

LAUDATO SÍ, ECOTHEOLOGY AND AGENDA 2030: A BIBLIOMETRIC ANALYSIS OF ARTICLE PRODUCTION IN ENGLISH, PORTUGUESE AND SPANISH (2010-2024)

LAUDATO SÍ, ECOTEOLÓGIA E AGENDA 2030: UMA ANÁLISE BIBLIOMÉTRICA DA PRODUÇÃO DE ARTIGOS EM LINGUA INGLESA, PORTUGUESA E ESPANHOLA (2010-2024)

LAUDATO SÍ, ECOTEOLÓGÍA Y AGENDA 2030: UN ANÁLISIS BIBLIOMÉTRICO DE LA PRODUCCIÓN DE ARTÍCULOS EN INGLÉS, PORTUGUÉS Y ESPAÑOL (2010-2024)



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ABSTRACT

This article applies bibliometric techniques to evaluate the impacts of the Encyclical Letter *Laudato Sí* (2015) on the production of academic articles on ecotheology in English, Portuguese, and Spanish between 2010 and 2024, seeking to identify relationships between Catholic faith, ecology, and sustainability. It also sought to identify the extent to which these articles were aligned with themes such as Globalism, Agenda 2030, Sustainable Development Goals (SDGs), and Global Warming. Regarding methodology, the research is classified as applied, exploratory, descriptive, quantitative, and bibliographic. The descriptive analysis used the Web of Science tool to capture the following aspects: keywords, categories of knowledge, language, countries, journals, teaching departments, most productive researchers, funders, and SDGs. In turn, the generation and analysis of author networks and co-occurrences used the VOSviewer software. The search retrieved 729 documents, reduced to 678 when restricted to articles, with 553 in the Religion category. International publications fall within the 17 SDGs, with 185 articles addressing Climate Action (SDG 13). In the Brazilian case, 15 of the 20 articles do not fit into the categories of the 2030 Agenda, while only two address SDG 13.

Keywords: 2030 Agenda. Bibliometrics. Ecotheology. *Laudato Sí*. SDGs.

RESUMO

O presente artigo aplica técnicas bibliométricas para avaliar os impactos da Carta Encíclica *Laudato Sí* (2015) na produção de artigos acadêmicos sobre ecoteologia, nas línguas inglesa, portuguesa e espanhola, entre 2010 e 2024, buscando identificar relações entre fé católica, ecologia e sustentabilidade. Buscou-se também identificar em que medida esses artigos estavam alinhados a temas, tais como Globalismo, Agenda 2030, Objetivos de Desenvolvimento Sustentável - ODS e Aquecimento Global. Quanto à metodologia, a pesquisa é classificada como aplicada, exploratória, descritiva, quantitativa e bibliográfica. A

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análise descritiva utilizou a ferramenta Web of Science para capturar os seguintes aspectos: palavras-chave, categorias de conhecimento, língua, países, periódicos, departamentos de ensino, pesquisadores mais produtivos, financiadores e ODS. Por sua vez, a geração e análise de redes de autores e coocorrências utilizou a *software* VOSviewer. A busca recuperou 729 documentos, reduzidos a 678, quando restrita a artigos, sendo 553 na categoria Religião. As publicações internacionais enquadram-se nos 17 ODS, sendo que 185 artigos versam sobre Ação Climática (ODS 13). No caso brasileiro, 15 dos 20 artigos não se classificam nas categorias da Agenda 2030, enquanto apenas dois contemplam o ODS 13.

Palavras-chave: Agenda 2030. Bibliometria. Ecoteologia. Laudato Sí. ODS.

RESUMEN

Este artículo aplica técnicas bibliométricas para evaluar los impactos de la Carta Encíclica Laudato Sí (2015) en la producción de artículos académicos sobre ecoteología en inglés, portugués y español entre 2010 y 2024, buscando identificar relaciones entre la fe católica, la ecología y la sostenibilidad. También buscó identificar en qué medida estos artículos estaban alineados con temas como el globalismo, la Agenda 2030, los Objetivos de Desarrollo Sostenible (ODS) y el calentamiento global. En cuanto a la metodología, la investigación se clasifica como aplicada, exploratoria, descriptiva, cuantitativa y bibliográfica. El análisis descriptivo utilizó la herramienta Web of Science para capturar los siguientes aspectos: palabras clave, categorías de conocimiento, idioma, países, revistas, departamentos de enseñanza, investigadores más productivos, financiadores y ODS. A su vez, la generación y el análisis de redes de autores y coocurrencias utilizaron el software VOSviewer. La búsqueda recuperó 729 documentos, reducidos a 678 cuando se restringió a artículos, con 553 en la categoría de Religión. Las publicaciones internacionales se enmarcan en los 17 ODS, con 185 artículos que abordan la Acción Climática (ODS 13). En el caso brasileño, 15 de los 20 artículos no se ajustan a las categorías de la Agenda 2030, mientras que solo dos abordan el ODS 13.

