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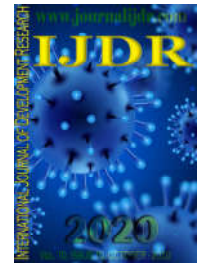
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SUSTAINABILITY INDICATORS: A PROPOSAL FOR THE INSTITUTIONAL DEVELOPMENT PLAN - PDI IN A FEDERAL EDUCATION INSTITUTION IN THE STATE OF PERNAMBUCO, BRAZIL

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ABSTRACT

This work aims to propose a set of sustainability indicators that comprise its three dimensions (social, environmental and economic), integrated into the Institutional Development Plan - PDI, adapted to the specificities and conditions of the organizational environment, in this case the Federal Institute of Education, Science and Technology of Pernambuco. The research was guided by the methods of qualitative descriptive research, documentary research and analysis of indicators that could be used in Higher Education Institutions. It was observed that, although the IFPE presents in its documents a concern with the theme, there is no planning or institutional policy that integrates the actions related to sustainability in the organization in general. Analyzed models and adaptations of indicators applied to HEIs, the Public Administration Environmental Agenda - A3P was chosen, associated with the UI Green Metric World University Ranking 2019 and the NBR ISO 14001: 2015 standard to define sustainability indicators to be incorporated into the Management Plan. Institutional Development - IFPE PDI.

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INTRODUCTION

PDI - Institutional Development Plan - is considered a planning and management instrument that characterizes the institutional identity and, in the strategic dimension, enables the development and integration of all areas of institutional planning in all its dimensions (BRASIL, 2004). It is essential to understand the nature of each institution for the planning and decision-making process, since it will reflect in its middle and end activities, from the perspective of the extreme social, cultural, environmental, and economic importance that the Educational Institution exercises Superior (IES) (BORKOVSKI *et al.*, 2019). At each renewal of the PDI's validity period, it is opportune to analyze the present and prospect for new directions, being a continuous and systematic process. In this perspective, the preparation of the PDI can result in a moment of reflection on the Institution and an excellent opportunity for its improvement, both with regard to the form of management, as well as in the execution of the foreseen goals and objectives (LUZ, 2014).

Dal Magro (2012) identifies that the construction of an identity for Higher Education Institutions depends on several factors, one of which is the implementation of an Institutional Development Plan that prioritizes the construction of academic knowledge and citizenship, encompassing methods that influence in improving the quality of education, uniformity of administrative tasks and efficient financial management. That said, the PDI must be built and implemented considering public policies, the needs of the institution, its community and society. This, built in line with the effective participation of those working in the institution, aiming at the integration of economic development with environmental protection and social progress, becomes a landmark for sustainable development within the institutions that aggregate environmental, normative and environmental policies. guidelines in this direction. Thus, different moments and motivations mark the concern with sustainability in educational institutions in Brazil (ALMEIDA *et al.*, 2019). The environmental issue has become a recurring theme in society, as an environmental crisis is increasingly imminent. More

conscious thinking in the face of this emergency points to concerns causally linked to academic and organizational environments, which come out of focused speeches and gain space for broader debates between society, government, and organizations. The adoption of sustainable principles in public management requires changes, attitudes, and practices (ALMEIDA *et al.*, 2017). This implies emphasizing that the government sector, as it has a strategic role to create new production and consumption habits in Brazilian society on a sustainable basis, needs to invest in technologies that make ecological sustainability feasible, developing public policies in organs and institutions (SERRÃO *et al.*, 2020). In the case of public policies, in the composition of the legality structure in which the Federal Institute of Pernambuco is inserted, specific aspects are perceived that include from the right to an ecologically balanced environment, established in art. 225 of the 1988 Constitution (BRASIL, 1988), passing through the National Environment Policy (BRASIL 1981), the implementation of environmental education as an essential and permanent component of national education until the use of sustainable criteria in the acquisition of goods and contracting of works and services, guided by Normative Instruction No. 01/2010 of the Ministry of Planning, Budget and Management - MPOG (BRASIL, 2010).

In this way, giving greater focus to the performance in public institutions, in relation to the environmental theme, it is possible to indicate government initiatives able to contribute effectively to the discussions related to the subject in question: the Environmental Agenda in Public Administration - A3P; the Sustainable Esplanade Project (PES); the Sustainable Logistics Management Plans (PLS), in addition to the norms that establish criteria for environmental sustainability in the acquisition of goods, services or works by the Federal Public Administration, as well as the separation and disposal of recycled waste discarded. These initiatives, in turn, must be examined based on indicators that ensure the possibility of evaluating the results and discussing possible improvements in action fronts aimed at sustainable development. For Araújo *et al.* (2017), it is relevant to approach the topic of sustainable development within public HEIs and, as a public enterprise, they have been called upon to incorporate socio-environmental issues and sustainability in their management model, in order to foster changes in culture institutional. However, for this condition to be included in the measurement processes in an efficient and effective manner, proactivity, long-term vision, and monitoring of the results of the decisions taken and actions implemented are required. IFPE, inserted in a contemporary context where social awareness of the need to protect the environment and achieve sustainable development goals stands out, must, in this perspective, act through its planning and management, integrating the areas of institutional planning in all its dimensions. Aiming to establish a standard in the approach and foundation of this research and, given the specificity of the Federal Institutes, especially in the characteristic of offering vertical education, from high school to graduate school, this work sought to base the analysis on studies that took as parameters Higher education institutions. This work aimed to analyze the Institutional Development Plan of IFPE in aspects related to sustainability and to propose a set of sustainability indicators for the planning of institutional management.

