial Diversity:** Soil is home to a vast array of microorganisms, including bacteria, fungi, and viruses. This microbial diversity is critical for maintaining a balanced ecosystem. The health of the soil microbiome influences the health of plants, which can impact the health of animals and humans through the food chain.

**Antibiotic Resistance:** The use of antibiotics in agriculture, including animal husbandry, can lead to the development of antibiotic-resistant bacteria in the soil. Resistant bacteria can potentially be transferred to humans through direct contact, consumption of contaminated food, or exposure to contaminated water, contributing to the global challenge of antibiotic resistance.

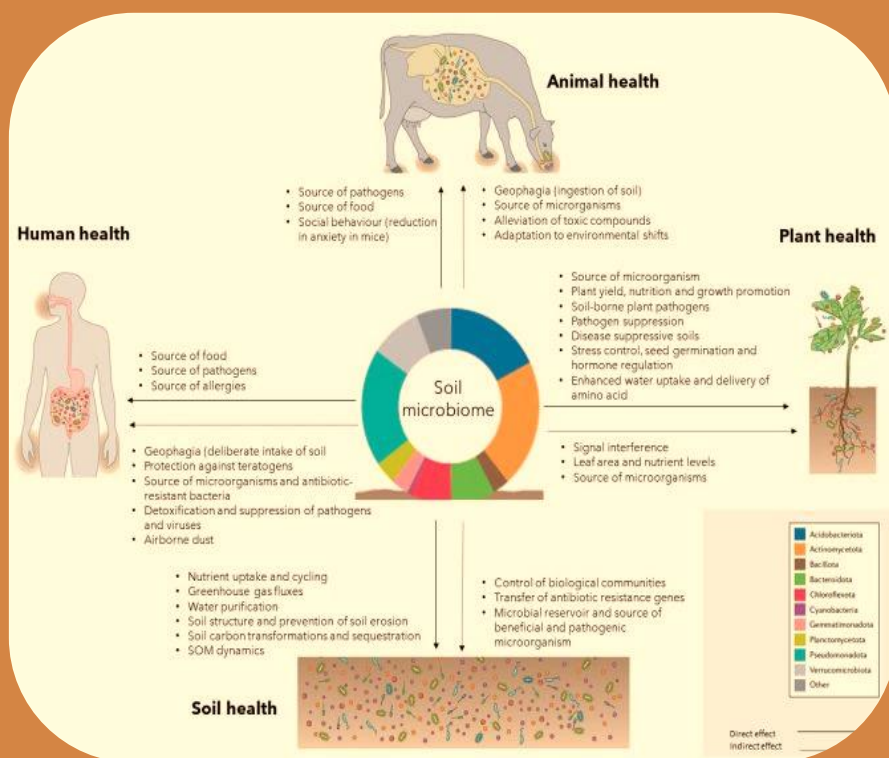
**Water Quality:** Soil acts as a natural filter for water, helping to remove impurities and contaminants before they reach water bodies. Contaminated water can have adverse effects on both human and animal health, causing waterborne diseases and affecting the overall quality of ecosystems.

**Climate Change Mitigation:** Healthy soils play a crucial role in carbon sequestration and mitigating climate change by acting as a sink for carbon dioxide. Practices that enhance soil health, such as agroforestry and sustainable land management, contribute to climate change adaptation and mitigation.

**Disease Transmission:** Soil can be a reservoir for various pathogens that can affect both plants and animals. Understanding the dynamics of soil-borne diseases is essential for preventing the transmission of diseases from animals to humans and vice versa.

**Pesticide Impact:** The use of pesticides in agriculture can have direct and indirect effects on soil health. Pesticide residues in soil may affect plant and microbial communities, potentially impacting the food chain and human health through the consumption of contaminated crops.

In summary, soil health is an integral component of the One Health paradigm. Ensuring the sustainability and well-being of our planet requires a comprehensive understanding of the interactions between soil, plants, animals, and humans. Promoting practices that prioritize soil health contributes to a more resilient and interconnected ecosystem that supports the health of all its inhabitants.



# PROMOTING ONE HEALTH FOR RESTORING HARMONY IN THE ECOSYSTEM

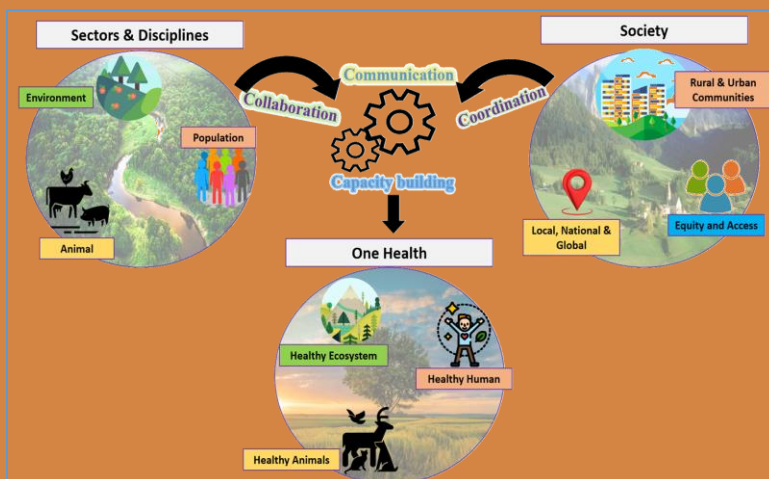
Akash Chakraborty

One Health is the result of a protracted search for a sustainable way of living. The recognition of interdependence and connectivity highlights the need to take into account the well-being of all living organisms and their common habitats. In today's globalized culture, there are intimate connections between the environment, animal health, and human health. Restoring environmental equilibrium is the goal of this comprehensive strategy, which aims to balance ecosystems and enhance both ecological and human well-being. It acknowledges that all components of the system are interrelated and that issues in one area may have an impact on the system as a whole. As per the World Health Organisation, "One Health is an approach where multiple sectors collaborate to achieve better public health outcomes." In our rapidly changing world, the intricate relationships between the health of people, animals, and the environment are becoming more and more apparent, underscoring the fragility of the food chain. In order to restore ecosystems to balance, a comprehensive and cooperative approach is urgently needed, and the concept of "One Health" serves as an effective paradigm that highlights the critical interdependence of various elements.



The World Health Organisation (WHO), Food and Agriculture Organisation (FAO), World Organisation for Animal Health (WOAH), and United Nations Environment Programme (UNEP) have called a meeting of the advisory group, also known as The One Health High-Level Expert group. One of the main things One Health does for ecosystems is

prevent zoonotic infections. By closely monitoring and managing the health of household animals, livestock, and natural settings, One Health aims to reduce the likelihood of illnesses spreading from animals to people. The implementation of sustainable practices, such as responsible waste management, the adoption of renewable energy sources, sustainable land management and agriculture, and the preservation of natural habitats, can help mitigate the ecological footprint of human activities and preserve the environment's rich diversity. This maintains the delicate equilibrium throughout ecosystems and protects the wellness of society.



Climate change poses a danger to access to clean air, safe drinking water, wholesome food, and secure housing, making it a key obstacle to the One Health strategy. By addressing the root causes of climate change and putting mitigation measures in place, the One Health approach helps create resilient ecosystems that can survive the difficulties brought on by a changing climate. One of the most important aspects of supporting One Health is encouraging a cooperative and integrated approach that highlights the intricate link between environmental, animal, and human health. Promoting One Health may be done in a number of ways, including community participation, international collaboration, public-private partnerships, media engagement, interdisciplinary collaboration with research and surveillance, and raising awareness via education and training.

One Health is significant because it can offer answers that cut beyond conventional disciplinary lines. In order to create a more resilient, sustainable, and peaceful society in which the well-being of all living things is intimately interwoven and safeguarded as a whole, it encourages collaboration among healthcare professionals, animal welfare organizations, environmentalists, government officials, and communities.

# **DILUTION OF CBDR PRINCIPLE – DARKENING CLOUDS OF CLIMATE INJUSTICE?**

**Bhagyasree Chatterjee**

The Common but Differentiated Responsibilities (CBDR) principle has long been a cornerstone which stood as a beacon of equity and justice of international environmental agreements, especially in the context of addressing climate change. Rooted in the idea that nations have different responsibilities based on their historical contributions to environmental degradation, CBDR seeks to promote equity and justice in the global response to climate change, and has been a guiding force in shaping international climate agreements. However, recent developments suggest a dilution of the CBDR principle, raising concerns about the emergence of dark clouds of climate injustice.

## **Historical context of CBDR**

The CBDR principle emerged during the United Nations Framework Convention on Climate Change (UNFCCC) negotiations in the early 1990s. It recognizes that developed countries, having historically contributed more to greenhouse gas emissions, bear a greater responsibility for addressing climate change. This acknowledgment of historical emissions serves as a moral and ethical foundation for climate action. Yet, it tempers this common responsibility with a nuanced understanding of historical context and disparities in development. Developed nations, having historically contributed significantly to the accumulation of greenhouse gases, are expected to bear a greater burden in mitigation and adaptation efforts. On the flip side, developing nations are afforded flexibility to pursue sustainable development without undue impediments.

## **Dilution in international agreements**

Despite its significance, the CBDR principle has faced challenges in recent international climate agreements. Some developed nations argue for a more equal distribution of responsibilities, seemingly overlooking the historical context that birthed the principle of CBDR-RC the addition of "Respective Capabilities" reflects an evolving understanding of responsibilities, considering both historical context and the current capacities of nations. The dilution is evident in the weakening language and commitments, particularly in agreements like the Paris Agreement. This shift threatens to tilt the balance of climate responsibility towards a one-size-fits-all approach - from binding emission reduction targets for developed countries to voluntary nationally determined contributions (NDCs) for all nations.

## **Economic interest v/s environmental ethics**

The dilution of CBDR can be attributed, in part, to the prioritization of economic interests over environmental ethics. Powerful nations often prioritize economic growth, compromising the ethical imperative of addressing climate change with a sense of global justice. This shift raises questions about the commitment of these nations to principles of fairness and equity in the face of an impending climate crisis. However, as emerging economies assert their positions on the global stage, there is a growing sentiment that responsibilities should be more evenly distributed. This perspective, while seemingly fair, neglects the historical culpability that has left vulnerable nations grappling with the severe impacts of climate change due to the lack of resources and infrastructure to adapt the climate change.

## **Civil society and grassroots movements**

As the CBDR principle faces challenges at the international negotiating table, civil society and grassroots movements play a vital role in upholding the principles of environmental ethics and climate justice. Activists and organizations advocating for climate justice highlight the importance of maintaining a commitment to historical responsibility and equitable distribution of climate-related burdens. Their efforts aim to counterbalance the dilution of CBDR through public awareness and pressure on governments to make it more effective than before.

## **Reimagining global environmental governance**

Redefining the parameters of responsibility and ensuring a more inclusive decision-making process that considers the voices of all nations, especially the most vulnerable, is essential. Ethical frameworks that prioritize justice and equity should guide the development of future international agreements to address climate change effectively.

## **Conclusion**

CBDR has long been a symbol of global solidarity in the face of a shared threat. Its dilution, however, threatens to fracture this unity. As dark clouds of climate injustice gather, it is imperative for nations to reflect on the ethical dimensions of their commitments. Upholding the principles of historical responsibility, equity, and justice is not just a matter of policy; it is a moral imperative that will shape the future of our planet and determine the legacy we leave for generations to come.

