
THE CREATION NARRATIVE IN ‘GENESIS’ A CASE OF ENVIRONMENTAL MONITORING AND AUDIT

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Abstract

Ecology is a central topic of interest in the 21st century environmental ethics of both the Orthodox and the Catholic Churches. The views of these institutions are in tandem with regard to the importance of protecting the natural environment in its totality for the planet’s survival. The Creation is the legacy left by our forebears to present and future generations, thus we have a responsibility to manage it well. The contemporary position of the Churches’ respective spiritual leaders can be gleaned through the pastoral letters and encyclical letters of the Ecumenical Patriarch Bartholomew of Constantinople and Pope Francis, respectively. A dimension which may contribute to addressing the current global environmental crisis is the notion of environmental monitoring and audit: an assessment of the impact generated by any type of development once it has been completed. Environmental impact assessments are at the core of environmental protection and management. However, it is equally important to audit a given development once it has been executed. Such a perspective has been endorsed for many years by various countries, including the European Union. This theme, although not prominent in the contemporary social teachings of the Churches, is at the crux of environmental ethics. Whilst outlining the main visions of the respective Church leaders on the environment, including ‘Laudato Si’, this paper proposes the use of monitoring and audits as an additional dimension to the position of the Churches to ensure the protection and enhancement of nature. This paper seeks to do this by addressing the creation narrative of ‘Genesis’ as a case-study of environmental monitoring and audit.

Keywords: Genesis, Laudato Si, environmental audit, Bartholomew I of Constantinople, Pope Francis

1. Introduction

The social teachings of the Orthodox and Catholic Churches with respect to the protection and preservation of the environment are a response to the current environmental crisis. They reveal a reaction to the greenhouse effect generated by carbon dioxide released by the widespread burning of fossil fuels, among other

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human activities, and its subsequent impacts on global climate and life on the planet due to the destruction and/or degradation of the natural environment. Humanity's extensive abuse of Earth's finite resources and damage to its natural ecological systems has wider implications including pollution and loss of biodiversity.

The importance of healthy ecological systems, and their significance in sustaining a healthy and thriving environment for the good of present and future generations, is well appreciated by both Churches. The main difference between them is that the Catholic Church engaged with this issue somewhat earlier than the Orthodox Church [1], commencing at least half a century ago with the publication of Pope Paul VI's Encyclical Letter, *Octogesima adveniens*, in 1971 [2]. His ideas were subsequently developed through other Encyclical Letters, namely *Centesimus Annus*, *Caritas in veritate* and *Laudato Si*, issued by His Holiness Pope Saint John Paul II [Pope John Paul II, *Centesimus Annus*, 1991, http://www.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_01051991_centesimus-annus.html, accessed on 14.11.2020], His Holiness Pope Benedict XVI [Pope Benedict XVI, *Caritas in veritate*, 2009, http://www.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html, accessed on 14.11.2020] and His Holiness Pope Francis [3] respectively. The Orthodox position dates back to the His All-Holiness Ecumenical Patriarch Dimitrios, although the current His All-Holiness Ecumenical Patriarch Bartholomew is a more forceful exponent who communicates his position through pastoral letters (the first having been issued on 1 September 1992) and in official messages at international conferences. Despite the differences in timing and emphasis, the contemporary spiritual leaders of both Churches converge with a critical vision for the future of humanity.

This article addresses Chapter 1 of *Genesis*: the creation of the Cosmos and the planet Earth as a suitable abode for humankind: "Thus heaven and earth were completed with all their array" (Genesis 2.1). Indeed, the narrative of Creation continues in the first three verses of Chapter 2. The allegorical duration of creation is limited to six days in Chapter 1; the seventh was for God to rest from all the work done in creation (Genesis 2.2). This 'resting' period is part of the creative process: "Such was the story of heaven and earth as they were created" (Genesis 2.3). Following a brief review outlining the perspectives of the Orthodox and Catholic Churches regarding their social teachings on the environment, this article addresses the significance of a recurrent statement in *Genesis* - "and God saw that it was good" - cited but not emphasised by the respective spiritual leaders, which has been compared with a crucial action in contemporary environmental science literature, namely environmental impact assessments. In the course of this study, extensive use was made of *The New Jerusalem Bible* [4].