It is expected, from this analysis, to improve the possibilities of contribution to environmental sustainability in the Federal

Institutes, and at the same time, to refine the instruments for evaluating initiatives of this nature, based on the social, economic and environmental aspects, in order to serve reference for other institutions.

MATERIALS AND METHODS

This research was motivated to think about socioenvironmental issues, under the challenge of creating new paradigms, based on IFPE's public policies and environmental policy, integrating the use of sustainability indicators to the PDI with the means of consolidating sustainability and sustainable development in the IFPE. The guiding methodology of this study is of a qualitative descriptive nature. According to Silva *et al.* (2014) qualitative research can provide a basis for understanding the social processes that underlie management. The purpose of this study is to integrate a set of sustainability indicators to the IFPE PDI, through bibliographic research in secondary sources, it is a research that has as reference the official IFPE planning document, the Institutional Development Plan - PDI, therefore, a qualitative study with documentary bias regarding the means (VERGARA, 2007). Bardin (2009) confirms that it is a documentary research due to the data collection having as source the IFPE PDI and institutional documents. Regarding its objectives, it is exploratory. The research technique adopted was the content analysis of the information made available on the internet, with emphasis on studies related to planning and sustainability in Higher Education Institutions and Sustainability Indicators, in addition to government and internal laws and regulations related to the area of sustainability and environment, applicable to HEIs.

It was decided to choose the PDI version 2014-2018, the last one elaborated and implemented in the institution, considering that this document should contain basic guidelines for the planning of an institution, including the sustainability guidelines. The frequency of the keyword's "sustainability", "environment" and "sustainable" was adopted as a reference, as they are considered essential in documents of an Institution that is concerned with sustainability. In the later phase of material exploration, a list was organized with excerpts and phrases where each word occurred, thus allowing a systematic view and the possibility of categorizing the different meanings in the context of the application of the words. To identify the type of information contained in the PDI, a summary study of each item of the document structure was established, underlining the information and / or indication of actions with a direct or indirect link to sustainability. The analysis was carried out to adapt to the characteristics of the PDI, which includes facts that have occurred as well as information about mere intentions. We sought to verify the records regarding social responsibilities and environmental management contemplated in the PDI and whether they were in compliance with the established guidelines, in relation to sustainability issues, by legislation applicable to the institution, such as: A3P, National Environment Policy, National Solid Waste Policy, Solidarity Collection, Disposal of Goods, Waste from Health Services, Sustainable Public Procurement, National Environmental Education Policy, among others. In view of being dynamic and subject to revision, the PDI document was also analyzed from the perspective of meeting the institutional responsibilities defined in the institution's Environmental Policy, even though it was found that IFPE's Environmental Policy was approved in 2017, during which the studied PDI it

was already in effect. To build the theoretical framework a bibliographic search was used. The theoretical foundation was carried out to verify the state of the art of the concepts and research related to the assessment of environmental performance in organizations, more specifically, at IFPE. We searched for themes aimed at the research intent, that is, to identify studies and documents focusing on environmental performance, as well as tools and assessment models used in Brazil and worldwide. Thereafter, with a literature review, it was observed that some studies depict constructions and adaptations of indicator models. It was observed that, particularly in Brazil, the formulation and implementation of a set of sustainable development indicators (IDS), at the national level, is an initiative coordinated by the Brazilian Institute of Geography and Statistics - IBGE. There are 63 indicators that provide an overview of the country in four dimensions: environmental, social, economic, and institutional. However, some studies and institutions have built their own indicators (SILVA and ALMEIDA, 2019; CANDIOTA BEVILAQUA and CASACCHI, 2018; OLIVEIRA and CAMELO, 2019; SANTOS E NASCIMENTO, 2020; SILVA *et al*, 2016; WACHOLZ and CARVALHO, 2015).

The application of indicators serves as a parameter for assessing the sustainable evolution of IFPE, to assess the progress of sustainable development and support decision making, enabling the structuring and organization of processes involving sustainability. From a theoretical and conceptual point of view, this research sought works with several models already used by universities and organizations and prioritized, for the choice of indicators: the University of Sustainability of UI Ranking (GreenMetric), the NBR ISO 14001: 2015 standard and A3P. The appropriate choice of indicators to be used to assess the environmental dimension is essential. The theme of this research is related to public management that includes planning, sustainability, indicators, and socio-environmental development in a transdisciplinary approach that contemplates an analysis perspective that reconciles institutional planning and sustainability indicators. These aspects are fundamental to the transformations that have been occurring in the IFEs planning process and it is expected to improve the possibilities of contribution to the Federal Institutes and, at the same time, to refine the instruments for measuring sustainability in the HEIs.



Source: Integrated Management Report 2018 - IFPE, 2019.

Figure 1. Location of Campis in the State

Analyzed models and adaptations of indicators applied to HEIs, the Public Administration Environmental Agenda - A3P was chosen, associated with the UI Ranking Sustainability University (GreenMetric) and the NBR ISO 14001: 2015 standard to define sustainability indicators incorporated into the PDI of the IFPE that could carry out sustainability assessment in HEIs. We interrelate the criteria and indicators defined by these models, selecting as inclusion criteria for the selection: indicators that contemplate the three dimensions of sustainability (social, environmental and economic), which can be measured and that are relevant to decision making. As a result of the research, a set of 23 sustainability indicators is presented to compose the assessment of the environmental dimension in the institution.

