

This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY-ND 4.0 International) license <https://creativecommons.org/licenses/by-nd/4.0>

p-ISSN 1733-1218; e-ISSN 2719-826X

<https://doi.org/10.21697/seb.5895>

Research Article

Pope Francis's Ecophilosophical Message: Guidelines for Building a Just and Sustainable World in the Light of *Laudato si'* and *Laudate Deum*

Ekofilozoficzne przesłanie papieża Franciszka: wskazania do budowania sprawiedliwego i zrównoważonego świata w świetle *Laudato si'* i *Laudate Deum*

Ryszard F. Sadowski^{1*}, Joshtröm Isaac Kureethadam²

¹ Cardinal Stefan Wyszyński University in Warsaw, Poland

² Salesian Pontifical University in Rome, Italy

ORCID RS <https://orcid.org/0000-0002-5452-2168>; JIK <https://orcid.org/0009-0009-3267-5356>;

• r.sadowski@uksw.edu.pl

Received: 2026-04-25; Revised: 2026-06-18; Accepted: 2026-06-22; Pre-published: 2026-06-22

Abstract

This article reconstructs *Laudato si'* and *Laudate Deum* as a coherent ecophilosophical framework for addressing the ecological crisis through relational anthropology, intergenerational responsibility, and ecological education. Focusing on *Laudato si'* (2015) and *Laudate Deum* (2023), it analyses the development of Pope Francis's thought on the ecological crisis, with particular attention to the critique of excessive anthropocentrism, the principle of intergenerational responsibility, and the role of ecological education. The article argues that Francis's concept of integral ecology provides more than general moral inspiration: it offers practical normative criteria for evaluating policies, institutions, and educational practices in the context of environmental degradation and climate instability. The analysis shows that the two papal documents form a dynamic continuum, moving from anthropological and ethical foundations to an urgent call for implementation and political accountability. On this basis, the article formulates a set of operational guidelines for institutional and public action, including intergenerational tests in decision-making, full internalization of environmental costs, compensatory mechanisms grounded in historical responsibility, and education oriented toward ecological conscience and civic competence. The study concludes that Pope Francis's ecological teaching constitutes a significant ecophilosophical contribution to contemporary debates on justice, sustainability, and responsibility for the future.

Keywords

Pope Francis, *Laudato si'*, *Laudate Deum*, integral ecology, ecophilosophy, environmental ethics, anthropocentrism, intergenerational responsibility, ecological justice, education for sustainable development, SDG 4 – Quality Education, SDG 13 – Climate Action

Streszczenie

Niniejszy artykuł rekonstruuje *Laudato si'* oraz *Laudate Deum* jako spójne ramy ekofilozoficzne służące przeciwdziałaniu kryzysowi ekologicznemu poprzez kategorię antropologii relacyjnej, odpowiedzialności międzypokoleniowej oraz edukacji ekologicznej. Koncentrując się na encyklice *Laudato si'* (2015) oraz adhortacji *Laudate Deum* (2023), analizuje rozwój myśli papieża Franciszka dotyczącej kryzysu ekologicznego, ze szczególnym uwzględnieniem krytyki nadmiernego antropocentryzmu, zasady odpowiedzialności międzypokoleniowej oraz roli edukacji ekologicznej. W artykule dowodzi się, że koncepcja ekologii integralnej papieża Franciszka wykracza poza ogólną inspirację moralną: dostarcza ona bowiem praktycznych kryteriów normatywnych służących ocenie polityk publicznych, instytucji oraz praktyk edukacyjnych w kontekście degradacji środowiska i niestabilności klimatycznej. Analiza ukazuje, że oba dokumenty papieskie tworzą dynamiczne kontinuum, przechodząc od fundamentów antropologicznych i etycznych ku pilnemu wezwaniu do wdrożenia oraz odpowiedzialności politycznej. Na tej podstawie artykuł formułuje zestaw operacyjnych wytycznych dla działań instytucjonalnych i publicznych, obejmujących m.in. stosowanie testów międzypokoleniowych w procesach decyzyjnych, pełną internalizację kosztów środowiskowych, mechanizmy kompensacyjne oparte na odpowiedzialności historycznej oraz edukację ukierunkowaną na kształtowanie świadomości ekologicznej i kompetencji obywatelskich. Podsumowując, autorzy stwierdzają, że nauczanie ekologiczne papieża Franciszka stanowi istotny wkład ekofilozoficzny we współczesne debaty nad sprawiedliwością, zrównoważonym rozwojem oraz odpowiedzialnością za przyszłość.

Słowa kluczowe

papież Franciszek, *Laudato si'*, *Laudate Deum*, ekologia integralna, ekofilozofia, etyka środowiskowa, antropocentryzm, odpowiedzialność międzypokoleniowa, sprawiedliwość ekologiczna, edukacja na rzecz zrównoważonego rozwoju, Cel Zrównoważonego Rozwoju 4 – Dobra jakość edukacji, Cel Zrównoważonego Rozwoju 13 – Działania w dziedzinie klimatu

Introduction

Against the backdrop of increasing threats to the flourishing of human life and the rest of the biotic community on Earth, our common home, Pope Francis's ecological teaching can be read as one of the most coherent and widely resonant contributions to contemporary ecophilosophical reflection on the ecological crisis and to the search for practical ways of responding to it. The encyclical *Laudato si'* (2015) [LS] articulated a framework of "integral ecology," linking an analysis of environmental degradation with a diagnosis of social exclusion, a critique of the technocratic paradigm, and postulates of inter- and

intragenerational justice (LS 10–14, 91–95, 137–162). Eight years later, *Laudate Deum* (2023) [LD] clarified and sharpened these insights, shifting the emphasis from general appeals to the urgency of action as well as to political and ethical responsibility in a context of accelerating climate change, and to exposing forms of only apparent concern for the environment (LD 2–7, 57–60). Taken together, the two documents create a dynamic axis in the development of the papal message, from anthropological and ethical foundations to explicit calls for implementation, which, when appropriately interpreted, provides practical guidelines for building a just and sustainable world.

The aim of this article is to reconstruct the development of Pope Francis’s reflection on the ecological question as an ecophilosophically relevant argument and to identify its normative consequences for education, public-policy design, and institutional life. We argue that Francis’s concept of integral ecology, set out in *Laudato si’* and strengthened in *Laudate Deum*, can be reconstructed as a coherent ecophilosophical and ethical framework, in which a critical revision of anthropocentrism, intergenerational responsibility, and ecological education interpenetrate, forming a basis for concrete political and institutional decisions. In this sense the “ecophilosophical message” is not merely a source of inspiration; it offers unambiguous criteria for assessing actions that have environmental consequences. The article’s original contribution lies in reconstructing Francis’s ecological teaching as a normative framework that can be translated into operational criteria for institutional design, public policy, and ecological education. Throughout the article, references to *Laudato si’* and *Laudate Deum* indicate Francis’s explicit claims, whereas the language of framework, matrix, criteria, and guidelines refers to the authors’ own ecophilosophical reconstruction and normative extrapolation.