## KEYS TO CLIMATE JUSTICE

Kasturi Dutta

Climate justice requires a fair distribution of responsibilities and rewards in addressing climate change. Sustainable production and consumption contribute directly to reducing environmental harm and ensuring equitable benefits. Developing countries and impoverished populations bear a disproportionate burden of climate change, highlighting the moral obligation of developed countries to lead in sustainable practices. Goal 12 emphasizes the establishment of sustainable production and consumption patterns to maintain the well-being of current and future generations. Changing consumption habits and transitioning to sustainable energy sources are crucial steps in reducing environmental impact. The objective is to minimize the environmental footprint by adopting eco-friendly practices, reducing resource depletion, and curbing pollution.

### **Global Disparities in the Face of Rising Hunger:**

Global disparities in the face of rising hunger are caused by inconsistent access to nourishing food, often exacerbated by poverty, violence, and natural disasters. Despite 828 million people being hungry, 13.2% of the world's food was lost in the supply chain in 2021, with an additional 17% wasted at the household, food service, and retail levels (SDG Report, 2023). Although regional differences in food loss exist, household food waste per capita remains consistent. Sustainable agriculture, precision farming, agroecology, and circular economy principles can enhance productivity while minimizing environmental impact. Initiatives promoting imperfect or surplus produce and redirecting surplus food to communities in need through distribution networks contribute to addressing both food waste and hunger.

### **Unveiling Regional Inequalities in Material Footprints:**

Regional inequalities in material footprints reflect consumption disparities and can be mitigated through a concerted effort towards sustainable consumption and production practices. High-income regions, often responsible for larger material footprints, can adopt eco-friendly and resource-efficient technologies to minimize their impact. Embracing circular economy principles, such as recycling and reusing materials, can significantly reduce the demand for new resources. Moreover, fostering awareness and encouraging sustainable consumer choices can lead to a more equitable distribution of material footprints globally. Sustainable consumption and production not only address environmental concerns but also contribute to levelling the playing field, promoting a more balanced and responsible utilization of resources across regions.

### **Rise of Fossil Fuel Subsidies:**

Persistent subsidies for fossil fuels are a major obstacle to sustainable development and efforts to combat climate change. This worsens environmental damage and slows down the shift to renewable energy. To tackle this issue, it is crucial for countries to collaborate internationally, report transparently and align their policies with sustainability goals. Implementing Sustainable Development Goal 12, which focuses on sustainable consumption and production, is key to reducing and eliminating these subsidies. This requires redirecting financial incentives, increasing public awareness, and promoting innovation in clean energy technology. Taking urgent action to phase out fossil fuel subsidies is essential to address the impacts of climate change and ensure that global energy policies are aligned with sustainable development.

### **Transformative Progress:**

- In the Tokyo 2020 Olympic games, Japan created recyclable medals for winners using small electronic devices like discarded mobile phones donated by Japanese citizens.
- For European countries, only fisheries products validated as legal by competent flag states can be imported or exported to avoid exceeding catch limits from the sea.
- An IT engineer in the United Arab Emirates invented Diwama, an AI-based software that automates waste analysis.
- Lastly, Malaysia has focused on food waste management. Instead of throwing away edible food waste, many NGOs take over unwanted food and use it as a food bank for underprivileged individuals.



## ZERO EMISSIONS, ZERO POVERTY

Jubaraj Roy

Zero emissions, zero poverty is a phrase that encapsulates the idea of achieving environmental sustainability and eradicating poverty simultaneously. This concept aligns with the United Nations Sustainable Development Goals (SDGs), particularly SDG-1 which aims to eliminate poverty in all its forms everywhere, and SDG 13 which calls for taking urgent action to combat climate change and its impacts.

The twin goals of combating climate change and eradicating poverty eradication are intertwined and both very closely connected with the fundamental issues of environmental ethics. Climate change affects all countries, all communities and all sectors of economy, but it affect poor people and their livelihoods disproportionately.

Poor people in rural and urban areas are the worst victims of climate change. Rural poor are mostly marginal farmers and



landless labourers who earn their livelihood from subsistence agriculture that is heavily impacted by climate change – rising temperature, uncertain rainfall and extreme climate events like droughts, floods and cyclones. Poor farmers living in the coastal areas and deltaic regions further suffer from the risks of rising sea level and salinization of soil and water, which give deadly blows to agriculture, forcing the poor to migrate in search of livelihood as climate refugees.

Eradication of poverty not only reduces the impact of climate change, it enhances the capacity of people to adapt to the impacts of climate change. Less the poverty, more the capacity to insure against losses of crop failure, and more the capacity to pay for higher prices of food, and to take care of other basic necessities like health, education and shelter.

Eradication of poverty is impossible without energy, as poverty cannot be removed without meaningful employment, and opportunities of employment - in industry, agriculture or services - cannot be created without energy. Even traditional handlooms and handicrafts need energy for completing processes to meet demands of modern markets. Countries of the west that achieved spectacular economic growth had access to abundant, cheap and reliable energy; countries in the east that lagged behind did not have modern energy – thermal, hydel or nuclear.

Generating energy by burning fossil fuels – coal, oil and gas – has the danger of emitting greenhouse gases and uncontrolled emission of such gases in the atmosphere since the industrial revolution have changed the climate with a continuous rise in temperature that have had very dangerous impacts on the planet – melting glaciers, rising sea level, changing patterns of rainfall, increasing frequencies and intensities of extreme climatic events – with adverse consequences on agriculture and food security, water resources and sanitation, ecology and bio-diversity, human health and well-being. These have affected the poor much more than the rich. Therefore excessive use of fossil fuel based energy created prosperity of a few in the developed countries, at the cost of poverty of the multitude in the developing world.

Hence solution lies not in the continued use of fossil fuel based energy that will aggravate poverty, but generating energy from abundant sun, wind, water, and bio-mass, for which technology at affordable costs are available within the reach of the developing world. The use of renewable energy alone can ensure that there is both zero emission and zero poverty.

**“In nature’s economy, the currency is not money; it is life” — Vandana Shiva**

# JUSTICE AND EQUITY IN CLEAN ENERGY TRANSITION

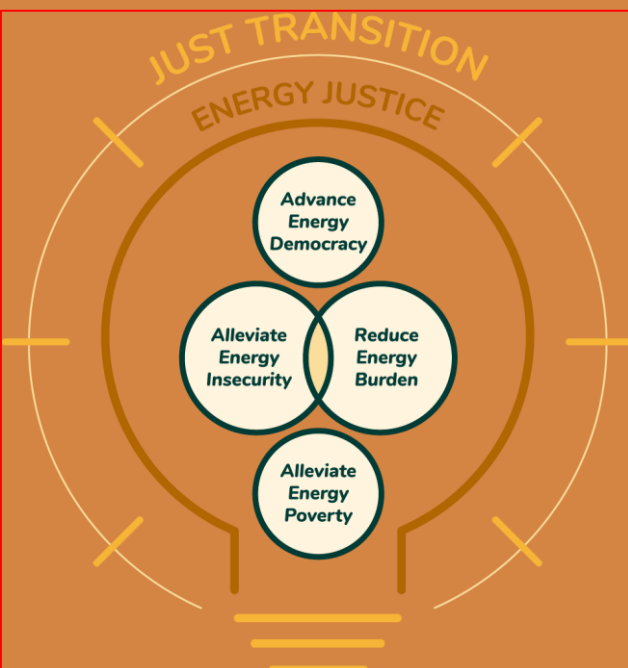
Sanchari Roy

Energy transition refers to the shift from dominant energy sources to clean energy, focusing on low-carbon resources like sun, wind, and natural gas. An equitable clean energy transition is one that benefits everyone, irrespective of their socioeconomic status, race, or income. Additionally, it seeks to strengthen the energy resilience, safety, and health of communities that have been disproportionately impacted by fossil fuels.

The notion of energy justice seeks to establish parity between political, economic, and social involvement in the energy system. Equal access to energy-related commodities, environmental health, and ecological well-being are also necessary for individuals and communities.

Developed countries of the west that contributed most to greenhouse gas emission has more responsibility to reduce dependence on fossil fuel based energy sources. These countries are switching over to clean energy sources. In order that such transition does not cause unfair burden to low income group people various incentives and programmes have been adopted by many countries.

The Green New Deal incorporates social justice and fairness into its objectives for reducing climate change. It places a focus on pledges to promote economic growth and employment training for people and communities who may suffer negative effects from a switch to new energy sources. Through just transition work, communities may identify areas for equitable improvement, connect with impacted citizens effectively, and bridge gaps in energy efficiency and climate resilience.



Five steps have been taken through industry and policy actions to guarantee a fair energy transition. Programs for the workforce and economic diversification that assist marginalized communities that rely on fossil fuels with training, employment opportunities, and economic transition include Canada's Coal Workforce Transition Fund and Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiative. Like the Low Income Home Energy Aid Programme (LIHEAP), weatherization and energy aid entail bill discounts, help for clients suing utility providers, and improving the efficiency of a housing unit.

Building energy-efficient and renewable energy infrastructure is the goal of energy technology access expansion initiatives like Washington's Solar Plus program, which attempts to provide these resources to underserved regions.

Collective action projects, such as the Inclusive Financing for Energy Savings program, include the community in decision-

making processes and educate the public about energy-related issues and their local effects. The main goals of entrepreneurial initiatives are to increase access to energy services, technology, and jobs while promoting energy innovation and sustainability.

Equity evaluation in energy transitions is a complex process that requires a multimodal, analytical approach. To help standardize the process of evaluating low-carbon transition programs and policies in terms of equity and justice, numerous studies have been conducted using a framework that divides the energy equity evaluation into three main dimensions: health, access, and livelihood. Each dimension is given its own unique set of indicators. In order to ensure equitable results from energy transition efforts and policies, this can help guide decision-makers in acquiring essential data, measuring and evaluating these dimensions, and making data-driven decisions.

Finally, the attention to the fairness and environmental justice components of the shift to renewable energy must increase in tandem with its acceleration. Frontline communities will not trust the renewable energy transition if equality and justice are not promoted at every stage of the process.

# CLIMATE JUSTICE FOR SMALL ISLAND DEVELOPING STATE: A DIRE NECESSITY!

V Rohit Kumar

Small Island Developing States, distinguishably known as SIDS, is a distinct group of 39 member countries of the UN and 18 Associate Members of UN regional commissions that face unique social, economic and environmental vulnerabilities. The three geographical regions in which SIDS are located are: the Pacific, the Atlantic and the Caribbean, and the Indian Ocean and South China Sea. SIDS were recognized as a special category States, both for their environment and development, at the 1992 United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil. The aggregate population of all the SIDS is 65 million, slightly less than 1% of the world's population, yet this group faces unique social, economic, and environmental challenges. What distinguishes SIDS from other developing countries, is their remoteness and isolation, which make these States highly vulnerable to external economic and financial shocks.

SIDS countries are particularly vulnerable to climate change. Rising temperature and consequential melting of mountain and arctic glaciers and rising sea levels have created an existential crisis for many SIDS countries. Some of these States, very close to sea level, are apprehending submergence of large part of their territories. Kavarati in the Pacific is projected to be the first island country to be submerged if the island is not protected by sea walls. Most of the atolls of Maldives in our neighbourhood are similarly threatened with submergence and extinction. Many islanders are purchasing lands in Australia, New Zealand and other countries for their rehabilitation and resettlement in the face of the looming crises.