Study Location: The Federal Institute of Education, Science and Technology of Pernambuco - IFPE is an autarchy linked to the Ministry of Education through the Secretariat of Professional and Technological Education - SETEC, created by Law no. 11,892, of December 29, 2008 that works in the Federal Network of Professional, Scientific and Technological Education (RFEPCT). In the state of Pernambuco, RFEPCT is composed of the Federal Institute of Education, Science and Technology of Pernambuco - IFPE and the Federal Institute of Education, Science and Technology of Sertão Pernambucano - IF Sertão – Pernambuco, Brazil. It is an institution that offers higher, basic, and professional education, multi-curricular and multicampi, specialized in professional and technological education. In its 16 campuses, spread from the coast to the

backlands of Pernambuco (Fig.1), courses are offered ranging from high school to undergraduate courses, specialization, and a master's program. It also offers courses in the Distance Education (EaD) modality, wide network with 11 centers and the National Program for the Integration of Professional Education with Basic Education in the Youth and Adult Education Modality (Proeja). The Institute offers a proposal for vertical teaching, articulating, 54 courses that serve around 27,000 students at different levels and training modalities: high school, technical, higher education in the Technological, Licentiate and Bachelor courses, in addition to specialization and master's degrees. This list also includes courses in Distance Education (DE) with a wide network with 11 poles, the National Program for the Integration of Professional Education with Basic Education in the Youth and Adult Education Modality (Proeja), the Initial Training courses and Continuous (FIC) and Professional Qualification. In Agreste, Sertão and Zona da Mata of Pernambuco, Brazil, the special focus on agriculture and livestock is maintained, always guided by sustainability, associated with this, a new focus on new productive arrangements and social transformations experienced by these locations. In 2014, the third phase of IFPE's expansion allowed the contribution of six more campuses in the municipalities of the Metropolitan Region (Abreu e Lima, Cabo de Santo Agostinho, Igarassu, Jaboatão, Olinda and Paulista), in addition to Palmares, in the South Forest, forming a support network for the region with the highest GDP in the state.

RESULTS AND DISCUSSION

Analysis of the PDI: In the presentation of the IFPE PDI, the vision of the transformative impact of the socioeconomic and cultural reality that the institution causes in society is evidenced, presenting it as an Education House with an emphasis on being an ethical, public, dignified and inclusive locus.

He also complements, citing Paulo Freire, who is part of an Educating Country, understands education as a social policy, and must work on the potential of the region, seek mechanisms for the community to access productive means and promote the broad insertion of students in the productive world. It adds that the challenges for achieving the future, permeates the dialogue between sciences, teaching and learning, acting in a trans and interdisciplinary way, in line with the institution's IDP and the planet, in constant reflection of practices and identity construction institutional. The insertion of the PDI in the context of HEIs occurred in the mid-2000s, being its origin in the Law of Guidelines and Bases of Education (LDB) (Souza et al, 2016). The preparation of the PDI is a requirement of Brazilian legislation, through Law no. 10,861 / 2004 (BRASIL, 2004), which institutes the National Higher Education Assessment System - SINAES; Decree nº 5.773 / 2006 (BRASIL, 2006) which provides for the regulation, supervision and evaluation of higher education institutions, later modified by Decree nº 9.235 / 2017 (BRASIL, 2017). The PDI of the institution studied, prepared and implemented through Decree No. 5,773 / 2006, has its term defined for the period 2014-2018, however its approval occurred with CONSUP Resolution No. 57/2015 of December 15, 2015.

The analysis of the form of preparation of the IFPE PDI demonstrates as assumptions: participatory construction, continuity, monitoring, evaluation and constant adjustments, transparency, information to support decision making and flexibility, with the plan prone to evaluations, reviews and contributions. Higher education institutions (HEIs), as they have sustainability as a guideline for their management, and environmental variables are integrated into planning, bringing solutions, interventions, discussion and technology to overcome problems (BOLAN and MOTTA, 2015; FERREIRA e SALES, 2019; ROHRICH and TAKAHASHI, 2019).

Table 1. References to sustainability in the PDI - IFPE - 2014/2018

ASPECTS	DESCRIPTION / REFERENCE
Mission	To promote professional, scientific and technological education, in all its levels and modalities, based on the principle of inseparability of the actions of Teaching, Research and Extension, committed to a citizen and inclusive practice, in order to contribute to the integral formation of the human being and the sustainable development of society.
Vision	To be a national reference institution in professional training that promotes education, science, and technology in a sustainable way and always for the benefit of society
Values	Commitment to social justice, equity, citizenship, ethics, preservation of the environment, transparency, and democratic management.
Academic	Areas of greater concentration of groups and research projects: Environment, Human Sciences, Agrarian Sciences and Engineering. Egress - Training skills related to the performance of their professional activities, preparing them to face a new economic order, a fast world based on information and knowledge, respecting the sustainability of the environment. Pedagogical principles - The dimensions of integral training are supported by the principles of solidarity, ethics, cultural plurality, and sustainability.
Infrastructure	Search for the necessary means to guarantee to all campuses adequate physical and technological infrastructure, observing the Regulatory Norms, Technical Norms, especially those dealing with accessibility, sustainability, and the environment.
Information Technology	Adopt policies aimed at sustainability, accessibility, and governance.
Institutional Development Assessment and Monitoring	Contribute to the process of social transformation and inclusion and to the development of a sustainability policy.
Institutional Environmental Education Policy	Environmental education is included as a transversal theme in the components of the curricula of all courses, valuing the articulated approach of local regional and national environmental issues. Educate for socio-environmental sustainability, integrating the curricula of the courses into a proposal for a balanced relationship with the environment. Academic - Scientific and Cultural Activities - Promote education for social change and transformation, based on the principles of human dignity, equal rights, recognition and appreciation of differences and diversities, the secularity of the State, democracy in education and transversality, experience and globality, in addition to socio-environmental sustainability.
Human Rights	Academic - Scientific and Cultural Activities - Promote education for social change and transformation, based on the principles of human dignity, equal rights, recognition and appreciation of differences and diversities, the secularity of the State, democracy in education and transversality, experience and globality, in addition to socio-environmental sustainability

Source: The Authors.

