Governance and sustainable development goals (SDGs): a bibliographic review of the literature

Objetivos de governança e desenvolvimento sustentável (ODS): uma revisão bibliográfica da literatura

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Larissa Luana Pereira Custodio
Master in Administration
Institution: Universidade Federal de Campina (UFCG)
Address: R. Aprígio Veloso, 882, Universitário, Campina Grande – PB, CEP: 58429-900
E-mail: larissaluana929@gmail.com

Maria de Fatima Martins
PhD in Natural Resources
Institution: Universidade Federal de Campina (UFCG)
Address: R. Aprígio Veloso, 882, Universitário, Campina Grande – PB, CEP: 58429-900
E-mail: fatima.martins@uaac.ufcg.edu.br

ABSTRACT
Objective: to carry out a bibliographical review of the literature on sustainable governance and SDGs, inventorying, and mapping initiatives developed by the international literature. Theoretical approach: Adopted a bibliometric approach that allows exploring the existing nuances in a specific field while discovering the emerging areas of this theme through the Bibliometrix software. Results: Through this review, the importance of governance for the implementation of the SDGs is evident because governance operates on a broader level and involves the participation of different stakeholders acting in different segments to obtain dialogues and different power relations to manage the common issues related to the achievement of the SDGs. Originality and Relevance: Highlighting the importance of governance for implementing and consolidating the 2030 Agenda, gaps were found in the few studies relating the two themes. Given this, there is a need to map initiatives developed by the international literature on sustainable governance, SDGs, and the 2030 Agenda, to understand better the current advances and challenges involving the subject so that new perspectives for studies are signaled. Theoretical and methodological contributions: Theoretical implications are in the discussion of the conceptual and empirical strengthening of these themes and practical implications in the development of future methodologies.
Keywords: SDGs, governance, local governance, municipal governance, sustainable development, bibliometrics.

RESUMO
Objetivo: realizar uma revisão bibliográfica da literatura sobre governança sustentável e ODS, inventariar e mapear iniciativas desenvolvidas pela literatura internacional. Abordagem teórica: Adotou uma abordagem bibliométrica que permite explorar as nuances existentes em um campo específico, enquanto descobre as áreas emergentes deste tema através do software Bibliometrix. Resultados: Através desta revisão, a importância da governança para a execução dos ODS é evidente porque a governança funciona a um nível mais vasto e envolve a participação de diferentes partes interessadas que atuam em diferentes segmentos para obter diálogos e relações de poder diferentes para gerir as questões comuns relacionadas com a realização dos ODS. Originalidade e relevância: destacando a importância da governança para a implementação e consolidação da Agenda 2030, foram encontradas lacunas nos poucos estudos relacionados aos dois temas. Diante disso, é necessário mapear iniciativas desenvolvidas pela literatura internacional sobre governança sustentável, ODS e a Agenda 2030, para compreender melhor os avanços e desafios atuais envolvendo o assunto, de modo que novas perspectivas de estudos sejam sinalizadas. Contribuições teóricas e metodológicas: implicações teóricas estão na discussão do fortalecimento conceitual e empírico desses temas e implicações práticas no desenvolvimento de metodologias futuras.

Palavras-chave: ODS, governança, governança local, governança municipal, desenvolvimento sustentável, bibliometria.

1 INTRODUCTION
The relationship of instability between man and nature does not only permeate the question of the exploitation of natural resources since other social and economic problems arise. In the historical evolution of this problem, a concept that was consolidated and emerged fundamentally in the search for the preservation of human life on the planet was that of sustainable development, which according to the publication of the 59 Brundtland Report or Our Common Future by the World Commission on the Environment Environment in 1987 is defined as development that meets the needs of present generations without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development [WCED], 1987).

In this perspective, discussions involving sustainable development have become recurrent in the literature to introduce environmental transformations
where they are inserted to seek a balance concerning the environmental, social, and economic dimensions. According to Elkington (1994), several approaches have been produced to incorporate the social, economic, and environmental axes, including the Triple Bottom Line sustainability assessment.

However, it is observed that before the Industrial Revolution, there were already signs of environmental degradation. Still, the rise occurs continuously after this movement, increasing the consequences of an anthropic order to obtain the necessary resources for producing goods and services. Services for the most diverse purposes, appearing substances and materials that did not exist in nature, being discarded irregularly (Silva & Crispim, 2011). In addition to environmental problems, other global challenges are emerging, such as hunger, poverty, and social and economic inequalities that are at the center of the discussions of the global plan of the 2030 Agenda and demand more concrete policy formulations and measures for a direction towards sustainable development, both globally how much locally.