Palabras clave: Agenda 2030. Bibliometría. Ecoteología. Laudato Sí. ODS.

1 INTRODUCTION

One of the main concerns today is the environmental issue, marked by climate change, degradation of ecosystems and inequality in access to natural resources.

The occurrence of extreme weather events is evident, as in the case of the recent flood in Rio Grande do Sul, the blackout of electricity in São Paulo, due to winds with speeds above 100 km/h, the growth of fires throughout the Brazilian territory, in addition to several other examples around the planet.

The diagnosis made by a relevant part of the scientific community attributes the crisis to anthropogenic factors, in particular, the emission of greenhouse gases and the predatory use of natural resources, and it is urgent to adopt measures to decarbonize the economy and sustainable use of the environment, in order to stop, or at least mitigate, the effects of climate change.

In line with this diagnosis, multilateral institutions, governments, financial institutions, private and public banks, investors, companies, and consumers are increasingly committed to the ESG (Environment, Social, and Governance) agenda², defining standards and indicators for environmental, social, and sustainable corporate governance management.

An important example of these initiatives was the launch by the UN of the 2030 Agenda, defining 17 Sustainable Development Goals (SDGs) to be pursued by member countries.

In line with the signs of the times, Pope Francis expands the body of the Social Doctrine of the Church - DSI,³ through the publication of the Encyclical Letter *Laudato Sí*.

The document addresses the ecological issue from an integral Christian perspective, contributing to an updated reflection on Creation and the due care that man must give to the environment, helping Catholics and people of good will to raise awareness on the subject and the adoption of sustainable and just environmental practices.

This is the context that motivated this research, where bibliometric techniques were applied to evaluate the impacts of the Encyclical Letter *Laudato Sí* (2015) on the production of academic articles on ecotheology, in English, Portuguese, and Spanish, between 2010 and 2024.

² **ESG** is the acronym for **Environmental, Social, and Governance (ESG)**, a set of criteria used to assess the sustainability and ethical impact of a company or organization. These criteria are adopted by investors and other stakeholders to measure how a company handles environmental, social, and governance issues, as well as to assess its contribution to the well-being of society and the planet. OpenAI (2025).

³ A set of teachings of the Catholic Church that seeks to guide the faithful and society regarding social, economic, political and cultural issues, always based on the Gospel and the Christian tradition. These teachings aim to promote human dignity, social justice, the common good, and respect for creation. OpenAI (2025).

After all, what relationships can be identified between Catholic faith, ecology, and sustainability in post-Laudato Sí academic production? Has this document catalyzed new insights in the field of ecological theology? Did the Encyclical stimulate theologians to respond to the challenges of collective social effort aimed at establishing environmentally sustainable and socially just development initiatives? It is possible to observe an alignment between the published articles and themes such as: Globalism, 2030 Agenda, Sustainable Development Goals - SDGs⁴ and Global Warming. Is it possible to identify a bias in relation to these issues or is it a more neutral approach in the face of the pressures of the international and national agendas?

2 METHODOLOGY

This research seeks to identify the influences of Laudato Sí in the production of articles on ecotheology in English, Portuguese and Spanish, through a bibliometric study, which can be classified, according to Severino (2017), as applied, exploratory, descriptive, quantitative and bibliographic.

The following databases were consulted: Web of Science - WoS, Atla RDB and Google Scholar, and the use of WoS was chosen, given the greater number of articles and better quality of its metadata.

The results of the search resulted from the choice of the following terms: (((((((((ALL=(Laudato Sí)) AND ALL=(eco-theology)) OR ALL=(ecological theology)) OR ALL=(ecothology⁵) OR ALL⁶=(integral theology)) OR ALL=(integral theology⁷) OR ALL=(ecothology)) OR ALL=(integral theology)) OR ALL=(ecological theology).

The period 2010/2024 was considered, that is, covering five years before and nine years after the publication of Laudato Sí, resulting in 729 documents, or 678, when the search was restricted to articles (including those of conference and review).