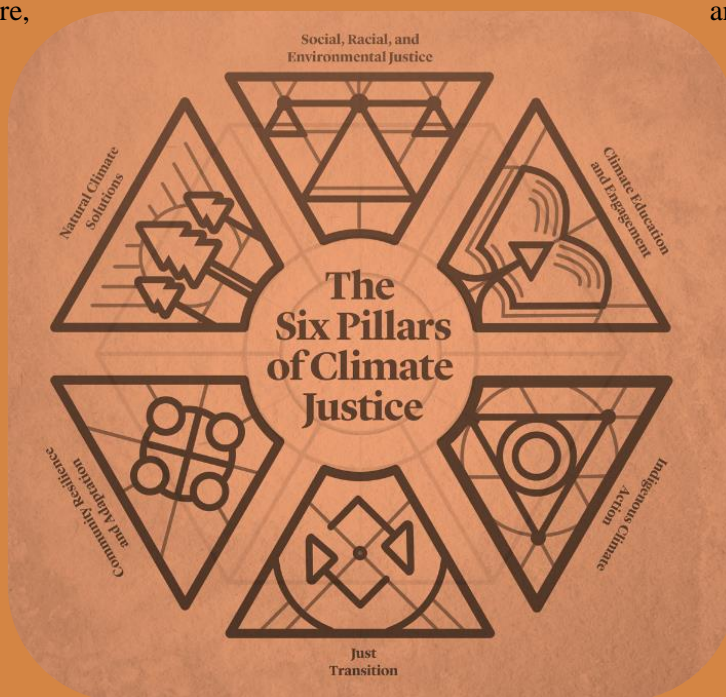
These countries and their unfortunate inhabitants have contributed least to the climate change, hardly emitting any carbon in the atmosphere, carbon through their lagoons, are the worst this is not an injustice,

Doing climate justice challenge and common mankind. The USA, Europe, Australia and maximum to global economies like China, Saudi Arabia, UAE emitters and that can generously for doing

Doing climate justice investing on structural that can save the term arrangements for whose habitats cannot

It will also mean taking

justice, as shown in the diagram. These include community resilience and adaptation; indigenous climate action; social, racial and environmental justice; natural climate solutions; climate education and awareness; and just transition to clean energy. These tasks cannot be undertaken by the Green Climate Funds created under the Paris Agreement or Loss & Damage Fund set up by COP-28. Hardly \$1.5 billion out of annual \$100 billion in climate finance pledged by the developed countries in 2019 have flown so far to the SIDS.<sup>15</sup> This calls for creation of a separate global fund for climate justice to SIDS.



and instead sinking sizeable vast forests, creeks and victims of climate change. If what else could be?

to SIDS is the common responsibility of the developed countries of the Japan that have contributed warming and emerging India, Brazil, South Africa, and others that are current afford must contribute justice to SIDS.

to SIDS will basically mean and non-structural measures islands and making long the resettlement of islanders be saved from submergence.

measures on six pillars of climate

<sup>15</sup>Paul Akiwumi. Climate finance for SIDS is shockingly low: Why this needs to change. Official website of the UN Conference on Trade and Development. <https://unctad.org/news/blog-climate-finance-sids-shockingly-low-why-needs-change>



# CLIMATE JUSTICE FOR SUNDARBANS ISLANDERS

Banashree Chakroborty

Sundarban is an agglomeration of about 200 islands, separated by nearly 400 interconnected tidal rivers, creeks and canals, at the confluence of Ganga, Meghna and Brahmaputra in the Bay of Bengal, spanning across India and Bangladesh.

Indian Sundarban, inhabited by more than 5 million people, is facing existential crisis in the face of continuous erosion of land mass, ingress of saline water into the agricultural fields and the sub-soil, and increasing frequencies and intensities of extreme climatic events like cyclonic storm surge, floods and even periodic drought due to failure of early monsoon, which together is taking regular toll of lives, livelihoods and property. Large part of Sundarban, with average elevation of 2 meters above mean sea level, is also facing real time threats of submergence due to sea level rise caused by rising temperature and melting glaciers. The area that historically emitted minimal greenhouse gases and sequestered maximum carbon through its vast mangroves has become one of the worst victims of global climate change.

There are very few places in the world that can compare with the depth, magnitude and complexities of the disasters and climate risks of Sundarban. The Small Island Developing States of the Pacific, the Maldives Islands of the Indian Ocean, and the Caribbean Islands of the Atlantic are often cited as countries most at risks due to climate change. The risks of Sundarban are much higher in every parameter – hazards, vulnerabilities and exposures. This has not been projected at the national and global levels of discourses on climate change and sea level rise.

Unfortunately there has not been any serious policy discourse on the short, medium and long term strategies for building resilience of Sundarbans based on their demands and needs. Instead there have been ad hoc programmes for welfare and development, largely undertaken by the departments in silos without any integrated and coordinated strategies for their planning, designing and implementation. Such strategies have ranged from ad hoc measures of post disaster relief and rehabilitations to routine maintenance of existing facilities and trickle down benefits of national programmes on food security, rural employment, access to energy and drinking water etc. These are straight jacketed interventions implemented in a linear fashion without any considerations of local demands, needs and resources, and hence have not been useful in making any material difference to the social and economic conditions of people who continue to live dangerously on the edge.



Building resilience of Sundarban from the risks of climate change and disasters is an urgent and serious environmental and humanitarian challenge that can be postponed only at the risk of enormous tragedies. The task is enormously complex and cannot be left to the initiatives of the local communities who do not have the resources and capacity to deal with the challenges; but communities must be the focus of any such initiative.

It requires multi-faceted interventions based on scientific investigations, knowledge and evidences as well as indigenous practices, perceptions and experiences across sectors and over time.

People of Sundarbans are clamouring for justice. It is high time that their voices are heard by authorities at state, national and global levels before it is too late.



# LOSS AND DAMAGE FUND: COSMETIC OR REAL CLIMATE JUSTICE?

Abhisek Kar

In the context of discourses on climate change, 'loss and damage' means all those losses and damages suffered by countries and communities due to climate change that are irreversible and cannot be restored or rebuilt. These include not only tangible physical, social and economic assets but also intangible assets like cultural heritage etc. Such irreparable losses have been suffered mostly by Small Island Developing States, Least Developed Countries and many vulnerable communities in developing countries, and these have been caused over the years due to consistent rise in sea level, extended heat waves, desertification, salinization, and the onslaught of extreme climatic events such as bushfires, tropical cyclones, droughts, floods etc.

The vulnerable countries have been demanding compensation for loss and damage since prior to the UN Framework Convention on Climate Change in 1992. The demands for the setting up of a global Loss & Damage Fund to be contributed primarily by the developed country due to their differential historical responsibility for climate change was finally accepted in principle at the 27<sup>th</sup> meeting of Conference of Parties to UNFCCC in Sharm el Sheikh in 2022 and the fund was actually set up in the COP-28 meeting in Dubai in 2023 when nearly a dozen countries collectively pledged more than USD700 million for the fund.

While there has been some jubilation at the acceptance of the long standing demands for the fund, there has been



disappointments in the manner by which the fund has been constituted, the quantum of funds that have been pledged vis-à-vis the needs, and the absence of any institutional mechanisms by which funds shall be mobilised, operated, and monitored.

First, the fund is too small to meet the needs of the affected countries. The initial pledges are less than a billion, while the World Bank estimates that the annual cost of climate change impacts is around \$1.7 trillion. Second, the fund is not based on the principle of historical responsibility which holds that rich countries, who have contributed the most to greenhouse gas emissions, should pay more to help poor countries, who have contributed the least but suffer the most. USA that has contributed most to climate change has pledged only \$17 million. Second, the fund is not transparent or accountable, as it is overseen by the World Bank, which has been accused of imposing neoliberal policies and undermining the sovereignty of developing countries. Third, the fund also lacks clear criteria and mechanisms for allocating and disbursing the money to the vulnerable countries and the kind of programmes and schemes on which these can be spent. Fourth, absence of robust monitoring systems makes it difficult to ensure that the allocated resources reach the intended beneficiaries. This loophole opens doors to potential misuse or diversion of funds, thwarting the fundamental purpose of aiding those most affected by climate-induced adversities. Last but not the least, the fund is not focused on addressing the root causes of climate change, such as reducing emissions and enhancing adaptation, but rather on providing short-term relief and compensation for the losses and damages that have already occurred. This could create a moral hazard and discourage mitigation efforts. .

These frustrations have led to protests and demands for a fairer and more effective fund - increasing the size and scale, and ensuring that it is replenished regularly and predictably; establishing a separate and independent body to manage the fund, with equal representation from developed and developing countries, and participation from civil society and affected communities; developing clear and transparent criteria and indicators for assessing the needs and priorities of the eligible countries, ensuring that the fund is responsive and flexible to their changing circumstances; integrating the fund with other climate finance instruments, such as the Green Climate Fund and the Adaptation Fund; and aligning it with the goals and principles of the Paris Agreement, promoting a holistic and transformative approach to loss and damage that addresses not only the economic and physical aspects, but also the social, cultural, and psychological dimensions.

The struggle, therefore, for these demands shall go on for real not cosmetic climate justice.

# CLIMATE REFUGEES: WHO TAKES THE RESPONSIBILITY?

Arkadip Mondal

The issue of climate refugees raises complex questions about responsibility, as it involves the consequences of climate change forcing people to leave their homes. Unlike traditional refugees who flee due to persecution or conflict, climate refugees are displaced primarily because of environmental factors such as rising sea levels, extreme weather events, and other climate-related changes.

A well-established international legal framework addressing the question of responsibilities and settlement of climate refugees is yet to be developed. The 1951 Refugee Convention and its 1967 Protocol define a refugee as someone with a "well-founded fear of being persecuted for reasons of race, religion, nationality, membership in a particular social group, or political opinion." This definition doesn't explicitly include those forced to move due to climate change.

Responsibility for climate refugees is often debated, and different perspectives exist:

**Individual Nations:** Some argue that individual nations bear responsibility for their citizens and should take measures to protect and assist those affected by climate change. This includes implementing policies to mitigate the impacts of climate change, providing social and economic support to affected communities, and potentially offering refuge to displaced individuals.



**International Community:** Others argue for a collective global responsibility, emphasizing that climate change is a shared challenge requiring coordinated efforts. They propose the establishment of international mechanisms and agreements to address the needs of climate refugees and distribute the responsibility among countries based on their historical contributions to climate change, economic capacity, and other factors. 'Common but differentiated responsibilities' is a well established principle of UNFCCC that has guided climate change negotiations, but these have hardly been applied to address the issue of climate refugees.

**Historical Contributors:** Another perspective focuses on the principle of historical responsibility, suggesting that nations that have historically contributed more to greenhouse gas emissions should bear a greater responsibility for assisting climate refugees.

**Private Sector and Global Institutions:** Some argue that corporations and global institutions, given their enormous resources and significant influence on environmental policies and practices, should also be held accountable for the consequences of climate change and contribute to solutions.

Efforts have been made to address these issues on an international level, such as the Paris Agreement, which aims to limit global temperature rise and promote adaptation and resilience. However, the issue of climate refugees is yet to be flagged for structured discussion in annual meetings of Conference of Parties. Many countries have suggested that part of USD 720 million Loss and Damage Fund mobilised during the recently concluded COP-28 may be utilised to mitigate the sufferings of the climate refugees from Small Island Developing States and the Least Developed Countries. The World Bank which is the interim custodian of the fund may have to take a decision on the issue in consultation with member countries.

Till then doing justice to climate refugees will continue to remain an unresolved issue of environmental ethics.

*"The only true wisdom is knowing that you know nothing" — Socrates*

# CLIMATE REFUGEES: A GROWING CONCERN FOR ENVIRONMENTAL JUSTICE

Tazmin Sultana

Global climate change due to anthropogenic emission of greenhouse gases is emerging as one of the biggest humanitarian problem of the century with disastrous impacts on the lives and livelihood of the vulnerable people in various eco-sensitive regions that are facing the brunt of climate change. Some of the predicted and observed effects of climate change include extreme weather events such heat waves, droughts, powerful storms, and floods and slow inset processes like sea level rise, salinization of soil and water, desertification, and ocean acidification. These are forcing thousands of people living in the edge – in islands, deltas, coasts, mountains, deserts and arid areas – to migrate in search of livelihood.

