Sustainability and the historical trajectory of environmental movements

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ABSTRACT

The present research aimed to analyze the evolution of sustainable awareness over time, focusing on the main historical milestones, initiatives and practices adopted, as well as the results achieved so far. To carry out this study, the methodology of bibliographic research was used through a survey of data in articles, theses, dissertations and books. As a result, it was found that sustainable awareness has been an increasingly relevant topic over the years, driving initiatives and practices aimed at preserving

the environment and promoting sustainable development. In addition, it was possible to observe that the theme has been addressed by various sectors of society, such as business, government, and education, demonstrating the importance of sustainable awareness for the construction of a fairer and more balanced future for the next generations.

Keywords: Sustainability, Environment, Awareness.

1 INTRODUCTION

Since the Industrial Revolution, humanity has had a significant impact on the environment, which has been worsening over time. The increasing exploitation of natural resources, the mass production of goods and the emission of polluting gases have put the health of the planet and the survival of several species at risk. The concern with sustainability is increasingly pressing, as humanity is approaching the limits of what the planet can support (GUEDES, 2021).

Over the years, sustainable awareness has evolved, involving various sectors of society, from the private sector to the governmental sphere and civil society. In this scenario, sustainable awareness has gained increasing importance both in the academic and business spheres, as it is a way capable of contributing to the reduction of the impact of human activity on the environment and promoting a fairer and more responsible development (ANTUNES, 2021).

According to Ribeiro and Cherobim (2017), sustainable awareness has been shown to be fundamental for the promotion of a more sustainable and balanced development in different areas of society. However, there are still many gaps in knowledge about how awareness has been promoted and what have been the results achieved to date. In addition, the practices adopted in the search for more sustainable development are often not effective or do not achieve the desired impact.

In this context, this research aimed to analyze the evolution of sustainable awareness over time, in order to ascertain the main historical milestones, initiatives and practices adopted, as well as the results achieved so far. To this end, the bibliographic research method was adopted, as the data were collected from different sources of information, including official documents, scientific articles, theses, dissertations, books and reports from governmental and non-governmental organizations.

Based on the results of the research, it is expected to contribute to the advancement of knowledge on the evolution of sustainable awareness and to the promotion of sustainable practices, whether in the governmental, business or social sphere. Thus, research can have important impacts on decision-making in different sectors of society, providing relevant information and data for the formulation of public policies, business strategies, and civil society actions.

2 DEVELOPMENT

2.1 THE EVOLUTION OF SUSTAINABLE AWARENESS THROUGH KEY HISTORICAL MILESTONES

In this topic, the development of the evolution of sustainable awareness through the main historical milestones over time is presented, thus contemplating the initial milestones from the Industrial Revolution to the contemporary scenario.

2.1.1 Initial milestone of sustainable awareness

The environmental process after the Industrial Revolution began in the nineteenth century, when people began to notice the negative impacts that industrialization was having on the environment and public health. With increasing urbanization and mass production, there has been increasing air, water, and soil pollution, as well as degradation of natural ecosystems (POTT; ESTRELA, 2017).

The concern with sustainable awareness emerged at the end of the twentieth century, in a context of growing environmental awareness and recognition of the need to protect the environment and the planet's natural resources. This movement arose in response to several environmental problems that began to become more visible, such as air and water pollution, the destruction of ecosystems, and climate change (MAGRINI, 2001).

From this perspective, the environmental movement emerged, according to Alexandre (2000), as a way to minimize the intensification of anthropic actions on nature. The aim of this movement was to promote awareness and protection of the environment, so as to seek sustainable development capable of meeting the needs of the present without compromising future generations. This aimed to bring about changes in public policies, in society's consumption habits and in the behavior of companies and industries.

In the early twentieth century, the first environmental laws emerged, such as the Water Protection Act of 1901 in Germany and the Soil Conservation Act of 1935 in the United States. However, it was only in the 1960s that the modern environmental movement took hold, driven by events such as the publication of Rachel Carson's book "Silent Spring" in 1962, which warned of the dangers of pesticides and other chemicals to wildlife and human health (BONZI, 2013).