⁴ The SDGs are a set of 17 interlinked goals that address key global challenges such as eradicating poverty, protecting the planet, and promoting peace and prosperity: 1. Poverty Eradication, 2. Zero Hunger and Sustainable Agriculture, 3. Health and Well-being, 4. Quality Education, 5. Gender Equality, 6. Clean Water and Sanitation, 8. Decent Work and Economic Growth, 9. Industry, Innovation and Infrastructure, 10. Reduction of Inequalities, 11. Responsible Cities and Communities, 12. Responsible Consumption and Production, 13. Action Against Global Climate Change, 14. Life on Water, 15. Terrestrial Life, 16. Peace, Justice and Effective Institutions, 17. Partnerships and Means of Implementation. United Nations Brazil (2024).

⁵ Ecotheology is a branch of theology that seeks to integrate religious reflection with environmental issues, proposing a spiritual and ethical vision of care for creation and the relationship between human beings and nature. OpenAI (2025).

⁶ Ditto.

⁷ Integral **theology** is a concept that refers to a comprehensive approach to theology, which seeks to understand and integrate all aspects of human life and the world in its entirety, taking into account the spiritual, social, economic, cultural, and environmental dimensions. In the context of **ecothology** and contemporary issues, integral theology highlights the interconnectedness between faith, social justice, environmental preservation, and the promotion of the common good. OpenAI (2025).

Later, the number of documents was reduced to 553, when the search was refined to consider only the Religion category.

The descriptive analysis was carried out from the data generated by WoS, highlighting the following aspects: keywords, knowledge categories, language, countries, journals, teaching departments, most productive researchers, funders and SDGs.

In turn, the VOSviewer software was used for the analysis of network-based data.

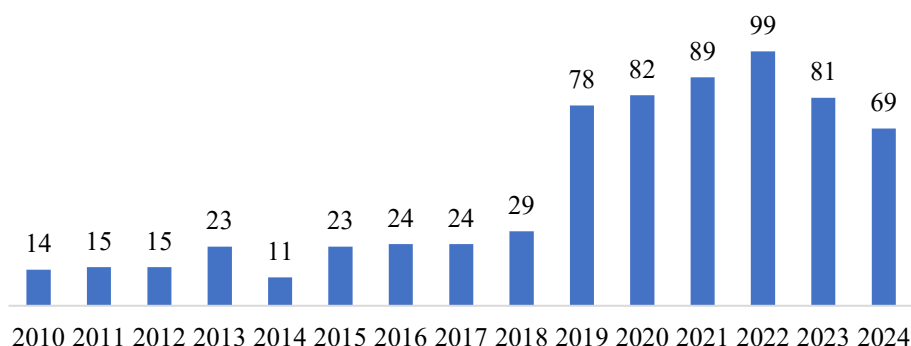
3 DATA ANALYSIS AND DISCUSSION

As shown in Figure 1, the publication of articles on the topic, considering all WoS categories, increased after 2015, with the annual average rising from 15.6 to 59.8 in the comparison between the 2010/2014 and 2015/2024 periods, respectively, suggesting the positive impact of Laudato Si.

It is worth noting the peak that occurred in 2022, eight years after the publication of the Encyclical, reaching 99 publications.

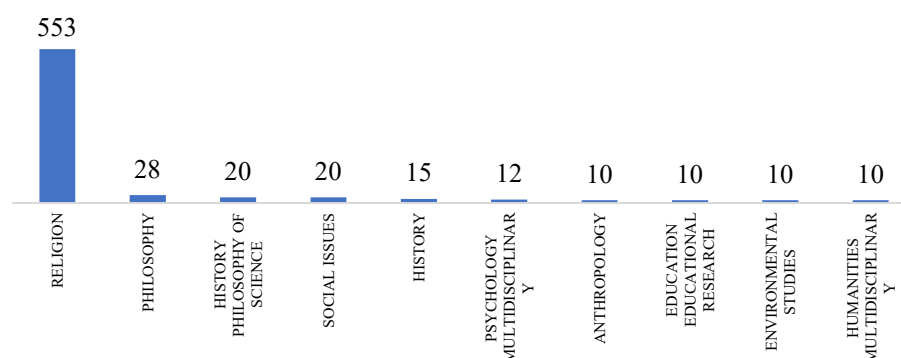
Figure 1

Publications of articles including all WoS categories (2010/2024)



Source: WoS Raw Data

Figure 2 shows, as expected, that the Religion category includes 83% of the publications on the topic researched during the period considered.