The analysis of the data (Table 1) showed that the Development Plan deals with the theme of sustainability, however there is no detail of actions and practices of social responsibility and sustainability. However, it was found that only in the PDTI - Information Technology Development Plan does an action and indicator linked to the sustainability theme appear when it proposes the computerization of administrative and academic processes and the development of a guiding document for the correct disposal of equipment and materials of IT, however without subsequent records of evaluation of results. Thus, the data collected show the institution and its relationship with the theme of sustainability and social responsibility practices, but the lack of socioeconomic surveys, environmental diagnostics and monitoring reports that promote and allow a broader discussion about the implementation of sustainable planning, because although IES makes socio-environmental responsibility actions explicit in the PDI, there is no effective verification, as was observed, for example, the absence of sustainability indicators. The IFPE Planning addresses the 12 performance indicators contained in the terms of TCU Decision No. 2,267/2005, classified as Academic (6), Administrative (4), Socioeconomic (1) and People Management (1), presented in a historical series 2010-2014 (Table 2). Thus, in the 2014-2018 PDI, there is an absence of sustainability indicators to measure the activities that have been developed, thus making it difficult to obtain a visible result of its actions and to better understand its institutional reality, its evolution and possible trends in the environmental area.

Table 2. IFPE PDI indicators

INDICATORS	
Academics	Candidate / Vacancy Ratio
	Admission / Student Ratio (%)
	Graduates / Student Ratio (%)
	Academic Efficiency Index - Graduates (%)
	School Flow Retention Index (%)
Administrative	Full-time Student / Teacher Relationship
	Current Expenses per Student
	Percentage of Personnel Expenses (%)
	Percentage of Expenditures with other Costs (%)
Socioeconomic	Percentage of Investment Expenses (%)
	Number of students enrolled by per capita family income *
People management	Faculty Degree Index

Source: PDI (2014-2018) – IFPE.

According to the IFPE Management Reports 2014-2018, the issue of preserving the environment is a constant concern. The publication of IFPE's annual Management Report complies with the legislation on administrative transparency and gives more credibility to the public administrator. However, it is emphasized that the objective of disclosing data on Public Administration goes far beyond compliance with standards. Its social function is to inform the academic community and society about how public revenues are being used. In consultation with the annual activity reports and the Management Report, it can be seen that IFPE has demonstrated its awareness of environmental sustainability, with greater emphasis on some campuses, such as the Cabo de Santo Agostinho Campus, the Belo Jardim Campus and the Pesqueira Campus. The first, despite the start of activities in 2016, develops an A3P extension project on the Campus, implemented the Sustainability Coordination and environmental management, adopted the practice of separating recyclable waste and an agreement with a municipal waste pickers cooperative, prepared the Logistics since 2016,

appointed the PLS Management Committee, in addition to meeting the sustainability parameters in its purchases and contracts. The Belo Jardim Campus established its environmental policy, created an Environmental Management Committee, and inaugurated the Campus effluent treatment work. The Pesqueira Campus implemented a photovoltaic plant, having, in 2018, saved R \$ 87,114.65 in electricity. Recently, this same campus, which already has this competence, after selection and awarding made by the Ministry of Education will become a Reference Center in Photovoltaic Solar Energy, in the Federal Network for Professional, Scientific and Technological Education. The institution will be one of the two reference centers in the country for the Federal Network for the training of teachers from all over Brazil, with the prospecting of a *latu sensu* postgraduate course in the area, in addition to consulting services through Metys (Working Group formed by professors in the field) and the future junior company. Also in consultation with the annual Management Reports (2014 to 2018) are records of institutional actions and normative acts that not only meet governmental requirements but also reinforce the institution's commitment "to a citizen and inclusive practice, in order to contribute for the integral formation of the human being and the sustainable development of society" (IFPE, 2015). The norms are summarized in Table 3:

Table 3. Institutional standards / IFPE focused on sustainability

STANDARDS	MENU
Ordinance N° 1592/2021-GR de 14/12/2012	Designates Commission responsible for the Development of the IFPE Sustainable Logistics Management Plan
Ordinance N° 1570/2016-GR de 13/10/2016	Commission responsible for the Development of IFPE's Environmental Policy
Ordinance N° 1383/2018-GR de 26/09/2018	IFPE Environment Council Regulatory Commission
Ordinance N° 262/2019-DGCBJ, de 21/10/2019.	IFPE Environmental Policy - Campus Belo Jardim
Ordinance N° 017/2014-DGCCSA de 13/10/2014	Creation of the Sustainability and Environmental Management Coordination at the Cabo de Santo Agostinho Campus and appointment of coordinator

Source: The Authors.