2. The environment from the perspective of the Orthodox and Catholic Churches

The contemporary perspectives of the Orthodox and Catholic Churches towards ecology and the environment form the theme of a recent study undertaken by Morariu [1]. The perspectives he offers are based on the positions of the Churches' current spiritual leaders, respectively, the Ecumenical Patriarch Bartholomew and Pope Francis [3]. Morariu analytically evaluates the manner in which each Church approaches the question of the environment in order to identify similarities and differences.

In the Orthodox tradition, the Ecumenical Patriarch Bartholomew is a fierce advocate for the environment who frequently articulates his position at international conferences [5, 6]. The Patriarch was a prime mover in the awakening of public awareness regarding the abuse of nature and, therefore, of creation, provoking national and international bodies to take a position on the matter. Al Gore, then Vice-President of the United States, described him as the "the Green Patriarch" [7]. To support the claim that Patriarch Bartholomew's work in the field of the environment dates back to the 1980s, Morariu [1] cites the editor of the Patriarch's works, noting that: "The environmental vision and initiatives of the Ecumenical Patriarchate date to the mid-1980s, when it organized and chaired the third session of the Pre-Synodal Pan-Orthodox Conference in Chambesy (October 28 - November 6, 1986). Although the decisions of this meeting were not binding, ... nevertheless the representatives attending the meeting expressed and stressed their concern for the abuse of the natural environment by human beings. ... The emphasis was on leaving a better world for future generations." [7]

In 1989, Patriarch Bartholomew's predecessor, the Ecumenical Patriarch Dimitrios, chose 1 September (the first day of the Orthodox liturgical year) to be an annual Day of Prayer for Creation - a day to give thanks for creation, to call upon the general public to respect and protect the natural environment, and to appeal to national governments to protect and preserve Nature and all of Creation [Ecumenical Patriarch Dimitrios, *Message by H.A.H. Ecumenical Patriarch Dimitrios upon the Day of Prayer for the Protection of Creation (01/09/1989)*, <https://www.patriarchate.org/-/message-by-h-a-h-ecumenical-patriarch-dimitrios-upon-the-day-of-prayer-for-the-protection-of-creation-01-09-1989->, accessed on 8.11.2020]. In his first official message on that day, Patriarch Dimitrios unequivocally stated the environmental problem faced by humanity: "The abuse by contemporary man ... has already led the world to the edge of apocalyptic self-destruction, either in the form of natural pollution which is dangerous for all living beings, or in the form of the extinction of many species of the animal and plant world, or in various other forms. ... Unfortunately, in our days of the influence of an extreme rationalism and self-centeredness, man has lost the sense of sacredness of creation and acts as its arbitrary ruler and a rude violator. ... We observe today the violation of nature for the satisfaction not of basic human needs, but of man's endless and constantly increasing desires and lust, encouraged

by the prevailing philosophy of a consumer society. ... Man cannot infinitely and at his pleasure exploit the natural resources of energy. The price of his arrogance, should the present situation continue, will be his self-destruction.” [https://www.patriarchate.org/-/message-by-h-a-h-ecumenical-patriarch-dimitrios-upon-the-day-of-prayer-for-the-protection-of-creation-01-09-1989-]

Patriarch Dimitrios’s concerns resonate with those expressed in *Octogesima adveniens*, which in 1971 placed the environment on the Catholic agenda, stating that: “man is suddenly becoming aware that by an ill-considered exploitation of nature he risks destroying it and becoming in his turn the victim of this degradation. Not only is the material environment becoming a permanent menace - pollution and refuse, new illnesses and an absolute destructive capacity - but the human framework is no longer under man's control, thus creating an environment for tomorrow which may well be intolerable. This is a wide-ranging social problem which concerns the entire human family.” [8] This theme was brought up again in 1979, although on a different, less critical note [1], by Pope John Paul II, who proclaimed Francis of Assisi the patron of those who promote environmental issues [Pope John Paul II, *Inter Sanctos*, 1979, https://www.vatican.va/content/john-paul-ii/es/apost_letters/1979/documents/hf_jp-ii_apl_19791129_inter-sanctos.html, accessed on 17.11.2020]. In 1989, in his message for the celebration of the World Day of Peace, the Catholic Pontiff stated: “The Earth is ultimately a common heritage, the fruits of which are for the benefit of all. ... The ecological crisis reveals the urgent moral need for a new solidarity, especially in relations between the developing nations and those that are highly industrialized. ... This need presents new opportunities for strengthening cooperative and peaceful relations among States. ... When the ecological crisis is set within the broader context of the search for peace within society, we can understand better the importance of giving attention to what the earth and its atmosphere are telling us: namely, that there is an order in the universe which must be respected, and that the human person, endowed with the capability of choosing freely, has a grave responsibility to preserve this order for the well-being of future generations. I wish to repeat that the ecological crisis is a moral issue.” [Pope John Paul II, Message of His Holiness for the celebration of the World Day of Peace, 1 January 1990, entitled *Peace with God the Creator; Peace with all of creation*, 1989, http://www.vatican.va/content/john-paul-ii/en/messages/peace/documents/hf_jp-ii_mes_19891208_xxiii-world-day-for-peace.html, accessed on 9.11.2020]