Figure 2*WoS article publications by category (2010/2024)*

Source: WoS Raw Data

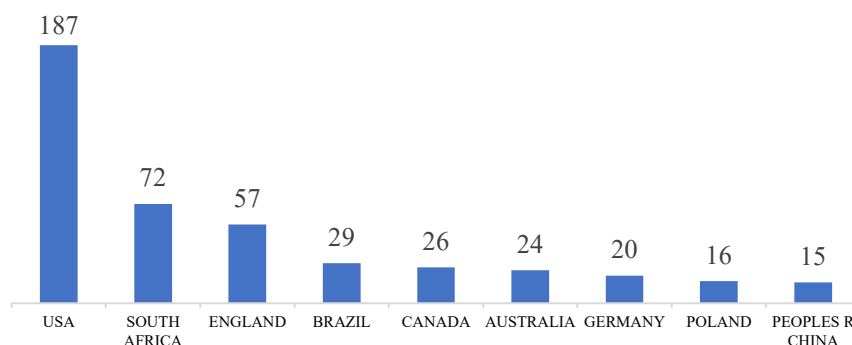
When considering the WoS categories, Figure 3 makes clear the leadership of English-language publications, followed by publications in Portuguese, Spanish, and Chinese.

Figure 3*Article publications by language (2010/2024)*

Source: WoS Raw Data

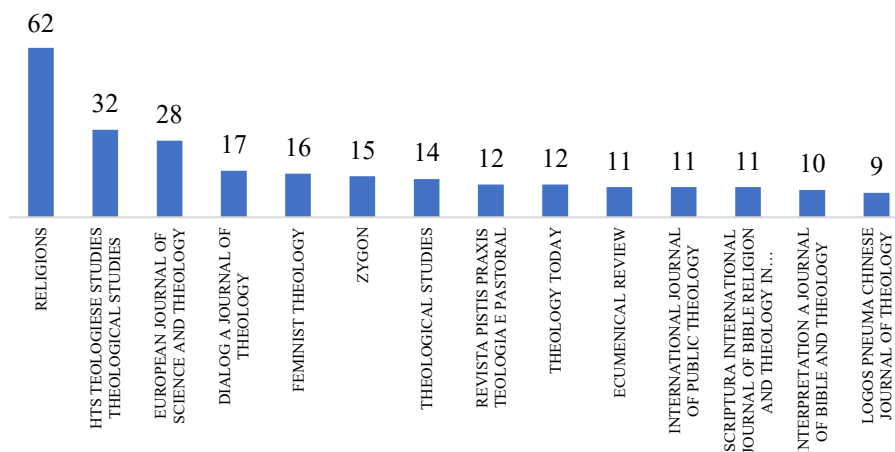
Given its greater representativeness compared to the others, the results presented below consider only the articles in the Religion category.

As shown in Figure 4, the U.S. leads the production of articles, with Brazil and China being among the nine countries with the most contributions.

Figure 4*Article publications by country (2010/2024)*

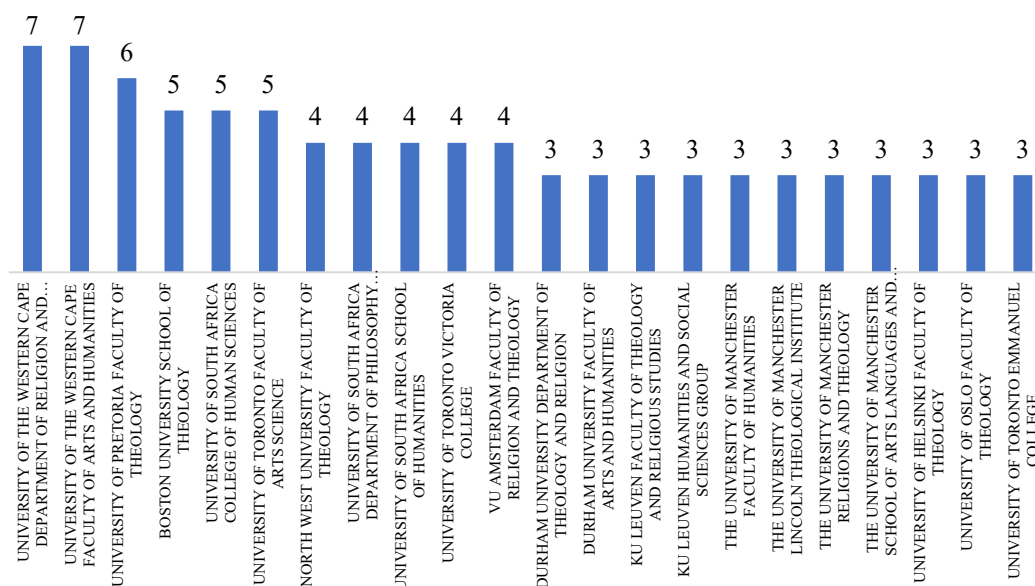
Source: WoS Raw Data

As for the relevance of journals, the Journal Religions stands out on the international scene, and the Journal Pistis & Praxis. Theology and Pastoral, in the Brazilian case.

