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The Anthropological Nature of the Environmental Crisis: Toward a Complementary Interdisciplinary Approach

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Abstract

The environmental crisis is anthropological in nature – that is, its causes lie in civilizational transformations, and thus its solutions must be sought in cultural change. Without a shift in cultural and mental paradigms, environmental, technological, or legal solutions alone will prove insufficient. The author argues that only a complementary and interdisciplinary diagnosis of the crisis can lead to the development of an effective framework for response. Such a model must integrate legal, administrative, environmental, technological, and cultural instruments. The article first presents the humanities perspective, moving from a critique of faulted human–nature paradigms toward the concept of integral ecology. It then explores the natural science perspective (Anthropocene, planetary boundaries), followed by the technical dimension (energy transition, circular economy), and the legal dimension (from the principle of sustainable development, through the precautionary principle, to the "polluter pays" principle). The article concludes with the *Integral Model for Addressing the Environmental Crisis* (IMAEC), which integrates the following components: (1) Diagnosis of the crisis' roots; (2) Ethical and spiritual dimensions of attitudes toward nature; (3) Scientific data; (4) Sustainable technologies; (5) Legal frameworks; (6) Cultural transformation. The author demonstrates that without an ethic of responsibility and a reconfiguration of civilizational narratives – such as consumerism and the instrumentalization of nature – only the symptoms of the crisis can be mitigated, not its causes. An interdisciplinary synthesis offers a feasible roadmap for public policy, education, and institutional practice. A proper response to the crisis requires the convergence of the above components. Together, these form a complementary and iterative model of addressing the crisis.

Keywords: environmental crisis, environmental philosophy, interdisciplinarity, planetary boundaries, SDG 12, SDG 9

1. Introduction

The global environmental crisis – including climate change, biodiversity loss, air, water, and soil pollution, deforestation, desertification, ecosystem degradation, and the depletion of natural resources – represents one of the most critical challenges of our time. According to the Intergovernmental Panel on Climate Change (IPCC 2023, 42), the average surface temperature of the Earth has already increased by approximately 1.2°C relative to the pre-industrial era, resulting in more frequent and intense extreme weather events, glacial melt, and rising sea levels. Research by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES 2019, XVI) shows that current species extinction rates exceed geological baselines by hundreds of times. These dramatic biospheric changes are the consequence of human activities – industrialization, urbanization, intensive agriculture, overconsumption, and technological development - often carried out without regard for the ecological limits of the planet.

Although the environmental consequences of the crisis are well documented, the key question concerns its nature: can it be reduced to a biophysical problem, or should it be understood primarily as a cultural and anthropological crisis? Lynn White Jr. argued that the roots of the modern environmental crisis are cultural in nature, particularly in the paradigm of human domination over nature (White 1967, 1203-1207). According to White, the adoption of the Christian anthropocentric worldview enabled the exploitation of nature and humanity's alienation from it (White 1967, 1204). As he famously stated, "What people do about their ecology depends on what they think about themselves in relation to things around them." Regardless of whether Christianity should be held responsible for the crisis, White's insight into its cultural sources remains significant (Sadowski 2015, 369-370).

Hans Jonas, in *The Imperative of Responsibility* (1984), argued that modern technology has endowed humanity with unprecedented destructive power, requiring an ethical transformation that traditional moral systems are unprepared to address (Jonas 1984, 1). He called for what he termed "heuristic of fear" - the capacity to anticipate the potentially harmful consequences of technological actions and to act in consideration of future generations and the integrity of the biosphere (Jonas 1984, 26-27).

Thus, the environmental crisis must be understood as anthropological in nature - not merely technological or ecological (Łepko 2003). Carolyn Merchant (1998, 198-206) noted that the Scientific and Industrial Revolutions redefined nature as a machine – an object of analysis, control, and exploitation – abandoning its previous holistic and intrinsic value. The result was a mental separation of humans from their environment, fostering an illusion of independence and a moral acceptance of domination over nature.

