

PUC-Rio Socio-environmental Agenda: New Steps Towards Sustainability in the University



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Abstract The way towards sustainability for the collective environment of university activities has a crucial role in achieving broader institutional sustainability goals in education, research and projects, both inside and outside university walls, particularly concerning its impact on society. This chapter discusses obstacles and opportunities for the sustainable transformation of the university environment, considering the ongoing process and investments of the Pontifical Catholic University of Rio de Janeiro in the sustainability of its Campus, especially concerning the application of its brand-new Socio-environmental Agenda (an institutional planning instrument built in participatory process over two years). The chapter analyzes the obstacles to implementing the Agenda, regarding (1) governance, (2) teaching and curriculum, (3) research, and (4) projects in all eleven new agenda items, defined as basic topics (water; biodiversity; energy; waste; constructed and living spaces; mobility)

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W. Leal Filho et al. (eds.), *Universities as Living Labs for Sustainable Development*,
World Sustainability Series, https://doi.org/10.1007/978-3-030-15604-6_44

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and crossing topics (education, health, communication, information technology and resilience to climate change). Definition of priorities, governance strategies, continuous monitoring, funding, new applications of technology and resisting inadequate paradigms are some of the obstacles observed, offering contributions to the exchange of good practices for the community of higher education worldwide.

Keywords Education · Sustainability · Socio-environmental agenda · Living lab · Participatory process

1 Introduction: PUC-Rio's Sustainability Project

The purpose of this article is to contribute to the debate about the challenges and opportunities for the implementation of sustainability in Higher Education Institutions (HEI) from the experience of the *Pontifícia Universidade Católica do Rio de Janeiro—PUC-Rio* (Pontifical Catholic University of Rio de Janeiro). The institution values common well-being and holds the search for sustainability as a mission. PUC-Rio has been working for more than seven decades in the production, updating and dissemination of that knowledge which continuously fosters the development of society. PUC-Rio's path for promoting the sustainability of the institution was the creation of the Environmental Agenda in 2009 (NIMA 2009). The University is currently concluding the revision and expansion of the Agenda in the light of the *Laudato Si'* Encyclical of Pope Francisco (2015), and the debate on Sustainable Development Goals—SDG (United Nations 2015).

The first Environmental Agenda of PUC-Rio is the result of one year of work by the Commission for the Sustainability of the Campus, coordinated by the *Núcleo Interdisciplinar de Meio Ambiente—NIMA* (Interdisciplinary Center for the Environment). An inter-disciplinarily team of teachers, students, employees and volunteers was formed to produce the document that has established a number of actions that enable and promote sustainability at the Gávea Campus of the University, among which are local practices based on humanitarian, scientific and ethical principles, divided into four topics: Biodiversity, Water and Energy; Materials and Waste and Environmental Education.

The strength and testimony of local actions is extremely important to enlighten and enrich the global proposals for planetary sustainability, contributing to change habits and the process of building new practices (ethos). This is the only way of carrying out the utopia of a world where environmental and social relations are truly more balanced, both for the present generations and for those who will succeed us in the future. (SIQUEIRA, in NIMA 2009, p. 7, authors' translation)

After seven years since the publication of the University's first document for campus sustainability, work for its revision, expansion and updating had started in 2016. Such action was necessary due to the socio-environmental changes that have occurred in recent years, added to new discoveries in environmental science and the publication of the Pope's *Laudato Si'* Encyclical on Care for Our Common

Home (Francisco 2015), which proposes a systemic, inclusive and trans-disciplinary approach to the ecological crisis that is being faced. Francisco's Encyclical has confirmed the university's belief in the paramount importance of its duty to set the example of responsible behavior regarding social and environmental issues, as well as its social role in leading transformational processes and creating the tools for innovation. Due to the importance given to community inclusion, awareness and experience in sustainability to transform society and to undo unsustainable behavior, Francisco's Encyclical has also inspired even greater emphasis on the participatory process in the concept of the new agenda, as compared to the first one. Furthermore, the agenda has inspired the very definition of new topics, such as resilience regarding climate change and health, which were especially emphasized in the Encyclical.