Figure 5*Publications by journal (2010/2024)*

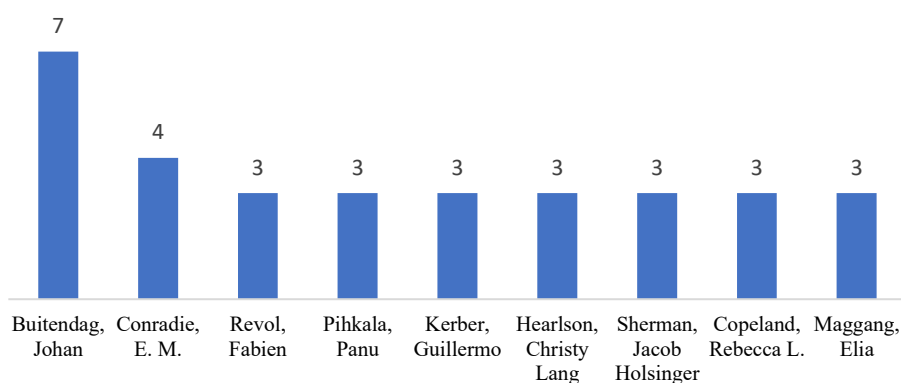
Source: WoS Raw Data

The data presented in Figure 6 reveal something surprising: of the six most productive departments, four are South African.

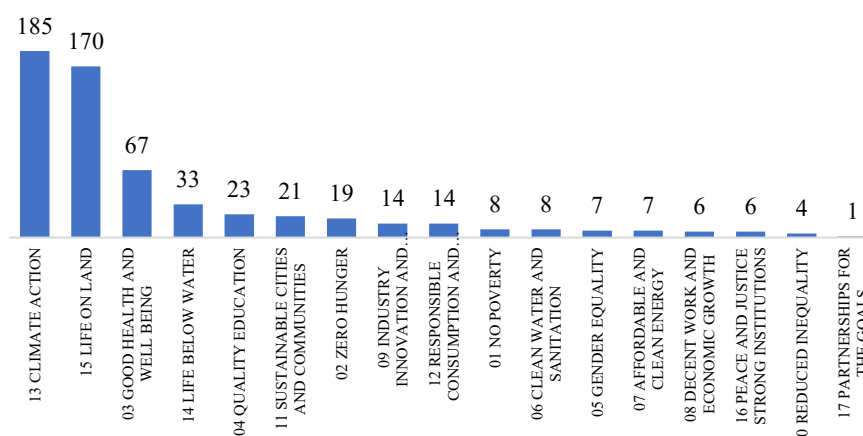
Figure 6*Publications by department (2010/2024)*

Source: WoS Raw Data

As for leadership among researchers, Johan Buitendag was the most productive of the period, as presented below.

Figure 7*Publications of the most productive researchers (2010/2024)*

Source: Authors.

Figure 10*Publications by SDGs (2010/2024)*

Source: WoS Raw Data

The following table presents the 19 most relevant keywords, according to the total strength of the link.

It is worth noting the relevance of the following terms resulting from the research at WoS, such as: ecology, ecological crisis, climate change, theology, ecotheology/ecotheology/ecological theology and *laudato sí*.

Table 1*Keyword occurrences and total link strength (2010/2024)*

Keyword	Occurrences	Total <i>link strength</i>
ecology	10	51
Integral ecology	6	43
theology	6	43
ecological crisis	7	35
liberation theology	5	34
ecotheology	6	33
ecological theology	7	32
public theology	5	31
creation	4	25
Laudato Si'	5	23
Nature	3	23
climate change	3	22
Eco-theology	3	21
practical theology	3	20
ecodomy	2	20
ecological conversion	2	16
The Earth Charter	2	16
Pope Francis	3	15
process theology	3	15