In the 2000s, one of the actions developed aiming at the sustainable development of the planet was the adoption by the UN and 191 other nations of the Millennium Development Goals (MDGs) to be implemented by 2015. After the 15-year period governed by the MDGs, there was a need for a more comprehensive agenda. New objectives and goals began to emerge that would continue the purpose initially outlined by the MDGs. And in 2015, the 2030 Agenda was adopted by the UN and 193 member countries, which presents 17 Sustainable Development Goals (SDGs) and 169 goals, functioning as an action plan for the next 15 years (United Nations [UN] 2015).

In the context of the evolution of sustainable development, it is noted how important it is to reach the objectives and adapt them from the global scenario to the circumstances and national and later local priority, thus observing the need to work in an integrated and joint way on the goals and objectives for a successful implementation, to guide public policies and encourage social actors to foster sustainable development. From this perspective of integration, there is a need to consider governance as a fundamental aspect of implementation in all areas.
Wilde et al. (2009, p. 5, as cited in Czepil, 2020) define governance as the result of interactions, relationships, and networks between different sectors (government, public, private, and civil society). It includes decisions, negotiations, and power relations between parties to define who gets what, when, and how. One of the most widespread and used concepts of governance is that of Kaufmann, Kraay, and Mastruzzi (2010), which defines governance as the traditions and institutions through which authority in a country is exercised. This encompasses how governments are selected, monitored, and replaced; the ability to formulate and implement sound policies; and the respect of citizens and the state for the institutions that manage their social and economic interactions.

Given this, the expression governance became involved in a variety of interpretations, ranging from a generic and descriptive meaning, an approach or theory, to an interdisciplinary research agenda; that is, the definitions of governance became associated with the type of organization under review; to fields or activities; as well as to a particular model (Peters, 2012). In this way, it is important to highlight the role that governance plays at the municipal level, as it applies to all issues that concern the city and a sustainable future and that must be incorporated with all sectors and indicators of the city, that is, it does not only cover the government and its actions, but the interactions, responsibilities, and interferences with the environment and society that exist in all organizations related to the community, region, and area (Santos & Ribeiro, 2015).

Based on these definitions, it is noted that governance involves not only government bodies formalized for decision-making but also other entities that could perform the role of co-governance (Czpetil, 2020). According to Laval and Olsson (2019), governance can be understood as the totality of forms used by individuals and public and private institutions to coordinate common issues.

Starting from the conceptions of governance, it is possible to connect its relevance with the scope of the SDGs. According to Sachs (2017), taking into account that the 2030 Agenda intends to achieve success through a governance arrangement, it appears that the objectives explain a new type of global governance balanced in the three major categories of economic development, environmental sustainability, and social inclusion and the three outcomes will
depend on a fourth condition which is good governance at all levels, local, national, regional and global.

Bearing that the 2030 Agenda aims to achieve significant results through governance arrangements, there is a need for an effective governance structure at the local level committed to achieving the objectives, as it is noted that governance is an essential factor for the objectives can be effectively met. The 2030 Agenda mentions good governance, the rule of law, and an adequate, inclusive, and sustainable environment as crucial for sustainable development. In this quest to establish the link between governance and the implementation of the SDGs, it is important to emphasize not only the role of the government but, above all, the importance of public-private partnerships and citizen participation to engage and mobilize the entire society in general. in pursuit of successful achievement in hopes of spreading peace, prosperity, and human rights worldwide.

Based on the assumption that the year 2023 represents half the journey until the deadline for achieving the objectives of the 2030 Agenda and given the problems and challenges of global impacts and taking into account the role that governance plays at the municipal level and, consequently, in the sustainable development of cities, the research aims to explore the following problem: How to map initiatives developed by the international literature on sustainable governance and SDGs?

The main objective of the research was to carry out a bibliographical review of the literature on sustainable governance and SDGs, inventorying, and mapping initiatives developed by the international literature. The relevance of promoting research on governance and the SDGs helps to present how the themes are being discussed at an international level, mapping concepts and methodologies disseminated in the literature that may contribute to the evolution of the research, which justified this study. This analysis contributes to, for example, improving the development of actions at the municipal level, helping managers in decision-making, and promoting public policies that must be implemented.
In addition to this introduction, this work is structured in three more sections: in the second section, a literature review is carried out regarding Governance and its main theoretical contributions and considerations about the Sustainable Development Goals (SDGs) addressed in this work, in the third section it is the research methodology is presented, then the main results obtained are exposed, and finally, there are the final considerations.

2 LITERATURE REVIEW

The following concepts will be addressed in the following subsections: Governance and Sustainable Development Goals (SDGs).

2.1 GOVERNANCE

The word governance emerged, gaining several variations for public or private institutions. The first manifestations of the expression are located in corporate governance that gained visibility in political debates among academics and practitioners from the 1980s onwards; in the early 1990s, it was a moment marked by financial crises, bankruptcies, scandals involving financial statements, the transformation of business management models and the complexity of the problems that spread the search for good governance practices and the need for the term in debates, to account for this process of increasing complexity (Caualcante & Pires, 2018).