The selection of these three axes is analytical rather than exhaustive. The article does not claim that anthropocentrism, intergenerational responsibility, and ecological education encompass the whole of Francis’s ecological teaching. Rather, they are selected because they correspond to three levels required for an ecophilosophical operationalization of integral ecology: an anthropological diagnosis of the crisis, a normative criterion for justice across generations, and a formative-institutional mechanism for social transformation. Other central themes in Francis’s teaching, such as the technocratic paradigm, global inequality, the intrinsic value of non-human creatures, and the critique of consumerism, are treated here as interrelated dimensions that run through these three axes.

First, we reconstruct and organize key anthropological themes in Francis's view, focusing on his critique of "excessive anthropocentrism" and his proposal of a relational human subject that recognizes the interdependence of all beings and the responsible "inhabiting" of our common home (LS 67–69, 115–121). We then analyze the category of intergenerational responsibility as a touchstone of ethical and political adequacy in the era of climate crisis; we show how *Laudate Deum* reinforces this axis by underscoring the necessity of immediate action and by indicating differentiated historical and political responsibility (LD 44–52; cf. LS 159–170, 194–196). In the third part we develop the practical dimension, that is, education for a sustainable world understood as a long-term process of forming ecological conscience, civic competencies, and institutional capacities to bear the costs of transformation – from the level of lifestyles to systemic frameworks (LS 202–215). Finally, we synthesize the conclusions as a set of guidelines that follow directly from the argument and are operational in character, indicating minimal conditions for consistency between declared values and the practice of institutions and public policies.

The article is interpretive, reconstructive, and programmatic in nature. On the interpretive side, we show the continuity and intensification of papal teaching – from the broad vision of integral ecology to the unambiguous call to action amid increasing climate instability. On the applicative side, we indicate that Francis's ethical vision requires institutional guarantees: intergenerational tests in decision-making processes, honest accounting of environmental costs, compensatory mechanisms grounded in historical responsibility, and education understood as the formation of virtues and social competencies necessary to sustain the community of life. Such an arrangement, from anthropology through justice to education, allows one to move from diagnosis to practice and to translate the message of *Laudato si'* and *Laudate Deum* into concrete, measurable actions conducive to building a world that is both just and sustainable.

1. Francis's Integral Ecology in Recent Scholarship

The ecological teaching of Pope Francis has already generated a substantial body of scholarship across theology, Catholic Social Teaching, environmental ethics, religion and ecology, sustainability studies, and education. In this literature, *Laudato si'* is commonly interpreted not merely as a papal statement on environmental protection, but as a synthetic contribution that links ecological degradation, social injustice, economic reductionism, and spiritual-cultural crisis within the paradigm of integral ecology. Theological and eco-theological readings have emphasized that Francis's proposal extends earlier Catholic reflection on

creation, human dignity, the common good, and integral human development, while also giving these themes a new ecological density (Miller 2017; Deane-Drummond 2008; Deane-Drummond and Deneulin 2021). The wider field of religion and ecology has likewise treated *Laudato si'* as part of a broader transformation in which religious traditions are increasingly examined as sources of ecological criticism, moral motivation, and social mobilization (Jenkins, Tucker, and Grim 2016).

A first important strand of interpretation situates Francis's ecological teaching within Catholic Social Teaching and eco-theology. In this perspective, integral ecology is read as a development of the Church's social teachings, especially its concern for the dignity of the poor, the common good, solidarity, and the moral limits of economic and technological power. Studies of *Laudato si'* often emphasize that the encyclical does not isolate environmental protection from social justice but presents ecological degradation and human exclusion as mutually reinforcing dimensions of one crisis. This is why the "cry of the earth" and the "cry of the poor" function together rather than separately. Such readings are important because they show that Francis's ecological thought is not an external addition to Catholic Social Teaching, but a reconfiguration of that tradition under the conditions of planetary ecological crisis (Miller 2017; Annett 2017; Deane-Drummond and Deneulin 2021).

A second strand reads *Laudato si'* as a contribution to environmental ethics and ecophilosophy. Here the emphasis falls less on ecclesial continuity and more on Francis's critique of anthropocentrism, technocratic rationality, consumerism, and the reduction of the natural world to an object of possession and utility. Cajetan Iheka, for example, argues that the anthropocentrism of Francis's integral ecology has a strategic function: it foregrounds the suffering of vulnerable human communities, especially in the Global South, while also intensifying human responsibility for the wider community of life (Iheka 2017). Other authors have emphasized the epistemological and ethical significance of integral ecology as a critical principle for sustainability, because it refuses to separate scientific, social, political, ethical, and theological dimensions of ecological crisis (Maier and Monti 2023). In this line of scholarship, Francis's contribution lies not simply in repeating familiar environmental concerns, but in offering a relational and ethically charged account of the human place within the ecological whole.

A third strand focuses on the socio-political and institutional implications of integral ecology. Scholars have noted that Francis's critique of the technocratic paradigm is directed not against technology as such, but against a form of political, economic, and cultural rationality in which efficiency, control, growth, and short-

term profit become dominant criteria of collective decision-making. This explains why *Laudato si'* has been discussed not only in theology, but also in debates on sustainability policy, climate governance, environmental justice, and development ethics. Recent work on *Laudate Deum* further strengthens this line of interpretation by showing that Francis moves from a broad vision of integral ecology toward a sharper critique of climate denial, weak political responses, and the lack of binding mechanisms of accountability (Borgoño 2025; Mazzoleni 2025; Pedersen 2024). The development from *Laudato si'* to *Laudate Deum* therefore marks not a change of direction, but an intensification of the demand that ecological responsibility be translated into public, institutional, and political practice.

A fourth area of scholarship concerns ecological education and formation. Studies in this field underline that Francis does not treat education as a merely informational process, but as a long-term formation of perception, habits, virtues, lifestyles, and civic responsibility. Kureethadam's analysis of ecological education in *Laudato si'* highlights the holistic character of Francis's educational model, in which ecological awareness is connected with solidarity, simplicity of life, care for creation, and responsibility toward future generations (Kureethadam 2016). Other studies similarly interpret education for integral ecology as a process that links environmental knowledge with ethical formation and social transformation (Szulczyński 2016; Polito 2022). This literature is particularly relevant for the present article, because it shows that education is not an appendix to Francis's ecological teaching, but one of the principal mechanisms through which integral ecology can become socially effective.

Against this background, the present article does not claim that the themes of anthropocentrism, intergenerational responsibility, and ecological education exhaust the whole of Francis's ecological teaching. Rather, it selects them as three analytically strategic axes for reconstructing the operational logic of integral ecology. The critique of anthropocentrism identifies the distorted model of human agency that lies behind ecological degradation; intergenerational responsibility translates that diagnosis into a criterion of justice and long-range accountability; and ecological education indicates the formative and institutional pathway by which such responsibility can be cultivated and implemented. The contribution of this article therefore consists in bringing these three dimensions together as a coherent ecophilosophical matrix that can support the evaluation of institutions, public policies, and socio-educational practices.