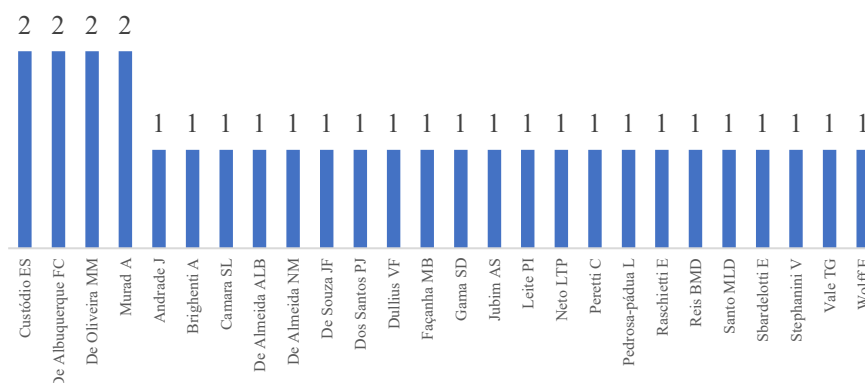
Source: WoS Raw Data

3.1 INDICATORS OF BRAZILIAN PRODUCTION

Figure 11 and Table 1 show the publications on the subject in Portuguese during the period analyzed. The most productive authors were Elivaldo Serrão Custódio, Francico Chagas de Albuquerque, Márcia Maria de Oliveira and Afonso Murad.

Figure 11

Publications in Portuguese by author (2010/2024)



Source: WoS Raw Data

Table 2

Publications in Portuguese by author, title and abstract (2010/2024)

Author	Title
Custodian, Elivaldo S.	Religious expressions of African origin in Protestant quilombos in Macapá-AP
Custodian, Elivaldo S.	Protestant religiosity in the face of the union of blacks in Amapá: the experience of Afro-Protestantism
de Albuquerque, Francisco C.	Evangelization in the Amazon: theology and inculturation
de Albuquerque, Francisco C.	Latin American Theology: The Church and the Kingdom of God According to I. Ellacuria
de Oliveira, Márcia Maria; Sbardelotti, Emerson	Liberation ecotheology in dialogue with poetry in some songs that address the theme
de Oliveira, Márcia Maria	Challenges and perspectives of the process of preparation of the Special Synod on the Amazon
Murad, Afonso	Ecotheology: Science of Faith and Spirituality
Murad, Afonso	Ecofeminist hermeneutics and ecotheology. Interfaces
Andrade, Joachim; Raschietti, Estevão	A synodal and "outgoing" Church in the Amazon: the greatest challenges pointed out by the Brazilian bishops
de Almeida, Nadi M; Brighenti, Agenor	Synod on the Amazon: new paths for the Church and for integral ecology
Vale, T Gurgel; Camara, S Lucas	About spiritual care in the care of extremely premature newborns
Buccato de Almeida, To Luiz	Pope Francis is the specificist of moral theology. Analysis of the discourse to the Alphonsian Academy for its 70th anniversary

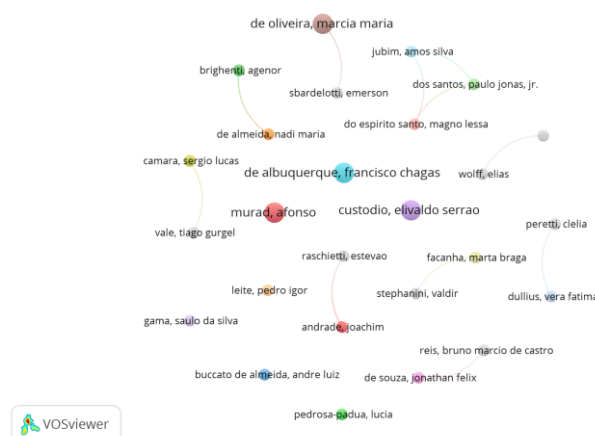
De Souza, J Félix; Reis, B M de Castro	Walking together: groups in adolescence and young women in Catholic schools
Jubim, A Silva; of Espírito Santo, M Lessa; Dos Santos, P Jonas Jr.	Do not be anxious: an exegetical, psychological and pastoral analysis of the possibilities of translating the Greek verb μεριμνάω (merimnaō) in the pericope Mt 6:25-34
Peretti, Clélia; Dullius, V Fatima	Human formation in Higher Education: an onto-anthropological and theological approach of Edith Stein
Façanha, M Braga; Stephanini, Valdir	Aspects of Religious Education in the National Common Curriculum Base: the fundamentals for quality education
Gama, Saulo da Silva	The contribution of an ecological theology in the process of overcoming the socio-environmental crisis generated by the technocratic paradigm
Leite, P Igor	Spiritual root of liberation theology: method and scope in dialogue with Gustavo Gutierrez
Wolff, Elias; Pontes Neto, L Tarquinio	The Theology of Life in Luiz Gonzaga
Pedrosa-Padua, Lucia	Guidelines of Pope Francis' spirituality: a reform from within the Church
Façanha, M Braga; Stephanini, Valdir	Aspects of religious education in the National Common Curricular Base: the foundations for quality education

Source: Authors.