Although the concept of governance is widely disseminated and discussed among policymakers and academics, there is still no agreement on a single definition of governance or institutional quality. Several authors and organizations have produced a wide range of definitions. Cavalcante and Pires (2018) address governance that promotes new forms of government coordination and articulation, emphasizing strengthening state capacities. According to the Commission on Global Governance (1996), a broader governance concept encompasses non-governmental organizations (NGOs), civil movements, multinational corporations, and global capital markets. Thus, it can be defined as how societies and organizations, public and private, manage their common themes.
Based on the definition by Oliveira and Pisa (2015), governance focuses on the state's ability to implement the policies necessary to achieve common goals. It assumes the improvement of the means of dialogue with society while promoting actions that ensure greater citizen action and accountability of public agents. Kaufmann, Kraay, and Mastruzzi (2010) define it as the traditions and institutions through which authority in a country is exercised. This encompasses the process by which governments are selected, monitored, and replaced; the ability to formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern interactions.

From this panorama, it is observed that the advancement of governance concepts brings democracy, citizen participation as an action mechanism capable of producing dialogue between countries and society in the search for effective solutions and public policies, that is, in addition to State participation, through new actors, public and private institutions, non-state agents, to manage common issues and achieve sustainable development.

Starting from the importance of governance for sustainable development, it is noted that a governance structure for the implementation of the SDGs is essential for countries with common objectives of transparency, advances, and commitment to reach solutions, public policies, and strategic actions in the search for a prosperous, inclusive and sustainable country aiming to transform the world for the better in 2030. In this context, it appears that governance operates on a broader level that is important for achieving the objectives, as it involves a set of actors from different sectors acting at different levels to obtain interactions, dialogues, negotiations, and different power relations to manage their common affairs and solve the collective problems and challenges of a global nature generated by contemporaneity.

2.2 SUSTAINABLE DEVELOPMENT GOALS (SDGS)

In September 2015, the General Assembly of the United Nations (UN) met in New York and committed to the 17 Sustainable Development Goals (SDGs) and 169 goals to be achieved by 2030 to encourage public policies and inspire social actors
to promote sustainable development around the world were created and expanded within the scope of the Millennium Development Goals (MDGs) (UN, 2015).

The 2030 Agenda, by electing the 17 Sustainable Development Goals (SDGs) and 169 proposed targets, aims at 'transforming our world' towards a more just and peaceful future that must be initiated, acting under the guidance of five principles, formally known as the '5 Ps': people, planet, prosperity, peace, and partnerships aiming to lead the world towards sustainable development (UN, 2015). It involves integrated and indivisible actions, which incorporate, in a balanced way, the three dimensions of sustainable development: economic, social, and environmental.

It is observed that the objectives present a set of global problems and challenges involving social, environmental, economic, and technological issues, from poverty reduction, good health, industrial innovation, and quality education, to the sustainable use of energy and drinking water that requires public decisions and conscious and responsible actions from government officials for the common good of all those involved, aiming at the successful implementation and achievement of objectives in pursuit of sustainable development.

Given this, it is relevant to highlight that the 2030 Agenda requires a revitalized global partnership that works in a context of global solidarity, in particular assistance with the poorest and with people in vulnerable situations, and also highlights the private sector from small corporations and cooperatives to multinationals, civil society, and other actors to manage matters for the common good of all and the construction of a sustainable country (United Nations Organization [UN], 2015), highlighting the need to establish a governance structure, starting specifically from translating the implementation of objectives at the global and national levels and, subsequently, adapting to the local context in search of a prosperous and sustainable development for cities that face great difficulties of social, environmental and economic order.

Because of the relevance of governance for human development and the SDGs, it is necessary to carry out a bibliographical review of the literature on sustainable governance and the SDGs, inventorying and mapping initiatives developed by the international literature to map the research related to the
themes and identify how the effectiveness mechanisms and challenges faced at the global level that reflect consequences of adaptation in the local scenario.

3 METHODOLOGY
3.1 CHOICE OF KEYWORDS AND FILTERS (DATA COLLECTION)

As the study sought a bibliometric survey on specific topics, the research technique was bibliographical research through consultation in international databases, such as Web of Science and Scopus, which were chosen to contain a large number of publications concerning the topic addressed to generate a greater depth and knowledge of the subjects.

Initially, the choice of keywords for insertion and search in the chosen databases was carried out. The objective was to carry out a bibliographical review of the literature on sustainable governance and SDGs, inventoring, and mapping initiatives developed by the international literature; the respective keywords were selected with the following Boolean operators (OR and AND).

In the Scopus database, the keywords TITLE-ABS-KEY (“municipal governance” OR “public governance” OR "local governance" OR "global governance" OR "environmental governance”) AND TITLE-ABS (“sustainable development goals ”) were mentioned. This initial search carried out in December 2022 resulted in 235 publications that were filtered by the following subareas: Social Sciences; Environmental Science; Business, Management, and Accounting; Arts and Humanities; Engineering; Earth and Planetary Sciences; Decision Sciences; Agricultural and Biological Sciences; Multidisciplinary. which resulted in 124 documents. And finally, the languages English, Portuguese, and Spanish were selected, resulting in 123 publications.