Internal Displacement Monitoring Center (IDMC) in Oslo which maintains most authentic database on migration has estimated that over **376 million** people around the world have been forcibly displaced by floods, windstorms, earthquakes or droughts since 2008, with a record **32.6 million** in 2022 alone. India records some of the highest numbers of internal displacements in the world every year, the vast majority of them triggered by disasters. According to the IDMC, 55.9 million people were internally displaced in India due to disasters during 2008-2022, most of them migrating to urban areas in search of livelihood, putting further pressure on the already overstressed urban housing, sanitation, infrastructure, transport, and public health facilities.



The United Nations High Commission for Refugees has estimated that **21.5 million** people have been displaced across borders by climate change-related disasters since 2008. The Ecological Threat Register, conducted by the Sydney-based Institute for Economics and Peace (IEP), projected that as many as **1.2 billion** people around the world could be displaced by 2050.

It is the responsibility of the national governments to protect the rights of internally displaced climate refugees and promote their welfare, but very few countries have an organized system to track, protect and promote the welfare climate refugees. For those displaced across borders, international refugee law may be relevant in some circumstances, and for those who do not meet the refugee criteria, international human rights law may be applicable based on the principle of non-refoulement, which is the prohibition not to return a person to a country where they have a real risk of serious or irreparable harm upon return, including torture, and other human rights violations.

Since climate refugees do not meet these criteria a clear international framework for the protection of the refugees displaced by climate change is still missing. One of the first international efforts to locate and safeguard people who have been uprooted by climate change was the Nansen Initiative, which was launched in 2012 by the governments of Norway and Switzerland. A series of recommendations were made by a Task Force on Displacement (TFD) to prevent, mitigate, and address displacement associated with the climate change, but these are followed more by its violations. In 2020 UNHCR came up with a Strategic Framework for Climate Action, for guiding their own activities under three core pillars for action – law and policy, operations - but this hardly provides any guidance for the origin and destination countries of climate refugees and other stakeholders including the refugees.

Clearly there are strong needs for developing an international legal framework for prevention, control, regulation and mitigation of the growing problem of climate refugees and for humanitarian relief and rehabilitation of men and women who are forced to cross international borders for livelihood and survival. This will remain one of the unfinished agendas of climate justice.



# WOMEN'S EMPOWERMENT AND SUSTAINABLE DEVELOPMENT

Sonia Paul

Women empowerment is a multifaceted social process that supports women's self-esteem, autonomy, control over their own lives both within and outside the house, and ability to affect societal changes that affect both them and other people. In order to achieve gender equality, which closes the gender gap and gives men and women equal rights, responsibilities, and opportunities, women's empowerment is also a crucial step. Conversely, the World Commission on Environment and Development has defined sustainable development as growth that satisfies current needs without jeopardizing the capacity of future generations to satiate their own needs.



The notions of sustainable development and women empowerment are related and reinforce one another. Empowered women help societies accomplish sustainable development goals, which serve as a guide for a sustainable future. In order to implement SDG 5 "Achieving gender equality and empower all women and girls" and its aims, it is imperative that women be given equal opportunity in all areas of

life and that discrimination based on gender be addressed. Furthermore, women empowerment is connected to all SDG goals. Here are a few synopses of the ways that women empowerment supports sustainable development:

- Women who are empowered are more likely to have educational opportunities. A woman with education may support sustainable development by improving her ability to engage in decision-making, raising their children, and instilling in them a sense of responsibility for the preservation and wise use of natural resources.
- Empowering women to have greater control over their reproductive choices, contributes to better family planning and population control. As we know population control in developing countries like China, and India is one of the key challenges. So empowered women are one of the greater assets for achieving these challenges.
- Empowered women often contribute to economic growth, when women have access to resources, education, and economic opportunities they can establish and run successful businesses and contribute to household income, and poverty reduction. And also, women empowerment increased their workplace participation by contributing to local and national economics.
- When women are empowered, they often take on leadership roles in community development. Their perspective and contribution lead to more inclusive and sustainable solutions to social challenges and problems.
- Women often play a significant role in natural resources management, empowered women are more likely to adopt sustainable practices in agriculture, and forestry.
- Women empowerment increased the participation of women in political and decision-making positions that ensure policies are more reflective of diverse perspectives and needs.
- Empowering women includes ensuring equal legal rights, protection against discrimination, and access to justice, this contributes to a more equitable society.

So, women's empowerment is a catalyst for fostering economic growth, social progress, and environmental sustainability these all are keys to sustainable development.



# ECOFEMINISM AND ENVIRONMENTAL ETHICS

Shreya Mitra

*“Ecofeminism is about recognizing the intrinsic value of nature and the interconnectedness of all life. It is about challenging the dominant paradigm that sees the Earth as a resource to be exploited and women as objects to be dominated”*

— Vandana Shiva, an environmental activist and scholar.

Two interrelated viewpoints that address the interaction between gender, society, and the environment are ecofeminism and environmental ethics. Recognizing the dual oppressions that women and the environment endure, ecofeminism maintains that patriarchal institutions are the cause of both nature's exploitation and women's oppression. On the other hand, environmental ethics studies the moral and philosophical implications of how people interact with nature.

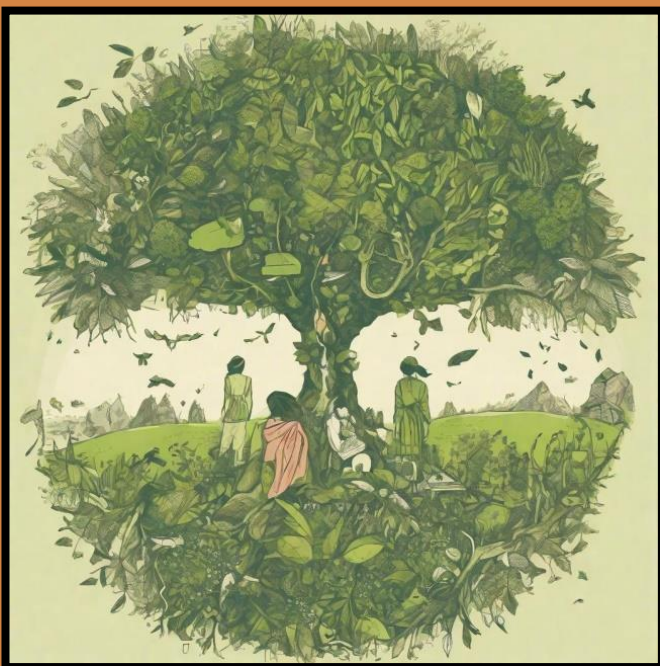
Ecofeminism has made significant contributions to the field of environmental ethics. The criticism of anthropocentrism, the idea that people are the primary and most important species in the universe, is a fundamental component of ecofeminist environmental ethics. Ecofeminists contend that the exploitation of women and the environment is a result of an anthropocentric viewpoint. They support an ecocentric perspective that values ecosystems and all living things and promotes a more sustainable and all-encompassing relationship with the environment by challenging the prevailing mindset that upholds the exploitation of women and the natural world.

Women are already a marginalized minority in our culture. However, they play a crucial part in bringing about this intergenerational equity. The concept of ecofeminism is not just for academic discussion. It encourages doable projects and activities that oppose repressive structures and advance environmental justice. Narmada Bachao Andolan (1985), Chipko Movement, Save the Western Ghats Movement (1987-1988), etc. That support women's emancipation and environmental resilience are examples of ecofeminist practices.



The movement against the dumping of hazardous wastes in the US and the Green Belt movement in Kenya are all labeled as “eco-feminist” movements.

Ecofeminism places a strong emphasis on the resilience and inherent worth of all living beings. The advancement of civilization depends on women's involvement in environmental initiatives. The Chipko movement in India, the Ganhian non-cooperative protest style, and forest satyagraha have offered role models for resolving disputes over natural resources and tactics for human survival amid ecological crises. Additionally, ecofeminism fosters relational ethics by highlighting interdependence, compassion, and empathy. It promotes a mentality that is more in tune with nature and reciprocity rather than exploitation. Environmental challenges, marginalized groups, and the destruction of structures that support exploitation are all addressed by ecofeminist action.



# WASTE WARRIORS: HOW WOMEN LEAD SUSTAINABLE CONSUMPTION

Arundhati Aich

Women have become key influencers in the worldwide movement towards sustainable living, helping to lead people towards environmentally friendly decisions. The family, where women have a great deal of power over everyday consumption decisions, is the center of this movement, and women are vital allies in the fight for a sustainable future. Women make decisions in the privacy of our homes, influencing the direction of sustainable consumerism. Their decisions impact environmental responsibility far beyond the kitchen, encompassing everything from meal planning and trash management to the grocery list. Promoting sustainable food practices is greatly aided by women. Their choices as main carers affect the planet's health in addition to the health of their families. Choosing seasonal, locally grown fruit and cutting back on meat intake are deliberate decisions that support sustainable living.

Women are driving the change in families when it comes to trash management activities. By adopting sustainable habits like recycling, composting, and reducing the use of single-use plastics, people are turning their houses into sustainable centres. Sustainable waste management methods and policies in our country have been shaped in great part by women environmentalist and trash management specialist like Almitra Patel.

**Almitra Patel**, born in 1942, has dedicated much of her life to addressing India's waste management challenges. Renowned for her pioneering work, Patel played a key role in the Public Interest Litigation filed in the Supreme Court of India in the 1990s. This landmark case resulted in the formulation of the Municipal Solid Wastes (Management and Handling) Rules in 2000. Patel's advocacy has been instrumental in shaping policies and practices related to waste management on a national scale.



Women are also making a difference in the corporate world by influencing businesses to adopt eco-friendly practices. Arundhati Bhattacharya, former Chairman of the State Bank of India, and Naina Lal Kidwai, former CEO of HSBC India, exemplify Indian women driving sustainable corporate practices.

**Arundhati Bhattacharya**, during her tenure at the State Bank of India, not only revolutionized the banking sector but also championed several green initiatives, promoting sustainable banking practices. She emphasized incorporating environmental, social, and governance (ESG) factors into banking decisions, leading to the creation of sustainable finance solutions. Arundhati Bhattacharya's vision demonstrates how sustainable banking practices can be a powerful force in shaping a more environmentally conscious financial sector.



**Naina Lal Kidwai**, former CEO of HSBC India, has also played a crucial role in advancing sustainable practices within the corporate sector. Her leadership has emphasized the importance of integrating sustainability into business strategies, contributing to a more environmentally conscious banking and financial landscape.



The influence of women in sustainable consumption extends beyond making eco-friendly choices—it is about instilling values of responsibility and stewardship. By imparting these values within their families and communities, women lay the foundation for a sustainable mindset that will endure for generations. Their leadership within households, communities, and businesses is shaping a future where sustainability is not just a choice but a way of life.

*“But Man is a part of Nature, and his war against nature is inevitably a war against himself” — Rachel Carson*

# PROTECTING CHILDREN'S RIGHTS IN THE FACE OF CLIMATE CHANGE

Saikat Dutta

Protecting children's rights in the face of climate change is a critical and multifaceted challenge. Climate change poses significant threats to the well-being and future prospects of children worldwide, including issues related to health, education, and overall quality of life. Here are some key aspects to consider in ensuring the protection of children's rights in the context of climate change:

## Health and Safety:

- **Air Quality and Respiratory Health:** Climate change can worsen air quality, leading to respiratory problems in children. Implementing and enforcing strict air quality standards is crucial.
- **Extreme Weather Events:** Children are vulnerable to the impacts of extreme weather events. Adequate infrastructure, early warning systems, and disaster preparedness plans are essential to safeguard their safety.