The following figure represents the networks of national authors by occurrence.

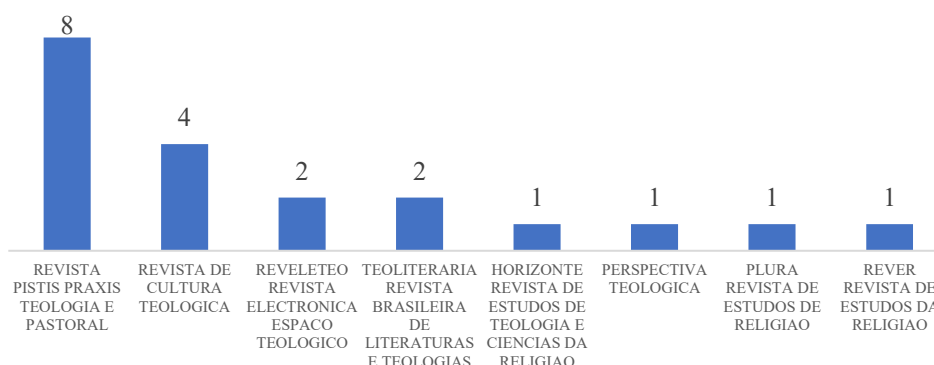
Figure 12

Map of Authors' Networks, by occurrence (2010/2024)



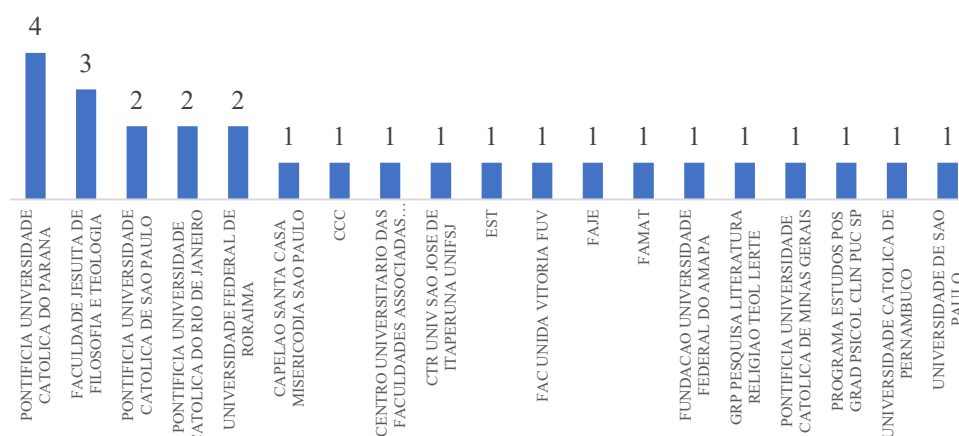
Source: Authors.

As for the prominent journals in the Brazilian case, the leadership is Pistis & Praxis Magazine. Theology and Pastoral Care, from PUCPR, according to Figure 13.

Figure 13*Publications in Portuguese by title (2010/2024)*

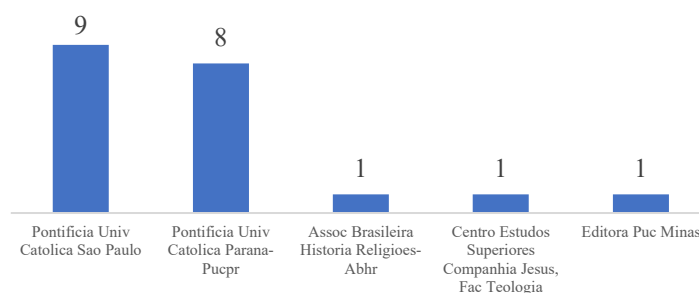
Source: WoS Raw Data

As shown in Figure 14, the Pontifical Catholic University of Paraná leads the publications, with three of the five main departments being from Pontifical Catholic Universities (PR, SP and Rio).

Figure 14*Portuguese-language publications by department (2010/2024)*

Source: WoS Raw Data

The trend identified above is reinforced when considering the data in Figure 15: 90% of the editions were carried out by Pontifical Catholic Universities (SP, PR and MG).