It was verified in the annual Management Reports, in the 2014-2017 period, after analysis of the TCU standard form, as shown in Table 4, called Management of the Use of Renewable Resources and Environmental sustainability - Aspects of Environmental Management: All IFPE Campuses carry out sustainable contracts and tenders, observing the parameters established by Decree 7746/2012; Campi Cabo de Santo Agostinho and Belo Jardim have a Sustainable Logistics Management Plan and a PLS Management Committee; Only the Campus Cabo de Santo Agostinho participates in A3P, through an extension project; 75% of Campi do not process the separation of discarded recyclable waste and its destination for associations and cooperatives of collectors; The publication of the PLS does not exist, neither by the rector nor by the Campi, nor the results achieved by its implementation and measured by indicators. As of 2018, there was a restructuring in the presentation of the annual Management Report. The sustainability theme is now presented by a description of the main sustainable actions and practices developed by the institution. From a comparison between the Institutions of the Federal Network of

Professional and Technological Education in the scenario of the Northeast region, it is possible to verify, observing Table 4, that there is a reduced number or total absence of sustainability indicators in the IDPs of these institutions. Even for those institutions that have a significant number of performance indicators, sustainability indicators reach a maximum of 4% of this total, a percentage presented by the IFRN.

implementation of sustainable planning compromises the different dimensions of the IDP, but does not prevent the set of actions generated from environmental concerns. of the Institution. For OLIVEIRA et al (2018), the organization is favored when adopting sustainable practices, considering that there is an increasing need for organizations to seek a sustainable balance between economic, environmental and social development, in view of society's growing concern with

Table 4. Performance Indicators - PDI of Institutions of the Federal Network of Professional and Technological Education in the Northeast, in the period from 2014 to 2018/2019

FEDERATION UNIT	INSTITUTION	INDICATORS (TOTAL)	SUSTAINABILITY INDICATORS (IS)
ALAGOAS - AL	IFAL	51	2
BAHIA - BA	IFBA	34	-
	IFBAIANO	112	1
CEARÁ - CE	IFCE	87	-
MARANHÃO - MA	IFMA	44	-
PARAÍBA - PB	IFPB	8	-
PERNAMBUCO - PE	IFPE	12	-
	IFSERTÃO	255	3
PIAUI - PI	IFPI	85	-
RIO GRANDE DO NORTE - RN	IFRN	100	4
SERGIPE - SE	IFS	35	-

Source: The Authors.

In the context of the Federal Institutes of the Northeast, IFRN stands out, which has been implementing environmental initiatives and it has been found, through documentary research, that in its environmental management there are no indicators to measure the activities that have been developed. IFRN became the first public educational institution in Brazil to adhere to the energy compensation system regulated by Normative Resolution 482/2012 of the National Electric Energy Agency - ANEEL. Currently, it is among the public institutions that generate the cleanest energy in the country, since all its units (Rectory and 21 campuses) have solar plants. Together, they have the potential to generate up to 3.36 GWh / year, which represents a reduction in annual emission of 339 tons of CO₂ into the atmosphere, in addition to an annual savings of around R \$ 1.3 million (IFRN, 2019). IFRN has the Campus Verde Project, created in 2011, with the objective of promoting conscious consumption and environmental preservation actions throughout the Institute. In 2014, he was awarded the A3P Seal of Sustainability in Public Administration, granted by the Ministry of the Environment. In 2015, the Institution had its Social and Environmental Policy approved by the Superior Council. This sustainability device recently earned the institution a place among the most sustainable educational institutions in the world, according to the UI GreenMetric - World University Rankings 2019, released by the University of Indonesia. Prepared annually since 2010, the ranking classifies the institutions that develop the best practices and sustainable programs on their campuses. In the analyzes carried out in the IDPs of the Federal Institutes of the Northeast Region, it appears that the concern with the environment and sustainable actions appear much more in specific programs in the environmental area, than in the form of indicators in their IDPs, reinforcing the gap in absence of institutionalized measurement tools, establishing the difficulty of better understanding its evolution, possible trends and a later amplitude of its environmental actions. The absence of further studies and with a greater degree of precision, even when the Institutional Development Plan was drafted, makes it impossible to be aware of the real conditions and demands of sustainability of the Institutions. Likewise, the lack of socioeconomic surveys, environmental diagnostics and follow-up reports that promote and allow a broader discussion on the

social and economic development. sustainability. There are worrying signs regarding the sustainable performance of public organizations. The requirement for the formulation of IDPs and good financial and environmental management, in all areas of activity of the institution, ensured by an integrated vision and corroborated by an effective set of actions, taking into account parameters of public service, allow to count a positive contribution on the its environmental impact.