Rachel Carson's book was important in raising awareness of the dangers of chemical pollution and led to the creation of stricter laws and regulations for the use of pesticides and other chemicals. Carson's work had a major impact on public opinion and led to greater pressure for the creation of stricter laws and regulations for the use of these chemicals. As a result, several government agencies created stricter regulations for the use of pesticides and other chemicals, and the book was instrumental in the emergence of the modern environmental movement (SANTOS, 2022).

2.1.2 Earth Day 1970

In the following years, several important events took place that helped promote environmental awareness, such as Earth Day in 1970. On April 22, 1970, millions of people across the United States participated in demonstrations, protests, and educational events to draw attention to the growing pollution of air, water, and soil. The idea for Earth Day came from U.S. Senator Gaylord Nelson, who was concerned about increasing pollution and the government's lack of action to address these issues (LEFF, 2001).

Earth Day 1970 was an astonishing success, with an estimated 20 million people participating across the country. The event inspired the creation of the United States Environmental Protection Agency (EPA) and the enactment of several important environmental protection laws, including the National Air Pollution Act, the Clean Water Act, and the Endangered Species Act (MORAES, 2018).

In addition to the United States, Earth Day 1970 also had a significant impact around the world. Demonstrations and educational events took place in many countries, including Canada, Australia, the United Kingdom, Japan, and many others. Through these events, awareness of the need to protect the environment and reduce pollution has been amplified around the world (GROHS; MATTHIES, 2021).

2.1.3 United States Environmental Protection Agency of 1970

Also in 1970, the United States Environmental Protection Agency was created. The U.S. Environmental Protection Agency (EPA) was created in 1970, during the administration of President Richard Nixon, as a result of the environmental movement that gained momentum at the time. The EPA is a federal agency responsible for protecting the environment and human health by regulating air, water, and soil pollution (CAPELLARI; CAPELLARI, 2015).

According to Colacios (2014), the creation of the EPA was an important milestone in the history of environmental protection in the United States, as it consolidated several environmental functions of the federal government into a single agency. Prior to the creation of the EPA, environmental protection functions were distributed across several agencies, including the Department of Health, Education, and Welfare, the Department of the Interior, and the Department of Agriculture. The EPA is responsible for developing and enforcing environmental laws and regulations, as well as providing grants and technical support to state and local governments to help them implement environmental protection programs.

Among the most important laws the EPA is tasked with implementing are the Clean *Air Act*, the *Clean Water Act, the Endangered Species Act*, and the Resource *Conservation and Recovery Act* (COLACIOS, 2014).

From the perspective of Guedes (2021), EPA has played a key role in environmental risk assessment and management, including the identification and assessment of toxic and hazardous

chemicals, as well as the assessment of risks to human health and the environment. In addition, it was responsible for ensuring the compliance of companies and industries with environmental laws and regulations, monitoring and applying penalties and sanctions when necessary.

2.1.4 1972 United Nations Conference

According to Pimenta and Nardelli (2015), awareness of sustainable development gained greater notoriety in 1972, through the United Nations Conference on the Human Environment in Stockholm. The United Nations Conference on the Human Environment was held in Stockholm, Sweden, from June 5 to 16, 1972. This conference was the first international gathering of world leaders to discuss environmental issues and marked the beginning of the global environmental protection movement.

As Guimarães and Fontoura (2012) point out, the Stockholm Conference brought together representatives from 113 countries and non-governmental organizations to discuss global environmental issues, including air and water pollution, biodiversity loss, and climate change. The main goal of the conference was to find ways to balance economic development with the protection of the environment.

During the Conference, a number of important resolutions and agreements were adopted. The most important was the Stockholm Declaration on the Human Environment, which set out the basic principles for protecting the environment and promoting sustainable development. The declaration affirmed that the protection of the environment is essential for human well-being and called on governments around the world to cooperate to protect the environment (GUIMARÃES; FONTOURA, 2012).