In the Web of Science base, the same keywords were selected (TS=("municipal governance" OR "public governance" OR "local governance" OR "global governance" OR "environmental governance") AND TS="sustainable development goal"). This initial search in December 2022 resulted in 202 publications that included review articles, open access, and enriched cited references and the following categories Environmental Sciences; Environmental Studies; Green Sustainable Science Technology; Public Administration;
Development Studies; Education Educational Research; Geography; Environmental Engineering; Political Science; Area Studies; Regional Urban Planning; Management; Water Resources; Biodiversity Conservation; Multidisciplinary Sciences; Interdisciplinary Social Sciences; Urban Studies; Multidisciplinary Agriculture; Communication; Demography; Education Scientific Disciplines; Ethnic Studies; Multidisciplinary Humanities; Operations Research Management Science resulting in 101 publications.

Thus, as previously described in both databases, the necessary filters were used to select better publications to meet the research objectives, as shown in Figure 1.

Soon after this refinement, the Scopus database resulted in 123 and the Web of Science 101 publications, totaling 224 documents, data exported in Bibtext to use the Bibliometrix tool.

3.2 OPERATIONALIZATION OF DATA

Bibliometry emerged around the 1960s; Pritchard proposed it, it is a recurrent and rigorous method to examine and investigate large volumes of scientific data, as it allows exploring the existing nuances in a given specific field at the same time that it discovers the areas emerging on this theme (Donthu, et al., 2021).
The bibliometric research software selected to direct the research was Biblioshiny: the Shiy app for bibliometrix. This software was chosen for not only to provide the creation of co-citation networks, coupling, collaboration, and analysis of co-words, co-authorship, and more relevant authors but also to allow a specific analysis of the database.

The Web of Science database had 101 documents, and Scopus with 123, totaling a combination of 224 documents. Soon after merging the databases, 44 duplicate documents were removed. Next, the option of articles containing 128 papers was chosen. After analyzing the 128 articles, 11 papers were excluded because they were not aligned with the theme, resulting in 117 publications, as highlighted in Figure 2.

**Figure 2. Database definition sequence in the Software**

- Definition of keywords and initial search in Scopus and Web of Science databases: 224 documents.
- Removing duplicate documents: 180 documents.
- Filter by document type (article only): 128 article.
- Removal of articles that are not in line with the theme: 117 article.

Note. Prepared by the authors (2023).

Thus, already in the Bibliometrix application biblioshiny environment, some parameters were selected for analysis. First, the following were selected in the Authors tab: the 10 most relevant authors from the databases production of the 10 authors over time; already in the Documents function: the 10 keywords of the most frequent authors were chosen.

As for the Conceptual Structure-function, the Thematic Evolution was selected using two-time slices, namely: cut-off year 1 from 2004 to 2015 before the emergence of the SDGs and cut-off year 2 from 2016 to 2022 after the emergence of the SDGs to investigate the evolution of the topic over time. After
loading the data, some parameters related to the number of labels and label size were chosen and adjusted to 1 and 0.1 with the option of joining synonym words. Keywords Plus was selected in the Factorial Analysis function of the Word map, and the field of multiple correspondence analysis (MCA) was chosen.

4 RESULTS AND DISCUSSION

4.1 MOST RELEVANT PRODUCTION

The universe of works discusses Governance and Sustainable Development Goals (SDGs) to contribute to municipalities' sustainable development and implement goals at the local level. The database where the study was conducted proved relevant, with 117 articles being found after refining the publications. Starting with data analysis in the Bibliometrix, it was possible to identify the 10 most relevant authors and their productions over time, as shown in Figure 3.

Figure 3. Authors' production over time

Note. Adapted from the Bibliometrix app biblioshiny (Aria & Cuccurullo, 2017).

The line represents the acting time of each author. Ribeiro S. had the longest timeline, from 2015 to 2022, with studies called `The role of transport indicators for improving local governance in the city of Rio de Janeiro: a contribution to the debate on a sustainable future´ published in 2015 (Santos & Ribeiro, 2015); and `Governance of the planet a new concept´ (Ribeiro & Quaresma, 2022), published in 2022.
The intensity of the color is proportional to the total citations per year. The author who stood out was Stafford Smith M. with the study entitled ‘Integration is the key to implementing the Sustainable Development Goals (2017), which had 39 citations, considered the highest number of annual citations (Stafford-Smith et al., 2017).

The bubble size is proportional to the number of documents published per year. The authors who stood out were Biermann F. and Kim R., who co-authored the studies ‘Scientific Evidence on the political impact of the sustainable development goals’ and ‘The Sustainable Development Goals Fail to promote policy integration: a text analysis of 159 international organizations’, published in 2022.