2. Critique of Anthropocentrism

In this article, “anthropocentrism” is not used as a single undifferentiated category. Following Francis’s own language of “excessive anthropocentrism,” the analysis focuses on a strong normative and practical form of anthropocentrism: a model in which human interests, especially short-term economic and technological interests, are treated as the final measure of value, while non-human beings are reduced to resources for use. This should be distinguished from a weak or perspectival anthropocentrism, according to which human beings inevitably interpret moral obligations from within human experience and responsibility. Francis does not reject the human perspective as such; rather, he rejects its tyrannical and self-absolutizing form.

By “modern anthropocentrism,” this article refers primarily to the post-Cartesian and technocratic configuration of subjectivity in which the human subject is construed as autonomous, self-grounding, and positioned over against nature as an external object of control. In this sense, the problem is not the mere fact that human beings interpret the world from a human standpoint, but the absolutization of this standpoint into a principle of domination, possession, and exploitation. This distinction is important because it allows Francis’s critique to be read not as an anti-humanism, but as a call to reconfigure human agency as responsible participation in the wider community of life.

Such a form of anthropocentrism has often been identified as one of the root causes of the current ecological crisis. It has led to “a view of other creatures as if they were all essentially ordered to the good of humankind and had no intrinsic finality of their own, and a vision of the cosmos so centred on humankind that it could virtually mean human society and its interests.” (Murray 1992, 163) Leonardo Boff develops this critique in especially strong terms:

The imperial and anti-ecological anthropology at work in the contemporary dreams, projects, ideals, institutions, and values can be summed up in one word: *anthropocentrism*. The term means that everything throughout the fifteen-billion-year story exists solely for the human being, man and woman. Hence, everything culminates in the human being. Nothing has intrinsic value, nothing has otherness and meaning apart from the human being. All beings are at the disposal of human beings, to serve as their property and under their control, so that humans may attain their desires and projects. Human beings feel that they are *above* things rather than *alongside* and *with* things. They imagine themselves as an isolated single point, outside nature and above it. (Boff 1997, 70)

In *Laudato si'*, Pope Francis points out how the modern technocratic paradigm is built on the hubris of the exalted position of the subject catapulted as the Archimedean centre of all that exists.

This paradigm exalts the concept of a subject who, using logical and rational procedures, progressively approaches and gains control over an external object. ... Men and women have constantly intervened in nature, but for a long time this meant being in tune with and respecting the possibilities offered by the things themselves. It was a matter of receiving what nature itself allowed, as if from its own hand. Now, by contrast, we are the ones to lay our hands on things, attempting to extract everything possible from them while frequently ignoring or forgetting the reality in front of us. Human beings and material objects no longer extend a friendly hand to one another; the relationship has become confrontational. (LS 106)

According to Francis, the disastrous state of our common home has to do with the tendency on the part of humanity to make itself the absolute centre of reality. The ecological crisis begins when human beings arbitrarily place themselves at the centre of reality and treat the natural world primarily as an object of possession, control, and use. Francis writes: “where we ourselves have the final word, where everything is simply our property and we use it for ourselves alone. The misuse of creation begins when we no longer recognize any higher instance than ourselves, when we see nothing else but ourselves.” (LS 6) Francis interprets the ecological crisis as the consequence of a distorted model of human agency in which dominion over nature replaces responsible participation in the wider community of life. “Once the human being declares independence from reality and behaves with absolute dominion, the very foundations of our life begin to crumble, for instead of carrying out his role as a cooperator with God in the work of creation, man sets himself up in place of God and thus ends up provoking a rebellion on the part of nature.” (LS 117) Excessive anthropocentrism has radically altered the way human beings understand their place within the Earth community. As Francis writes, “we have come to see ourselves as her lords and masters, entitled to plunder her at will”. (LS 2)

The hubris of anthropocentrism is conspicuously evident in the emergence of the Anthropocene epoch, the unprecedented and unique era in geological history in which human activities are threatening the collapse of stable living conditions in our planetary home. Anthropogenic changes to the Earth’s climate, land, oceans and biosphere are now so significant and rapid that it may be time to speak of a new geological epoch defined by human activity (Zalasiewicz et al. 2011).¹ The term proposed to capture this quantitative shift in the relationship between humans and the rest of the natural world is ‘Anthropocene,’ namely, ‘the age of the humans’. It was proposed by Paul J. Crutzen almost several years ago, although the concept that humans are

¹ On the controversy regarding the definition of Anthropocene as a new geological epoch see (Witze 2024).

capable of altering geological processes is more than a century old. (Crutzen and Stoermer 2000, 17-18; Crutzen 2007).² The term Anthropocene suggests that the Earth is now moving out of the current geological epoch of the Holocene, and that human activity is largely responsible for this exit, making humanity a global geological force in its own right.

We humans today constitute the largest force of change on the planet, exceeding the impacts caused by natural phenomena such as shifts in the Earth's orbit, earthquakes, and volcanic eruptions. We have become "geological agents, destabilizing planetary systems with effects that will play out in geological time scales of tens of thousands to possibly millions of years." (Miller 2016, 440) The human impact on the planet and the rest of the web of life is unprecedented, irreversible, and detrimental. It is not an exaggeration to say that the ultimate drivers of the Anthropocene, "if they continue unabated through this century, may well threaten the viability of contemporary civilization and perhaps even the future existence of *Homo sapiens*." (Stephen et al. 2011, 862) The Anthropocene epoch is a startling testimony to the world-changing power of *Homo sapiens*, the only "geologic force aware of its own influence" but lacking at this point any "mechanisms for self-control." (Grinspoon 2017, xi, xv) In *Laudate Deum*, Pope Francis reaffirms that "it is no longer possible to doubt the human – "anthropic" – origin of climate change." (LD 11).

