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SUSTAINABILITY ASSESSMENT IN HIGHER EDUCATION: EVALUATING THE POTENTIAL ADOPTION OF THE UI GREENMETRIC RANKING IN A BRAZILIAN PUBLIC UNIVERSITY

AVALIAÇÃO DA SUSTENTABILIDADE NO ENSINO SUPERIOR: ANÁLISE DO POTENCIAL DE ADOÇÃO DO *RANKING UI GREENMETRIC* EM UMA UNIVERSIDADE PÚBLICA BRASILEIRA

EVALUACIÓN DE LA SOSTENIBILIDAD EN LA EDUCACIÓN SUPERIOR: ANÁLISIS DEL POTENCIAL DE ADOPCIÓN DEL RANKING UI GREENMETRIC EN UNA UNIVERSIDAD PÚBLICA BRASILEÑA

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ABSTRACT

In recent decades, sustainability has become a central issue for Higher Education Institutions (HEIs), which are increasingly expected to contribute to sustainable development through teaching, research, and institutional management. Within this context, international sustainability rankings have emerged as important tools for evaluating and promoting environmentally responsible practices in universities.This study aims to analyze the main challenges reported in the literature regarding the implementation of the UI GreenMetric World University Ranking and to explore the institutional conditions that may influence its potential adoption by a Brazilian public higher education institution—the Federal Institute of Education, Science, and Technology of São Paulo (IFSP). Additionally, the study seeks to compare the sustainability performance of the analyzed institution with that of Brazilian universities that already participate in the UI-GMWU ranking. The research adopts an exploratory and descriptive approach, combining a bibliographic review with a quantitative assessment based on the sustainability indicators established by the UI-GMWU methodology. The empirical analysis focuses on a campus of the Federal Institute located in the interior of the state of São Paulo, Brazil. The findings suggest that, although the institution has not yet been evaluated by the UI-GMWU and is expected to initially presente relatively modest scores, the application of the ranking indicators provides a valuable diagnostic framework. This evaluation allows the identification of existing sustainability initiatives as well as institutional gaps, offering strategic insights that may support the development of future sustainability policies and potential participation in international university rankings.

KEYWORDS: *Sustainability. Higher education. University ranking. UI GreenMetric. Brazilian public universities.*

RESUMO

Nas últimas décadas, a sustentabilidade consolidou-se como uma temática central para as Instituições de Ensino Superior (IES), as quais vêm sendo crescentemente demandadas a contribuir para o desenvolvimento sustentável por meio do ensino, da pesquisa e da gestão institucional. Nesse contexto, rankings internacionais de sustentabilidade emergem como instrumentos relevantes para a avaliação e promoção de práticas ambientalmente responsáveis no ambiente universitário. O presente estudo tem como objetivo analisar os principais desafios apontados na literatura quanto à

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implementação do *UI GreenMetric World University Ranking* (IU-GMWU), bem como investigar as condições institucionais que podem influenciar sua potencial adoção em uma instituição pública brasileira de ensino superior — o Instituto Federal de Educação, Ciência e Tecnologia de São Paulo (IFSP). Adicionalmente, busca-se comparar o desempenho em sustentabilidade da instituição analisada com o de universidades brasileiras já participantes do referido ranking.A pesquisa adota uma abordagem exploratória e descritiva, combinando revisão bibliográfica com avaliação quantitativa fundamentada nos indicadores de sustentabilidade estabelecidos pela metodologia do UI-GMWU. A análise empírica concentra-se em um campus do Instituto Federal localizado no interior do estado de São Paulo. Os resultados indicam que, embora a instituição ainda não tenha sido formalmente avaliada pelo UI-GMWU e apresente, em um primeiro momento, expectativa de pontuações relativamente modestas, a aplicação dos indicadores do ranking constitui um importante instrumento diagnóstico. Tal abordagem possibilita identificar iniciativas existentes e lacunas institucionais, oferecendo subsídios estratégicos para o aprimoramento de políticas de sustentabilidade e para uma eventual inserção futura em rankings universitários internacionais.