Therefore, due to the deeper focus on social issues, the new agenda was named the Socio-environmental Agenda of PUC-Rio, reinforcing its importance for strategic action. The Agenda is a powerful management tool that establishes a community pact to consolidate the institution as a sustainable structure, contributing to an effective governance system of the university. It is updated through an inclusive, collaborative and multidisciplinary discussion process.

The work of revision of the Agenda was conceived with the premise of certain primary conditions that guarantee, among other things, community participation with all its diversity and complexity, as well as the space where it is located. Therefore, the structure and content of the Agenda integrates topics with the participation of students and teachers from different backgrounds and reflects urgent issues for society within a vision of the University's potential for innovation.

Based on the assumptions defined above, the Agenda is being organized in seven parts: principles, which guide actions; diagnosis, which indicates the current status of sustainability at the University; guidelines for the set of actions that respond to the diagnosis and meet the principles; goals that detail the guidelines and prioritize the actions; projects that make it possible to achieve the goals; indicators to monitor the effectiveness of actions; and, finally, the creation of monitoring and governance strategies.

Through a collaborative process, eleven topics were chosen to be highlighted in the Agenda, including five from the 2009 document: Water, Biodiversity, Energy, Waste; and Education. Six new themes were incorporated: Health, Constructed and Interaction Spaces; Mobility; Communication; Resilience; and Information Technology. "Basic Topics" (Water, Biodiversity, Energy, Waste, Constructed and Interaction Spaces and Mobility) were worked in separate chapters, although they may be interrelated, whereas "Transversal Topics" (Education, Health, Communication, Resilience, and Information Technology) are designed to have multiple interference with the other issues.

The collaborative and inclusive construction of the Social and Environmental Agenda of PUC-Rio required the use of different methods in four distinct stages. In the first, called the Preparatory Stage, a group composed by 50 volunteers (teachers, students and staff, most of them from NIMA) held meetings for four months to define a work plan and the proposal for the document structure and strategies for its implementation.

The second stage was called Principles, Diagnosis and Guidelines (PDG), which included research scholarship students on the team through an integrated and multidisciplinary scientific initiation project, as well as new undergraduate students, masters and volunteer teachers divided in three working groups. In this phase, much debate regarding PDG with the community of PUC-Rio took place with the participation of about 200 students and teachers during the XXII Environmental Week (EW) of PUC-Rio in 2016. From the meetings held, the “sensitivity diagnosis” surveys and new discussions were conducted.

The third step was called Goals and Projects (GP). At this stage, the campaign for dissemination and the call for collaborative participation was intensified. The virtual participation environment and working groups continued active, as well as the general meeting for discussion of the PDG established in the second stage and the proposal of the goals and projects that occurred in the EW of 2017 (about 200 participants again). The fourth and last step, called Indicators and Monitoring (IM), focused on the preparation of indicators and strategies for monitoring or follow-up of the implementation of the agenda and updating its goals and projects.

In its final format, currently being revised for publication, the Agenda comprises three volumes. The first one is the Social and Environmental Agenda itself, which includes Principles, Diagnosis (summary), Guidelines, Goals, Indicators and Strategies for Monitoring and Governance. The second one presents the portfolio of projects to be executed and managed to reach the goals, according to the collective construction of the community. The separation of this volume from the first one was strategic to guarantee the durability of volume one and to allow for the dynamic updating required for the project portfolio. The third volume is a record of the whole process, acting as the work’s calculation memory, including the theoretical discussions, the complete diagnosis and additional information about the whole complementary process to the Agenda.

The collaborative and inclusive work of reviewing and expanding the PUC-Rio Agenda has as its background four fundamental topics: (i) understanding the document as a management tool able to collaborate for effective governance of sustainability in the university; (ii) the importance of a curriculum that addresses social and environmental issues; (iii) the need to carry out and disseminate scientific research on the themes of the Agenda and dedicated to socio-environmental sustainability; and (iv) the development and monitoring of projects related to the sustainability of the campus and collaborate to achieve the established goals. These topics focus specially on the challenges and opportunities of the new PUC-Rio Socio-environmental Agenda.