While the contemporary environmental crisis manifests itself in the disruption of natural systems, its roots are fundamentally civilizational (Łepko 2003, 7-9). This thesis is echoed by Hermann Lübbe, who emphasized that a proper diagnosis of environmental problems is only possible through an understanding of cultural transformations (Lübbe and Ströker 1986). Carl Friedrich von Weizsäcker stated it succinctly: "The present crisis appears as a crisis of a highly developed culture. It has reached a dead end as a result of

technological progress, which itself would not have been possible without the development of abstract knowledge that is central to advanced cultures" (Weizsäcker 1990, 173).

The anthropological nature of the crisis has also been affirmed by Pope Francis, who points that the environmental crisis has human roots (Francis 2015, 101-136), emphasizing the necessity of a profound mental and cultural transformation. Without such change, any intervention will be merely fragmentary. What is therefore needed is an interdisciplinary approach: the humanities (philosophy, anthropology) help identify the cultural and ethical sources of the crisis; theology offers reflection on the spiritual dimension of humanity's relationship with creation; the natural sciences document the scale and dynamics of environmental change; technology proposes tools for innovation and adaptation; and law provides institutional frameworks necessary for implementing sustainable development strategies.

This article aims to: (1) demonstrate the anthropological character of the environmental crisis by pointing its cultural and ethical roots; (2) present the necessity of an interdisciplinary approach combining the humanities, theology, natural sciences, technology, and law; and (3) propose the *Integral Model for Addressing the Environmental Crisis* (IMAEC) as a conceptual foundation for future research and practical application. The structure of the article includes an analysis of the various disciplinary perspectives, a presentation of the integrative model, and a conclusion with recommendations for public policy and interdisciplinary research.

2. The Humanities Perspective

2.1. Philosophy

Philosophy and environmental anthropology provide the foundation for understanding the anthropological character of the environmental crisis. Throughout history, the human–nature relationship has been shaped by diverse philosophical and cultural systems that assigned it different meanings and forms.

Already in antiquity, a series of thinkers depicted human beings as parts of a living, ordered cosmos, governed by harmony and interdependence. Plato presents the universe as "a single visible living creature, containing all living creatures within it," which frames each being – including humans – as a member of a larger living whole (Plato 1997, Tim. 30d-31b). Stoics turned this into an ethical thesis of mutual implication: "all things are interwoven," and "what is not good for the hive is not good for the bee" (Marcus Aurelius 2002, Med. VII.9, VI.54). Seneca writes in the same vein that "we are members of one great body. Nature produced us related to one another, since she created us from the same source and to the same end" (Seneca 1917-25, Ep. 95.52-53). Even the medical tradition recognized human embeddedness in the environment – health depends on air, water, and place (Hippocrates 1923, Airs 1-2). Taken together, these ancient sources show a vision of the world as a web of relations in which no being exists in isolation.

By contrast, the development of early modern philosophy – especially Cartesianism – introduced a sharp dualism of mind and body and separated the human from nature. In

the *Discourse on the Method* (1637), René Descartes proposed that humans ought to become "masters and possessors of nature," which eventually led to an instrumental view of the environment as a resource for exploitation (Descartes 1996, Part VI, pp. 142-143). Francis Bacon holds a similar view. He believes that through science, man can dominate nature and expand his dominion (lat. *imperium homini*) over the world (Bacon 2000, I. III; I. LXVIII; Merchant 2013, 551-599). John Locke further advanced the idea of private property, linking it to a right to transform the environment – an idea that became a philosophical foundation for nineteenth-century capitalism and industrialization (Locke [1690] 1988, V. sect. 27-32)**.**

The twentieth century saw the rise of environmental anthropology, which began to challenge the dominant paradigm of unrestrained exploitation of nature. In *Theory of Culture Change* (1972, 11-29), Julian H. Steward presented the theory of multilinear cultural evolution, arguing that societies adapt to their environments in diverse ways and that ecological and technological change are closely interconnected. Gregory Bateson (1972, 1-11) developed the concept of an "ecology of mind," emphasizing that the health of ecosystems is inseparable from the health of human societies.