PALAVRAS-CHAVE: Sustentabilidade. Ensino superior. Ranking universitário. UI GreenMetric. Universidades públicas brasileiras.

RESUMEN

En las últimas décadas, la sostenibilidad se ha consolidado como una temática central para las Instituciones de Educación Superior (IES), las cuales son crecientemente requeridas a contribuir al desarrollo sostenible mediante la enseñanza, la investigación y la gestión institucional. En este contexto, los rankings internacionales de sostenibilidad han emergido como instrumentos relevantes para la evaluación y promoción de prácticas ambientalmente responsables en el ámbito universitario. El presente estudio tiene como objetivo analizar los principales desafíos señalados en la literatura en relación con la implementación del UI GreenMetric World University Ranking (UI-GMWU)*, así como investigar las condiciones institucionales que pueden influir en su potencial adopción en una institución pública brasileña de educación superior: el Instituto Federal de Educación, Ciencia y Tecnología de São Paulo (IFSP). Adicionalmente, se busca comparar el desempeño en sostenibilidad de la institución analizada con el de universidades brasileñas que ya participan en dicho ranking. La investigación adopta un enfoque exploratorio y descriptivo, combinando revisión bibliográfica con una evaluación cuantitativa basada en los indicadores de sostenibilidad establecidos por la metodología del UI-GMWU. El análisis empírico se centra en un campus del Instituto Federal ubicado en el interior del estado de São Paulo. Los resultados indican que, aunque la institución aún no ha sido formalmente evaluada por el UI-GMWU y presenta inicialmente expectativas de puntuaciones relativamente modestas, la aplicación de los indicadores del ranking constituye una herramienta diagnóstica relevante. Este enfoque permite identificar iniciativas existentes y vacíos institucionales, ofreciendo insumos estratégicos para el fortalecimiento de políticas de sostenibilidady.*

PALABRAS CLAVE*: Sostenibilidad. Educación superior. Clasificación universitária. UI GreenMetric. Universidades públicas brasileñas.*

INTRODUCTION

In the 21st century, the urgency of addressing environmental challenges - particularly climate change, resource depletion, and biodiversity loss - has placed sustainability at the core of the global

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development agenda (Sachs, 2016). HEIs, as centers of learning and innovation, are considered key agents in the promotion of sustainable development, not only through education and research but also via institutional practices and community engagement (Lozano *et al.,* 2015; Filho *et al.,* 2019).

Given their potential influence, universities are increasingly being called upon to adopt sustainability assessment frameworks that promote transparency, benchmarking, and continuous improvement. Among such frameworks, the UI-GMWU, established by Universitas Indonesia in 2010, stands out for its comprehensive approach in evaluating sustainability practices across six dimensions: setting and infrastructure, energy and climate change, waste, water, transportation, and education and research (UI GreenMetric, 2025).

The relevance of this ranking lies in its capacity to stimulate institutional reflection and strategic planning regarding environmental management, especially in the context of global academic competitiveness and the alignment with the United Nations Sustainable Development Goals (SDGs) (Sonetti *et al.,* 2016; Findler *et al.,* 2019). However, despite the growing global participation in UI-GMWU, there remains a noticeable gap in the inclusion of Brazilian public universities, many of which have yet to adopt structured tools to evaluate their environmental performance (Silva *et al*., 2022; Santos and Teixeira, 2021).

This study is justified by the need to understand the current state of sustainability practices in Brazilian public universities and to explore their readiness for integration into global sustainability assessment systems, such as the UI-GMWU. Without such understanding, these institutions may struggle to identify existing gaps, implement effective environmental strategies, and enhance their visibility on the international stage (Azevedo *et al.*, 2017; Leal Filho, 2018).

The central problem addressed in this research is the lack of institutional assessment and benchmarking regarding sustainability in certain Brazilian public universities, specifically, the absence of participation in international evaluation systems such as UI-GMWU. This scenario limits the ability of these institutions to track progress, compare with peers, and establish clear sustainability goals (Leal Filho *et al*., 2018; Amaral *et al*., 2020).