The hubris of modern anthropocentrism, clearly mirrored in the current era of the Anthropocene, ultimately rises from our refusal to accept our creaturely existence within physical and moral boundaries. It has led to a form of relativism as everything is seen exclusively from the vantage point of human beings, often a minority, and their interests alone. As Pope Francis writes: "When human beings place themselves at the centre, they give absolute priority to immediate convenience and all else becomes relative." (LS 122) Relativism "sees everything as irrelevant unless it serves one's own immediate interests". (LS 122) Modern anthropocentrism which exalts the individual over everything else, Francis notes, also "continues to stand in the way of shared understanding and of any effort to strengthen social bonds." (LS 116)

Modern anthropocentrism is ultimately based on an inadequate anthropology that isolates the human subject from the wider web of ecological relations and legitimizes a distorted relationship between humanity and the natural world. "An inadequate presentation of Christian anthropology gave rise to a wrong understanding of the relationship between human beings and the world," namely, "a Promethean vision of

² On the antecedents of the Anthropocene concept see (Steffen et al. 2011).

mastery over the world.” (LS 116) In ecophilosophical terms, this means that human distinctiveness should not be interpreted as a license for domination, but as a capacity for responsible agency within the community of life. (LS 116) The point is therefore not to abolish the human perspective, but to reject its tyrannical form: a model of humanity that recognizes no intrinsic significance in other beings and no limits to human appropriation. (LS 68; Grinspoon 2017, xi, xv)

From an ecophilosophical perspective, Francis’s position can be read as the claim that an adequate ecological ethics requires an adequate anthropology. “There can be no ecology without an adequate anthropology.” (LS 118) The response to excessive anthropocentrism should not be a simple reversal into biocentrism, as found in some currents of environmental philosophy, including Deep Ecology. Such a reversal risks replacing human domination with an undifferentiated view of life that does not sufficiently account for the distinctive moral capacities and responsibilities of human beings. As Francis notes: “Human beings cannot be expected to feel responsibility for the world unless, at the same time, their unique capacities of knowledge, will, freedom and responsibility are recognized and valued (LS 118).

Modern anthropocentrism is dialectically linked to the modern mechanistic vision of the natural world. Anthropocentrism, in exalting the human subject to a position of absolute centrality, has led to the depreciation and abuse of the surrounding natural world. Once the subject becomes the Archimedean centre as in modern anthropocentrism, the rest of physical reality comes to be seen as nothing, but a gigantic reservoir of objects or raw materials destined for human consumption. Modern technological rationality, as Pope Francis points out, “sees nature as an insensate order, as a cold body of facts, as a mere ‘given’, as an object of utility, as raw material to be hammered into useful shape; it views the cosmos similarly as a mere ‘space’ into which objects can be thrown with complete indifference.” (LS 115) Within the modern mechanistic worldview, entities come to be considered as mere resources for human use and consumption with their ontological value measured only in terms of utility.

Against the worldview of anthropocentrism and the modern technocratic paradigm, Pope Francis proposes the relational view of integral ecology. The ecophilosophical significance of *Laudato si’* lies in its rejection of the fiction of complete human autonomy: human beings are embedded in ecological, social, and moral relations that precede and sustain them. (LS 105) Francis points to a relational vision of reality in which cosmic, biological, and human bonds reveal the interdependence of all beings. “Everything is related, and we human beings are united as brothers and sisters on a wonderful pilgrimage, woven together by the love God

has for each of his creatures and which also unites us in fond affection with brother sun, sister moon, brother river and mother earth.” (LS 92) In ecophilosophical terms, this triadic structure can be interpreted as a claim that human life is constituted by relations with the natural world, with other human beings, and with the normative horizon that gives responsibility its depth. (LS 66) Francis also acknowledges that “these three vital relationships have been broken, both outwardly and within us.” (LS 66)

Francis’s argument therefore points to the need to reconstruct fundamental relationships that shape human existence within ecological, social, and moral contexts. According to Francis, “if the present ecological crisis is one small sign of the ethical, cultural and spiritual crisis of modernity, we cannot presume to heal our relationship with nature and the environment without healing all fundamental human relationships.” (LS 119) Today, the ecological crisis requires the restoration of responsible relationships with the natural world, with other human beings, and with the value horizon that sustains just and sustainable coexistence. A holistic and integral perspective is vital in this regard. The preceding analysis shows that Francis’s critique of anthropocentrism is not an anti-humanism, but a redefinition of human agency in relational and responsible terms. Once human agency is understood as participation in a wider community of life, responsibility must also extend to those who will inherit the ecological consequences of present choices. This leads directly to the question of intergenerational responsibility.

3. Intergenerational Responsibility

In *Laudato si’* and *Laudate Deum*, Pope Francis formulates a clear account of intergenerational responsibility, situating it within the framework of ecological and social justice. In *Laudato si’* he first treats intergenerational justice systematically as “a fundamental question of justice,” because the earth “belongs to those who come after us” as well (LS 159). He develops this within the concept of integral ecology: care for future people is not a separate requirement but a direct consequence of recognizing the interdependence of all beings and the common goods of climate and Earth’s resources (LS 23–26, 159–162). Francis also poses the question, “What kind of world do we want to leave to those who come after us?”, linking it with human dignity and the meaning of dwelling together on the planet (LS 160–161; Sadowski 2017; Syropoulos 2025).

This moral perspective returns in his critique of economic shortsightedness that aims to maximize profit while ignoring environmental costs and shifting burdens onto “other peoples or future generations” (LS 195). He also reminds us of “common but differentiated responsibilities,” which entail greater obligations for

those who have historically exploited the environment more heavily and benefited from industrialization (LS 170).

In the apostolic exhortation *Laudate Deum* (2023) Francis deepens the diagnosis, emphasizing that the climate crisis is “a global social problem closely linked to the dignity of human life,” whose effects hit the most vulnerable first; at the same time he calls for abandoning attempts to “mask or relativize” the systematically intensifying extreme phenomena (LD 2–7).

Francis explicitly ties intergenerational responsibility to a critique of short-term economic calculus, in which the costs of degradation are pushed onto future generations. He states plainly that such cases violate basic norms of justice – “It is not other peoples or future generations” who should bear the consequences of today’s gains (LS 194–196).

From this vantage point, intergenerational justice is not limited to individual ethics but becomes a criterion for assessing institutions and policies that should internalize full environmental costs and prevent their “masking” through the technocratic language of growth (LS 194–195).

An important complement to the papal approach is the principle of “common but differentiated responsibilities.” Francis notes that wealthy countries and actors that have historically benefited the most from exploiting Earth’s resources and have polluted the most have greater obligations in financing the transformation and adaptation of poorer countries (LS 52, 170).

This places intergenerationality within the matrix of justice within a single generation (today’s global inequalities), so as to avoid the paradox of care for the future at the expense of the contemporary poor. *Laudato si’* also diagnoses the “weakness of the response” of the political community and the lack of a culture capable of long-range thinking. Hence the postulate of establishing norms with “inviolable limits” that protect ecosystems and future generations from the logic of short-term interests (LS 53–54).

Laudate Deum reinforces and updates the message of *Laudato si’*. First, Francis underscores the urgency of action: the world “is collapsing and may be nearing breaking point,” and the consequences will increasingly affect life, health, work, and migration—therefore intergenerational responsibility becomes a test of basic care for dignity (LD 2–3).

Second, he reframes the problem as a “global social problem,” not merely a natural one: responsibility toward future generations requires rejecting all forms of denialism and pseudo-action (greenwashing) and building mechanisms of political accountability. Compared with *Laudato si’*, the treatment is more

categorical: rather than a general framework of integral ecology, we receive a diagnosis of a deficit of political and institutional agency that calls for urgent, measurable commitments (LD 2–7).