In addition to the Stockholm Declaration, the conference also led to the creation of the United Nations Environment Programme (UNEP), which is the main UN agency tasked with dealing with global environmental issues. UNEP aims to promote sustainable development and environmental protection around the world (AGUIAR, 2016).

The Stockholm Conference also established, according to Aguiar (2016), the agenda for future international conferences on global environmental issues, including the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, and the United Nations Conference on Climate Change, held in Paris in 2015.

2.1.5 Our Common Future Report 1983

From the 1980s onwards, the concern with sustainability began to become, according to Lopes et al. (2017), more important on the global political agenda. The World Commission on Environment and Development, established by the UN in 1983, published a report in 1987 titled "Our Common

Future," which popularized the concept of sustainable development. The report defined sustainable development as "that which meets the needs of the present without compromising the ability of future generations to meet their own needs."

Goldemberg (2015) reiterates that the report "Our Common Future" was an important milestone in the history of sustainability, as it was the first document to establish the idea of sustainable development as a central concept for social and economic progress. The report highlighted the need to strike a balance between the economic, social and environmental dimensions of development and proposed a set of strategies to achieve this goal.

In addition, the report also emphasized the importance of international cooperation to address global environmental issues such as climate change, pollution and land degradation. This cooperation requires integration between civil society and the public and private sectors in the search for sustainable solutions. The document stated that sustainable development requires the integration of policies and actions in all areas, including energy, transport, agriculture, industry and trade (JAPIASSÚ; GUERRA, 2017).

2.1.6 Agenda 21 (1992)

In the following years, several initiatives and movements emerged in defense of sustainability, such as Agenda 21, which was a global action plan for sustainable development adopted during the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992. The objective of Agenda 21 was to promote economically, socially and environmentally sustainable development around the world, considering the global challenges of poverty, environmental degradation and social inequality (MARTINS et al., 2015).

According to Dias (2018), the Agenda 21 action plan encompassed 40 chapters covering a wide variety of topics, including biodiversity, energy, transport, urban development, agriculture, water resources, health, education, and public participation. Agenda 21 highlighted the importance of international cooperation, civil society participation, and public and private sector engagement to achieve the sustainable development goals.

As mentioned by Jannuzzi and Carlo (2018), among the main goals established by Agenda 21, we can mention the eradication of poverty, the reduction of social inequalities, the improvement of the health and well-being of the population, the promotion of sustainable production and consumption patterns, the conservation of biodiversity and natural ecosystems, the reduction of pollution and greenhouse gas emissions, and strengthening institutional capacity to deal with environmental and development issues.

Agenda 21 is considered an important milestone in the history of sustainability and has influenced policies and actions around the world since its adoption. In addition, Agenda 21 inspired

the creation of other international sustainability agreements, such as the Sustainable Development Goals (SDGs) adopted in 2015 by the UN (JANNUZZI; CARLO, 2018).

2.1.7 1997 Protocol of Kyoto

In the late 1990s, the Kyoto Protocol was created in 1997, where an international agreement was signed in 1997 during the third Conference of the Parties to the United Nations Framework Convention on Climate Change (COP3) held in Kyoto, Japan. The protocol established quantified commitments to reduce greenhouse gas (GHG) emissions by industrialized countries, with the aim of combating global warming (SOUZA, 2008).

Chaves (2015) points out that the signatory countries of the Kyoto Protocol agreed to reduce their greenhouse gas emissions by at least 5.2% below 1990 levels in the period between 2008 and 2012. To achieve this goal, individual GHG emission limits were established for each industrialized country that signed the agreement. These limits are known as emission reduction targets.

In addition, the Kyoto Protocol created the Clean Development Mechanism (CDM), which allows industrialized countries to finance emission reduction projects in developing countries as a way to achieve their own emission reduction targets. The protocol also established an emissions trading system, allowing countries that exceed their reduction targets to purchase emissions credits from other countries that have achieved reductions beyond their own targets (CHAVES, 2015).