In order to reach its objective, this article is divided into two chapters and presents a preliminary conclusion regarding the experience of PUC-Rio in the implementation of the sustainability in the campus. The first chapter shows a theoretical review of global concepts and resolutions that surround universities as potential centers for promoting sustainability. The second chapter shows and discusses the obstacles and opportunities found in the implementation of the PUC-Rio Socio-environmental Agenda.

2 Sustainability on University Campuses: A Global Agenda

Aware of its role as a driver of changes in the society and its influence on the breaking of paradigms, the Higher Education Institutions have sought the best mechanisms to incorporate adequate institutional policies and management systems in their physical operations and in their educational system in order to institutionalize their commitment to the sustainable development.

To convert a university into a sustainable environment through the concepts of sustainable development, it is necessary not only to be ecologically responsible, but also economically viable while finding and disseminating solutions for social problems. In order to contribute to sustainable development, institutions of higher learning should consistently foster sustainability beyond their boundaries (Alshuwaikhat and Abubakar 2008).

In pursuit of the ideal way to implement the Global Agenda for Sustainable Development, the HEI have developed their own institutional agendas based on their political contexts, corporate principles and heedful attunement to current issues of local and global society. The HEI are also mainly committed through networking in the academic environment to find sustainable solutions for society, but also through adherence to statements of global scope for sustainability in the HEI, among other forms of engagement (Larrán Jorge et al. 2015). Thus, HEI cooperate to transform society beyond the limits of the university. However, the transformation of the institution itself remains a major challenge.

The true success of an institutional environmental agenda is in implementing its content to reach goals and advance indicators of sustainability, which are the main and most important obstacles to overcome for transforming the university in the sense of social and environmental sustainability. Naturally, institutions will continuously encounter new obstacles and must be prepared to adjust goals and actions constantly within efficient systems of local governance.

One of the issues raised regarding the challenges of implementing sustainability in the HEI is to address the three dimensions of sustainability: ecological, economic and social. Alshuwaikhat and Abubakar (2008) point out that many universities implement measures to protect the environment as initiatives for sustainability; although, the economic and social dimensions are insufficiently addressed. In order to ensure a systemic approach of sustainability in the universities, the authors suggest a management structure that minimizes the limitations of systems focusing on ecological issues and guarantees sustainability through the integration of three strategies: “application of an Environmental Management System (EMS), public participation and social responsibility, and promotion of sustainability in teaching and research” (Alshuwaikhat and Abubakar 2008, p. 1777).

The capacity and governance strategies of the institution will therefore be extremely important to the successful implementation of a local sustainability agenda.

According to Avila et al. (2017): “when a university seeks to implement sustainability initiatives as part of its daily activities, a set of barriers are encountered, which

need to be addressed if the proposed activities are to yield the expected benefits” (Avila et al. 2017, pp. 1275–1276) As so, many barriers associated with: management, technology, availability of resources and institutional culture are found and have to be dealt with. Indeed, the capacity for engaging agents within the community is also fundamental. For this purpose, it is central to disseminate information, among other actions.

It is important that decision-makers and the community-at-large see campuses as places of opportunity and areas to foster emerging strategies for managing and deploying appropriate technologies. In an exploratory study conducted by Aleixo et al. (2018) to investigate how the stakeholders of the Portuguese Public College Institutions seize such opportunities, the authors include not only the concept of sustainability, but also sustainability within the HEI and the role of higher education for sustainable development. The study concluded that while leaders, students, management teams and other stakeholders are aware of the concept of sustainability, they are not yet familiar with the concept of Sustainable Universities.

The involvement and commitment of an organization’s leadership with a policy or management system is critical to the successful implementation of such tools. The example of leadership facilitates the breaking of resistance of the various silos of an organization and contributes to the adherence of all areas of the institution to new institutional cultures.

Initiatives for transforming environments, inserting new concepts and breaking of paradigms require the involvement of as many actors as possible. The adoption of the participatory process in the construction of institutional policies and in the operationalization of commitments generates greater commitment and legitimacy to the process. According to Disterheft et al. (2015), the participatory process is the key to creating a real community consciousness regarding sustainability and to incorporating it in the culture of the institution. It can also facilitate dialogue, empower stakeholders and increase commitment to the issue.