For a better observation of the publications of these authors who stood out over these years, Table 1 shows the authors, studies, and co-authorships concerning the 10 main authors of the theme identified in the studied database.

Table 1. The 10 most relevant authors

<table>
<thead>
<tr>
<th>Author and Year</th>
<th>Title</th>
<th>Co-authorship</th>
<th>Connectivity with SDGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kim, R. E. (2022)</td>
<td>Scientific evidence on the political impact of the sustainable development goals</td>
<td>Biermann F (2022) Bernstein S (2022)</td>
<td>SDGs 17</td>
</tr>
<tr>
<td>Kim, R. E. (2022)</td>
<td>Sustainable development goals fail to advance policy integration a largen text analysis of 159 international organizations</td>
<td>Biermann F (2022)</td>
<td>SDGs 17</td>
</tr>
<tr>
<td>Kim, R. E. (2020)</td>
<td>Cherry-picking the sustainable development goals goal prioritization by national governments and implications for global governance (2020)</td>
<td></td>
<td>SDGs 1 E 8</td>
</tr>
<tr>
<td>Bernstein S. (2020)</td>
<td>The absence of great power responsibility in global environmental politics</td>
<td></td>
<td>SDGs 12</td>
</tr>
<tr>
<td>Dong L. (2020)</td>
<td>Chinas renewed perception of global environmental governance</td>
<td></td>
<td>SDGs 7, 9, 11, 13, 14, 15 e 17</td>
</tr>
<tr>
<td>Li Y. (2022)</td>
<td>Aligning engineering education for sustainable development through governance the case of the international center for engineering education in china</td>
<td></td>
<td>All 17 SDGs</td>
</tr>
<tr>
<td>Li Y. (2019)</td>
<td>The 2030 agenda for sustainable development and chinas belt and road initiative in latin america and the caribbean</td>
<td></td>
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<tr>
<td>Ribeiro S. (2022)</td>
<td>Planet governance a new concept</td>
<td></td>
<td>SDGs 12, 13, 14 e 15</td>
</tr>
<tr>
<td>Sianes A. (2022)</td>
<td>Impact of the Sustainable Development Goals on the academic research agenda a scientometric analysis</td>
<td></td>
<td>All 17 SDGs</td>
</tr>
<tr>
<td>Sianes A. (2020)</td>
<td>Rethinking the governance of the 2030 agenda for sustainable development in the covid19 era</td>
<td></td>
<td>SDGs 3 e 17</td>
</tr>
<tr>
<td>Stafford Smith M (2021)</td>
<td>Governing drylands as global environmental commons</td>
<td></td>
<td>SDGs 15</td>
</tr>
<tr>
<td>Stafford Smith M (2017)</td>
<td>Integration the key to implementing the sustainable development goals</td>
<td></td>
<td>All 17 SDGs</td>
</tr>
<tr>
<td>Yang X. (2020)</td>
<td>Assessment and optimization of territorial space vulnerability: A case study of Xingyang, Henan, China</td>
<td></td>
<td>SDGs 6, 11 e 12</td>
</tr>
<tr>
<td>Acuto M. (2020)</td>
<td>The city as actor in UN frameworks: formalizing ‘urban agency’ in the international system?</td>
<td></td>
<td>SDGs 11</td>
</tr>
</tbody>
</table>

Note. Prepared by the authors (2023).

Kim, R. E. (2022) is an author considered relevant; he had 3 documents published within the database; he is co-authored by Biermann F (2022) and Bernstein S (2022), producing works entitled ‘Scientific evidence on the political impact of the objectives of sustainable development’ (2022) addresses an analysis of the SDGs to examine their political impact concerning governance since their application in 2015 (Biermann, et al., 2022). The second study, in addition to Kim, R. E. is co-authored by Biermann F (2022), entitled ‘The Sustainable Development Goals Fail to promote policy integration: a text analysis of 159 international organizations’ (2022), seeks to investigate whether the goals made progress in policy integration (Bogers et al., 2022).

And the third study by Kim, R. E., entitled ‘Single-picking the Prioritization of sustainable development goals by national governments and Implications for global governance’ (2020), deals with a national review analysis of 19 countries to identify which SDGs are most prioritized. (Forestier & Kim, 2020). Bernstein S. is another author considered relevant within the database; he developed a study entitled ‘The absence of responsibility and power in global environmental..."
policy´ (2020), which addresses the lack of environmental commitment in global politics, arguing that despite the increased relevance of the themes, norms or institutions that require or recognize responsibilities of great power are absent (Bernsteins, 2020).