The general objective of this study is to examine the current conditions for a potential future implementation of the UI-GMWU at a Brazilian public university. In addition, it seeks to compare the sustainability performance of this institution, being assessed for the first time, with that of other leading Brazilian universities that have already implemented the UI-GMWU framework.

The specific objectives are to:

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- Identify the main challenges and benefits of UI-GMWU implementation as reported in the literature;
- Evaluate the selected Brazilian public university based on the UI-GMWU framework;
- Propose initial recommendations for aligning the university with international sustainability standards.

To achieve these goals, the study seeks to answer the following research questions:

RQ1: What are the main barriers and opportunities for the adoption of UI-GMWU by Brazilian public universities?

RQ2: How does the current sustainability profile of the selected university align with the UI-GMWU criteria?

RQ3: What strategic measures can be proposed to improve institutional sustainability and foster future participation in the ranking?

This investigation aims to contribute both theoretically and practically to the discourse on sustainability in higher education, offering insights that may guide university administrators and policymakers in aligning institutional practices with global environmental benchmarks.

1. THEORETICAL FRAMEWORK

Sustainability

Sustainability is a concept that originated in the Brundtland Report, published by the World Commission on Environment and Development (WCED, 1987). This concept emphasizes the interaction between the aspirations for improved quality of life and the limitations imposed by nature on those aspirations. The Brundtland Report primarily addresses the needs and interests of humanity, advocating for global equity for future generations through the redistribution of resources to poorer nations, with the aim of fostering economic growth and thereby enabling all of humanity to meet its basic needs. The report conveys a belief that social equity, economic growth, and environmental preservation can coexist harmoniously. It highlights three fundamental pillars of sustainable development: environmental, economic, and social dimensions, which later came to be known collectively as the Triple Bottom Line (TBL).

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Sustainability in educational institutions

In recent decades, the growing global concern regarding environmental, social, and economic issues, aligned with the Triple Bottom Line (TBL) framework, has placed increasing pressure on various sectors to adopt sustainable practices, including Higher Education Institutions (HEIs) (Barros et al., 2020). In this context, HEIs are expected to contribute strategically in responding to societal demands related to climate change and to support broader sustainability efforts, by developing new business models aligned with their mission toward sustainability (Menter, 2024; Suchitwarasa *et al.,* 2024).

HEIs hold significant potential to influence sustainability not only at the local level but also on a global scale, in a variety of impactful ways. On a basic level, the environmental footprint of their infrastructure and operations includes greenhouse gas emissions, air pollution, waste generation, soil and water contamination, and the exploitation of surrounding natural resources (Samara *et al.,* 2022; Torretta *et al*., 2012). Beyond these tangible impacts, HEIs also carry a higher responsibility: to educate students, staff, and the broader community on environmental sustainability and to promote behavioral and consumption changes (Akhtar *et al.,* 2022; Bertossi and Marangon, 2022). Moreover, HEIs play a crucial role in advancing research aimed at discovering new ways to preserve and enhance the human - environment relationship. They are capable of developing new technologies and supporting sustainability initiatives through engagement with surrounding communities, while also serving as role models by implementing and showcasing sustainable practices on campus.

Therefore, HEIs must acknowledge their pivotal role in society and actively propose and implement sustainability strategies within their campuses (Lozano *et al.,* 2013), since such initiatives have substantial social and environmental impacts within the context in which they are embedded (Leal Filho *et al.,* 2019).

UI GreenMetric world university ranking

This ranking was created by the University of Indonesia, UI GreenMetric which was established in 2010 (Galletli *et al.,* 2022; Hazelkorn, 2018). UI GreenMetric was the world's first initiative to assess HEIs in their efforts to fulfill the mission of becoming sustainable. Since its inception, UI GreenMetric has been the pioneering global ranking aimed at evaluating the commitment of HEIs to meeting society's growing demands for sustainability.