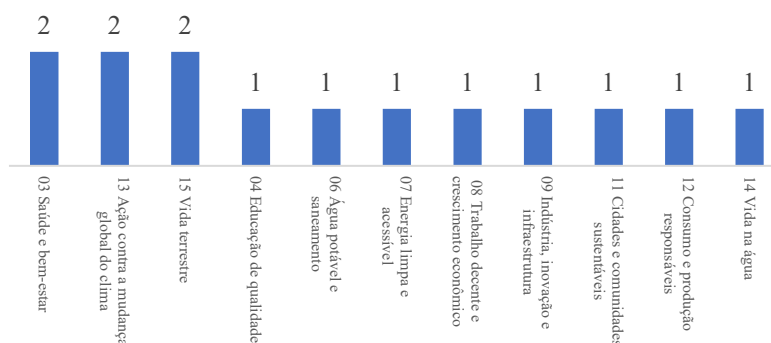
Figure 15*Portuguese-language publications by publisher (2010/2024)*

Source: WoS Raw Data

Regarding the association of publications in Portuguese with the SDGs, Figure 16 points out that the articles address 11 of the 17 UN goals, while two of the 20 articles are considered to be the climate issue.

On the other hand, 15 of the 20 national publications did not address any UN sustainable development goal.

In other words, at least in the case of publications in Portuguese, no evidence was found that the 2030 Agenda had a relevant direct impact on theological production.

Figure 16*Portuguese-language publications by SDGs (2010/2024)*

Source: WoS Raw Data

The following table presents the 20 most relevant keywords, according to the total strength of the links, and shows the relevance of the terms searched for in this research: ecology, ecological crisis, climate change, theology, ecotheology/eco-theology/ecological theology, and *laudato sí*.

Table 3

Keyword occurrences and total link strength (2010/2024)

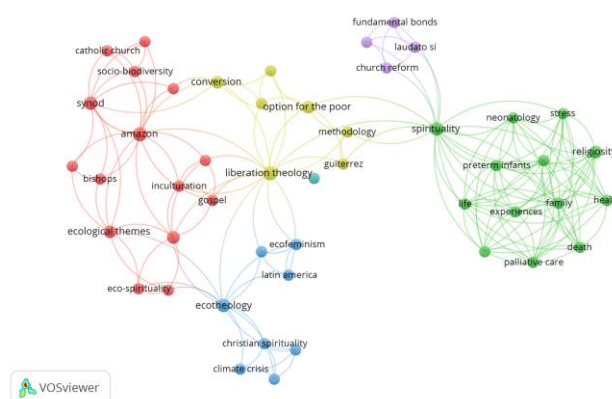
Co-occurrences	Total link strength
spirituality	20
liberation theology	17
Amazon	16
death	12
ecotheology	12
experiences	12
family	12
health	12
life	12
Neonatology	12
neurodevelopmental outcomes	12
palliative care	12
prematurity	12
preterm infants	12
religiosity	12
Stress	12
synod	11
theology	9
ecological themes	8
option for the poor	8

Source: Authors.

Finally, the following figure shows the co-occurrence networks of keywords.

Figure 17

Map of Keyword Co-occurrence Networks (2010/2024)



Source: Authors.

4 FINAL CONSIDERATIONS

This article applied bibliometric techniques with the objective of evaluating the impacts of the Encyclical Letter *Laudato Sí* (2015) on the production of academic articles on ecotheology, in English, Portuguese, and Spanish, between 2010 and 2024, seeking to identify relationships between Catholic faith, ecology, and sustainability.

The research also sought to identify the extent to which these articles were aligned with themes such as: Globalism, 2030 Agenda, SDGs and Global Warming, analyzing the results of the Web of Science – WoS.

The search recovered 729 documents, reduced to 678, when it was restricted to articles, 553 of which were in the Religion category.

In short, the bibliometric study pointed out the relevance of the themes of ecology and sustainability for the Catholic faith and theology, as well as the influence of the Encyclical Letter *Laudato Si*.

In fact, the results of the survey support the position that there is an alignment between the 553 publications, the 2030 Agenda and the SDGs. However, this understanding loses a lot of strength when we consider only national production.

At first, it was not possible to identify a direct relationship between the articles evaluated and the themes of globalism and global warming.

A suggestion to deepen this point would be to refine the search carried out, restricting it to articles classified in SDG 13.

A bibliographic review of Brazilian articles and the most representative of international production and, in particular, those that deal with Climate Action also seems relevant.

Finally, it would be interesting to replicate the current research to other areas of knowledge.

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