Dong L. is another author who stands out in the database; he has developed studies entitled ´China's renewed perception of global environmental governance´ (2020), which addresses the development of a national strategy to reduce the global climate crisis and build environmental institutions (Dong, 2020). And the second study, in addition to Dong L, co-authored by Yang X. (2018), entitled ´The Belt and Road Initiative (BRI) and the 2030 Agenda for sustainable development seeking links to global environmental governance´ (2018), depicts the 2030 Agenda and the BRI to achieve the goals of sustainable development (Dong et al., 2018).

Li Y. is another author considered relevant in the database and produced studies entitled ´Aligning engineering education to sustainable development through governance: the case of the International Center for Engineering Education in China´ (2022), which reports the importance of governance that aligns engineering education with sustainable development (Chen et al., 2022). And the other study, entitled ´The 2030 Agenda for Sustainable Development and China's Belt and Road Initiative (BRI) in Latin America and the Caribbean´ (2019), discusses the approach of the 2030 Agenda, China's relations with countries from Latin America and the Caribbean and the BRI to achieve success with the goals of sustainable development (Li & Zhu, 2019).

Ribeiro S. is another important author who has developed studies entitled ´Governance of the Planet a new concept´ (2022), explaining the importance of the concept of governance of the planet in the search for a healthy planet. (Ribeiro & Quaresma, 2022). And the other is called ´The Role of transport indicators for improving local governance in the City of Rio de Janeiro: a contribution to the Debate on a sustainable future´ (2015), which deals with the relevance of transport sector indicators for the development of local governance in the city of Rio de Janeiro, justifying that governance is essential to achieve sustainable development goals (Santos & Ribeiro, 2015).
Sianes A. is another important author who has developed studies entitled ‘Impact of the Sustainable Development Goals on the academic research agenda a scientometric analysis (2022), which explores the impacts of sustainable development to examine how the themes are being developed (Sianes A. et al., 2022). And another study by Sianes A. `Rethinking the Governance of the 2030 Agenda for Sustainable Development in the COVID-19 era´ (2020), relates the governance of the 2030 agenda in the COVID-19 era to identify the main traits that should be changed (Santos-Carrillo et al., 2020).

Stafford Smith M, who is considered relevant to the database, has produced studies entitled `Governing drylands as global environmental assets´ (2021), which reports the calls for land governance as an aspect of global environmental assets (Stafford-Smith & Metternicht, 2021). And the other study by Stafford Smith M `Integration is the key to the implementation of the Sustainable Development Goals´ (2017), deals with the importance of integration to implement and achieve the goals, investigating more specifically goal 17 (Stafford-Smith et al., 2017).

Yang X. is another relevant author of the database; he developed a study called `Evaluation and optimization of the vulnerability of the territorial space: A case study of Xingyang, Henan, China´ (2020), which deals with an analysis of the evaluation and optimization of the vulnerability of the territorial space (Yang et., 2020). And finally, the author Acuto M. produced a study entitled `The City as an Actor in the Framework of the UN: formalizing the urban agency in the international system´ (2020), which discusses the recognition of cities as important participants in some global agendas such as the ODS (Acuto et al., 2020).

In addition to the most relevant publications, it was possible to identify the keywords that make up a list of terms that the authors believe best portray the content of their article (Aria & Cuccurullo, 2017), that is, the ones that occur most among the articles, according to shown in Figure 4.
Special emphasis should be given to some keywords: the first is sustainable development goals; it is the most relevant word within the database due to the delimitation for analysis of research on sustainable development goals (SDGs). The study by Sianes et al. (2022) shows a significant increase in articles published in the last two years of 2019 and 2020. This trend confirms how the SDGs continue to arouse great interest in the scientific community and that the debate on the interpretation of sustainable development is still open and very present in the gym. Followed by governance that connects with the objectives, the United Nations and other international organizations have encouraged countries to build more effective and well-executed governance systems as essential elements for sustainable development.

Global governance is another word considered relevant within the database; according to the study Dong et al. (2018), current global governance exposes a new mode of networked governance that maintains association with the sustainable development goals (SDGs) by setting goals to improve actions between nations being made up of different types of actors, international institutions, as well as the public and private sectors to govern their common concerns and affairs. In sequence, sustainable development is associated with the objectives since they are integrated and indivisible, incorporating the three dimensions of sustainable development: environmental, economic, and social in a balanced way (UN, 2015). And as the sustainability challenges were
accentuated, the 21st century began with a commitment to achieve the MDGs that the SDGs later replaced initially.

4.2 THEMATIC EVOLUTION

Thematic evolution is part of the conceptual structure that portrays what science discusses, the main themes, and trends. The thematic evolution of the analyzed database was divided into two-time slices. Time slice 1 corresponds to the period from 2004 to 2015 before the emergence of the Sustainable Development Goals, and time slice 2 corresponds to the period from 2016 to 2022 after the emergence of the Sustainable Development Goals to investigate the evolution of the topic over time.

Below is Figure 5 of the thematic evolution with the authors' keywords corresponding to the period from 2004 to 2015 time slice 1.