## Education:

- **Disruption of Education:** Extreme weather events, such as floods and hurricanes, can disrupt education by damaging schools and displacing students. Building resilient educational infrastructure and providing emergency education services are important measures.
- **Climate Change Education:** Integrating climate change education into the curriculum helps children understand the challenges and empowers them to be environmentally conscious citizens.

## Nutrition and Food Security:

- **Impact on Agriculture:** Climate change affects food production, leading to potential food shortages. Ensuring food security and implementing sustainable agriculture practices is vital for children's nutrition and well-being.

## Water and Sanitation:

- **Access to Clean Water:** Climate change can exacerbate water scarcity. Ensuring access to clean water and sanitation facilities is crucial for preventing waterborne diseases that disproportionately affect children.

## Displacement and Migration:

- **Climate-Induced Migration:** Climate change can force communities to migrate, leading to displacement. Special attention should be given to the rights and protection of children in such situations, including access to education and healthcare.

## Participation and Advocacy:

- **Children's Voices:** Encouraging and facilitating children's participation in decision-making processes related to climate change policies ensures their perspectives are considered.
- **Advocacy for Future Generations:** Advocating for strong climate action is essential to protect the rights of current and future generations. Governments and international organizations need to prioritize sustainable policies and practices.

## Legal Protections:

- **Legal Frameworks:** Strengthening legal frameworks that protect children's rights in the context of climate change is essential. This includes incorporating climate considerations into existing child protection laws.

## Capacity Building:

- **Community Resilience:** Building the resilience of communities, especially those most vulnerable to climate impacts, is essential. This includes providing resources and support for sustainable practices that enhance community resilience.

Protecting children's rights in the face of climate change requires a comprehensive and collaborative approach that involves governments, communities, NGOs, and international organizations. By addressing the unique challenges children face in a changing climate, we can work towards a more sustainable and equitable future for all.



*“From Brahman arises space, from space arises air, from air arises fire, from fire arises water, and from water arises earth” — Upanishad*

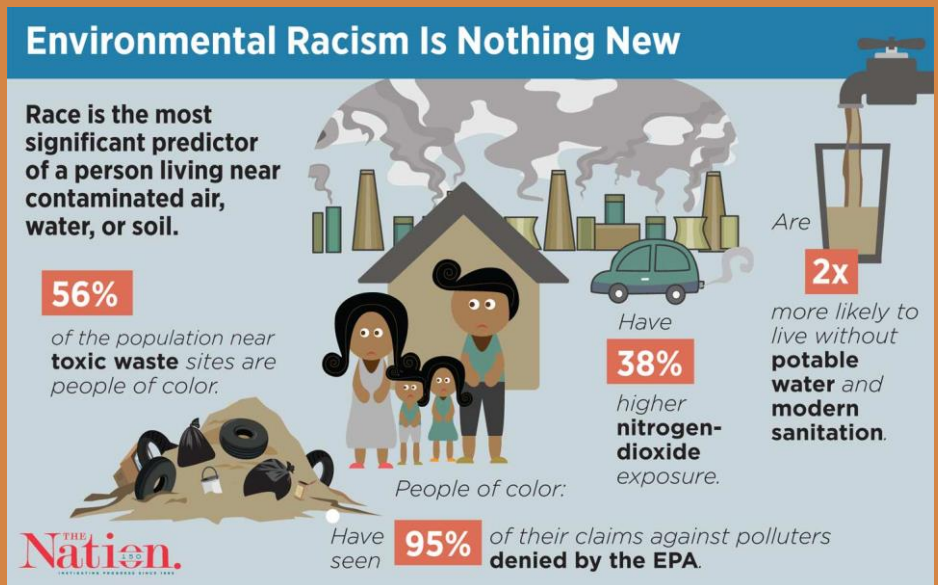


# COUNTERING ENVIRONMENTAL RACISM

Soheli saha

The term ‘environmental racism’, originally used in the context of locating landfills, incinerators, and hazardous waste disposal sites near the settlements of black communities in the USA, is used to describe disproportionate environmental burdens and risks that certain communities, often marginalized and minority populations. Deliberately or by default, this has been the practice in several countries including India. Here are some strategies to combat environmental racism:

1. **Community Empowerment and Engagement:** Empower affected communities with information about environmental issues, their rights, and potential health impacts. Supporting and facilitating community-led initiatives to address environmental justice issues. Encourage the formation of grassroots organizations to advocate for their rights.
2. **Policy Advocacy:** Working towards the implementation of policies that prioritize environmental justice, fair distribution of environmental benefits and burdens, and protection of vulnerable communities. Ensuring diverse representation in decision-making bodies and policymaking processes to amplify the voices of marginalized communities.
3. **Data Collection and Analysis:** Use GIS (Geographic Information System) tools to map environmental hazards, pollution sources, and vulnerable communities to identify and highlight environmental injustices. Advocating for transparency in data collection and dissemination to ensure accurate representation of environmental impacts on communities.
4. **Legal Action:** Supporting legal actions against companies or entities responsible for environmental injustices. This can include filing lawsuits for compensation, enforcement of regulations, or changes in practices to protect affected communities.
5. **Corporate Accountability:** Encouraging corporations to adopt ethical and environmentally responsible practices, ensuring that they consider the well-being of communities in their operations. In addition, Working towards the development of CBAs between companies and affected communities to ensure fair compensation, job opportunities, and community development.
6. **Health Impact Assessments:** Carrying out health impact assessments to evaluate the potential health consequences of proposed developments or industrial activities on nearby communities, especially those already burdened with environmental hazards.
7. **Supportive Legislation:** Advocating for the development and implementation of legislation specifically targeting environmental justice concerns. This may include laws that address cumulative impacts and consider the social and economic conditions of affected communities.
8. **Investment in Sustainable Solutions:** Supporting the development of green and sustainable infrastructure in marginalized communities to mitigate environmental hazards and promote environmental justice.
9. **Education and Training:** Providing training and educational programs to empower communities to actively participate in decision-making processes, understand environmental issues, and advocate for their rights.
10. **International Collaboration:** Engaging in international collaborations and partnerships to address environmental injustices on a global scale, sharing knowledge, experiences, and resources.



It's important to recognize that countering environmental racism requires a multi-faceted approach involving community engagement, policy changes, legal actions, and corporate responsibility. Additionally, it demands a commitment to equity, justice, and sustainability at various levels of society.



# TOWARDS A GREENER TOMORROW: EXPLORING THE ETHICAL IMPERATIVES OF ENVIRONMENTAL STEWARDSHIP

Pritthish Rauth

The need for environmental stewardship has become an ethical need in our quickly changing world. We must reconsider our connection with the environment in light of the pressing need to combat climate change, maintain biodiversity, and safeguard the planet's resources. It's not only about sustainability, it's also an ethical duty we have to the next generation.

The understanding of interconnectedness—that every decision we make has an impact on ecosystems and populations throughout the globe—is the cornerstone of environmental stewardship. It's recognition that protecting our planet is more important than serving our own selfish goals because it is our common home.

We are compelled by the moral requirement of environmental stewardship to reconsider our consumption habits and give preference to renewable resources over limited ones. Adopting eco-friendly behaviours, cutting carbon emissions, and supporting renewable energy sources are moral decisions that have significance that extends beyond self-interest—they represent a dedication to preserving the environment for future generations.



Furthermore, recognizing environmental justice is a prerequisite for ethical environmental management. Equitable solutions are required for communities that are disproportionately impacted by environmental deterioration, are frequently marginalized, and have few resources. In order to pursue a sustainable future, it is morally required that we provide equality and justice, which is why we should address their concerns.

Another important factor is education. Giving people the knowledge they need to make informed decisions about environmental challenges promotes a sense of communal consciousness and encourages morally sound behaviour. By fostering environmental literacy, we provide present and future generations the capacity to make morally sound decisions that put the health of the earth first. Another critical component is corporate accountability. Businesses that practice moral environmental stewardship take into account their ecological effect in addition to profitability. Beyond monetary rewards, initiatives that include sustainable methods, cut waste, and aiding in conservation efforts show a dedication to moral responsibility. Most importantly, in order to move society towards environmental stewardship, political leadership, and policy creation are essential. A dedication to moral leadership for the greater good is demonstrated by governments that enact laws that encourage sustainability, safeguard natural areas, and prohibit detrimental activities.

However, there are obstacles in the way of a greener tomorrow. Advancement is frequently hampered by competing interests, financial limitations, and inertia. To overcome these obstacles, we must all adopt a new perspective that recognizes environmental stewardship as an ethical requirement ingrained in our moral fibre rather than an option. To sum up, accepting environmental stewardship as a moral need forces us to put aside our interests and take a comprehensive approach to understanding our relationship with the environment. To bring about significant change, there must be coordinated efforts at all governmental, business, and individual levels. By upholding this moral obligation, we open the door to a sustainable future in which the welfare of the earth and all of its people comes first.

The moral obligation of environmental stewardship continues to be a beacon of hope for us as we traverse complexity and uncertainty, asking us to conserve and safeguard our world for future generations.

# MEDIA ETHICS AND CLIMATE CHANGE

Rasmoni Karak

Media ethics play a crucial role in shaping public perception and understanding of various issues, including climate change. The way media outlets cover and communicate climate change can influence public opinion, policy decisions, and individual behaviours. Here are some key considerations regarding media ethics and climate change:



## 1. Accuracy and Truthfulness:

- Media outlets should prioritize accurate and truthful reporting on climate change. Misleading information can lead to misconceptions and hinder effective decision-making.
- Journalists and editors must fact-check information thoroughly before publishing to ensure the credibility of their stories.

## 2. Balance and Fairness:

- Strive for balance and fairness in reporting by presenting diverse perspectives on climate change. However, this does not mean giving equal weight to scientifically unsupported viewpoints, as this can create a false sense of controversy where there is scientific consensus.
- Emphasize the overwhelming scientific evidence supporting climate change while providing context for differing opinions.

## 3. Avoiding Sensationalism:

- Media should avoid sensationalizing climate change stories for the sake of attracting attention. Sensationalism can distort the severity of the issue or create unnecessary panic.
- Presenting information clearly and soberly helps the public better understand the implications of climate change.

## 4. Transparency:

- Media outlets should be transparent about their funding sources and potential conflicts of interest that could influence their coverage of climate change.
- Communicate when content involves partnerships or sponsorships related to climate issues.

## 5. Educational Role:

- The media has a responsibility to educate the public about the science behind climate change, its impacts, and potential solutions.
- Use clear language and visuals to enhance understanding, making complex scientific concepts accessible to a broad audience.

## 6. Advocacy and Activism:

- While journalists can cover environmental issues passionately, they should maintain objectivity and avoid overt advocacy in their reporting.
- Opinions and commentary should be clearly labeled as such, distinguishing them from straight news reporting.

## 7. Long-Term Perspective:

- Climate change is a long-term issue, and media outlets should provide ongoing coverage rather than only reporting on extreme events. Consistent coverage helps the public understand the gradual changes and long-term implications of climate change.

## 8. Community Engagement:

- Foster community engagement by encouraging public discourse on climate change. Provide platforms for discussion and feature local perspectives to make the issue more relatable.

In summary, media ethics in the context of climate change involve a commitment to accuracy, balance, transparency, and responsible communication. By adhering to these principles, media outlets can contribute to a better-informed public and support efforts to address the challenges posed by climate change.