The differences between the two documents can be summarized as follows. In *Laudato si'*, intergenerationality emerges as a normative conclusion from a theological-anthropological vision: since the world is a common good and a space of communion, the present generation may not consume the resources that are the basis of life for future generations (LS 159–162, 194–196; Bołoz et al. 2016). In *Laudate Deum* the same conclusion is set within the logic of a “last call”: intergenerational responsibility today entails an obligation to reduce emissions now and to rebuild systems, because delay multiplies the harms for both future people and today’s most vulnerable (LD 2–3). In short, *Laudato si'* provides the foundations (values, principles, institutionalization of costs), while *Laudate Deum* heightens the urgency and political oversight.

Both documents consistently connect intergenerationality with education and culture, yet with different emphases. In *Laudato si'* ecological education and “ecological conversion” aim to form virtues and practices that enable us to renounce short-term profit maximization and to show solidarity with “those who will come after us” (LS 202–215, 159–162). *Laudate Deum* shifts the focus to mobilizing political and social action that counters the downplaying of the crisis, encouraging a culture of responsibility that manifests in enforceable decisions rather than empty declarations (LD 2–7).

From an ecophilosophical perspective, two planes can be distinguished: theoretical and practical. Theoretically, the juxtaposition of the two documents yields intergenerational responsibility as a principle of long-range accountability. This involves three assumptions:

1. intergenerational justice requires full internalization of all costs, including environmental ones, and rejecting the practice of “shifting harm into the future” (LS 194–196);
2. the distribution of sacrifices must account for historical responsibility and present poverty so as not to reproduce injustice (LS 52, 170);
3. and insufficient action and procrastination constitute a breach of obligations toward future generations because they prolong the period in which harm grows faster than adaptive capacity (LD 2–3).

Practically, implementation is demanded through institutional mechanisms: intergenerational tests in law-making; binding emissions budgets and “inviolable limits” for key ecosystems in line with the precautionary principle (LS 53–54); transparent standards for reporting ecological debt; and transfer policies supporting countries less prepared for environmental transformation – so that neither the future is burdened by the price of present comfort nor today’s poor by the presumed wealth of future generations.

In sum, in both documents intergenerational responsibility is intertwined with the option for the poor, integral ecology, and a critique of technocratic reductionism. While *Laudato si'* supplies a full ethical argument and points to norms, *Laudate Deum* tightens the tempo and language of responsibility. The philosophical significance of intergenerational responsibility lies in its transformation of sustainability from a policy preference into a criterion of justice. It requires that institutions, laws, and economic decisions be assessed not only by their immediate efficiency, but also by their long-term consequences for those who will inherit the ecological effects of present choices. This is why intergenerational responsibility functions as the second axis of the article's argument: it connects the critique of anthropocentrism with the need for educational, institutional, and policy-oriented implementation.

4. Education for a Sustainable World

Ecological education occupies a central place in Francis's ecophilosophical framework because it connects the critique of anthropocentrism with the formation of habits, virtues, and civic competences necessary for sustainable social life. As Pope Francis affirms: "A great cultural, spiritual and educational challenge stands before us, and it will demand that we set out on the long path of renewal." (LS 202) As the crisis of our common home is caused by human activities, we stand in need of a radical change in our consumption driven lifestyles which is taking a heavy toll on the sustainability of our planetary home. Such deep changes require education understood not merely as the transmission of information, but as the formation of ecological agency, critical reflection on consumption, and civic responsibility.

According to Pope Francis, in the context of the imminent collapse of our common home and the increasing breakdown of social relationships, "we are faced with an educational challenge." (LS 209) In this context, young people occupy a particularly important place, because ecological responsibility must be learned through concrete habits, practices, and social participation. At the same time, young people increasingly appear in Francis's account as important agents of ecological transition. However, as they live in a context of excessive consumerism, they need to be helped to cultivate more sustainable lifestyles. Francis writes:

In those countries which should be making the greatest changes in consumer habits, young people have a new ecological sensitivity and a generous spirit, and some of them are making admirable efforts to protect the environment. At the same time, they have grown up in a milieu of extreme consumerism and affluence which makes it difficult to develop other habits. (LS 209)

Young people are most vulnerable to the contemporary consumerist culture, but they can also be guided to make responsible ecological choices in terms of lifestyles. We are thus faced with a challenge as well as an opportunity in the area of environmental education. Pope Francis notes how “environmental education has broadened its goals”. (LS 210) He refers to some of the new trends in environmental education: “Whereas in the beginning it was mainly centred on scientific information, consciousness-raising and the prevention of environmental risks, it tends now to include a critique of the ‘myths’ of a modernity grounded in a utilitarian mindset (individualism, unlimited progress, competition, consumerism, the unregulated market).” (LS 210)

As we have reflected earlier in the article, the deeper sources of the utilitarian mindset characterized by individualism and consumerism are modern anthropocentrism and the mechanistic vision of the natural world. As noted, scholars of education such as C. A. Bowers, David Orr, and others have pointed out, most of our current educational systems are based on these presuppositions inherited from Modernity, anthropocentrism and the mechanistic conception of nature, in particular. Modern anthropocentrism subtly permeates educational curricula in most parts of the world.³ According to Bowers, the main cultural message propagated by the contemporary educational system is the western myth that accords human beings the status of independence and absolute centrality in relation to other forms of life within biotic communities. He writes: “In all public education students encounter in textbooks an image of the individual as an autonomous agent engaged in social and technological activities. The pronoun ‘you’ is ubiquitous from grade one through grade twelve.” (Bowers 1993, 125) Modern and contemporary forms of educational theories and praxis are largely centred around the atomistic and reductive concept of the self, inherited from Modernity.

According to Pope Francis, the new ecological culture needed to care for our common home “cannot be reduced to a series of urgent and practical responses to the immediate problems of pollution, environmental decay and the depletion of natural resources.” (LS 111) The changes required are much wider and far-reaching. “We need to develop a new synthesis capable of overcoming the false arguments of recent centuries”. (LS 121) “We urgently need a humanism capable of bringing together the different fields of knowledge.” (LS 141) What is required is a new vision of reality, a new way of conceiving our relationship with our common home. According to Francis, “There needs to be a distinctive way of looking at things, a way of thinking, policies,

³ C. A. Bowers provides an excellent review of how anthropocentrism subtly permeates educational curricula as in the case of school text-books (Bowers 1993, 117-153).

an educational programme, a lifestyle and a spirituality which together generate resistance to the assault of the technocratic paradigm.” (LS 111)

In *Laudato si'*, Pope Francis proposes a holistic model of ecological education capable of integrating environmental responsibility, social solidarity, self-formation, and reflection on ultimate values. He writes: “It [ecological education] seeks also to restore the various levels of ecological equilibrium, establishing harmony within ourselves, with others, with nature and other living creatures, and with God”. (LS 210)

Francis’s model of ecological education can be read as a practical extension of integral ecology. Its three constitutive dimensions – ecological belonging, social solidarity, and axiological depth – correspond to the relational structure of the crisis diagnosed above: the ruptured relationship with nature, the fragmentation of human community, and the loss of a normative horizon capable of sustaining responsibility.