![Thematic evolution time slice 1 from 2004 to 2015](image)

Note. Adapted from the Bibliometrix app biblioshiny (Aria & Cuccurullo, 2017).

In this figure, the bubble represents an emerging topic moving towards the main topic area. In this way, it is possible to observe the following themes: governance and sustainable development that are at the center of the bubble, representing the beginning of discussions on these subjects where the frequencies of occurrences are low due to the emergence of the Sustainable Development
Goals in 2015, thus originating, greater involvement with sustainable development and, consequently, for the environmental, social and economic areas.

After the launch of the SDGs, it is possible to notice the development of some terms that, throughout their evolution, become essential for their achievement and implementation in an adequate way concerning the fulfillment of the objectives. The composition of contents such as governance, sustainable development goals, and the 2030 Agenda can be seen in the basic themes' quadrant. In this context, it is clear that these are important themes for a domain and relate to general themes. Therefore, the focus of these clusters is related to environmental and governance issues, in which expressions such as global governance, investment, climate problems, pollution, conservation, environmental governance, standards, and global environmental governance are present, which in the scenario of progress has implications for the achievement of these objectives.
In the motor themes quadrant, words such as integration, citizen participation, policy integration, environmental, and 2030 Agenda are present, which are highly developed. Important themes for the research field, being composed of expressions such as public policies, collaboration, coordination, inclusion, local, local governance, and social responsibility, which, in the context of the theme’s evolution, will become relevant for the implementation of the objectives as it deals with factors that are involved with sustainable development and governance as it involves interactions, relationships between the parties involved and the sectors, to manage common issues.

The quadrant of niche themes is formed by terms such as ecosystem services and economics, which are highly developed themes. Still isolated, being characterized as having limited importance for the field, words such as human rights, water, empowerment, and gender issues address social and economic factors that are linked to sustainable development and, in the scenario of evolution, it is relevant to address these issues, as it is part of people’s daily lives and causes an impact on quality of life.

And finally, the quadrant of emerging or declining themes is formed by terms such as urban development, legitimacy, international organizations, polycentric governance, approach, international, millennium development goals, and resources are considered of low centrality and low density, that is, underdeveloped in the area. In this context, it is observed that no item is being worked on with little relevance to the context of sustainable development and governance since, with the emergence of the SDGs in 2015 by the UN, there was the appearance of other terms different from those worked on in the objectives of millennium development.

4.3 FACTOR ANALYSIS: CORRESPONDENCE ANALYSIS

Factor analysis is useful in checking subareas. Several dimensionality reduction techniques can be used. And to investigate the database, the multiple correspondence analysis (MCA) technique was selected. Thus, a word map was defined through the plus keyword filter, which is a method that investigates the structure of knowledge in scientific areas (Aria & Cuccurullo, 2017).
Below is the multiple correspondence analysis Figure 7 through the grouping of plus keywords.

Note. Adapted from the Bibliometrix app biblioshiny (Aria & Cuccurullo, 2017).

The light gray cluster, named cluster 1, is formed by the keywords sustainable development goals, environmental governance, indicators, public-private governance, climate change, and integration, which are close to each other because large parts of the articles deal with them together, due to the delimitation of the research for SDGs and governance and for being relevant to the theme in the general context of achieving the SDGs. This cluster addresses sustainable development issues by focusing on environmental factors such as biodiversity conservation, air quality, climate change, environmental governance, and involvement in social and economic areas.

The dark gray cluster, titled Cluster 2, is represented by the words sustainable development, capacity, human, environmental policy, environmental management, and governance approach are a little distant from Cluster 1 because a small fraction of articles use these words together. In this way, this
cluster also directs words to environmental issues such as sustainable development, environmental policy, and environmental management and involves aspects that deal with approaches to governance systems.

4.4 DISCUSSION OF THE RESULTS

Observing that the SDGs consider the MDG legacy and seek to progress on unreached goals, integrates the three dimensions of sustainable development: economic, social, and environmental, in an integrated way, seeking to benefit the most vulnerable and achieve success in the goals. However, implementation problems are noted, considering the different national realities, capacities, levels of development, policies, and national priorities of each country. (UN, 2015).

When examining figures 6 and 7 of the thematic evolution of governance and SDGs, it is observed that concerns regarding environmental, economic, and social issues have been addressed in recent decades. However, global challenges such as hunger, poverty, social and economic inequalities, climate change, and environmental degradation are still at the center of discussions on the 2030 Agenda in search of sustainable development.

According to Bulkeley et al. (2013), although the concept of sustainable development has achieved relevance in policy-oriented discourses and practice, it is noted that both developed and developing countries fail to implement integrated policies and practices related to sustainable development. From this perspective, the success of implementing this agenda requires a strategy at the micro level due to the essential institutional repositioning and, at the macro level, by improving the role of the States, which requires the establishment of better governance practices and innovation in public management. to implement the necessary actions to achieve the SDGs (Gomes et al., 2016).