# ECOTOURISM FOR NATURE CONSERVATION

Sravana Chanda

Ecotourism, or ecological tourism, is a sustainable and responsible travel approach that focuses on conserving the environment, supporting local communities, and educating visitors about the natural world. When implemented effectively, ecotourism can contribute significantly to nature conservation. Here are some ways in which ecotourism can support conservation efforts:

## 1. **Biodiversity Protection:**

Ecotourism destinations often promote the conservation of biodiversity-rich areas. By attracting visitors to these regions, there is a financial incentive to protect the unique flora and fauna that draw tourists in the first place.

2. **Sustainable Practices:** Eco-friendly practices and low-impact tourism are essential components of ecotourism. Sustainable accommodation, waste management, and energy-efficient facilities help minimize the ecological footprint of tourists, reducing negative impacts on natural ecosystems.

## 3. **Community Engagement:**

Ecotourism encourages collaboration with local communities. Involving residents in the planning and management of tourism activities helps create a sense of ownership and responsibility for preserving the environment.

4. **Educational Opportunities:** Ecotourism provides educational opportunities for visitors. Interpretive programs, guided tours, and interactive experiences foster an understanding of the importance of conservation and the role each individual can play in protecting the environment.

5. **Alternative Livelihoods:** By generating income through ecotourism, local communities can reduce reliance on activities that harm the environment, such as logging or unsustainable agriculture. This economic diversification contributes to long-term conservation goals.

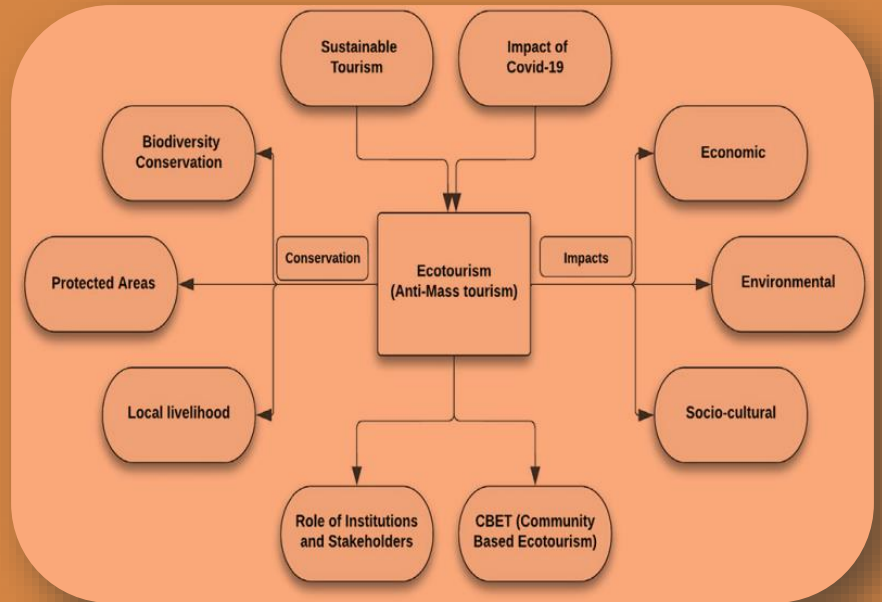
6. **Research and Monitoring:** Ecotourism can facilitate scientific research and monitoring programs. Tourists and guides can contribute valuable data on local flora and fauna, helping researchers understand ecosystems and identify potential conservation challenges.

7. **Protected Area Funding:** Entrance fees, permits, and other revenue generated from ecotourism activities can be reinvested into the maintenance and protection of protected areas. This financial support is crucial for the ongoing preservation of natural habitats.

8. **Regulation and Enforcement:** Ecotourism operations often come with regulations and guidelines to ensure minimal impact on the environment. Strict enforcement of these regulations helps maintain the delicate balance between tourism and conservation.

9. **Cultural Preservation:** Many ecotourism destinations showcase indigenous cultures and traditions. By promoting cultural preservation and respecting local customs, ecotourism can contribute to the overall conservation of both natural and cultural heritage.

10. **Climate Change Awareness:** Ecotourism can serve as a platform to raise awareness about climate change and its impacts on ecosystems. Educated tourists are more likely to support conservation initiatives and advocate for sustainable practices.



While ecotourism has the potential to benefit nature conservation, it's crucial to approach it with careful planning and monitoring to avoid unintended negative consequences. Balancing the economic benefits of tourism with the long-term health of ecosystems is essential for successful ecotourism initiatives.



# TOURISM IN SUNDARBANS: BOON OR BANE?

Kaberi Saha

The Sundarbans, the largest delta as well as the largest mangrove forest in the world, came up through the natural process of sedimentation and vegetation in the confluence of the Ganges, Meghna, and Brahmaputra rivers in the Bay of Bengal. The rich flora of the mangroves amidst large rivers with mix of sweet and salt water and serve as a haven for a variety of species, such as the Royal Bengal Tiger, saltwater crocodile, and a wide range of animals, birds and other species. The beauty, solitude and the bio-diversities of Sundarbans attract a large number of tourists from around the world specially during the winter months. Tourism creates new opportunities for livelihood to the local community who otherwise have to struggle hard through subsistence farming and fishing that are threatened by climate change and natural disasters.

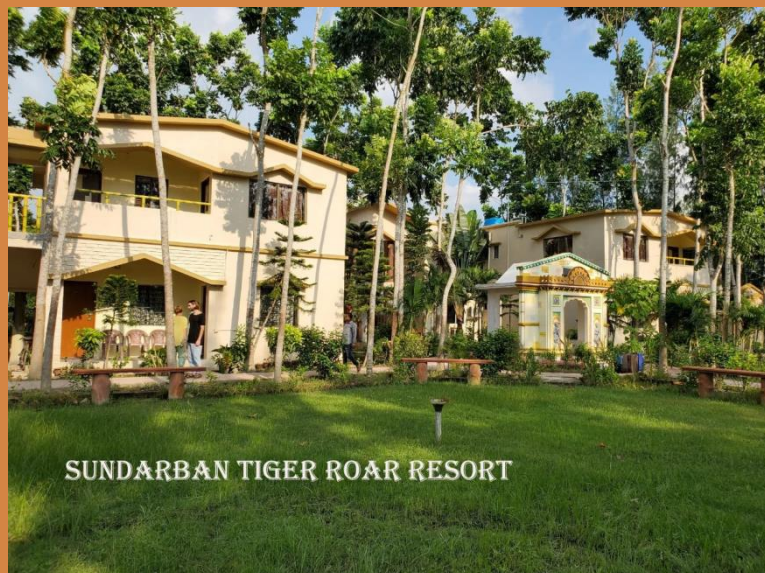
There are two aspects to tourism in the Sundarbans: positive and negative. On the positive side, thousands of tourists visit this area each year to witness the breathtaking mangrove tiger land, which is also



protected as a “World Heritage Site”. Traveling through natural places with an emphasis on experience and education is what tourism entails. Tourists love seeing uncommon species, the scenery, and local customs. Because of the Sundarbans' ecological significance and potential economic benefits to the local economy, resorts and boat safaris to the mangrove forest, village tours, and other activities have been developed alongside Sundarbans jungle camps. In addition, the locals work in a variety of activities like

housekeeping, gardening, and small business ventures like selling handcrafted goods, medicinal plants, local products, and food stores because most food is bought locally.

In the negative scene, uncontrolled inflow of tourists through hoards of steamers, emitting smokes and noise from the engines, and sounds of loud music and chorus of partying revelers, disturb the serene tranquility of the surroundings, with not too healthy effects on the wildlife. Visitors pollute the area by throwing plastics bottles and food scraps from



their boats, which pollute the rivers. A large number of hotels and resorts have come up in villages close to the reserved forests in an unplanned manner without any assessment of their impacts on environment. Many of these facilities do not have their arrangements for drinking water, drawing from the limited resources of the village which affect local community. Further these hotels and resorts do not have their own systems for disposal of solid and liquid waste, which create pollution in the villages.

Therefore, tourism in fragile areas affects the environment, society, economy, and culture in both positive and negative ways. On the one hand, tourism can encourage more business opportunities and wildlife conservation, but on the other hand, it

can also lead to some very serious issues with the environment, economy, and culture. The only way to address this issue is to develop sustainable ecotourism, which will increase positive effects while reducing negative ones.



# CARBON SEQUESTRATION IN EAST KOLKATA WETLAND: OPPORTUNITIES AND CHALLENGES

Dipayan Laha

Wetlands are areas where water covers the soil round the year creating an ecosystem that supports both aquatic and terrestrial plants, and provide natural breeding grounds for fish and habitats for birds, including migratory birds. The prolonged presence of water creates conditions that favor the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils that work as carbon sinks. Wetlands cover approximately four to six percent of the Earth's surface and contain about 35 percent of global terrestrial carbon. In India, wetlands cover an estimated three percent of India's land area.

The metropolitan city of Kolkata is naturally endowed with a wetland of 125 sq. km area in its eastern suburb, known as East Kolkata Wetlands (EKW), recognized as a Ramsar site (Wetland of International Importance). The topography of Kolkata sloping towards the east ensures that rainwater as well as waste water is drained towards the wetland which serves as a natural reservoir that protects the city from flood.



The hydric soils and the hydrophytes of EKW serves as a natural ground for absorbing carbon dioxide from the atmosphere and storing it in wetland habitats and storing it in the sediments of the wetlands and in their biomass. The wetlands further absorbs wastewater from the city drains and sewage treatment plants. As it treats wastewater and sequesters carbon, so the East Kolkata Wetland is special. The organic content in the wastewater serves as a source of nutrients for the wetland plants, and the wetland's receipt of municipal wastewater fosters the growth of a variety of vegetation. The wetland's capacity to sequester carbon is improved by this procedure.

East Kolkata Wetlands has emerged as the largest wastewater-fed aquaculture system in the world where the sewage is recycled for pisciculture and agriculture. Various research studies have demonstrated that this wetlands locks-in over 60% of carbon which might otherwise pile

up in the atmosphere. The presence of the large wetland in the close vicinity of the city has great potential to mitigate the urban heat island effect of Kolkata.

However, East Kolkata Wetlands, due to its close proximity to the city, have been subjected to frequent encroachments, legally and illegally, for industrial, commercial or residential purposes. The natural processes of the wetland environment may be disturbed and biodiversity may be lost as a result of this encroachment. Wetlands may be susceptible to pollution from urban garbage, industrial discharges, and agricultural runoff. Pesticides, heavy metals, fertilizers, and other contaminants can deteriorate water quality and endanger aquatic life. The natural hydrology of wetlands can be altered by modifications to land use and drainage patterns. Water levels may fluctuate as a result, which may have an impact on the fauna and flora that are suited to particular water regimes. Overuse of wetland resources, including fish, plants, and water, can result in habitat deterioration and biodiversity loss. When non-native species are introduced, they may outcompete or prey on native species.

Wetlands might deteriorate due to low public awareness and insufficient conservation efforts. Sustainable management techniques, community engagement, and education are necessary for effective conservation measures. To ensure the long-term viability of this important ecosystem and to maintain its capability for sequestering carbon dioxide, the East Kolkata Wetland must be preserved and protected. West Bengal Government has enacted East Kolkata Wetlands (Conservation and Management) Act 2006 and constituted East Kolkata Wetlands Management Authority for the protection and conservation of the wetlands.

# INDIGENOUS KNOWLEDGE IN ENVIRONMENT CONSERVATION

Chetana Tunga

Indigenous knowledge refers to the wisdom, skills, and practices that are developed, sustained, and passed down within a community over generations. This knowledge often encompasses a deep understanding of the environment, including local ecosystems, flora and fauna, weather patterns, and sustainable resource management techniques. Many indigenous communities around the world possess valuable traditional knowledge that has contributed to their ability to live in harmony with their environments for centuries. Human emotions and ancient cultural systems have always demonstrated a profound care for the environment, regardless of how old they are. It is the phrase used to collectively describe the variety of place-based knowledge.