The UI GreenMetric is broadly grounded in the conceptual framework of Environment, Economy, and Equity. Its indicators and categories are designed to be universally relevant, with weighting systems developed to minimize bias as much as possible. The process of data collection and submission is straightforward and essential. In 2010, only universities from 35 countries participated in the UI GreenMetric evaluation, totaling 95 institutions—18 from the United States, 35 from Europe, 40 from

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Asia, and 2 from Australia. By 2024, this number had grown to 1,477 universities from 95 countries worldwide. This growth demonstrates that UI GreenMetric has been recognized as the first global university ranking in sustainability (UI GreenMetric, 2025).

Although the UI GreenMetric encourages HEIs to actively engage in campus-based sustainability initiatives (Lauder *et al.,* 2015; Suwartha and Sari, 2013), its scope remains limited by placing minimal emphasis on sustainability research and other broader dimensions not directly linked to environmental preservation (Puertas and Martí, 2019; Ragazzi and Ghidini, 2017). Furthermore, the ranking's comparative nature, based solely on the relative performance among participating institutions, offers limited explanatory value. This limitation becomes especially apparent in light of the geographical imbalance among participating HEIs, with some regions significantly overrepresented while others remain underrepresented (Matulová, 2023). As a result, the actual contribution of the ranking to advancing sustainability may be overstated, with its promotional appeal as a "green ranking" emerging as the primary advantage for institutions and countries involved (Boiocchi *et al.,* 2023).

2. METHODS

This study breaks down its methodology into six steps for better understanding:

2.1. Research design

This study adopts a mixed-methods approach**,** combining qualitative and quantitative procedures to provide a comprehensive assessment of sustainability practices in higher education institutions (HEIs). The research is classified as: Exploratory**,** due to the investigation of emerging challenges related to UI GreenMetric adoption; Descriptive**,** as it systematically evaluates the sustainability performance of a selected institution; Case study**,** focusing on a single campus of a Brazilian public higher education institution (IFSP).

This design is appropriate for understanding complex institutional phenomena within real-world contexts (Yin, 2018).

2.2. Systematic Literature Review

A systematic literature review was conducted to identify the main challenges and limitations associated with the UI GreenMetric ranking.

The review followed structured procedures inspired by PRISMA guidelines, including:

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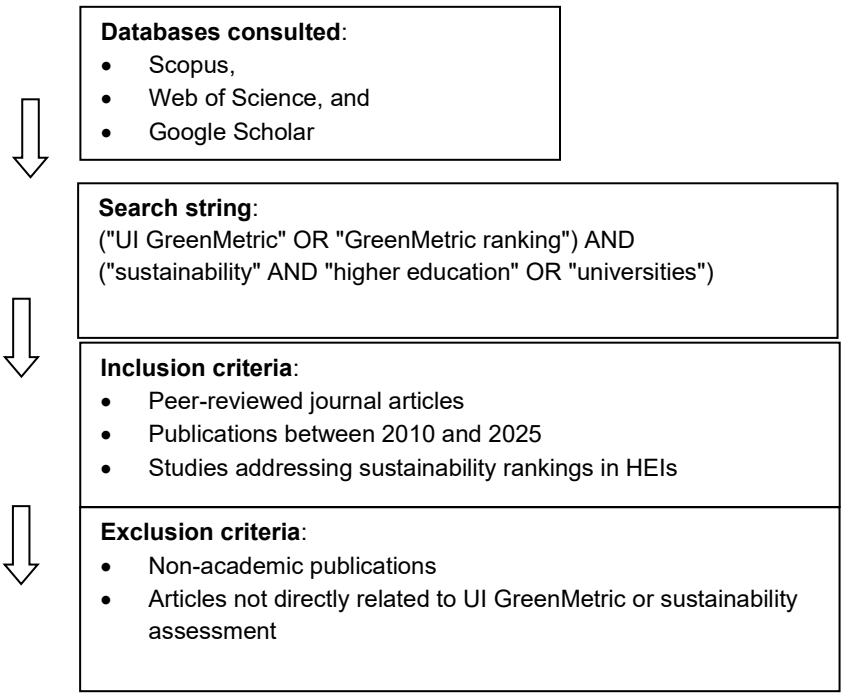
1. PRISMA guidelines



Source: Adapted from MOHER (2009)

The selected studies were analyzed using qualitative content analysis (Bardin, 2011), enabling the identification of recurrent themes such as methodological limitations, data reliability issues, and indicator bias.