Ecological education should help, first of all, to re-establish an intimate link with the natural world, our common home. Unfortunately, current educational curricula reinforce the modern worldview that humans are totally separate from the natural world and are not dependent on the web of biological and ecosystems that sustain all life, including human life, on Earth. As F. Berkes and others have noted, our alienation from nature is a key component of environmental destruction. (Berkes 1999) Education towards sustainability requires a radical correction of such a “persistent and problematic ‘human versus nature’ binary,” (Di Chiro 2014, 17) if we are to overcome our current ecological hazards. A holistic educational curricula educates students to become responsible members of the wider human community and citizens of the biotic community. As Francis writes: “there is a nobility in the duty to care for creation through little daily actions, and it is wonderful how education can bring about real changes in lifestyle.” (LS 211) Ecological education entails simple and concrete measures of caring for the natural world which is our common home. Again Francis writes in the encyclical:

Education in environmental responsibility can encourage ways of acting which directly and significantly affect the world around us, such as avoiding the use of plastic and paper, reducing water consumption, separating refuse, cooking only what can reasonably be consumed, showing care for other living beings, using public transport or car-pooling, planting trees, turning off unnecessary lights, or any number of other practices. (LS 211)

Secondly, holistic ecological education should also lead to a greater sense of solidarity within the human family, especially with the more vulnerable members of our common household. To quote Pope Francis: “It [ecological education] needs educators capable of developing an ethics of ecology, and helping people, through effective pedagogy, to grow in solidarity, responsibility and compassionate care.” (LS 210)

The contemporary ecological crisis points not only to the unsustainable physical state of our planetary home but also of our common household. Education towards sustainability needs to inculcate precisely the virtues of kindness and solidarity in the young pupils if we are to construct a more equal and just world. The current educational scenario appears to be largely guided by the neo-liberal agenda of free market which is taking its toll on human communities and ecosystems. Against such a situation we need to create a civilization of love and kindness, performing those small daily acts of solidarity, in a world where power and wealth tend to dominate and monopolize. (Francis 2013, 188) In this perspective, solidarity functions as a critical counterweight to economic models that externalize social and ecological costs. Compassion and solidarity are indeed vital for the future of our planetary home and our common household.

Thirdly, holistic ecological education should open learners to the axiological depth of ecological ethics, that is, to the non-instrumental value, vulnerability, and integrity of the natural world. (LS 210) Education remains incomplete if it fails to cultivate a sense of wonder, humility, restraint, and responsibility toward the natural world and toward other human beings. The unsustainable situation of our common home and common household can be interpreted as the result of a profound rupture in the way human beings understand their place within the community of life and the limits of their power over the natural world. Humanity cannot expect to live in harmony with the Earth community if it continues to understand the natural world merely as material for possession, consumption, and control. Pope Benedict XVI expresses this critique of possessive and reductionist attitudes in explicitly theological language:

The brutal consumption of creation begins where God is missing, where matter has become simply material for us, where we ourselves are the ultimate measure, where everything is simply our property ... The waste of creation begins where we no longer recognize any claim beyond ourselves, seeing only ourselves. (Benedict XVI 2008)

The ecological crisis can be interpreted as a failure to recognize the integrity, intrinsic value, vulnerability, and beauty of the natural world beyond mere considerations of utility and consumption. Education toward sustainability needs to be anchored in the recognition that the natural world is not merely a stock of resources, but a community of life that calls for respect, restraint, care, and responsibility.

Laudato si' points to ecological education as a way of re-establishing responsible relationships with the natural world, with human communities, and with the value horizon that sustains ecological responsibility. Such a holistic approach is vital because the contemporary ecological crisis is not only a technical problem, but also an anthropological, ethical, cultural, and institutional challenge.

In *Laudato si'*, Pope Francis speaks of a variety of settings for ecological education: schools, families, media, catechesis, houses of religious formation, etc. He insists on imparting such education right from an early age. As he writes: “Good education plants seeds when we are young, and these continue to bear fruit throughout life.” (LS 213) Ecological education should cover the entire spectrum of our lives. Pope Francis lays special emphasis on the role of the family in the arena of ecological education. He points out that the womb of the family is where one receives integral education. The following passage illustrates Francis’s understanding of the family as a primary setting of ecological formation:

I would stress the great importance of the family, which is the place in which life – the gift of God – can be properly welcomed and protected against the many attacks to which it is exposed, and can develop in accordance with what constitutes authentic human growth. In the face of the so-called culture of death, the family is the heart of the culture of life. In the family we first learn how to show love and respect for life; we are taught the proper use of things, order and cleanliness, respect for the local ecosystem and care for all creatures. In the family we receive an integral education, which enables us to grow harmoniously in personal maturity. In the family we learn to ask without demanding, to say “thank you” as an expression of genuine gratitude for what we have been given, to control our aggressivity and greed, and to ask forgiveness when we have caused harm. These simple gestures of heartfelt courtesy help to create a culture of shared life and respect for our surroundings. (LS 213)

In ecophilosophical terms, the family functions here as a primary environment for habit formation, care, restraint, gratitude, and everyday ecological responsibility. According to Pope Francis, “political institutions and various other social groups are also entrusted with helping to raise people’s awareness” (LS 214) about the need to care for and protect our common planetary home. The Pope proposes, given the importance of the question, that political institutions be “empowered to impose penalties for damage inflicted on the environment.” (LS 214) He is aware that these measures are not sufficient in themselves. Ultimately “we also need the personal qualities of self-control and willingness to learn from one another.” (LS 214)

Widening the scope of ecological education, Francis speaks of the importance of aesthetic education, “the relationship between a good aesthetic education and the maintenance of a healthy environment cannot be overlooked.” (LS 215) Francis observes with keen insight: “If someone has not learned to stop and admire something beautiful, we should not be surprised if he or she treats everything as an object to be used and abused without scruple.” (LS 215) According to him, “by learning to see and appreciate beauty, we learn to reject self-interested pragmatism.” (LS 215) We may recall in this regard the oft quoted saying of Fëdor

Dostoevskij that “only beauty will save the world.” We need to educate ourselves to appreciate the beauty of the natural world around us, if we are to save it for ourselves and for generations to come.