Contemporary environmental philosophy has examined, in depth, the competing paradigms of the human place and role within the natural world. Many scholars move away from strong anthropocentric accounts, seeing in them a root of human domination over nature. Others defend responsible forms of anthropocentrism that affirm the intrinsic value of all forms of life and the respect and care owed to them; in such qualified anthropocentric views they discern a plausible path toward overcoming the environmental crisis. In a related vein, Hans Jonas, in *The Imperative of Responsibility* (1984, 1), argued that technological development has endowed humanity with such vast power to intervene in the environment that ethics must be expanded to include responsibility for future generations and for the biosphere as a whole. Jonas formulated a new moral imperative: "Act so that the effects of your action are compatible with the permanence of genuine human life on earth." (Jonas 1984, 11)

Environmental ethics, as a subdiscipline of philosophy, advances these ideas by examining the moral relations between humans and the environment. Holmes Rolston III (1988), Aldo Leopold (1949), and Val Plumwood (1993) highlighted the need to transform ecological consciousness – from a stance of domination over nature to one of respect and co-responsibility. Aldo Leopold in *A Sand County Almanac* (1949) argued that ethics should extend beyond interpersonal relations to include the "land community," that is, all living beings and their environment. Rolston developed the notion of nature's intrinsic value, which exists independently of human benefit. These concepts reshaped paradigms of the human–nature relationship, enabling first a shift in ecological consciousness and, consequently, changes in attitudes and practices toward the natural world.

2.2. Culture

The industrialization of the nineteenth and twentieth centuries brought not only immense economic and technological growth but also a fundamental change in how nature was perceived and used. Traditional agrarian societies maintained a more balanced relationship with the environment. Natural cycles determined the rhythm of life, and the human relationship with nature formed part of everyday experience (Mazur 2010). The

Industrial Revolution, which began in the eighteenth century and intensified in the nineteenth, introduced a new civilizational model based on mass production, urbanization, consumption, and unlimited economic growth. As Zygmunt Bauman observes (2000, 115, 134-135), modern societies came to view progress as an open-ended process in which the success of individuals and nations is measured by their capacity for accumulation and rapid industrial development.

A defining feature of modernity was the belief in the boundless potential of science and technology. Francis Bacon and Enlightenment thinkers approached nature as an object to be understood and controlled, with technology enabling full subordination of the environment to human needs (Merchant 1998). In *Technopoly*, Neil Postman (1992, 132-133) argues that modern societies ceded authority to technique: science and inventions not only served human aims but began to shape social structures and cultural values. The result was intensified exploitation of natural resources, the rise of a fossil-fuel economy, and the dominance of heavy industry – developments that led to ecosystem degradation on an unprecedented scale.

In the twentieth century, industrial culture evolved into a culture of consumption. Mass production and expanding commerce created the conditions for a new way of life in which the human being is understood primarily as a consumer. As Carolyn Merchant notes (1998), nature came to be viewed merely as a warehouse of raw materials, while economic success was defined by the capacity to maximize environmental extraction. The growth of capitalism accelerated urbanization and severed people from direct contact with nature, producing societies increasingly alienated from ecological rhythms.

Globalization, which intensified in the latter half of the twentieth century, extended the industrial-consumer model worldwide. Developed countries served as templates for emerging economies, which began to emulate their lifestyles and production structures. This shift drove a sharp rise in energy use and the exploitation of natural resources at a global scale (Latouche 2009, 55-56). Consumption patterns – propelled by advertising, mass media, and pop culture – promoted the idea that happiness and status are measured by the volume of goods possessed. Traditional values such as moderation, simplicity, and harmony with nature were pushed to the margins of contemporary public discourse (Francis 2015, 222-224).

Cultural narratives play a crucial role here. Modern literature and art rarely presented nature as an autonomous value; most often, they depicted it as a backdrop for human activity or as a resource to be used (Glotfelty and Fromm 1996). Only in the second half of the twentieth century did literary movements (e.g., ecocriticism), Earth/Land art, and Hollywood productions begin to foreground the destructive impact of modern civilization on the environment and to emphasize the need to restore ecological balance.

In response to the environmental crisis, intellectual and social movements emerged that proposed alternatives to the culture of growth and consumption. Serge Latouche (2009, 31-33) promotes degrowth: the voluntary reduction of production and consumption, along with shorter supply chains, in order to protect natural resources and improve quality of life. This movement challenges the paradigm of unlimited economic growth, arguing that it conflicts with the planet's ecological limits (Meadows *et al.* 1972).