Despite the objectives being an action plan that aims to guide the planet towards a more sustainable future, more incisive measures need to be put into practice, such as, for example, the commitment of governments through the creation of institutional structures responsible for the implementation of the SDGs, bodies that supervise the actions developed, adoption of policies and strategies in their development and multi-annual plans, clearly establishing
methods of action for each goal, to impact political domains at the municipal and local levels in search of a greater understanding of the field of research to strengthen public policies and the development of governance structures to achieve the objectives.

In general, the analysis of the table of the 10 most relevant authors, the figures of the authors' production over time, the keywords of the most relevant authors, the thematic Evolution, and the multiple correspondence analysis present a connection with themes related to the governance and sustainable development encompassing implications for environmental, social and economic sustainability and consequently for the implementation of the SDGs, in addition to public, municipal, global, environmental and local governance to investigate governance in the sense of achieving the SDGs.

Finally, examining these figures was necessary to identify the works with the greatest contribution and in which areas governance is being measured, aiming to provide the development of new investigation methodologies directed towards governance in the perspective of the fulfillment of the SDGs. Given this, it is observed that the relationship between governance and the SDGs is essential. It is clear through this review that governance operates on a broader level that is fundamental for the implementation of the SDGs as it involves a set of diverse actors acting in different segments in search of partnerships, citizen participation, government action, civil Society, and engagement of different stakeholders, to develop and manage common issues that monitor SDG strategies and actions at the local level.

5 CONCLUSIONS

The 2030 Agenda, which encompasses the SDGs, works as an action plan to balance social, economic, and environmental sustainability development. However, for this action plan to be implemented, the efforts of academic institutions, companies, and people who need to work together in search of a transformation to put the established objectives into practice is essential. At the municipal level, a key issue is the role that governance plays in municipal management as a whole and in the implementation of the SDGs.
Given the problem of mapping initiatives developed by the international literature on sustainable governance and SDGs, it appears that the bibliographical survey in the Scopus and Web of Science databases was fundamental to investigate how these themes are integrated into current studies and how they are being discussed at an international level. International, with the aim of exploring the concepts and methodologies disseminated in the literature that can contribute to the evolution of research in order to promote and develop actions that aim to achieve the objectives. It is also observed that the theme has evolved from the insertion of the MDGs to the SDGs in terms of governance and the expansion of the thematic axes of sustainable development goals, but it still needs to strengthen multisectoral partnerships, government collaboration, mobilization of resources and governance structures in search of progress towards the SDGs.

Considering that the SDGs cover a variety of themes essential to the sustainability of the Planet, whose implementation involves different governmental and institutional levels, as well as areas such as People, Planet, Prosperity, Peace and Partnerships, governance presents itself as an essential element for achieving consistent results for the consolidation of a sustainable development model. In this context, the importance of governance for implementing the SDGs for both academia and society is evident as it involves the participation of different stakeholders working in different segments with the aim of developing actions and policies towards maintaining a development process on a sustainable basis.

Despite being a task that needs to involve the entire society of the planet, a good governance structure at the local level consolidated in guiding sustainable development at the municipal level is essential, intending to emphasize the importance of public-private partnerships, engagement, and participation of other stakeholders in the process of achieving objectives in all contexts.

Therefore, as the work aimed to carry out a bibliographical review of the literature on sustainable governance and the SDGs, inventorying and mapping initiatives developed by the international literature in the Scopus and Web of Science databases, the importance of governance for the implementation of the
SDGs is evident because it involves the participation of the different stakeholders acting in different segments to develop practical actions related to the achievement of the SDGs. It is also observed that the theme has evolved since the inclusion of the MDGs in the SDGs in terms of governance and the expansion of the thematic axes of sustainable development goals. However, it still needs to strengthen multisectoral partnerships, government collaboration, mobilization of resources, and governance structures in pursuit of progress toward the SDGs.

Therefore, it appears through this review that the theoretical implication of the research investigation is in the discussion of the conceptual and empirical strengthening of these themes, focusing on the need to work on governance within the scope of the implementation of the SDGs. Its practical implication is the development of future methodologies aimed at monitoring and analyzing governance to achieve the SDGs that make it possible to support the consolidation of policies, strategies, and actions for sustainable development, assisting managers in decision-making and promoting public policies that should be implemented.

The research provided, through mapping, to analyze how the themes are being addressed in order to identify the gaps and limitations that can be filled through new research, such as the low number of studies relating the two themes, the absence of methodologies that guide the implementation, monitoring and evaluation of the results of the SDGs, anchored in governance concepts, as well as governance indicators that allow monitoring the objectives and their respective results, among others, thus opening up opportunities for future research in the area to build governance monitoring models towards implementation integrated SDGs with the aim of contribute to sustainable development.
REFERENCES