2.3. Case study and data collection

The empirical stage consisted of a single-case study conducted at a campus of the Federal Institute of São Paulo (IFSP), located in the interior of São Paulo State, Brazil.

The case selection followed a purposive sampling strategy**,** justified by: Institutional relevance, Accessibility of data and Absence of prior participation in the UI GreenMetric ranking.

Data collection was carried out in July 2025 and involved: Institutional documents (reports, sustainability plans, infrastructure data); Direct consultation of administrative sectors and; Secondary institutional data aligned with UI GreenMetric indicators

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2.4. Sustainability assessment framework

The evaluation was based on the UI GreenMetric Guideline (2025), which includes six dimensions: 1. Setting and Infrastructure; 2. Energy and Climate Change; 3. Waste; 4. Water; 5. Transportation and 6. Education and Research.

Each indicator was analyzed according to the official scoring criteria. The institutional score was calculated through: Mapping available data to each indicator; Assigning scores based on guideline thresholds; Aggregating results to obtain the total institutional score.

2.5. Benchmarking analysis

To contextualize the results, a benchmarking analysis was conducted comparing the evaluated institution with Brazilian universities ranked in UI GreenMetric (2023). The comparison considered: Total score; Performance by dimension and Relative ranking position.

This approach enables the identification of performance gaps and best practices (UIS, 2023).

2.6. Data analysis

The study employed a combination of:

- Descriptive statistics (scores and rankings)
- Comparative analysis (benchmarking with other HEIs)
- Visual analysis using radar charts

Radar charts were used to represent multidimensional performance, facilitating the identification of strengths and weaknesses across sustainability dimensions (Few, 2012).

3. RESULTS

Difficulties identified in relation to the assessment carried out by UI GreenMetric

Based on recent academic literature, several challenges have been identified regarding the assessment process carried out by the UI-GMWUR. These limitations encompass both methodological issues and concerns related to representativeness and practical impact. Below, we highlight the main challenges identified in the literature:

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Lack of Methodological Clarity and Transparency in Scoring Criteria

One of the primary concerns raised in the literature pertains to the lack of methodological transparency and robustness within the UI GreenMetric ranking system. Scholars have noted that the evaluation criteria are not consistently or clearly defined, which hampers the possibility of fair and meaningful comparisons among participating institutions. As emphasized by Ragazzi and Ghidini (2017) and Puertas and Marti (2019), the criticism has been particularly focused on the absence of clarity in how data are collected, validated, and scored, an issue that significantly compromises the credibility of the ranking as an objective and reliable benchmarking tool for universities.

Excessive Focus on Environmental Operational Aspects

Another recurrent critique of the UI-GMWUR is its disproportionate emphasis on the physical and operational aspects of university campuses, such as energy usage, transportation systems, and green infrastructure, while largely overlooking academic dimensions related to sustainability, including teaching and research. According to Lauder *et al*. (2015) and Suwartha and Sari (2013), the *ranking primarily focuses on environmental infrastructure and campus operational practices, while neglecting academic contributions such as sustainability-oriented research, curriculum development, and community outreach.*

Geographical Inequality in Institutional Participation

Concerns have also been raised regarding the global representativeness of the UI GreenMetric rankings. The system tends to reflect the realities of specific regions, particularly Southeast Asia and Europe, while institutions from developing countries are often underrepresented or face significant challenges in participating. *The unequal representation of world regions within the ranking undermines the comparability and generalizability of its results, suggesting a potential geographical bias* (Matulová, 2023).

Limitations in the Explanatory Value of the Results

The UI GreenMetric ranking provides a relative assessment, meaning that institutional performance is evaluated in comparison to that of other participating universities. This comparative approach limits the ranking's capacity to generate absolute diagnostics or define measurable targets. *The practical utility of the ranking is constrained, as it offers little concrete guidance on how to improve sustainability performance and fails to contextualize the data within global frameworks such as the Sustainable Development Goals (SDGs)* (Puertas and Marti, 2019; Matulová, 2023).