Religious perspectives likewise underscore the need for cultural transformation. In *Laudato si'*, Pope Francis calls for an "ecological conversion," understood as a deep change of mentality and lifestyle, the reduction of waste, and the cultivation of solidarity among human beings and with other living creatures (Francis 2015, 216-221). Similar ideas appear in the writings of ecotheologians, who argue that spiritual renewal is a necessary condition for addressing environmental problems (Berry 1988; Nasr 1996).

Despite its technological and economic achievements, industrial civilization has significantly contributed to the present environmental crisis. Overcoming this crisis requires a profound change in cultural narratives – from the myth of limitless progress and consumption to a vision of harmonious coexistence between humans and nature. This entails not only reforms in economic policy or technology but also a redefinition of civilizational values, making the protection of life on Earth and responsibility toward future generations the highest priorities.

2.3. Theology

Cosmological visions of the world, connected with religious doctrines of creation, play a crucial role in shaping humanity's relationship to nature. Alongside the rise of humanistic reflection on the environmental crisis, a theological interpretation has taken shape that emphasizes responsibility and care for creation. The theology of creation underscores that the world is not human property but a gift from God. God entrusts human beings with the task of caring for the Earth, where the human person is more a gardener and guardian of life than an absolute master of nature (Boff 1995; Skolimowski 1999, 145; Sadowski and Ayvaz 2023, 153-154). This outlook leads to the rejection of harmful versions of anthropocentrism in favor of a responsible anthropocentrism and a theocentric perspective in which all of nature participates in God's plan of salvation (Taylor 2008).

The development of ecotheology is one of the most important signs of this shift. Ecotheology – advanced by thinkers such as Leonardo Boff and Jürgen Moltmann – points to the spiritual roots of the environmental crisis and to the need for an "ecological conversion" (Boff 1995; see also Francis 2015, 216-221). Boff argues that environmental degradation and poverty are inseparable – "the cry of the earth is the cry of the poor." Integral ecology, understood as the union of care for the environment with the pursuit of social justice, becomes a foundation for a renewed Christian environmental ethic (Francis 2015, 137-167).

Documents of the Catholic Church – especially Pope Francis's encyclical *Laudato si'* (2015) – mark a watershed in Catholic social teaching. The pope stresses that environmental degradation stems not only from mismanagement of resources but also from a spiritual crisis of humanity. He calls for ecological conversion that includes personal and communal changes in lifestyle, reductions in waste, and a restored bond with the natural world (Francis 2015, 211-212). *Laudato si'* is the first papal document of this rank to integrate theological reflection with the natural and social sciences, proposing an integral vision of ecology.

Laudato si' builds on the teaching of John Paul II and Benedict XVI, both of whom consistently underscored responsible stewardship of creation as a gift rather than merely a resource for use (John Paul II 1990; Benedict XVI 2009). Pope Francis states even

more explicitly in *Laudato si'* (2015, 48) that environmental degradation is inseparable from a crisis of the human person and of social relations. The encyclical develops the notion of integral ecology, encompassing natural as well as social, spiritual, and ethical dimensions.

The Orthodox perspective also offers a significant contribution to ecotheology. Ecumenical Patriarch Bartholomew I – often called the "Green Patriarch" – has repeatedly emphasized that sin against the environment is sin against God, because it destroys His creation (Bartholomew I 1997, 229-230). The Orthodox Church engages in numerous pro-environmental initiatives: it convenes ecological conferences, promotes environmental education, and supports conservation efforts in a spirit of Christian asceticism and moderation.

Other religious traditions – Judaism, Islam, Buddhism, and Hinduism – are likewise actively engaged in reflecting on the roots of the environmental crisis, developing their own ecological teachings. Judaism's sabbatical theology highlights the need for rest not only for human beings but also for the land (Gen 2:2-3). Islam presents the human as *khalīfa* – a steward of creation accountable to God for its protection (Nasr 1996; Sadowski and Ayvaz 2023, 153-154). Buddhism and Hinduism stress the interdependence of all beings and reverence for life, which undergirds the formation of an environmental ethics.