The Kyoto Protocol entered into force in 2005 and initially involved the participation of 38 industrialized countries. The United States, one of the world's largest emitters of greenhouse gases, signed the agreement in 1998 but never ratified it. In 2012, during the Conference of the Parties held in Doha, Qatar, the signatory countries agreed to extend the period of the Kyoto Protocol until 2020 and to adopt a second commitment period covering the period from 2013 to 2020 (SEIFFERT, 2013).

The Kyoto Protocol is considered an important milestone in the fight against climate change, as it established for the first time legally binding commitments to reduce greenhouse gas emissions for industrialized countries. Since then, other international agreements have been established to address climate change, including the 2010 Green Fund (SOUZA, 2018).

2.1.8 ISO 14040:2006

According to the Brazilian Association of Technical Standards (2006), ISO 14040:2006 is a standard developed in 2006 that establishes guidelines and principles for life cycle assessment (LCA) of products and services. The standard is used to assess the environmental impacts of a product or service throughout its entire life cycle, from the extraction of raw materials to their disposal.

ISO 14040:2006 defines four steps for LCA, which are: defining objectives and scope, analyzing life cycle inventory, assessing life cycle impact, and interpreting the life cycle. Each of these steps is explained in Chart 1.

Table 1. Product and Service Life Cycle Assessment

Definition of objectives and scope At this stage, the objectives of the LCA are defined and the scope of the study is established. It is important to identify the boundaries of the study and define which environmental impacts will be assessed.
Lifecycle inventory analysis In this step, data is collected on all inputs and outputs of materials, energy, and other resources throughout the life cycle of the product or service. This includes the extraction of raw materials, transportation, manufacturing, use, and disposal.
Life Cycle Impact Assessment In this step, the data collected in the inventory analysis is evaluated in relation to environmental impacts. This includes assessing greenhouse gas emissions, toxicity, and waste generation, among other impacts
Life Cycle Interpretation In this step, the results of the impact assessment are interpreted and analyzed to identify opportunities for improvement. The conclusions are used to make informed decisions about the product or service being evaluated

Source: ISO 14040 (2006).

Based on the above, it turns out that ISO 14040:2006 is an important tool for companies to assess the environmental impact of their products and services. The standard helps businesses identify opportunities for improvement and make informed decisions about the sustainability of their products and services. In addition, LCA can also be used to support public policy decision-making and help guide actions to promote sustainability.

2.1.9 Green Fund 2010

The Green Climate Fund (GCF) is a financial mechanism created by the United Nations Framework Convention on Climate Change (UNFCCC) to help developing countries cope with the impacts of climate change and promote low-carbon sustainable development (PEREIRA, 2022).

The GCF was established in 2010 during the 16th Conference of the Parties (COP) to the UNFCCC, and became operational in 2015. Its main objective is to mobilize significant financial resources from public and private sources to support developing countries in implementing climate change mitigation and adaptation actions (ANTUNES, 2021).

Pereira (2022) reiterates that the Green Fund's resources are directed to projects and programs in areas such as renewable energy, energy efficiency, sustainable transport, water resources and forest

management, sustainable agriculture, climate change adaptation, and strengthening the capacity of developing countries to deal with these challenges.

The GCF is considered one of the key financial mechanisms for the implementation of the Paris Agreement and aims to achieve annual funding of $100 billion by 2025 to support climate action in developing countries. The Green Fund is managed by a board, with representatives from both developed and developing countries, and is responsible for making decisions about the financing of projects and programs (CASTRO et al., 2019).

2.1.10 ISO 14006:2011

ISO 14006 (2011) is an international standard developed in 2011 that establishes guidelines for incorporating environmental aspects into product *design*. The standard aims to help companies integrate sustainability into all stages of the product life cycle, from design to disposal (ABNT, 2011).

ISO 14006:2011 defines environmental *design* as the process of incorporating environmental considerations into the design of products and services, with the aim of improving their environmental performance throughout their life cycle. The standard establishes guidelines for the implementation of an environmental design system in an organization, which includes the steps outlined in Chart 2.