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Susceptibility to Self-Reporting and Lack of External Auditing

Another significant limitation lies in the ranking's reliance on self-reported data provided by the participating universities, which may introduce to bias, exaggeration, or inconsistencies, particularly in the absence of independent verification mechanisms. *The fact that data are submitted by the institutions themselves, without the support of a rigorous external audit process, raises concerns about the accuracy of the information and the potential for data manipulation* (Ragazzi and Ghidini, 2017; Findler *et al.,* 2019).

Evaluation of the single campus of the Federal Institutes (IFSP)

For the evaluation of the selected campus, the UI GreenMetric Guideline (2025) was adopted as the reference framework. Based on this guideline, the following results were obtained:

Table 1. Ranking by Country 2025 - Brazil

Rank.	University	Year	Total Score	Setting Infrastr.	Energy Climate Change	Waste	Water	Transp.	Educat.
1*	Univ. de São Paulo	2025	9555	1475	1875	1800	1000	1700	1700
2*	Fed. Univ. of Lavras	2025	9012	1400	1750	1700	1000	1437	1725
3*	U.F. Mato Grosso Sul	2025	8800	1450	1825	1400	800	1612	1662
4*	IF Sul de Minas Gerais	2025	8787	1325	1725	1650	1000	1437	1650
5*	Univ. de Campinas	2025	8712	1225	1575	1725	950	1550	1687
48*	IF São Paulo	2025	2857	535	625	575	247	435	440
49**	IFSP (studied)	2025	2746	305	925	550	10	422	534

Source: * GreenMetric (2025); ** Author himself (2025)

In Table 1, the information for items 1 to 5 and 48 was extracted from GreenMetric (2025). The data corresponding to item 49, which was evaluated and scored by the authors, were based on the updated criteria outlined in the UI GreenMetric Guideline (2025). According to its assigned score (49), this would represent the hypothetical ranking position that IFSP (the institution under study) would hold on the GreenMetric 2025 scale.

As illustrated a radar chart illustrating the scores obtained by the Higher Education Institutions (HEIs), shown in Table 1, In studies related to sustainability in higher education, radar charts are particularly useful because they allow the simultaneous representation of multiple evaluation criteria, such as those adopted by the UI GreenMetric World University Ranking. One of the main advantages of this type of graphical representation is its ability to provide an immediate visual identification of areas with higher or lower performance across different dimensions. Such visualization facilitates the interpretation of complex datasets and supports the identification of institutional gaps, which may guide strategic actions aimed at improving sustainability performance (Few, 2012; Evergreen & Metzner, 2020).

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4. ANALYSIS OF RESULTS

Based on the analysis of the results obtained from our research, we identified in the literature the main challenges reported in the reviewed articles. An assessment was conducted at a selected institution to verify whether the difficulties encountered in practice align with those highlighted in the literature. Therefore, the analysis focuses on comparing the observed implementation challenges with those previously reported in the academic sources examined. All remarks and analytical interpretations presented in this study are grounded in the criteria and guidelines established by the UI GreenMetric Guideline (2025).

Below, we present a set of considerations regarding the evaluation criteria of the UI-GMWUR, some of which are supported by findings in the existing literature. These shortcomings raise concerns about the reliability, transparency, and comprehensiveness of the ranking system.

One such example is the criterion *"Health infrastructure facilities for students, academics, and administrative staff's well-being"* (SI.9), which requests institutions to *"provide information on the availability of physical and mental health services".* It is common for many HEIs to offer mental health support while lacking comprehensive physical health services. However, this distinction is not adequately considered in the evaluation, potentially resulting in skewed or incomplete assessments of institutional support structures.

One of the most frequently cited limitations is the reliance on self-reported data**,** without any formal mechanism for external validation or auditing. Since participating institutions submit their own data, the possibility of inconsistencies, exaggerations, or intentional misreporting cannot be ruled out, thereby compromising the credibility and comparability of results, as already mentioned by Ragazzi and Ghidini (2017) and Findler *et al.* (2019).