Pope Francis encourages us in the encyclical to make our small but precious contribution in the concrete settings of our lives towards the safeguarding of our common home. He writes in the context of ecological education:

We must not think that these efforts are not going to change the world. They benefit society, often unbeknown to us, for they call forth a goodness which, albeit unseen, inevitably tends to spread. Furthermore, such actions can restore our sense of self-esteem; they can enable us to live more fully and to feel that life on earth is worthwhile. (LS 212)

The contemporary ecological crisis places humanity at crossroads with regard to its own future in our common home, Earth. As Pope Francis frankly acknowledges in *Laudate Deum*, “our responses have not been adequate, while the world in which we live is collapsing and may be nearing the breaking point.” (LD 2) The coming years will be crucial because the window for effective mitigation, adaptation, and institutional transformation is narrowing rapidly. As Stephen Mulkey warns: “Humanity faces a central choice: Live more sustainably on this planet, or face consequences that are incompatible with civilization. The choice really is that stark.” (Mulkey 2012, 356) Ecological education therefore functions not as an auxiliary pastoral recommendation, but as the social and institutional mechanism through which integral ecology can shape habits, civic competences, and public practices. In this sense, education links the anthropological and ethical diagnosis of the crisis with the practical possibility of long-term ecological transformation.

Conclusion

This article has shown that *Laudato si'* and *Laudate Deum* can be read together as a coherent ecophilosophical framework that links relational anthropology, ecological justice, intergenerational responsibility, and education for sustainability. The former underscores the essential theses of Francis’s ecophilosophical message: the world as our common home, the interdependence of beings, the correction of excessive anthropocentrism, intergenerational justice, and the priority for the poor, all of which can be interpreted as elements of a coherent ecological ethics relevant to public responsibility and institutional practice (see: LS 67–69, 91–95, 159–170, 194–196). The latter intensifies and updates this message: it strengthens the language of human agency (“we create and sustain the crisis”) and explicitly names and unmask such phenomena as political resistance, denialism, and greenwashing, demanding urgent and

effective action rather than empty declarations (LD 2–7, 57–60). There is thus a shift in emphasis: from the general perspective of integral ecology (LS) toward urgency and political accountability (LD), with a clear demand to abandon illusions of security and the semblance of environmental concern.

This shift in emphasis – from the general perspective of integral ecology to urgency and political accountability – creates the basis for the article’s own normative synthesis. The guidelines proposed below should therefore be read not as a paraphrase of papal teaching, but as an ecophilosophically grounded attempt to translate that teaching into operational criteria for contemporary institutions and public policies.

Operational Guidelines for Institutional and Public Action

The following authorial guidelines are formulated as operational criteria rather than general moral appeals. Each guideline translates one of the three analytical axes developed above – critique of excessive anthropocentrism, intergenerational responsibility, and ecological education – into a possible institutional instrument. Their purpose is not to provide a complete policy programme, but to indicate minimal conditions under which public institutions, educational bodies, and socio-political actors can plausibly claim consistency with integral ecology.

The operational logic of these guidelines follows from the three-part structure of the article. The critique of excessive anthropocentrism justifies limits on domination, environmental cost accounting, and anti-greenwashing mechanisms. Intergenerational responsibility justifies long-term impact assessment, emissions budgets, and institutions representing future generations. Ecological education justifies the formation of ecological conscience, civic competence, and institutional consistency.

- **Intergenerational impact test.** Every major strategy, statute, infrastructure project, and long-term investment should undergo a mandatory assessment of ecological and social effects over a 20-30-year horizon. A negative long-term balance should create a default presumption against approval, unless compensatory measures are clearly specified, publicly justified, and independently reviewed (LS 159–162).
- **Full environmental cost accounting.** Public and private decision-making should include mechanisms for identifying, pricing, and disclosing environmental externalities. Fiscal and regulatory tools – such as ecological taxation, mandatory environmental impact accounting, or sectoral transition funds – should prevent the transfer of present costs onto future generations. In this sense, “profit” that depends on unaccounted ecological degradation cannot be treated as genuine profit (LS 194–196).
- **Binding ecological limits and emissions budgets.** Institutions should define measurable ecological thresholds, including emissions budgets and “inviolable limits” for key ecosystems, in line with the precautionary principle. These limits should be incorporated into public planning,

procurement, investment decisions, and reporting systems, with regular public review and accountability procedures (LS 53–54; LD 2–7).

- **Common but differentiated responsibilities.** Climate and sustainability policies should include distributive mechanisms that prevent the burden of transition from falling disproportionately on poorer communities, regions, or future generations. This requires technological transfer, targeted financial support, and compensatory instruments for communities with lower adaptive capacity or lower historical responsibility for ecological degradation (LS 52, 170).
- **Representation of future generations.** Public institutions should develop procedural mechanisms that give future generations a voice in present decision-making. These may include ombudspersons for future generations, advisory chambers for long-term ecological risk, mandatory future-impact opinions, and annual reports on ecological debt. Such bodies should have consultative authority and the power to require public justification for decisions that create high climate or biosphere risk (LD 2–3).
- **Anti-greenwashing standards.** Declarations of sustainability, climate neutrality, or ecological responsibility should be subject to transparent criteria, independent audit, and sanctions for misleading claims. Institutions and companies should disclose the methodology behind climate-neutrality claims, the scope of emissions counted, offsetting assumptions, and the timeline for real emission reductions. Without such verification, ecological language risks becoming a substitute for action rather than a driver of transformation (LD 57–60).
- **Formation of ecological conscience and civic competence.** Educational institutions should integrate ecological responsibility into curricula, institutional culture, and civic formation. This means linking knowledge about ecological crisis with virtues such as temperance, restraint, responsibility, and solidarity, as well as with practical competences: critical assessment of consumption, participation in public decision-making, recognition of greenwashing, and understanding of long-term ecological consequences (LS 202–215).
- **Institutional consistency audit.** Institutions that invoke sustainability or integral ecology should periodically assess whether their internal practices correspond to their declared values. Such an audit should include energy use, procurement, waste management, investment policy, educational content, public communication, and governance procedures. This criterion follows from the central claim of the article: integral ecology becomes credible only when declared values are translated into institutional habits, procedures, and measurable practices.

Taken together, these guidelines show how integral ecology can move from a general ethical vision to a set of institutional tests and practices. Their significance lies not in providing a complete policy programme, but in identifying the minimal operational conditions under which ecological responsibility, intergenerational justice, and educational formation can become publicly accountable.

Statements

Author Contributions: Conceptualization, R.F.S.; methodology, R.F.S. and J.I.K.; writing – original draft preparation, R.F.S. and J.I.K.; writing – review and editing, R.F.S. and J.I.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Data Availability Statement: Not applicable.

AI Tools Declaration: During the preparation of this manuscript, the authors used ChatGPT, GPT-5.5 Thinking, OpenAI, for the following purposes: improving the linguistic quality of the text and organizing the literature according to the journal's editorial standards. The authors reviewed and edited the output where necessary and take full responsibility for the content of this publication.

Conflicts of Interest: The authors declare no conflicts of interest.