Caritas in veritate [http://www.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html] developed the notion of ecological crisis with a conceptual, anthropological grounding akin to that of Patriarch Bartholomew. Pope Benedict XVI made reference to “intergenerational justice as a potential solution for overcoming the future challenges that this might bring” [9], a theme brought up and further developed by his successor Pope Francis in *Laudato Si* [3] which acknowledges that Pope John Paul II, in the Encyclical Letter *Centesimus Annus*, “had noted that little effort had been made to ‘safeguard the moral conditions for an authentic human

ecology” [3, p. 5]. *Laudato Si*, dated 24 May 2015 and published at noon on 18 June 2015, is Pope Francis’s second encyclical; unlike his first, *Lumen Fidei* [Pope Francis, *Encyclical Letter Lumen Fidei*, 2013, http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20130629_enciclica-lumen-fidei.html, accessed on 8.11.2020], which is based on the work of his predecessor, it is essentially Pope Francis’ own work. In it the Pope emphasises climate change as “a global problem with grave implications: environmental, social, economic, political and for the distribution of goods. It represents one of the principal challenges facing humanity in our days.” [3, p. 21] In the same encyclical, the Pontiff floats the notion of ‘integral ecology’. This is, essentially, a holistic approach to comprehending ecology which should be at the centre of humanity’s endeavours: “Human beings too are creatures of this world, enjoying a right to life and happiness and endowed with unique dignity. So we cannot fail to consider the effects on people’s lives of environmental deterioration, current models of development and the throwaway culture.” [3, p. 31] Citing *Laudato Si*, Pope Francis claimed that ‘intergenerational solidarity’ is the main moral imperative to address present problems [3, p. 118-120]: “By placing the needs of our contemporaries, especially young people, and also of generations yet to come, at the heart of efforts to care for creation, then the common good of all may be promoted and protected, ‘since the world we have received also belongs to those who will follow us’” [Pope Francis, *Messaggio del Santo Padre ai partecipanti alla Conferenza Internazionale The Common Good on our Common Seas* in corso a Copenaghen (5 May 2019), <https://press.vatican.va/content/salastampa/it/bollettino/pubblico/2019/05/05/0373/00783.html>, accessed on 8.11.2020].

Whilst the Catholic Church has a long tradition of social doctrine, including matters associated with the environment [9, p. 3], the Orthodox Church’s tradition of commentary on the environment only dates back to Ecumenical Patriarch Dimitrios. Currently, the Orthodox Church’s main advocate on environmental issues is the present Patriarch Bartholomew [1]. Unlike his Catholic counterpart, who can build on the existing environmental doctrine of his Church, Patriarch Bartholomew has had to build up the idea of championing environmental issues within the Orthodox Church almost from scratch, resting only on the thinnest foundations laid by Patriarch Dimitrios. This difference in speed of adopting environmental concerns could be rooted in the political contexts of post-Second World War Europe: until 1989 the Catholic Church was dominant in the more liberal West, where ecological awareness has been rising up the social agenda since at least the 1960s, whilst the Orthodox Church was dominant in the more ‘censored’ East where environmental issues were of little concern before the fall of the Iron Curtain.

Based on the Scripture and the respective Patristic traditions, the Orthodox and Catholic Churches’ visions of the environment and ecological issues converge. A fundamental dogma of both Churches is that the world was created by the Creator. Humanity was granted “dominion over the Earth” (Genesis 1.28) to use and share the fruits of creation but not to abuse it, to ensure its preservation for future generations and not destroy it. However, the Churches have diverged

slightly in terms of how the notion of integral ecology, proposed by the current Patriarch, has been developed by Pope Francis, a tangent which the Catholic Pontiff acknowledges [3, p. 5]. Grounded in the work of his predecessors, Pope Francis developed the concept of integral ecology and put forward propositions to tackle the issues in an integrated, all-inclusive approach.