Another critical issue lies in the lack of empirical validation of the indicators and weighting criteria. While the ranking uses a set of standardized metrics, the methodological basis for assigning weights to each category remains unclear, potentially introducing bias or distortions in institutional evaluations, as also highlighted by Sonetti *et al.* (2016).

Moreover, the UI-GMWU adopts a narrow focus that overlooks equally important dimensions such as social equity, diversity, community engagement, and institutional governance, thereby limiting the comprehensiveness of how sustainable development is conceptualized within HEIs (Puertas and Martí, 2019; Matulová, 2023). This is particularly limiting considering that we believe HEIs play a fundamental role in driving social, economic, and technological development, not only within their immediate surroundings but also on a global scale.

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Furthermore, the visibility and competitive nature of the ranking may inadvertently encourage symbolic actions or “greenwashing”, whereby universities implement superficial measures aimed primarily at improving their position in the ranking rather than fostering genuine, long-term transformations in sustainability practices, an issue also highlighted by Findler *et al.* (2019) and Lozano (2011).

Another limitation, also confirmed in the literature, relates to the comparability of results**,** as the UI-GMWU provides relative rather than absolute rankings. This makes it difficult to assess institutional progress over time or to make meaningful comparisons across non-participating universities (Matulová, 2023). Additionally, the lack of detailed feedback or performance reports restricts universities’ ability to identify areas for improvement and to design effective sustainability strategies (Findler et al., 2019).

Radar charts allow multiple datasets to be overlaid within the same graphical structure. This feature enables direct comparisons between institutions or evaluation scenarios, thereby facilitating benchmarking analyses. Benchmarking is widely used in institutional performance assessment and university ranking studies, as it supports the identification of best practices and the comparison of sustainability indicators across institutions (UIS, 2023; UI GreenMetric, 2024).

In summary, while the UI GreenMetric ranking plays a significant role in promoting awareness and benchmarking sustainability in higher education, it still faces substantial challenges regarding data reliability, methodological rigor, contextual sensitivity, and practical utility**.** These issues should be addressed through improved transparency, third-party validation mechanisms, and the incorporation of broader sustainability dimensions to ensure more accurate and equitable assessments.

5. FINAL CONSIDERATION

This study has explored the challenges, limitations, and possibilities associated with the implementation of the UI GreenMetric World University Ranking (UI-GMWU) within Brazilian public higher education institutions, using a case study of a single IFSP campus. The findings reveal that, although the UI-GMWU offers an important benchmarking tool for promoting sustainability awareness, it presents methodological and structural limitations that must be critically addressed—particularly regarding data validation, indicator balance, and contextual sensitivity.

The evaluation of the selected IFSP campus, when compared with other public universities already ranked in the system, revealed a relatively low score, which may be expected given the institution’s first participation in the framework. Nevertheless, this preliminary assessment provides a valuable diagnostic of its current sustainability status and may serve as a strategic starting point for planning future improvements.

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The analysis also confirmed several critiques found in the literature, including the ranking's overemphasis on operational environmental indicators, its susceptibility to self-reported data without external auditing, and its limited inclusion of social, cultural, and governance dimensions of sustainability. Furthermore, the relative nature of the ranking restricts meaningful comparisons over time and across institutions not yet participating.

Overall, the use of radar charts provides a clear and intuitive visualization of multidimensional sustainability indicators, contributing to a more comprehensive interpretation of institutional performance and supporting evidence-based decision-making in higher education sustainability management.

Despite these challenges, the UI-GMWU can serve as a useful initial instrument for institutional self-assessment and for fostering a culture of environmental accountability. However, for it to become a robust and equitable global benchmark, its methodology should evolve to incorporate broader sustainability dimensions, include third-party validation mechanisms, and offer more contextualized feedback to institutions.

Finally, the results underscore the critical role of HEIs in advancing sustainability agendas not only on their campuses but also in the wider society. As influential actors in social, technological, and economic development, Brazilian public universities, such as the IFSP, must strengthen their engagement with sustainability frameworks to enhance institutional transparency, international visibility, and their contribution to the United Nations Sustainable Development Goals (SDGs).

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