Here are some ways in which indigenous knowledge can contribute to conserve the environment a) biodiversity conservation, b) land stewardship, c) water resource management, d) community-based conservation, e) cultural and spiritual values, f) ethical issue and resource use etc.

India, with its diverse ethnic societies, is abundant in biodiversity. Among the 45,000 ethnobotanical important species, 7,500 are utilized for indigenous medicinal practices, showcasing the integral link between traditional health and the rich natural resources of the country. There exist many adorable examples to experience that connection. In the Himalayan region of Uttarakhand, indigenous communities have been practicing agroforestry for generations, which involves planting a variety of crops having ecological importance.



The Bishnoi community in Rajasthan has a long-standing tradition of environmental conservation. They follow the principles of "Jiv Daya" and "Van Raksha". They are known for their efforts in protecting the local wildlife, including blackbucks and other endangered species. Their indigenous knowledge includes sustainable grazing practices, protection of flora and fauna, and revering certain trees, strengthening their traditional conservation practices and integrating them into modern conservation strategies.

Indigenous communities in the Western Ghats also have significance for unique agricultural practices such as "Kaavu" (sacred groves). The traditional rice varieties and traditional aquaculture in Kuttanad, Kerala is known as "Pokkali farming". This is an integrated farming system involves the cultivation of rice and prawns in the same fields. The 'Kani' tribal community in the Western Ghats possesses extensive knowledge of medicinal plants and their traditional uses.

There are many more examples of traditional knowledge which might be utilized to protect our environment.

In recent times, there has been a growing recognition of the importance of integrating traditional knowledge with modern conservation practices. Combining the wisdom of traditional knowledge with scientific approaches can lead to more effective and sustainable environmental conservation efforts.

# CORPORATE RESPONSIBILITY AND ENVIRONMENTAL ETHICS

Anindya Haty

Environmental ethics and corporate responsibility are more important than ever at a time when the effects of climate change are becoming more and more obvious. India is leading the way in tackling environmental issues thanks to its expanding economy and varied industrial landscape. Recently, there has been a paradigm change in the business sector in India as it has realized the need to strike a balance between environmental stewardship and economic growth. Environmental, social, and governance (ESG) considerations are increasingly being included by businesses in their business plans. Sustainable Development Goal 12, which highlights patterns of responsible consumption and production, is one of the main SDGs that aligns with this strategy.

The first aspect of SDG 12, “Ensure sustainable consumption and production patterns” prompts companies to adopt sustainable practices in their operations. Many Indian corporations are actively reducing their environmental footprint by implementing energy-efficient technologies, optimizing resource utilization, and adopting circular economy principles. For instance, several leading IT companies are embracing green data centers and renewable energy sources to power their operations. Another critical dimension of SDG 12 is the reduction of waste generation. Indian companies are increasingly investing in waste management initiatives and adopting eco-friendly packaging solutions. This not only aligns with global sustainability goals but also addresses local environmental challenges, such as plastic pollution. A notable example is the FMCG sector, where companies are redesigning their product packaging to be more eco-friendly and easily recyclable.

Corporate Social Responsibility (CSR) initiatives in India also play a crucial role in advancing environmental ethics. One of the permissible CSR activities under the amended provisions of Indian Companies Act 2013 include ‘ensuring environmental sustainability, ecological balance, conservation of natural resources and maintaining quality of soil, air and water’.

Companies are channeling funds towards environmental conservation, afforestation, and community-led sustainability projects. These initiatives not only contribute to SDG 12 but also foster a sense of environmental stewardship among employees and the wider community.

Furthermore, Indian companies are realising how crucial accountability and openness are to their environmental initiatives. Building stakeholder trust is facilitated by openly sharing environmental impact assessments and progress towards sustainable goals. This dedication to openness is consistent with SDG 12's recommendation to increase knowledge and understanding of sustainable development.

Even with these encouraging developments, problems still exist. Some businesses may continue to put short-term profits ahead of long-term sustainability, which would impede the achievement of SDG 12. In order to motivate more companies to voluntarily implement sustainable practices, regulatory frameworks, and industry standards must be enhanced. But as India's economy grows, it is critical to combine environmental ethics with business accountability. SDG 12 is a compass that points businesses in the direction of sustainable patterns of production and consumption.

Indian businesses are becoming more aware of the connections between social progress, environmental sustainability, and economic development. By aligning with SDG 12, they are influencing a future in which ethical business practices are essential to success as well as helping to achieve global environmental goals.





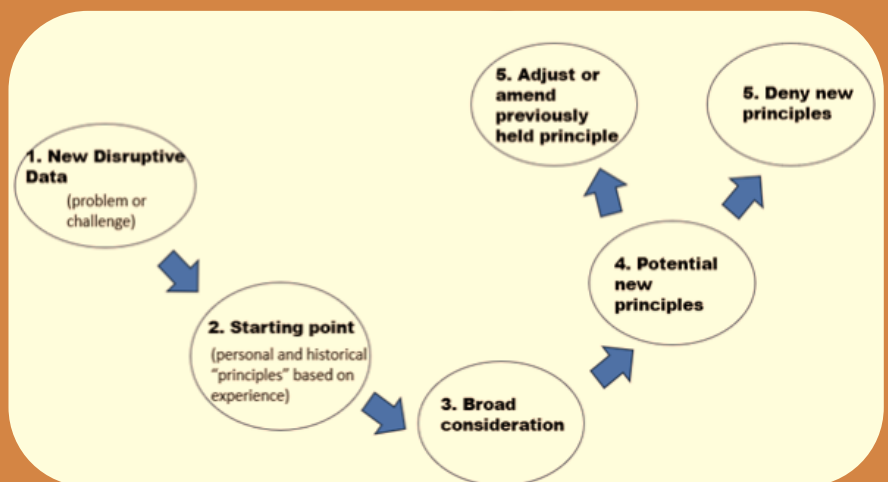
# ENVIRONMENTAL ETHICS AND BUSINESS SUSTAINABILITY

Ashmita Rakshit

As a Senior Manager, you are responsible for the quality and productivity of a plant belonging to an international paper company that is publicly traded. This plant produces 45% of the paper stock used in the United States, which includes milk and orange juice cartons, cereal boxes, and other packaged consumer goods. In the process of budgeting for next year's plant improvements, you have encountered a dilemma. While the plant generates an annual profit of \$180 million and accounts for 25% of the company's annual production, it also produces dioxin, a carcinogen, as a byproduct of its paper bleaching process. The dioxin is deposited in the local river, but it remains within the federal and state limits. However, there have been over 100 reports of cancer cases in a small community downstream, which has raised the concern of various environmental groups, leading to multiple protests. What should you do?

The above fictional case highlights the difficult decisions that business managers face daily. Due to the inherent systemic condition in contemporary markets, managers are compelled to prioritize profit maximization over morally preferable initiatives that may conflict with it. Environmental issues were not seen as an opportunity to innovate or differentiate a company in the past, but over the past decade or so, businesses have started integrating environmental standards into their decision-making processes, leading to the production of environmentally friendly products. For instance, 3M, a global publicly traded corporation, has a long-standing commitment to sustainability, saving millions of dollars through their pollution prevention pays (3P) program. However, this commitment is driven primarily by economic rather than ethical considerations, as every 3P project must demonstrate significant cost savings. Similarly, Proctor and Gamble quickly responded to the growing demand for environmentally safe packaging and products. Despite these efforts, environmentally friendly products often fail to translate into a viable business case. For example, in 2000, Shell introduced Pura, a more environmentally friendly fuel that contained fewer pollutants. However, it failed to attract premium prices, and customers did not show interest. When Shell launched a new fuel that promised to increase engine performance and didn't mention its environmental advantages, it became a commercial success. This dilemma of success and failure of environmentally sound products is due to the gap between environmental managers and product developers regarding expectations, perceptions, and orientations towards Environmental New Product Development (ENPD) practices and tools. Additionally, the lack of a uniform definition of what constitutes an environmental or green product means that the win-win logic of being 'green and competitive' is not widely accepted.

As a senior manager, you may wonder how to have productive discussions about environmental issues with other business leaders. One approach that can be effective is to use classical American pragmatism as a guiding ethical framework. This approach involves constantly evaluating and evolving our personal perspective, while also considering the broader community's perspective. It doesn't tell us what to think, but rather how to think. To pursue sustainable business development within an existing firm, it's important to create an atmosphere of openness to experimentation. This means being willing to adopt novel ideas, technologies, and approaches that can drive positive changes within the company. By being open to innovation, an organization can stay ahead of the curve and avoid falling behind competitors. For instance, the company could consider developing a technology called bleach filtration recycling (BFR), which could reduce total effluent by 85% and eliminate all dioxin outflow. By embracing innovation and exploring new approaches, a forward-thinking manager can lead their company towards continuous improvement and success.



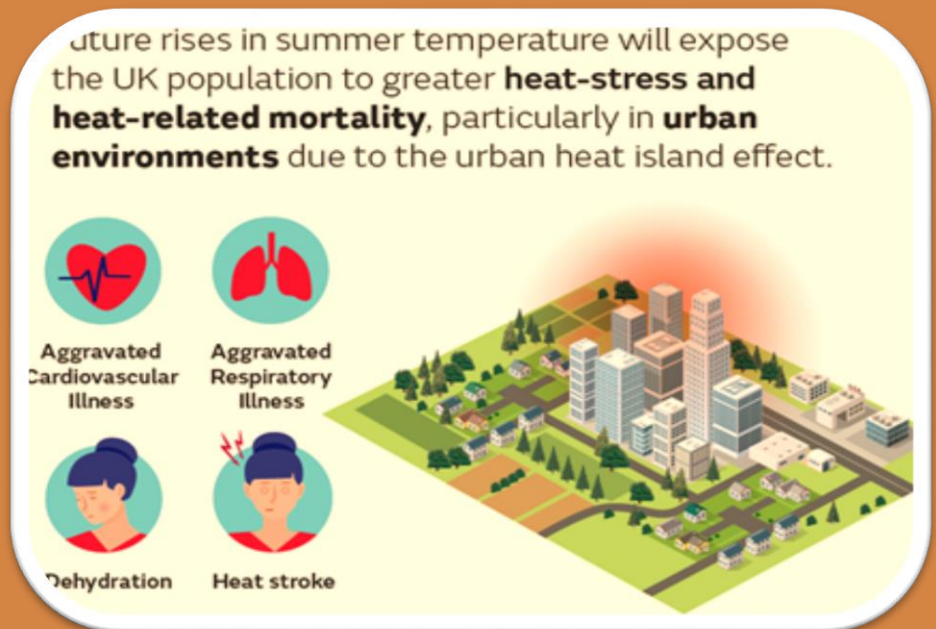


# URBAN HEAT ISLANDS AND ENVIRONMENTAL JUSTICE

Sneha Mistri

Urban Heat Islands (UHIs) pose a significant challenge that is further exacerbated by the relentless progression of climate change. They present intensified difficulties, particularly for marginalized communities, which already suffer from pre-existing environmental injustices. As global temperatures continue to rise, UHIs amplify, transforming cities into pockets of extreme heat. Vulnerable populations, often residing in areas with limited green spaces and inadequate infrastructure, are disproportionately affected by this escalating thermal burden. The intricate relationship between climate change and UHIs unfolds through various mechanisms. The surge in greenhouse gas emissions, which is a hallmark of human activities, ensnares heat, elevating temperatures worldwide. Concurrently, the process of urbanization compounds this effect. Surfaces dominated by concrete and asphalt absorb and subsequently re-radiate heat, establishing urban environments as thermal hotspots. This phenomenon manifests with temperatures significantly surpassing those in surrounding rural areas. The resulting surge in heat not only poses health risks but also strains energy systems, further deepening existing environmental disparities. Therefore, it is essential to develop comprehensive strategies for resilience that account for the intertwined dynamics of UHIs and environmental justice.