Table 2. Guidelines for incorporating environmental aspects into *product* design

Establish an *environmental* design policy The organization should establish an environmental *design* policy that reflects its commitment to sustainability and sets clear goals for incorporating environmental considerations into product *design*.
Integrate environmental *design* into the product development process The organization must integrate environmental considerations into the product development process, from conception to the end of the product lifecycle. This includes establishing environmental criteria for evaluating and selecting materials, manufacturing processes, and technologies.
Develop skills and knowledge for *environmental* design The organization must ensure that its design team has the necessary skills and knowledge to incorporate environmental considerations into product *design*. This can include training in life cycle assessment, *eco-design,* and environmental technologies.
Conduct Life Cycle Assessment The organization should conduct a life cycle assessment of its products to identify opportunities for environmental improvements at all stages of the product lifecycle.
Communicate environmental information throughout the supply chain The organization must communicate relevant environmental information throughout the supply chain to ensure that its suppliers and partners also incorporate environmental considerations into their design and manufacturing processes.

Source: ISO 14006 (2011).

ISO 14006:2011 is an important tool to help businesses incorporate environmental considerations into the *design* of products and services. The standard can help businesses reduce their environmental impact, improve their efficiency, and increase competitiveness in the market. Additionally, environmental design can also be an opportunity for businesses to innovate and develop more sustainable products that meet consumer demands for greener products.

2.1.11 ISO 14031:2013

As pointed out by the Brazilian Association of Technical Standards (2013), ISO 14031 (2013) is a standard published in 2013 that establishes guidelines for the evaluation of an organization's environmental performance. Its goal is to help organizations measure, evaluate, and improve their environmental performance through a performance-based environmental management system.

The standard is based on the Plan-Do-Check-Act (PDCA) continuous improvement cycle and defines environmental performance as the measurable outcome of an organization's actions in relation to the environment, based on its environmental policy, objectives and targets. This means that the standard establishes guidelines for the implementation of an environmental management system that allows organizations to assess and measure their environmental performance against their environmental objectives and targets.

In this sense, the environmental management system requires the implementation of four stages, which are: planning, implementation, verification and critical analysis. Table 3 provides more details of these steps.

Table 3. The steps of the environmental management system

Planning The organization must establish an environmental policy and establish measurable environmental objectives and targets. In addition, the organization must identify and evaluate the environmental aspects of its activities, products, and services.
Implementation The organization must implement its environmental management system and identify the processes and procedures necessary to achieve its environmental objectives and goals. The organization should also provide training and awareness of environmental issues to its employees.
Verification The organization must evaluate its environmental performance on a regular basis by measuring and monitoring its environmental impacts. The organization must identify the root causes of environmental problems and implement corrective measures.
Critical analysis The organization should conduct regular critical reviews of its environmental management system, assessing whether its environmental objectives and goals are being achieved and identifying areas for continuous improvement.

Fonte:ISO 14031 (2013).

2.1.12 ISO 14001:2015

The ISO 14001:2015 standard is an internationally recognized standard for environmental management systems (EMS). It defines the requirements for establishing, implementing, maintaining and continuously improving an effective environmental management system (ABNT, 2015).

The purpose of ISO 14001:2015 is to help organizations minimize the negative environmental impacts of their activities, products, and services. The standard encourages companies to responsibly and sustainably manage environmental issues, including the use of natural resources, greenhouse gas emissions, waste management, and other aspects relevant to the environment.

The standard is applicable to all organizations, regardless of industry or size, that wish to implement an effective environmental management system. It provides a framework for identifying the environmental aspects and impacts of the organization's activities, establishing environmental objectives and targets, and implementing an action plan to achieve them.

ISO 14001:2015 also requires organizations to take a risk-based approach to environmental management. This means that organizations must identify the environmental risks and opportunities associated with their activities, products, and services and implement measures to minimize those risks and take advantage of those opportunities.

In addition, the standard requires organizations to establish a monitoring, measurement, and analysis program to assess the effectiveness of their environmental management system. This allows organizations to identify areas that need improvement and implement corrective actions to ensure that their environmental management system is always in compliance with the requirements of the standard.