3. Environmental impact assessments

Assessments of environmental impacts generated by a given proposed development project/initiative date to the 1960s, coincident with the increase in environmental consciousness at that time. Environmental Impact Assessments (EIAs) can underpin a less subjective decision-making process. Various definitions of EIAs have been put forward. A concise definition is the one drawn up by the United Nations Economic Commission for Europe: “an assessment of the impact of a planned activity on the environment” [10]. A broader definition is that proposed by Munn: a survey carried out “to identify and predict the impact on the environment and on man’s health and well-being of legislative proposals, policies, programmes, projects and operational procedures, and to interpret and communicate information about the impacts” [11]. The definition adopted by the International Association for Impact Assessment is “the process of identifying, predicting, evaluating and mitigating the biophysical, social and other relevant effects of proposed development proposals prior to major decisions being taken and commitments made” [12].

On the other hand, auditing implies that a given action has been monitored. This is pivotal to the EIA process. It can involve comparing the predicted with the actual outcomes and may be applied to refine the quality of the predications and assess the significance of mitigating measures. However, in reality, following the implementation of a project/initiative post-consent, “monitoring and auditing ... are often absent from the EIA process” [13]. Monitoring and auditing should be built into the EIA process. Undertaking them ensures an effective assessment of a given project/initiative.

To date, the number of EIAs undertaken worldwide is significantly large. Yet, most are not rigorous and often do not include a follow-up monitoring programme to ensure that the recommendations delineated actually mitigate impacts on the environment, or undertake auditing to ensure that the projected impacts converge with the actual results. Such studies are hardly ever challenged.

An example of an exception to this is the EIA for the outline development permission PA2838/03 for part demolition of an existing plant and upgrading of the existing facility to accommodate a material recovery facility, a mechanical treatment plant, a digestion plant and a composting plant at Sant Antnin Waste Treatment Plant off Triq Wied Iz-Ziju, Marsascalea, Malta. The EIA was challenged through a planning appeal filed by Bianco [L. Bianco, *Third party planning appeal against outline development permit PA2838/03*, Lino Bianco and Associates, Malta, 2006, http://www.lino-bianco.com/otherprojects/images/2_st_antnin/Thrd%20party_planning%20appeal_Sant%20Antnin%20Waste%20Treat

ment%20Plant.pdf, accessed on 10.11.2020] on behalf of the local councils of the towns of Marsascala and Zejtun against the applicant, WasteServ Malta Ltd, a central government project, run and owned by a semi-autonomous quango responsible for constructing and operating waste management facilities on behalf of the Ministry for Resources and Infrastructure, Malta. At the time, Malta had just joined the European Union. The EIA was challenged on the grounds it was not acting impartially and showing bias towards the development. Not only were its terms of reference not adhered to, but some baseline surveys required in the EIA were either not thoroughly undertaken or not undertaken at all.

Prior to the final comments of the submissions of the appeal, reference was made to the joint declaration on articulating a code of environmental ethics, issued on 10th June 2002 by Pope John Paul II and Patriarch Bartholomew [L. Bianco, *Third party planning appeal against outline development permit PA2838/03*, 89-90]. It states that: “in our time we are witnessing a growth of an ecological awareness which needs to be encouraged, so that it will lead to practical programmes and initiatives. ... It is on the basis of our recognition that the world is created by God that we can discern an objective moral order within which to articulate a code of environmental ethics. In this perspective, ... all ... have a specific role to play in proclaiming moral values and in educating people in ecological awareness, which is none other than responsibility towards self, toward others, toward Creation.” [Pope John Paul II, Patriarch of Constantinople Bartholomew I, *Common Declaration on Environmental Ethics*, Venice, 2002, http://www.vatican.va/content/john-paul-ii/en/speeches/2002/june/documents/hf_jp-ii_spe_20020610_venice-declaration.html, accessed on 9.11.2020] The appeal further argued that ethical goals listed at the end of the *Common Declaration on Environmental Ethics* are geared for the wellbeing of present and future generations, the ‘world’s children’, ‘our children’: “The problem is not simply economic and technological; it is moral and spiritual. A solution at the economic and technological level can be found only if we undergo, in the most radical way, an inner change of heart, which can lead to a change in lifestyle and of unsustainable patterns of consumption and production” [http://www.vatican.va/content/john-paul-ii/en/speeches/2002/june/documents/hf_jp-ii_spe_20020610_venice-declaration.html].