References

- Annett, Anthony. 2017. "Laudato Si' and Inclusive Solidarity: The Ideology of the Market and the Reality of Inequality." In *Inclusive Solidarity and Integration of Marginalized People*, edited by Stefano Zamagni and Marcelo Sánchez Sorondo, 36–58. Vatican City: Libreria Editrice Vaticana.
- Benedict XVI. 2008. *Meeting with the Clergy of the Diocese of Bolzano-Bressanone*. August 6, 2008. https://www.vatican.va/content/benedict-xvi/en/speeches/2008/august/documents/hf_ben-xvi_spe_20080806_clero-bressanone.html.
- Berkes, Fikret. 1999. *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*. Philadelphia: Taylor & Francis.
- Boff, Leonardo. 1997. *Cry of the Earth, Cry of the Poor*. New York: Orbis Books.
- Bołoz, Wojciech, Stanisław Jaromi, Zbigniew Karaczun, Zbigniew Łepko, Andrzej Papuziński, and Ryszard F. Sadowski. 2016. "Ecophilosophical Message of Encyclical *Laudato Si'*." *Studia Ecologiae et Bioethicae* 14 (4): 109–128. <https://doi.org/10.21697/seb.2016.14.4.06>.
- Borgoño, Cristián. 2025. "From Laudato Si' to Laudate Deum: The (Still) Unengaged Theology of Technology and the Technocratic Paradigm." *Teología y Vida* 66 (1): 103–131. <https://doi.org/10.7764/TyV.661.E4>.
- Bowers, Chet A. 1993. *Education, Cultural Myths and the Ecological Crisis: Toward Deep Changes*. Albany, N.Y.: State University of New York Press.
- Crutzen, Paul J. 2007. "Geology of Mankind: The Anthropocene." *Écologie & politique* 34(1): 141-148.
- Crutzen, Paul J., and Eugene F. Stoermer. 2000. "The Anthropocene." *Global Change Newsletter* 41: 17–18.
- Deane-Drummond, Celia, and Séverine Deneulin. 2021. *Integral Ecology: Discovering Its Meaning and Depth*. LSRI Briefing Note 1. Oxford: Laudato Si' Research Institute, Campion Hall.
- Deane-Drummond, Celia. 2008. *Eco-Theology*. Winona, MN: Saint Mary's Press.
- Di Chiro, Giovanna. 2014. "Response: Reengaging Environmental Education in the 'Anthropocene'." *Australian Journal of Environmental Education* 30 (1). <https://doi.org/10.1017/ae.2014.18>.

- Francis. 2013. *Evangelii Gaudium: Apostolic Exhortation on the Proclamation of the Gospel in Today's World*. November 24, 2013.
https://www.vatican.va/content/francesco/en/apost_exhortations/documents/papa-francesco_esortazione-ap_20131124_evangelii-gaudium.html.
- Francis. 2015. *Laudato Si': Encyclical Letter on Care for Our Common Home*. May 24, 2015.
https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html.
- Francis. 2023. *Laudate Deum: Apostolic Exhortation to All People of Good Will on the Climate Crisis*. October 4, 2023.
https://www.vatican.va/content/francesco/en/apost_exhortations/documents/20231004-laudate-deum.html.
- Grinspoon, David. 2017. *Earth in Human Hands: Shaping Our Planet's Future*. New York: Grand Central Publishing.
- Iheka, Cajetan. 2017. "Pope Francis' Integral Ecology and Environmentalism for the Poor." *Environmental Ethics* 39 (3): 243–259. <https://doi.org/10.5840/enviroethics201739319>.
- Jenkins, Willis, Mary Evelyn Tucker, and John Grim, eds. 2016. *Routledge Handbook of Religion and Ecology*. London and New York: Routledge.
- Kureethadam, Joshtrom Isaac. 2016. "Ecological Education in Laudato Si'." *Seminare. Poszukiwania Naukowe* 37 (4): 83–96. <https://doi.org/10.21852/sem.2016.4.07>
- Maier, Roberto, and Paolo Monti. 2023. "Integral Ecology as Critical Principle of Environmental Sustainability in the Agri-Food Chain: Epistemological and Ethical Inputs from Laudato si'." *Current Opinion in Environmental Science & Health* 31: 100415.
<https://doi.org/10.1016/j.coesh.2022.100415>.
- Mazzoleni, Martino. 2025. "Pope Francis and the Environment, Act 2: Time for Decisive Climate Action." *Environmental Politics* 34(1): 195-203. <https://doi.org/10.1080/09644016.2024.2416372>.
- Miller, Richard W. 2016. "Deep Responsibility for the Deep Future." *Theological Studies* 77 (2): 436–465.
<https://doi.org/10.1177/0040563916636488>.
- Miller, Vincent J., ed. 2017. *The Theological and Ecological Vision of Laudato Si': Everything Is Connected*. London: Bloomsbury Publishing.
- Mulkey, Stephen. 2012. "Sustainability Science as a Foundation for Higher Education in the Environmental Century." *Sustainability* 5 (6): 356–358. <https://doi.org/10.1089/SUS.2012.9918>.
- Murray, Robert. 1992. *The Cosmic Covenant: Biblical Themes of Justice, Peace and the Integrity of Creation*. London: Sheed & Ward.

- Pedersen, Kusumita P. 2024. "Pope Francis, the Climate Crisis and Global Ethics." *Modern Believing* 65 (4): 366–380. <https://doi.org/10.3828/mb.2024.24>.
- Polito, Michael R. 2022. "Integral Conversion: A Catholic Pedagogical Framework for Teaching Environmental Sustainability and Ecological Citizenship from Japan." *Jesuit Higher Education: A Journal* 11 (1): 75–93.
- Sadowski, Ryszard F. 2017. "The Christian Concept of Responsibility for the Environment in the Light of Encyclical *Laudato Si'*." *Studia Ecologiae et Bioethicae* 15 (1): 69–79. <https://doi.org/10.21697/seb.2017.1.08>.
- Steffen, Will, Jacques Grinevald, Paul J. Crutzen, and John R. McNeill. 2011. "The Anthropocene: Conceptual and Historical Perspectives." *Philosophical Transactions of the Royal Society A* 369 (1938): 842–867. <https://doi.org/10.1098/rsta.2010.0327>.
- Syropoulos, Spyros, Kyle Flore Law, Gordon Kraft-Todd, Andrea Mah, Ezra Markowitz, and Liane Young. 2025. "Responsibility to Future Generations: A Strategy for Combatting Climate Change across Political Divides." *British Journal of Social Psychology* 64 (1): e12775. <https://doi.org/10.1111/bjso.12775>.
- Szuleczyński, Andrzej. 2016. "Education to the 'Integral Ecology'. Focus on the Social Teaching of Pope Francis and His Encyclical *Laudato si'*." *Studia Socialia Cracoviensia* 8 (1): 199–211. <https://doi.org/10.15633/ssc.1883>.
- Witze, Alexandra. 2024. "Geologists Reject the Anthropocene as Earth's New Epoch—after 15 Years of Debate." *Nature* 627: 249–250.
- Zalasiewicz, Jan, Mark Williams, Alan Haywood, and Michael A. Ellis. 2011. "The Anthropocene: A New Epoch of Geological Time?" *Philosophical Transactions of the Royal Society A* 369 (1938): 835–841. <https://doi.org/10.1098/rsta.2010.0339>.