2.1.13 2015 Paris Agreement

In addition to the Green Fund, another important milestone for sustainable awareness was the 2015 Paris Agreement, which established ambitious GHG emission reduction targets for all signatory countries. Such an agreement was an international treaty on climate change, which was adopted in December 2015 at the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC), held in Paris, France. The primary objective of the agreement is to limit global warming to below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit it to 1.5 degrees Celsius (REI; GATES; SOUZA, 2017).

According to Aubertin and Kalil (2016), the signatory countries of the agreement committed to reducing their greenhouse gas emissions and to present, on a regular basis, national action plans to deal with climate change. In addition, the Paris Agreement provides for international cooperation to help the most vulnerable countries cope with the impacts of climate change and the transition to a low-carbon economy. The agreement entered into force in November 2016 and so far has 197 signatories.

In the year 2015, the Sustainable Development Goals (SDGs) were established by the United Nations in 2015, during the United Nations Summit on Sustainable Development. The SDGs consist of 17 interlinked and ambitious goals that aim to eradicate poverty, protect the planet and ensure prosperity for all. Table 4 shows the 17 goals established by the United Nations in 2015.

Table 4. The 17 goals set by the United Nations in 2015.

- Poverty Eradication: End poverty in all its forms, everywhere.
- Zero Hunger and Sustainable Agriculture: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.
- Health and Well-Being: Ensuring healthy lives and promoting well-being for all ages.
- Quality Education: Ensure inclusive, equitable and quality education, and promote lifelong learning opportunities for all.
- Gender Equality: Achieve gender equality and empower all women and girls.
- Drinking Water and Sanitation: Ensure the availability and sustainable management of water and sanitation for all.
- Affordable and Clean Energy: Ensure access to clean, affordable and sustainable energy for all.
- Decent Work and Economic Growth: Promote sustainable, inclusive economic growth and sustain decent employment for all.
- Industry, Innovation and Infrastructure: Build resilient infrastructure, promote inclusive industrialization and foster innovation.
- Reducing Inequalities: Reducing social, economic and regional inequalities everywhere.
- Sustainable Cities and Communities: Making cities and communities inclusive, safe, resilient and sustainable.
- Sustainable Consumption and Production: Ensure sustainable consumption and production patterns, including sustainable waste management.
- Action Against Global Climate Change: Take urgent action to combat climate change and its effects.
- Life in Water: Protect marine life and the oceans, and promote the sustainable use of marine resources.
- Life on Land: Protect, restore and promote the sustainable use of terrestrial ecosystems, manage forests sustainably, combat desertification and biodiversity loss.
- Peace, Justice and Strong Institutions: Promote peaceful, just and inclusive societies and strengthen strong institutions.
- Partnerships and Means of Implementation: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Source: United Nations (2015).

The process of formulating the SDGs involved a broad process of consultation and negotiation involving governments, civil society organizations, the private sector, and other relevant actors around the world. The goal was to develop a global agenda for sustainable development that could guide the policies and actions of governments, international organizations, and other actors for the next 15 years (ANTUNES, 2021).

The SDGs replaced the Millennium Development Goals (MDGs), which were established in 2000 with the aim of fighting poverty and improving the living conditions of people around the world. The SDGs are more comprehensive than the MDGs, addressing issues such as gender equality, climate change, sustainable use of natural resources, and peace and justice (REI; GATES; SOUZA, 2017).

2.1.14 ISO 14004:2016

ISO 14004:2016 is, according to the Brazilian Association of Technical Standards (2016), an internationally recognized standard for guidelines on environmental management systems (EMS). It

provides information on the principles, requirements and guidelines for the implementation of an effective EMS in accordance with ISO 14001:2015.

ISO 14004:2016 is applicable to all organizations, regardless of size or industry, that want to implement an effective EMS. The said ISO offers detailed guidance to help organizations understand and implement the requirements of ISO 14001:2015 effectively. The guidance provided by ISO 14004:2016 is based on fundamental principles of environmental management, including senior management commitment, risk-based approach, employee and stakeholder involvement, and continuous improvement.