Environmental Policy and Actions: There is no institutional policy in the IFPE PDI aimed at sustainable development within the organization. However, it was observed that IFPE's Environmental Policy was only approved and institutionalized in 2017. Thus, the importance of work and measurement of actions in relation to the environmental theme is fundamental for its implementation within the institution. This document defines the fulfillment of the criteria and standards of quality and environmental norms, the search for the development of research, extension and technological innovation studies oriented to the rational use and protection of environmental resources, to the diffusion of environmental management technologies, to the sustainable use of natural resources and adequate disposal of waste produced at the institution. The IFPE Environmental Policy highlights the following basic principles: sustainability, planning, prevention, cooperation, monitoring and control, environmental information, and continuous improvement. The conduct of implementing this document is defined within the institution with the establishment of objectives, principles, and instruments. On this aspect, we emphasize that the document can be a stimulus to the internal and external community to propagate models and effective sustainable practices, in their Campi and in the society, seeking to rethink and manage more efficiently the use of natural resources in a way that nature be able to meet everyone's current needs without exhausting replacement capacity and ensuring the survival of future generations. The institutional powers and responsibilities for implementing the Environmental Policy are also included in this document. Among the institutional attributions contained in the policy, with regard to establishing indicators for the monitoring of environmental actions, in the case of IFPE, it constitutes a great challenge, since the specificity necessary to build

capacities for the defense of the environmental pillar, the maintenance and the improvement of the system's balance, focuses on processes of formation and transformation of knowledge, values, attitudes and behaviors of subjects and collectives. Thus, it is pointed out that the instruments presented in the IFPE Environmental Policy will serve as a basis for structuring environmental actions and practices. Based on the principles and instruments proposed by the Environmental Policy, a list of actions was organized to make it feasible to meet the criteria and standards of environmental quality and norms related to the use and management of environmental resources; the development of research, extension and technological innovation studies oriented to the rational use and protection of environmental resources; the diffusion of environmental management technologies, the dissemination of environmental data and information; the sustainable use of natural resources and the proper destination of residues from the activities developed at IFPE.

According to REIS & MORAES (2009) it is important to implement an Environmental Policy for Federal Institutes based on the NBR ISO 14001/2004 and on the existing environmental policies because, the application of these tools makes society belong in decision making within the scope of your community. It is interesting to say that this Policy still needs to be strengthened in the Institution's Campuses, although some actions have been carried out in this area, such as, for example, the Renewable Energy Program at the Pesqueira Campus, creation of a sustainability and environmental management unit and approval of the Sustainable Logistics of the Cabo de Santo Agostinho Campus, it is known that it is necessary to make efforts, in order to implement the actions already developed, as well as to implement new processes that guarantee the fulfillment of what was defined in the referred Policy, in order to work, observing the criteria that ensure environmental sustainability in the acts and actions of institutional management. According to Gomes and Brasileiro (2018), measures such as the formulation of multi or bilateral agreements, cooperation and technological transfer, configuration of programs in Science and Technology, production of scientific knowledge and development of programs in environmental education could be triggered by the IFES, continuing the responsibility in relation to sustainable development, which these institutions have gradually assumed. The HEIs that address sustainability issues in the IDPs explain actions that reiterate the institutional commitment to governmental guidelines and to sustainability acting in the enhancement of educational actions for sustainability; Implementation of extension actions through environmental education; Availability of information for sustainability internally and in extension programs; improving the rational use of resources; adherence to government programs. The contribution to the construction of more sustainable HEIs and societies goes back to a panorama in which these institutions need to adopt new models and undergo new changes that go beyond the administrative, technical and academic spheres, so that the areas of teaching, research and extension promote and promote environmental management (Mendonça et al, 2018). The authors also emphasize the importance of planning and collective participation in building this sustainable society.

Sustainability indicators: In this stage the results referring to the sustainability indicators are presented, based on the social, environmental, and economic pillars, selected and necessary to

the reality of the institution in the case study. From a theoretical and conceptual point of view, this research sought works with several models already used by universities and organizations and prioritized, for the choice of indicators: University of Sustainability of UI Ranking (GreenMetric), NBR ISO 14001: 2015 and the A3P. The appropriate choice of indicators to be used to assess the environmental dimension is essential. The Green Metrics World Universities Ranking, created by Universitas Indonesia in 2010 - the most used to assess Universities' commitment to the environment - requires Universities to provide information on a series of sustainability indicators, classified into 6 categories: Environment and Infrastructure (Setting & Infrastructure-SI); Energy and Climate Change (Energy & Climate Change-CE); Waste (Waste-WS); Water (Water-WR); Transportation (Transportation-TR); Education and Research (Educacion and Research-ED) (UI, 2019). Universities' adherence to this assessment tool has grown, in the 2010 edition of the UI GreenMetric Ranking, 95 universities from 35 countries participated, while in the 2019 edition, 779 universities from 83 countries participated.

The UI GreenMetric Ranking created a world ranking of universities to measure the sustainability efforts of campuses. The rankings are based, in general terms, on domains such as Environment, Economy and Equity. The indicators and the respective classification categories are constructed in such a way that they are relevant to all these areas. The selected criteria are those that are generally considered important by universities concerned with sustainability. The assessment is organized into six main categories: structure of campuses and green areas, energy consumption, waste management, water use and treatment, transport policies and academic activities related to the environment. The proposed guidelines for sustainability of NBR ISO 14001, an internationally accepted standard, brings in its scope the requirement of waste management, meeting the legal environmental requirements relevant to the institution's activity and ways to help improve the performance of companies by through the efficient use of resources, thus gaining competitive advantage and the trust of stakeholders. In the most recent update, NBR ISO 14001:2015, in addition to maintaining relevance to the market, brought trends such as concern with the volatility of the climate and the competitive context in which companies operate and the growing recognition by them, the need to take into account the internal and external elements that influence its environmental impact, in addition to defining particularities for implementing an Environmental Management System. The amendment to NBR ISO 14001:2015 ensures its compatibility with other standards of environmental management systems. It also proposes: Greater leadership commitment; most important environmental management in the company's strategic positioning; implementing proactive initiatives aimed at protecting the environment from damage and degradation; communication strategy focused on stakeholders; and focus on the life cycle concept (ensuring the observation of environmental aspects of development at the end of the product's useful life). A3P, unlike NBR ISO 14001: 2015, which only covers the environmental perspective, proposes to review consumption and production patterns and raise public managers' awareness, in order to create a new organizational culture in order to incorporate management principles and criteria socio-environmental in order to build new benchmarks of environmental sustainability in their routine activities. (MMA, 2015). The A3P Program is a voluntary agenda and is

aimed at the organs at the federal, state and municipal levels and at the three branches of the Republic: executive, legislative and judicial. The A3P Program systematizes and distributes the rationale for a sustainability project in 6 thematic axes. They are: Use of natural resources and public goods; Quality of life in the work environment; Awareness and training of civil servants for sustainability; Sustainable public procurement; Sustainable buildings; and Adequate management of the waste generated.