Religions also play a practical role through environmental action. Communities from diverse traditions increasingly organize campaigns for environmental protection, tree planting, river restoration, and reductions in plastic use (Taylor 2008). In India and Nepal, temples and monasteries often function as local hubs of conservation, with monks and nuns engaged in environmental initiatives at social and educational levels.

Ecotheology has further introduced new ethical categories – "ecological sin," "ecological conversion," "justice of creation," and "ecological responsibility." These terms appear with growing frequency in church social teaching and in environmental dialogues (John Paul II 1990; Bartholomew I 1997; Bartholomew I 2010; Francis 2015). In this way, a basis is emerging for building environmental awareness capable of uniting people of different religions and cultures in the care for our common home.

Philosophy, culture, and theology thus converge in the search for deeper causes of the environmental crisis. This crisis is not solely the result of economic systems or technologies; it is rooted in mentalities, values, and cultural narratives that have separated human beings from nature for centuries. The response therefore requires not only political, legal, or technological measures, but also a transformation of consciousness – adopting a paradigm of the human place and role in the world in which the human being is recognized as part of a broader community of life, bearing responsibility for the integrity of all creation.

3. Scientific-Technical and Legal Perspectives

3.1. Natural Sciences

The natural sciences play a fundamental role in diagnosing the immediate causes and consequences of the contemporary environmental crisis. Geological, biological, and ecological research unequivocally shows that human activity has become the principal

driver shaping planetary processes in the era known as the Anthropocene (Crutzen 2002). Climate change, biodiversity loss, soil and water degradation, air pollution, and ocean acidification all indicate that humanity has exceeded planetary boundaries across multiple domains (Rockström *et al.* 2009a, 473; Rockström *et al.* 2009b).

According to the IPCC (2023, 42), the global mean temperature has already risen by 1.2°C relative to the pre-industrial baseline, and absent radical reductions in greenhouse gas emissions, this increase may reach 3°C by the end of the twenty-first century. The consequences include more frequent heatwaves, floods, hurricanes, and droughts, as well as glacial melt and sea-level rise – developments that directly threaten the lives of millions and destabilize ecosystems worldwide (Steffen *et al.* 2015).

The IPBES report (2019, XVI) emphasizes that roughly one million species are at risk of extinction in the coming decades, with current extinction rates hundreds of times higher than geological background levels (Barnosky *et al.* 2011, 51). Biodiversity loss undermines ecosystem services such as pollination, climate regulation, and water purification, with direct implications for human well-being (Cardinale *et al.* 2012).

The natural sciences also provide knowledge that clarifies the limits of human activity. The planetary boundaries framework identifies safe operating thresholds for human interference in Earth's ecological systems, crossing these thresholds risks triggering irreversible changes in the biosphere (Rockström *et al.* 2009b). Domains such as the nitrogen and phosphorus cycles, land use, and CO_2 emissions are already severely perturbed. Understanding these processes is essential for designing strategies of sustainable development and for safeguarding life on the planet.

3.2. Technical Sciences

Technological development has been one of the chief drivers accelerating environmental degradation. The Industrial Revolution initiated an era of mass production and mass consumption, based on the combustion of fossil fuels and the intensive extraction of raw materials (Meadows *et al.* 1972). Today we face a different challenge: to harness technology's potential to create sustainable solutions that reduce humanity's negative impact on the environment.

Renewable energy technologies – wind, solar, geothermal, and biomass – play a crucial role in the energy transition. A shift to a low-carbon economy is essential to limit global warming and its consequences (Geels 2002). Innovations in energy storage, smart grids, and the expansion of electric vehicles are accelerating the move away from fossil fuels (Jacobson *et al.* 2017).

The concept of the circular economy (Stahel 2016) offers a complementary technological pathway. It aims to minimize waste and maximize material use through recycling, reuse, and environmentally conscious product design. Examples from Scandinavian countries show that such systems can reduce greenhouse gas emissions and raw-material consumption while maintaining high quality of life.