The appeal was not upheld eight years after it was lodged. Due to a change in the central government some weeks after the decision was delivered - the political affiliations of the new government were the same as those of the local councils - the needs of the locality/ies which were going to be affected by the development proposal were given priority. Indeed, it had been a political decision to undertake this project in the first place and, in any case, the consent was an outline permit, thus the principle of undertaking the development had been accepted but not the right to execute it. The EIA on which the original decision to grant permission was based lacked a monitoring and auditing strategy; it was effectively an *a priori* statement to justify a development and hence defeated the aim of the EIA process.

In Patriarch Bartholomew's words, "the use of the world is not an end in itself for humanity, but a way of relating to God. If humanity distorts the use of this world into an egocentric abuse of greed, by dominating and destroying nature, then humanity is denying and destroying its own life-giving relationship with God." [14, p. 68]

The Malta case-study is useful to illustrate the significance of collective responsibility, whether by public entities - government departments and agencies, public authorities, NGOs - or private citizens, as a viable alternative to self-monitoring by the state. In his 1994 pastoral letter, the Patriarch criticised individualism [1] and "the problem of the polarization of individual sin against collective responsibility" [15, p. 32]. He called for collective responsibility as a guarantor for protection of the natural environment. Patriarch Bartholomew is a staunch advocate of integral ecology [16]. This concept goes beyond the notion of "ecological reconstruction" noted by Gould [17]. Referring to a statement made by Pope Francis at the international conference *The Common Good and our Common Seas* [<https://press.vatican.va/content/salastampa/it/bollettino/pubblico/2019/05/05/0373/00783.html>], Morariu argues that integral ecology involves "a deep motivation and an intergenerational interest and justice" [1, p. 127]. Further to the theme of "intergenerational interests", Patriarch Bartholomew highlighted the financial dimension of the natural disasters occurring in various parts of the globe and generated by global warming: "Such disasters have persuaded even the most incredulous persons that the problem is real, that the cost of repairing damages is comparable to the cost of preventing them, and that there is simply no margin left for remaining silent" [15, p. 50].

4. Genesis - a proposition of environmental monitoring and audit

Official publications by leaders of both Churches recall the recurrent statement in *Genesis*, "And God saw that it was good" (Genesis 1.4, Genesis 1.10 and 1.12, Genesis 1.18, Genesis 1.21, Genesis 1.25). Patriarch Bartholomew's publication, *Et Dieu vit que cela était bon. La vision théologique de la création dans la tradition orthodoxe* [And God saw that it was good: The theology of creation in the Orthodox tradition] [6] is an essay on his comprehension and pragmatic vision for the defence of the environment, based on a speech he delivered at Yale University in November 2014, thus pre-dating *Laudato Si*. The latter is a critique of consumerism and irresponsible development and the degradation of the environment they cause; it also calls for swift and unified action on climate change. Section 1, paragraph 3 of Pope John Paul II's message for the celebration of World Day of Peace, entitled 'And God saw that it was good', makes specific reference to the first chapter of *Genesis*: "In the Book of Genesis, where we find God's first self-revelation to humanity (Gen 1:3), there is a recurring refrain: 'And God saw that it was good'" [http://www.vatican.va/content/john-paul-ii/en/messages/peace/documents/hf_jp-ii_mes_19891208_xxiii-world-day-for-peace.html]. Yet, what is the significance of 'And God saw that it was good' in the context of the first book of the Scripture?

Genesis is a narrative of primeval history (chapters 1-11) and ancestral history (chapters 12-50) [18]. The word itself is a transliteration from the Greek Γένεση meaning origin. Indeed, “In the beginning” is the opening phrase of the creation narrative (Genesis 1.1). The term in Ancient Hebrew is בְּרֵאשִׁית, which translates as “In [the] beginning [of something]” (the definite article is missing but implied) [19]. The Cosmos had an absolute beginning, *creatio ex nihilo*: “In the beginning God created Heaven and Earth” (Genesis 1.1) - or beginning out of chaos: “Now the Earth was a formless void, there was darkness over the deep, and a divine wind sweeping over the waters” (Genesis 1.2). It could be read as the state of the Cosmos prior to Creation [20], the context for God’s development project, planet Earth.