The first axis seeks to encourage the implementation of practices based on the planet's sustainability, seeking ways to act on changes in the environment due to the inconsequential and irrational use of natural resources. The second axis addresses the quality of life in the work environment, whose actions make it possible to improve environmental conditions, promote health and safety, including ensuring accessibility, using and developing human capacities, taking advantage of each person's skills for their personal development and raising productivity and well-being. This third axis, called Sensitization and training of civil servants, seeks to change habits, behavior, and consumption patterns, to develop and encourage the practice of citizen awareness of Social and Environmental Responsibility by managers and public servants. Awareness raising must be accompanied by initiatives to train civil servants, providing guidance, information and qualification to public managers and allowing better performance of socio-environmental management within the scope of public administration. The fourth axis deals with sustainable public procurement and comprises the acquisition of goods and contracting of works and services and must comply with planning with delimitation of needs, in addition to knowledge of the applicable legislation, characteristics of the goods and services to be purchased. The acquisition of products and services with sustainability criteria implies the generation of socio-environmental benefits and the reduction of environmental impacts. The Sustainable Construction Axis addresses a concept that calls for a set of measures adopted during all stages of the work aimed at building sustainability. With the use of these measures it is possible to minimize the negative impacts on the environment in addition to promoting the economy of natural resources. The sustainable work must also consider care to minimize the use of raw materials with reuse of materials, generation of waste, efficiency of natural resources and improvement of the quality of the built environment.

Adequate management of the waste generated, the sixth axis of A3P, deals fundamentally with what Law No. 12,305/10 (Law of the Solid Waste Policy) establishes, inferring in the prevention and reduction in the generation of waste, having as a proposal the practice of habits sustainable consumption and a set of instruments to increase the recycling and reuse of solid waste and the environmentally appropriate disposal of waste. This Law incorporates modern concepts of solid waste management and brings new tools to Brazilian environmental legislation: integrated management of solid waste, shared responsibility, reverse logistics and the social inclusion of waste pickers. A3P has become a reference for the inclusion of the theme of sustainability in the administrative activities of public institutions. Add your contribution to awareness by public bodies and entities, contributing to socio-environmental responsibility and improving public management throughout the national territory. Based on the social, environmental and economic pillars, the sustainability indicators proposed here

cover these three pillars: the guidelines of the UI GreenMetric that encompasses the three pillars, the NBR standard that contemplates the environmental perspective and the A3P, with the perspective of the socio-environmental pillars. The need to reinforce and improve the implementation and monitoring of sustainable practices is well known. Notwithstanding the use of sustainability indicators to evaluate these practices, the increase in the creation and structuring of a sustainability unit or service with the purpose of supervising the actions carried out in Campi and the development of a system to assess the environmental impact generated by the institution, for example, they can make data more reliable, increase discussions on the topic, facilitate decision-making and assess institutional performance. The results obtained in the data collection have points, such as the monitoring of the results from the implementation of the actions defined by the instruments forming the Environmental Policy, such as the Sustainable Logistics Plan, the Solid Waste Management Plan, the Environmental Education Program in which it is necessary to verify results in order to better understand possible trends and amplitude of its environmental actions and, thus, trigger social, economic and environmental improvements and, thus, provide a differential in HEI.

The indicators arise from the concern with measuring actions and, consequently, their application generates values in the culture and in the institutional profile. It is essential to map the candidate indicators in the light of information necessary for well-informed decisions, such as the purpose, the feasibility of time and resources, clarity and simplicity, the availability of information, the collection as well as its potential for use. The institutional legitimation promoted with the inclusion of sustainability indicators in the PDI is a stimulus to the IFPE community for the strengthening of actions that were already carried out and for the implementation of new initiatives, based on guiding norms committed to continuous improvement, which meets the legal requirements and provides a framework for setting and analyzing environmental objectives and targets. Ferreira and Salles (2019) state that, when environmental variables are integrated into planning, it is possible to positively explore environmental potentials and restrictions, while, when environmental issues are observed after the project is conceived, the contribution of management to insert the environmental dimension in the development process is minimal. Thus, without major development in terms of concrete proposals, it is important to focus on planning and emphasis on sustainable actions to develop viable strategies that guarantee economic, social, and environmental returns.