The standard addresses several aspects of environmental management, including planning and implementation; monitoring and measuring; auditing and review; and communication and stakeholder involvement, as shown in Table 5.

Table 5. Elements of environmental management

Planning & Implementation ISO 14004:2016 provides guidance on identifying the environmental aspects of the organization, setting environmental objectives and targets, and developing an action plan to achieve them. Monitoring and measurement: The standard offers guidance on how to establish a monitoring and measurement program to assess the effectiveness of the EMS and identify areas that need improvement.
Monitoring & Measurement The standard offers guidance on how to establish a monitoring and measurement program to assess the effectiveness of the EMS and identify areas that need improvement.
Audit & Review ISO 14004:2016 provides guidance on how to conduct internal and external EMS audits and reviews by management to ensure that the system complies with the standard.
Communication and stakeholder engagement The standard offers guidance on how to engage stakeholders, including employees, customers, suppliers, and the local community, and communicate the results of the EMS.

Source: ISO 14004 (2016).

In summary, ISO 14004:2016 is an important standard for organizations that want to implement an effective EMS in compliance with ISO 14001:2015. It provides detailed guidance to help organizations understand and implement the requirements of the standard effectively, and to responsibly and sustainably manage the environmental issues associated with their activities, products and services.

2.1.15 GSR

For Costa and Ferezin (2021), the acronym ESG refers to a set of environmental, social, and corporate governance criteria that companies must consider in their operations and business strategies.

These criteria have gained more and more importance in recent years, as companies are increasingly held accountable for their social responsibility and environmental impact.

In this case, the "E" refers to environmental aspects, such as the emission of greenhouse gases, use of natural resources, waste management, among others. The "S" refers to social issues such as labor relations, diversity and inclusion, employee health and safety, among others. And the "G" refers to corporate governance issues, such as transparency in operations, business ethics, independence of the board of directors, among others (COSTA; FEREZIN, 2021).

As Irigaray and Stocker (2022) reiterate, incorporating these ESG criteria into a company can lead to tangible benefits, such as better risk management, greater resilience, talent attraction and retention, and a positive reputation. In addition, there is evidence that companies that take their ESG commitments seriously tend to perform better financially in the long run.

Currently, investors, regulators, and other stakeholders are increasingly requiring companies to adopt ESG practices and disclose information related to these criteria in their financial and sustainability reporting. As a result, many companies are incorporating these criteria into their strategy and management, aiming to create long-term value for their shareholders and other stakeholders (GUEDES, 2021).

3 CONCLUSION

Over the last few decades, sustainable awareness has become increasingly important around the world, and this research aimed to analyze the evolution of this awareness over time, as well as the main historical milestones, initiatives and practices adopted, and the results achieved to date. Based on the bibliographic research carried out, it was possible to verify that sustainable awareness began in the 1960s and 1970s, with the emergence of the environmental movement and the concern with the degradation of the environment.

Since then, sustainable awareness has become increasingly strong, and various initiatives and practices have been adopted by governments, businesses, and non-governmental organizations to promote sustainability and protect the environment. Among the most important initiatives are the creation of environmental laws and regulations, the promotion of conscious consumption practices, the development of cleaner and more sustainable technologies, the adoption of environmental management practices in companies, and the awareness of the general population.

The results achieved so far are quite significant, with the reduction of greenhouse gas emissions, the preservation of natural areas and the promotion of recycling and the use of renewable energy sources. However, there is still much to be done to ensure long-term sustainability, and it is critical that sustainable awareness continues to be promoted and encouraged around the world.

Therefore, this research found that sustainable awareness has evolved significantly over time, with the adoption of various initiatives and practices to promote sustainability and protect the environment. While important results have already been achieved, it is critical that this awareness continues to be promoted and encouraged around the world in order to ensure long-term sustainability and protect our planet for future generations.

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