“In the beginning was the Word: the Word was with God and the Word was God” (John 1.1). The Word is the Command, the decision for a phase to be executed. Using contemporary language in development planning, the project of Creation was spread over the proverbial seven days, that is, split into seven phases. It is this narrative of *Genesis* which gives this digit its association with completeness and perfection. The various phases are tabulated hereunder (Table 1).

Table 1. Phases of Creation and the corresponding verses in *Genesis*.

Day/Phase of Creation	Verses
Day 0/The Beginning	1.1 and 1.2
Day 1/Phase 1	1.3 to 1.5
Day 2/Phase 2	1.6 to 1.8
Day 3/Phase 3	1.9 to 1.13
Day 4/Phase 4	1.14 to 1.19
Day 5/Phase 5	1.20 to 1.23
Day 6/Phase 6	1.24 to 1.31
Day 7/Phase 7	2.2 and 2.3

4.1. The creation narrative in *Genesis*

Creation is a development project undertaken in seven phases, with Day 0 as the beginning, forming the context of creation, and Day 7 in the final phase. Humanity came later to manage and develop creation, representing the threshold between or the link between spiritual and material creation, to use the interpretation of the Doctors of the Church.

Each given phase, X, of creation is distinctly delineated from the former: “Evening came and morning came” (Genesis 1.5, Genesis 1.8, Genesis 1.13, Genesis 1.19, Genesis 1.23, Genesis 1.31). Each phase includes the following premises:

Let there be Y P₁
 There was Y P₂
 Y was good P₃

where Y is one of the following actions stated in this order: light (Genesis 1.3), Heaven (meaning sky) (Genesis 1.6), Earth/seas (Genesis 1.9), day/night (Genesis

1.14), creatures of the sky and sea (Genesis 1.20) and land creatures (Genesis 1.24).

P_1 is the decision/command to undertake Y at phase X, whilst P_2 is the implementation of the said decision/command. P_3 is the positive assessment of the implemented decision/command Y, essentially an audit of phase X whose result is positive; this is reiterated in the following verses which correspond to action Y: Genesis 1.4, Genesis 1.10 and 1.12, Genesis 1.18, Genesis 1.21 and Genesis 1.25. P_3 is systematically and periodically used to validate P_2 prior moving to the next day/phase X_n , where n is the phase number; indeed, it implies that phase X_{n-1} was monitored. The recurring proposition, 'And God saw that it was good', states that at the end of each phase X of Creation, the Creator assessed that the resulting realization was fitting. This is tantamount to what is referred to, in contemporary literature on the EIA process, as monitoring and auditing: two activities which help safeguard against any development having negative impacts on the environment or deepening the current ecological crisis.

5. Conclusions

The concepts of environmental monitoring and auditing are grounded in contemporary environmental science. They constitute a medium to assess whether decisions/initiatives affecting the environment are sustainable for the good of all, including nature, its resources and the habitats that it supports. Environmental monitoring and auditing form part of a scientific approach to assessing the sustainability of a given decision or initiative, providing a means to check whether any degradation has taken place as a result of the use (or abuse) of natural resources. This approach complements the visions of the spiritual leaders of the Orthodox and Catholic Churches regarding environmental matters. Both churches focus on ensuring that intergenerational justice does not remain a pipe dream but becomes the basis of a real, science-based strategy aimed at the wellbeing of all, both present and future generations. The stances they promote offer a check against the egocentric, financially driven consumer society paradigm and have the potential to evolve into a means to ensure effective solidarity whereby the common wellbeing of present and future generations is addressed.

The social teachings of the Orthodox and Catholic Churches on the environment are in tandem. The vision of both Churches is grounded in the reading of the Scripture through the Patristic tradition. Integrating the notions of monitoring and auditing into their teachings requires a shift from medieval to modern Philosophy, from an *a priori* to an *a posteriori* position, in the terms of Kantian philosophy. These concepts form part of an *a posteriori* assessment of the impact generated by a given development project. This dimension is still not emphasized in contemporary social teachings of the Orthodox and Catholic Churches on the environment. Continuous environmental monitoring and auditing are part of the solution to the ecological crisis. They critically review compliance; they ensure intergenerational interest and justice through compliance grounded in

environmental ethics. This reiterates the vision of Pope John Paul II that “the ecological crisis is a moral crisis” [http://www.vatican.va/content/john-paul-ii/en/messages/peace/documents/hf_jp-ii_mes_19891208_xxiii-world-day-for-peace.html]. As the ecological crisis highlighted the moral requisite for solidarity between nations and communities, monitoring and auditing need to be at the core of environmental ethics. Applying them to decisions impinging on the environment adds a rational dimension the requirement to respect the environment and to protect the Earth’s ecological systems for the good of present and future generations. Integrating the notions of monitoring and auditing into the existing corpus of the social teachings of the Churches ensures a pragmatic solution for the defence of the environment through:

1. safeguarding the planet’s ecological systems by specifying humanity’s physical and metaphysical/moral obligations, and
2. effectively implementing the notion of integral ecology by ensuring that the objectives set for intergenerational solidarity are met.