It must be noted, however, that gains in technological efficiency can trigger the so-called Jevons paradox (1866, 124-125), whereby increased efficiency ultimately leads to higher total resource use. Technological transformation therefore needs to be supported by cultural and educational change, as well as appropriate legal regulation. Technology

alone will not suffice. Societies must adopt new models of consumption and production grounded in the principles of sustainable development and environmental ethics.

3.3. Legal Sciences

Environmental law has developed rapidly since the second half of the twentieth century. Early global agreements, such as the Stockholm Conference (1972), laid the groundwork for international environmental law. Subsequent instruments – including the United Nations Framework Convention on Climate Change (1992), the Kyoto Protocol (1997), and the Paris Agreement (2015) – define the contemporary framework for interstate cooperation in combating climate change and environmental degradation (Kiss and Shelton 2004, 39-68; Boyd 2012; Boyd 2017).

At the national level, many states have enacted the principles of sustainable development, the precautionary principle, and the "polluter pays" principle, which together form the foundation of environmental protection policy (Kiss and Shelton 2004, 212-215). Legal mechanisms enable the creation of national parks, the protection of habitats, and the regulation of industrial emissions, as well as the setting of air- and water-quality standards.

The concept of environmental justice (Schlosberg 2007, 45-78; Gocko 2024) emphasizes the fair distribution of the costs and benefits associated with environmental protection across different social groups and generations. Environmental law increasingly recognizes the rights of local communities that are directly affected by ecosystem degradation.

Law serves not only regulatory but also educational and cultural functions. By establishing norms for the protection of nature, it promotes ecological values within society and helps cultivate a sense of responsibility for the planet's future. Jonas (1984, 38-46) argues that, in an age of technological power and global risks, legal ethics must expand to include responsibility toward future generations and the biosphere as a whole.

The natural sciences provide essential knowledge about environmental conditions, planetary limits, and the impacts of human activity. The technical sciences develop tools that enable the transition to a sustainable economy, while law establishes the institutional frameworks and normative standards for environmental protection. An effective response to the environmental crisis, however, requires synergy among all three realms – an interdisciplinary collaboration in which scientific knowledge, technological innovation, and legal regulation mutually reinforce and sustain one another.

4. Integral Model for Addressing the Environmental Crisis

An important tool for integrating the interlinked and multilayered perspectives on the environmental crisis is the Integral Model for Addressing the Environmental Crisis (IMAEC). The following components outline the model's structure. Taken together, they are designed to catalyze cultural transformation – changes that, in turn, can address the drivers of the crisis rather than merely its symptoms.

1. Diagnosis of the crisis' roots

The first component involves identifying the cultural, historical, and philosophical roots of the environmental crisis – such as the denial of nature's intrinsic value, consumerism,

and the instrumental treatment of the natural world. This analysis reveals that environmental degradation stems from long-term cultural processes that have separated human beings from nature.

2. Ethical and spiritual dimensions of attitudes toward nature.

The second component cultivates awareness that attitudes toward nature are ethical and spiritual in character and therefore shape responsibility for the biosphere, inspired by care for future generations (Jonas 1984, 38-46). This element also draws on the notion of ecological conversion (Francis 2015, 216-221) and includes interreligious and intercultural dialogue that fosters global ecological solidarity.

3. Scientific foundations and empirical data.

The third component integrates results from the natural sciences – climatic and ecological datasets – to define safe operating limits for human activity (Rockström *et al.* 2009a, 473). Science-based strategies enable political and economic decision-making that reflects the complexity and fragility of ecosystems.

4. Sustainable technologies.

The fourth component entails developing and deploying innovative technologies that reduce humanity's environmental footprint (Geels 2002). This includes the energy transition, circular-economy practices, intelligent resource-management systems, and the expansion of green infrastructure.

5. Legal and institutional frameworks.

The fifth component focuses on creating and enforcing legal regulations that enable more effective protection of ecosystems. Law not only safeguards the environment but also shapes public consciousness and promotes an ethical approach to the natural world.