The application of indicators can support decision making, in addition to assessing the relevance of sustainability actions in institutions, enabling them to recognize and appreciate what they are already doing, their benefits, achievements, improvements and planning for the next advances in sustainability. Studies carried out in recent years point to the development and application of indicators, as tools for analyzing and interpreting data, as a way to promote decision-making and to mitigate and prevent environmental impacts from their actions. It is a consensus among experts that the indicators must be easy to measure, have representativeness and consider peculiarities inherent to the reality of the Institution (SILVA E ALMEIDA, 2018; SANTOS E NASCIMENTO, 2020). Among the variety of sustainability indicators are the Ecological footprint Method (EFM) or Ecological Footprint, the Dashboard of Sustainability (DS),

the Barometer of Sustainability (BS), The Global Reporting initiative (GRI) among others. The studies carried out by Silva and Almeida (2018) were also considered, in which a set of sustainability indicators for Higher Education Institutions -IES is proposed, comprising the social, environmental, and economic dimensions. The authors, based on a literature review in national and international studies that present tools for measuring sustainability in HEIs or other organizations, propose a set of sustainability indicators, these validated by a group of specialists in the area. Silva e Almeida (2019) presents a set of indicators that, in compliance with the sustainability tripod, include aspects related to teaching, research and extension, services and administrative operations. The authors associate in this context the importance of the sectors involved in the execution of tasks (administrative staff), the operations and services carried out and the subjects inserted in the process- academic staff (teachers and students). Six aspects are selected: academic, administrative, operations and services, teaching, research, and extension. The work was completed with the validation of 37 indicators. Based on the social, environmental and economic pillars, the sustainability indicators proposed here cover these three pillars: the guidelines of the UI GreenMetric that encompasses the three pillars, the NBR standard that contemplates the environmental perspective and the A3P, with the perspective of the socio-environmental pillars.

Conclusions

Considering social responsibility as a federal autarchy and the concepts of sustainability and social development, this work intends to propose paths in the Institutional Development Plan - PDI of an HEI, in a perspective of measuring sustainability through the use of a set of indicators, in a way to contribute to the improvement of added environmental practices and policies and decision making, as well as gains and / or losses in the environmental, social and economic areas. It is undeniable that there is an advance in the debate on environmental issues in Public Institutions, mainly linked to management and daily life. However, for an effective transformation with the way that Public Institutions conduct their actions in favor of sustainability, it is necessary to create environmental policies that integrate all organizational systems. The analysis conducted suggests a panorama of environmental sustainability where individual and specific actions still prevail, without quantifiable indices or indicators and without continuity in projects or institutionalized programs in the long term. Despite the intentionality presented by the institution, the version of the PDI of the IFPE studied showed fragility and inconsistency (was it shown fragility and inconsistency or the non-existence of environmental actions?) For environmental actions.

Organizational mobilization to achieve environmental goals is simple (the word simple is so heavy). The moment at the Institution is for the formulation of its new IDP, which is why there is a need for a plan that guides decision-making processes and the implementation of joint public policies and which aims at integrated and sustained development. Instituting, as an integral element of the Institution's development process, a PDI that institutionalizes commitments to environmental sustainability, in addition to the organization and planning of academic and administrative management, is to promote and guarantee human activities and actions that can support the needs present in society

without compromising future generations. The PDI sometimes refers only to the sustainability of programs, as a synonym for continuity or as a synonym for economic balance as shown, for example, financial sustainability. In this sense, it can be said that IFPE expressively started its contribution to the issue of sustainability, implementing relevant aspects of sustainability in the organization such as the elaboration of its Environmental Policy, the implementation of the Solar Energy Program on Campus Pesqueira, the administrative structure in the environmental area of Campus Cabo de Santo Agostinho, the internalization of environmental policy in Campus Belo Jardim. However, it is necessary to expand its reflection, in dialogues and debates about the unfolding of sustainability in the academic (teaching, research and extension) and technical-administrative areas. The use of the strategy to define a set of sustainability indicators, to include them in the PDI, makes it possible to strengthen IFPE's environmental policy, in addition to contributing to the construction of action proposals that help to optimize all forms of projects and practices awareness of the culture of sustainability that could positively influence institutional performance in the medium and long term. With the implementation of this set of indicators in the PDI, it is expected to provide more support and create better conditions so that IFPE can evaluate its activities focused on sustainability and strengthen the consolidation of its environmental policy, in addition to allowing the monitoring of various social actions, economic, environmental and institutional.

This study is limited to the proposition of sustainability indicators to the educational institution, considering that they will only be validated during the term of the new IFPE PDI, when data will be collected and its applications and reporting will be made feasible so that results and impacts. As a proposal for continuity, the study aims to monitor the application of the indicators and their results in making a diagnosis of sustainability at IFPE. Subsequently, the proposal to present the diagnosis and discussion with senior management, contributing to decision-making with a view to improving environmental practices and policies. However, the study does not eliminate other perspectives, on the contrary, it serves as a basis for the emergence of new perspectives on the relationship between planning and sustainability indicators that will enable institutions to recognize and analyze what they are doing, their advances, limitations, improvements and planning towards new steps towards sustainability. Planning and evaluation using indicators are important, but change is only achieved through appropriate actions and strategies. For this integration to flow, it is essential that the institution acts based on ethical issues and that it can be committed and engaged in socio-environmental actions. However, more than that, it is necessary to form a joint environmental awareness involving all participants of the institution, teachers, students, and administrative technicians. This study is certainly not the solution to the uncertainties and challenges of the future of IFPE in the area of sustainability, but a path that can reorganize or direct its restructuring towards the construction of a qualified intellectual and technological human capital, aware and involved with sustainable development. and the social-economic inclusion of citizens. Finally, it is necessary to assume its role in addition to the legal requirements imposed by governmental and control bodies and must present in its planning its institutional development model and sustainability goals to be achieved.

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