Guarding creation against destruction has biblical roots [21]. Sustained by the writings of the current respective spiritual leaders, both Churches are adamant about the importance of respecting creation, of protecting and preserving it for the benefit of present and future generations. The concepts of environmental monitoring and auditing also have biblical roots and complement the existing corpus of the teachings of the Orthodox and Catholic Churches, in that for each day/phase of creation, the Creator “saw that it was good”.

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References

- [1] I-M. Morariu, *J. Study Relig. Ideol.*, **19(56)** (2020) 124-135.
- [2] B. Mondin, *Etica Politica*, Edizioni Studio Domenicano, Bologna, 2000, 312.
- [3] Pope Francis, *Encyclical Letter Laudato Si’ of the Holy Father Francis on Care for our Common Home*, Libreria Editrice Vaticana, Vatican, 2015.
- [4] ***, *The New Jerusalem Bible*, Darton, Longman & Todd, London, 1985.
- [5] I-M. Morariu, *Eur. J. Sci. Theol.*, **15(5)** (2019) 19-25
- [6] Patriarche œcuménique Bartholomée, *Et Dieu vit que cela était bon. La vision théologique de la création dans la tradition orthodoxe*, Les Editions du Cerf, Paris, 2015, 4.
- [7] J. Chryssavgis, *Introduction*, in *On Earth as in Heaven. Ecological Vision and Initiatives of Ecumenical Patriarch Bartholomew*, J. Chryssavgis (ed.), Fordham University Press, New York, 2012, 4.
- [8] Pope John XXIII, Pope Paul VI, *Enchiridion delle Encicliche*, Edizione Dehoniane, Bologna, 1994, 1015.

- [9] Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church*, Libreria Editrice Vaticana, Rome, 2005, 451-487.
- [10] United Nations Economic Commission for Europe, *Policies and systems of environmental impact assessment*, United Nations, New York, 1991, 1.
- [11] R.E. Munn, *Environmental impact assessment. principles and procedures*, Wiley, New York, 1979, 8.
- [12] ***, *What is impact assessment?*, International Association for Impact Assessment, Fargo (North Dakota), 2009, 1.
- [13] J. Glasson, R. Therivel and A. Chadwick, *Introduction to Environmental Impact Assessment*, Routledge, London, 2012, 14.
- [14] J. Chryssavgis (ed.), *Orthodox Theology and the Environment. General Addresses*, in *On Earth as in Heaven. Ecological Vision and Initiatives of Ecumenical Patriarch Bartholomew*, Fordham University Press, New York, 2012, 65-144.
- [15] J. Chryssavgis (ed.), *Call to Vigilance and Prayer. Patriarchal Encyclicals for September 1st*, in *On Earth as in Heaven. Ecological Vision and Initiatives of Ecumenical Patriarch Bartholomew*, Fordham University Press, New York, 2012, 23-64.
- [16] M.G. Sereti, *Ecumenical Rev.*, **70(4)** (2018) 617-626.
- [17] K.A. Gould, *Global Dynamics*, in *Ten Lessons in Introductory Sociology*, K.A. Gould & T.L. Lewis (eds.), Oxford University Press, Oxford, 2018, 287-316.
- [18] D. Bergant, *Genesis. In the Beginning*, Liturgical Press, Minnesota, 2013, xii.
- [19] J. Blenkinsopp, *Creation, Un-Creation, Re-Creation. A Discursive Commentary on Genesis 1-11*, T&T Clarke International, New York, 2011, 30-31.
- [20] B.L. Bandstra, *Reading the Old Testament. An Introduction to the Hebrew Bible*, Wadsworth Publishing Company, Belmont, 1999, 38-39.
- [21] I. Chirilă, *Wealth and Poverty in the Book of Proverbs*, in *The Bible and Economics*, G. Benyik (ed.), JATE Press, Szeged, 2014, 71-80.