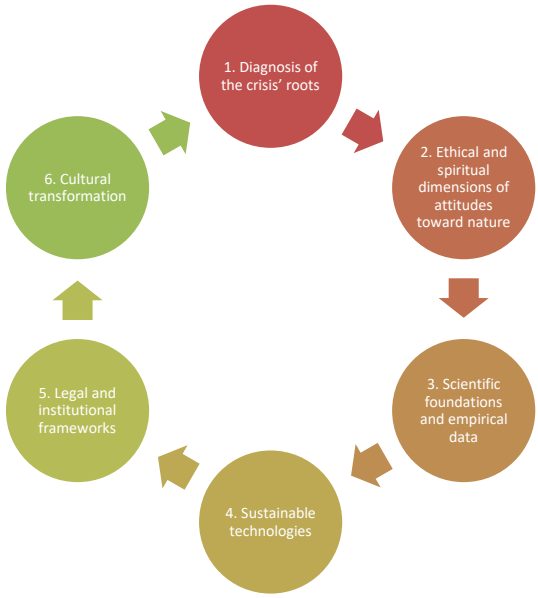

Figure 1. Integral Model for Addressing the Environmental Crisis.
Source: Author's elaboration.

This model operates cyclically: Diagnosis of the crisis' roots → Ethical and spiritual dimensions of attitudes toward nature → Scientific foundations and empirical data → Sustainable technologies → Legal and institutional frameworks → Cultural transformation. Each element reinforces the others, creating a dynamic system capable of responding to ecological and social change. Such integration is key to designing public policies that are durable, effective, and morally grounded. It enables a shift from fragmented interventions to a comprehensive environmental strategy built on the synergy of diverse domains of knowledge and practice.

5. Conclusion

The goal of this article has been to show that without profound cultural change and a transformation of mindsets, contemporary environmental challenges cannot be effectively addressed. Responding to the crisis only on environmental, technological, or legal planes will not eliminate its causes; at best, it will mitigate some of its symptoms. It is therefore crucial to move beyond reductionist thinking that confines action to technological or legal fixes, and instead to adopt a complementary, interdisciplinary perspective that recognizes the environmental crisis as a crisis of the human being and of humanity's mode of presence in the world.

The article has presented multiple perspectives – humanities, theology, natural sciences, technology, and law – that together provide a foundation for a renewed approach to environmental protection. The humanistic and theological perspectives uncover the spiritual and philosophical roots of the crisis, highlighting the need for an ethics of responsibility (Jonas 1984) and for ecological conversion (Francis 2015). The natural sciences supply knowledge about the state of the biosphere, planetary boundaries, and ecological processes that are essential for understanding the consequences of human activity (Rockström *et al*. 2009b). Technologies and legal instruments create enabling conditions for remedial action, but their effectiveness remains limited if not accompanied by a transformation of social values and environmental consciousness (Geels 2002; Kauffman and Martin 2017).

In response to these challenges, the article proposes the Integral Model for Addressing the Environmental Crisis (IMAEC). This concept integrates anthropological diagnosis, ecological ethics and spirituality, scientific evidence, sustainable technologies, and legal frameworks into a coherent system of action. The model accounts for the dynamic interaction among culture, science, technology, and law. It shows that genuine ecological transformation requires collaboration across all these domains yet must ultimately be rooted in cultural and mental change.

In sum, overcoming the environmental crisis requires:

1. Transforming the paradigms that rooted human alienation from nature and legitimized irresponsible exploitation.
2. Developing environmental ethics and spirituality that clarify the moral dimension of attitudes toward nature and deepen co-responsibility for future generations and for all creation.

3. Basing public policy on scientific knowledge, so that the limits of human activity are defined in ways that reflect the complexity and fragility of ecosystems.
4. Implementing pro-environmental technologies that not only mitigate the crisis's effects but also support new paradigms of harmonious human coexistence with nature.
5. Strengthening legal frameworks and environmental justice to protect the interests of future generations.

Only by integrating these elements – and by undertaking deep cultural and mental transformation – will it be possible to articulate a new vision of civilizational development. In this vision, humanity is no longer an adversary of nature but its responsible co-participant and guardian. Only such a civilization stands a chance not merely to survive, but to flourish, securing the well-being of both present and future generations.

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