These processes, which value diversity and multidisciplinary, often imply difficulties in the need of capacity building and leveling of knowledge among all involved as the first indispensable step of the process. This model of participation, when adopted within HEI, can be transformed into opportunities as the knowledge to be disseminated can be incorporated into the academic curriculum, generating inclusion of the subject in the curriculum and commitment of those involved in the implementation of the developed content.

Bekessy et al. (2007) makes an important remark in stating that, in order for statements to be more than simple promises and the intended results achieved, HEI should adopt a posture of transparency in the processes and developments regarding honorable commitments. Permanent changes can only occur if engagement reaches as many people as possible, not just a small group.

The research done at the Institute of Technology University in Royal Melbourne, described in the article “The failure of non-binding declarations to achieve university sustainability—a case of study” by Bekessy et al. (2007), identified some obstacles for achieving sustainability at the institution, including: (i) the high academic and institutional independency of the units within the university, constraining the need of

interdisciplinary approaches to achieving sustainability; (ii) several general financial constraints; (iii) the lack of solid and comprehensive knowledge of sustainability; (iv) and the inadequacy of the built environment.

Therefore, the barriers to change are not primarily financial, as one might imagine, especially in less wealthy contexts. The cultural characteristics of each group and place, as well as the will to change, are equally important.

What is more: a consistent and permanent transformation in a complex structure such as HEI or other collective and institutionalized structure must have its actions and their results constantly measured and monitored. As Adams (2013) points out, regarding the importance of the practice of periodic sustainability reports for institutions that wish to achieve effective transformation, “what gets reported, gets measured; what is not measured, is not managed; and if you are not managing sustainability performance it is difficult to improve it, or know if it has improved” (Adams 2013, p. 385).

The importance of precise indicators that can demonstrate the evolution of the implementation of an Agenda is paramount to generate credibility for the proposed actions and to demonstrate with precision the evolution of the achieved results. Hák et al. (2016) carried out a critical evaluation of the proposed indicators to measure the implementation of the action plan established to achieve the SDG during the process of constructing Agenda 2030 indicator framework in 2015. In this paper, the author remarked that indicators with faulty elements could generate misrepresentation of the results and undermining of the proposed targets for Agenda 2030.

According to Berzosa et al. (2017) the tools for evaluating sustainability may define sustainability strategies adopted and action in the institution. The authors also point out that adequate measurement and monitoring systems and indicators that accurately demonstrate results are useful for leaders to adopt correct strategies and effective actions to seek sustainability, requiring less financial resources.

However, the solid basis for an effective Socio-environmental Agenda is primarily a coherent and accurate diagnosis stage of the current scenario, which indicates the effective level of sustainability of the institution in each aspect of the institution's interest and of the Agenda itself. It is the “V₀” of each topic to be worked by the university to reach sustainability. The projects and goals resulting from this initial assertive evaluation can therefore be given a correct priority and focus on the adoption of more effective actions.

The core activities of HEI are generally teaching, research and academic extension (or the set of forms of relationship with society—individuals, groups, companies and governments). Therefore, in order to achieve a high level of sustainability at the University, it is paramount that these three fields of action are transformed in an articulate way, creating a positive cycle of self-feeding among them. This presupposes the inclusion of sustainability issues in the curricula of professional training courses, allowing them to be updated with the global concern about the durability of the contemporary society and enabling the training of professionals prepared to face the challenge of the global and local social and environmental crisis. It also implies encouraging and investing in sustainability research in all areas, fostering the interest of students in the subject, self-feeding education with innovation in the

field and collaborating to find solutions for the university itself in the search for its transformation. It is also necessary to invest in order to the knowledge generated and the professionals trained and acting at the university to reach society through projects, social actions, collaborations, leadership and example.

The Global Agenda 2030, in one of its main approaches, considers educational institutions as key players in the transformation process for sustainable development. From the studies of Weybrecht (2017), the SDG represent an opportunity for HEI in all academic and scientific activities, as well as an opportunity in the campus management to incorporate sustainability. Considering the global scale of performance of Agenda 2030, the author also highlights the opportunity of joining business schools and researchers to work together for change.