Environmental justice is a growing concern as disadvantaged communities face increased vulnerability due to Urban Heat Islands (UHI). These areas have historically suffered from pollution and lack of resources, leading to existing health disparities. Residents already facing socio-economic challenges are at an even higher risk of heat-related illnesses due to UHIs. The lack of cooling infrastructure further exacerbates these issues, leading to a cycle of environmental injustice. It is imperative to adopt holistic strategies to address the complex interplay of climate change, UHIs, and environmental justice. Urban planning is key to this approach and must prioritize green spaces and sustainable infrastructure in disadvantaged neighborhoods. Initiatives such as cool roofs, green roofs, and reflective surfaces can significantly reduce the build-up of heat, creating a more balanced urban climate. Community engagement is also essential to ensure that proposed solutions align with the unique needs and preferences of residents. Policy interventions are necessary to promote environmental justice in the context of UHIs. Heat action plans that target vulnerable communities, energy-efficient affordable housing, and enhanced public transportation infrastructure are crucial initiatives. By integrating climate resilience into urban development policies, cities can mitigate the impact of UHIs on marginalized populations. Education is a powerful tool for promoting environmental justice in the context of UHIs. Raising awareness about the interconnected impact of climate change, UHIs, and associated health risks empowers communities to demand policies that prioritize the equitable distribution of resources and address the root causes of environmental injustice. Informed citizens are better equipped to participate in decision-making processes, advocating for their well-being.



By integrating climate resilience into urban development policies, cities can mitigate the impact of UHIs on marginalized populations. Education is a powerful tool for promoting environmental justice in the context of UHIs. Raising awareness about the interconnected impact of climate change, UHIs, and associated health risks empowers communities to demand policies that prioritize the equitable distribution of resources and address the root causes of environmental injustice. Informed citizens are better equipped to participate in decision-making processes, advocating for their well-being.

*“It is our collective and individual responsibility to preserve and tend to the world in which we all live” — Dalai Lama*

# ANCIENT INDIAN KNOWLEDGE AND TECHNIQUES FOR LONG-TERM ENVIRONMENTAL PRESERVATION

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India, a nation rich in wisdom and ancient traditions, has long understood the essential connection between humans and the natural world. Traditional practices and beliefs encourage environmental harmony and offer important insights into sustainable and ecologically conscientious life. A wealth of knowledge about human social welfare, harmony, unity, brotherhood, peace, prosperity, and environmental preservation may be found in the Sanskrit literature. The most priceless legacy of Indian civilization is the Vedas. The song The Vedic people acquired the art of using nature's power to sustain and improve their lives.

एक एवाग्निर्बहुधा समिद्ध एकः सूर्यो विश्वमनु प्रभूतः । एकैवोषाः सर्वमिदं वि भ्रात्येकं वा इदं वि बभूवु सर्वम् ॥  
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**“Agni is one, though kindled in various ways; one is the Sun, pre- eminent over all; one Dawn illuminesthis all; one is that which has become this all.”**

The Vedas place a strong emphasis on maintaining seasonal cycles and a clean environment. They stress the holistic view of nature and blame inappropriate human conduct for climate change. The Sanskrit shloka urges people not to harm the natural world and all of its plants and creatures by comparing the earth to a mother and her kid. The Rigveda emphasizes the need for a better future by pleading with God to step in and rescue the environment.

Traditional Practices for Sustainable Environmental Conservation are:

- **Ayurveda and Herbal Remedies:** Ayurveda, a centuries-old Indian medical system, emphasizes sustainable resource use and individual well-being. Its mainstay, herbal medicines, uses plant-based solutions to promote human health and biodiversity conservation.
- **Sacred Groves and the Preservation of Biodiversity:** Sacred groves in India have been a sanctuary for numerous plant and animal species for millennia, serving as biodiversity reservoirs and a model for conserving endangered species and their ecosystems.
- **Traditional Agricultural Methods:** India's agricultural legacy is based on crop rotation, mixed cropping, and organic farming, which prioritize sustainability and soil health by using "Jivamrita" and "compost" over heavy chemical inputs.
- **Water Conservation through Traditional Knowledge:** Indian culture honors water through rainwater collecting, step wells, and traditional water management systems like "Johads" and "Kunds," which restore groundwater supplies and mitigate drought.
- **Ecological balance and Ahimsa:** The Ahimsa philosophy promotes kindness, non-violence, and environmental preservation by acknowledging the interdependence of living forms and encouraging vegetarianism.
- **Cultural Festivals and Environmental Awareness:** India celebrates the agricultural seasons and encourages environmental appreciation through its festivals, which include Pongal, Bihu, and Baisakhi. These festivities promote environmentally conscious behavior and sustainable practices, which in turn cultivate a love and respect for the natural world.

A concerted effort involving government laws, educational initiatives, and local preservation programs is required to fully utilize ancient Indian wisdom for contemporary environmental protection. India can take the lead in a sustainable future by fostering environmental consciousness, safeguarding its cultural heritage, and fusing modern science with age-old wisdom. Taking up and revitalizing traditional Indian wisdom is a purposeful step toward ensuring a sustainable and harmonious future for coming generations.

# SUNDARBANS SILENT CRISIS: CHILD FOOD SECURITY IN A CHANGING CLIMATE

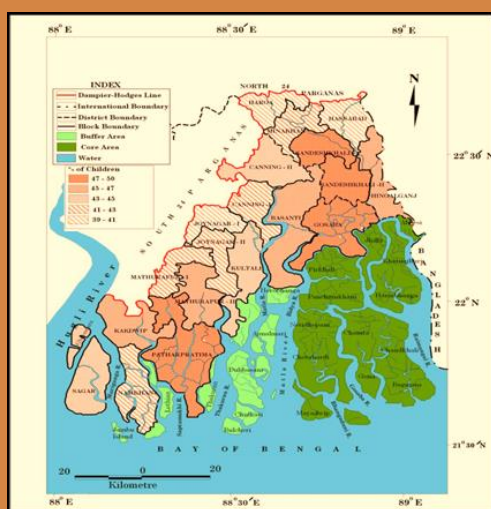
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Climate change is a widely debated topic in science today. Rainfall and temperature are two crucial factors that have a significant impact on food production and agriculture. Changes in these factors have resulted in a sharp decline in food grain output, which is a matter of concern, particularly in a nation like India. In India, where over one-third of the population is considered extremely poor, and half of all children are underweight, ensuring food security should be a top priority (Dev.M.S, 2010).

Recurrent climate shocks and long-term climate variability have negatively impacted all four dimensions of food security - availability, accessibility, utilization, and food system stability - in the Indian Sundarbans. The region is vulnerable to several natural hazards due to climate change, such as temperature changes, rainfall variability, storm surges, cyclones, and relative sea level rise. These factors have resulted in coastal erosion, forest degradation, coastal inundation, and increasing salinity, which have put pressure on livelihoods such as agriculture production, fishing cultivation, and other environmental activities. As a result, people are facing food insecurity. The effects of climate change are making it difficult to find locally farmed vegetables and seafood, and they are disappearing from the average person's plate. The uncertainty surrounding traditional agro-fishing livelihoods is impacting people's purchasing power, forcing them to select less nutrient-dense food options.

Children are the most affected by these impacts as they are more susceptible to undernutrition and related morbidities. Children from socially and geographically marginalized communities, such as Schedule Castes and the Indian Sundarbans, are suffering more than their mainland peers from the effects of climate change on food security. However, it is challenging to recognize and address the effects of climate change on food security for children from socio-geographically impoverished positions like the Indian Sundarbans. This is due to a lack of awareness about nutritional care systems for their current vulnerabilities. Because of this information gap, there is a divergence, making it harder for care delivery systems to absorb the effects of climate change on the food system. As a result, children in the area are suffering from nutritional inadequacies.



**Fig:** Concentration of Malnourished Children in Sundarban (Mondal, 2022)

## Key Finding:

- ❖ **25.40%** of households faced extremely high losses to food resources during climatic emergencies in the last five years.
- ❖ Food security is reflected in the basis of households that are food insecure compared to **31.20%** of General Caste households.

## Priority Actions:

- Identify climate change as a risk factor for food security, particularly in areas where resources are limited, such as islands.
- Implement long-term community-led adaptation strategies in the food production system instead of relying on short-term emergency responses.
- Construct climate-sensitive infrastructure in areas that are vulnerable to climate change, to ensure uninterrupted care.
- Explore innovative measures for improving the availability of vegetables and fruits through the Public Distribution System to enhance the food availability in the region.
- Conduct robust surveillance to monitor the growth of children, especially in the worst-affected areas, and take prompt action at the household level to address any issues related to food insecurity.

# OUR COMMON DUTIES FOR ENVIRONMENTAL PROTECTION

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The environment refers to all the physical surroundings on Earth, including everything living and nonliving. The nonliving part of the environment is made up of the atmosphere, hydrosphere, and lithosphere. The environment is vital for our survival, and our actions have been damaging it since ancient times. It's now our collective responsibility to safeguard our planet by taking action. National and international policies have been created to protect the environment, but it's not just the responsibility of governments or organizations. Every individual, community, business, and policymaker has a role to play in protecting the environment. Here are some ways we can contribute to environmental protection:

- **Reduce, Reuse, and Recycle:** One of the most effective ways to reduce our environmental impact is by adopting the principles of reduce, reuse, and recycle. We can minimize waste and make conscious choices about consumption.
- **Conserve Water:** Water is a precious resource, and we must use it responsibly. Fix leaks, use water-efficient appliances, and practice responsible water use in daily activities.
- **Energy Efficiency:** Conserving energy is key to mitigating climate change. We can opt for energy-efficient appliances, turn off lights and electronics when not in use, and explore renewable energy sources.
- **Sustainable Transportation:** Transportation is a major contributor to pollution and greenhouse gas emissions. We can opt for eco-friendly transportation options such as public transit, carpooling, biking, or using electric vehicles.
- **Mindful Landscape Practices:** We can choose native plants for landscaping, avoid harmful pesticides and fertilizers, and promote biodiversity.
- **Support Eco-friendly Products:** Our consumer choices matter. We can opt for products with minimal packaging, eco-friendly materials, and certifications that indicate adherence to environmental sustainability standards.
- **Educate and Advocate:** We must stay informed about environmental issues and share knowledge with others. We can participate in community initiatives, engage in discussions, and advocate for policies that prioritize environmental conservation.
- **Preserve Natural Services:** Protecting natural habitats is crucial for maintaining biodiversity. We can support and participate in conservation efforts, whether by volunteering, contributing to preservation projects, or respecting designated protected areas.
- **Reduce, Reuse, Refuse Single-use Plastics:** Reducing the use of single-use plastics is crucial in protecting the environment. Opt for reusable alternatives whenever possible and say no to single-use plastics. Join initiatives aimed at reducing plastic pollution to make a difference.
- **Carbon Footprint Awareness:** It's essential to be mindful of our carbon footprint. Consider supporting tree-planting initiatives or investing in carbon offset projects to offset your carbon emissions. Small changes collectively make a significant impact.
- **Clean-up initiative:** Participating in community clean-up events is an excellent way to remove litter and pollutants from public spaces. Clean surroundings not only benefit local ecosystems but also cultivate a sense of community responsibility.
- **Educate Others:** Environmental protection is a shared journey, and we must educate and inspire others to join us. Share information and knowledge with friends, family, and colleagues to create a ripple effect of positive change. Education is a powerful tool for inspiring collective action.



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