According to Alshuwaikhat and Abubakar (2008), due to the educational role of universities, some responsibilities related to sustainability fundamentals can be achieved by incorporating concepts and practices into regular courses, curricula, academic and scientific activities and research.

Another important approach in terms of curriculum and research is the adoption of an interdisciplinary vision to address sustainable development issues. Anna-Diab and Molinari (2017), in a study to demonstrate the importance of adopting the interdisciplinary approach to sustainable development, conclude that “inter-disciplinarity promotes the ability to understand complex problems and act on them, aligned to the expected results from education for sustainable development” (Anna-Diab and Molinari 2017, p. 81).

Many HEI have incorporated curriculum, research, campus operations, community dissemination, evaluation and reports, both the environmental education and the education for sustainable development in their institutional framework. To this end, Ramos et al. (2015) analyzed around thirty-three articles illustrating measures and efforts to contribute to the sustainable environment of universities. These papers discussed not only the implementation of sustainable development, but also the stakeholders’ involvement and participation, the campus operations, sustainability reporting and assessment, organizational change management and curriculum development. The authors conclude that, while there is growing evidence that HEI currently present more “holistic and systemic approaches to sustainability, there are still many challenges, such as better integration of Education for Sustainable Development into curricula, research, and most importantly holistically into their systems” (Ramos et al. 2015, p. 9).

In 2007, the University Kebangsaan Malaysia (UKM) launched two important instruments for the full integration of sustainable development practices at the university by 2020: a UKM Sustainable Letter and a UKM Sustainability Program with the theme “UKM Sustainability for Malaysia and the World”. In parallel, a study was carried out to determine the level of knowledge, awareness, attitude and availability to participate in sustainable development programs. Among the challenges, weak points and obstacles to achieve the university’s goal of having a sustainable campus by 2020 was “to build the capacity for staff to establish and operate a sustainable campus” (Derahim et al. 2012, p. 276). In addition, the administration of the university realized the great importance of strengthening the management system, so that

the entire community, inside and outside the university) can feel comfortable inside the campus, thus offering support for the achievement of the objectives.

Another finding that reinforces the state-of-the-art in practices associated with sustainable development, regards the inclusion of SDG in the curriculum, research and communication of institutions. It means that, although HEI leaders acknowledge their importance, such inclusions have not yet been implemented and/or designed. Whereas HEI play a critical role in promoting SDG, and the efforts of their leaders are vital to the achievement of such goals, there is a conceptual challenge for academics in the future: elaborating an interdisciplinary curriculum that allows for performance in projects of sustainability, while, at the same time, guarantees its capacity for employability.

Finally, the success of an institutional sustainability agenda also depends on the capacity to coordinate and implement projects not only conducted within their physical, educational and management structures, but outside such institutions, in the community-at-large and in society, to achieve the necessary transformation as defined by the goals of the agenda. Ideally, these projects will be designed and executed in cooperation with students, teachers, institutional staff and the community, via interdisciplinary teaching, research and extension activities, whenever possible, thereby increasing awareness, community engagement and transformational capacity of measures for institutional sustainability.

3 Obstacles and Opportunities for Implementing the Socio-environmental Agenda of PUC-Rio

PUC-Rio's experience with the 2009 Environmental Agenda (now Socio-environmental Agenda) highlights the interrelationship between the university's capacity of *governance* for sustainability, the incorporation of concern for *sustainability in education*, the production of knowledge in this area (through *research* activities) and the ability to find *solutions* and execute *projects* that increase sustainability *inside and outside the university*.

An example of this interrelation is observed when including different agents in constructing a pact for the sustainability of the university when building the agenda, which is decisive for expanding community awareness and engagement, especially that of students, with whom it had a positive impact—not only on the legitimacy of the management tool, but also on the students' interest in the subject of sustainability in the different areas of knowledge, thereby creating a clear demand for subjects and research.

As witnessed in the Agenda, such a demand has the potential to stimulate and renew the supply of subjects that reflect concern for the environment. The demand for such content, as well as the student movement surrounding proposals of solutions and projects to reach the goals of the Agenda, during the very process of its drafting, has enormous potential to encourage research in the area. This would be focused not

only on the sustainability of society, but also on its specific and contextual challenges of the sustainability of the Campus itself. It is the first strong indication of a positive mutual impact among good governance for sustainability, teaching, research and academic extension activities.

The incentive for research in the area of sustainability has already been given by the university's central management, which, for example, awards scientific initiation projects that deal with issues related to socio-environmental sustainability, contributing as an opportunity to the success of the implementation of the Agenda in PUC-Rio.

In addition, the research on campus-based sustainability and its local-specific issues, associated with the growing supply of academic disciplines with the same subject, are the ingredients for the establishment of a living laboratory in the university, or rather, *the consolidation of the university as a living laboratory of sustainability*.

This is another opportunity identified by the process of constructing the new environmental agenda of PUC-Rio in the last two years of work, and it is one of the most emphasized points by the group of students, teachers and staff who participated in the preparation of the socio-environmental agenda.

A living sustainability laboratory, however, is not consolidated in a university with the complexity and solidity of PUC-Rio without overcoming a set of obstacles, among which are the rigidity of the curricula of several courses and the delay in the modification of these curricula—when and if already dealing with any resistance from the teaching staff.

Throughout the process of preparing the Agenda, the Interdisciplinary Center for the Environment (NIMA) of PUC-Rio carried out a survey of subjects related to sustainability offered in the 27 departments of the University. Most courses in this area are elective, i.e., external to the compulsory curricula, and has remains so for years, without being incorporated into those curricula, reinforcing the suspicion of their high rigidity. On the other hand, the fact that 47 sustainability disciplines, distributed among 20 undergraduate programs at the University, were identified in a preliminary survey suggests a strong predisposition for adherence to the topic. A movement that is almost counterculture is certainly a great opportunity. Another positive factor to increase the environmental awareness of students in the classroom was the implementation, in 2017, of the discipline on the topic Socio-environmental Ethics and Human Rights of the Department of Theology, replacing the discipline Professional Ethics in the obligatory curriculum of subjects of Religious Culture of undergraduate programs.

Regarding research, the main obstacle seems to be the adaptation of the obligatory interdisciplinary nature of this topic in the open calls for proposals of local institutions that are still quite strict, as well as the criteria of national evaluation to which the researchers are submitted in the country, according to information provided by several teachers, directly influencing their topic options.

Obviously, the difficulties of fostering interdisciplinary research will be reflected in the promotion and development of the university extension projects. Although internally this can be more easily solved by the institution, the extension of this kind of initiative beyond the structure of the University is essential to ensure the leading

role that HEI represent for society. For this purpose, the institution needs not only to exercise sustainability within its structure and influence transformation through example, but also to cooperate with the local community—with the neighborhood, the city—in actions and projects for its own transformation.

However, what is most striking when observing what happens with research in the area is precisely that the same interdisciplinary character which may be an obstacle to its expansion is also a huge potential for PUC-Rio. There is proximity among departments, teachers and students of the different areas as a strong brand, positively boosting the interaction among the areas. This proximity is conditioned by the physical characteristics of the main Campus, in the Gávea neighborhood, but it is reinforced by the institutional guideline of maintaining all undergraduate programs within the same Campus, forcing direct contact among the people of its community. And this vocation is evidenced, for example, by the existence of the Interdisciplinary Center for the Environment, created in 1999, whose main purpose is to gather the wide diversity of knowledge and articulate interdisciplinary actions inside and outside the University, in order to encourage socio-environmental sustainability.

The very formation of the PUC-Rio community is, in itself, a promising opportunity for the successful implementation of the Agenda. The university is community-based and offers some form of financial aid scholarship to approximately 50% of its approximately 12,000 undergraduates. It results in a very diverse student population in terms of social groups, purchasing power, as well as geographical origin, which goes beyond the borders of the country. This diversity is a fundamental ingredient not only for the quality of the Agenda, but also for its implementation, by bringing together different economic and cultural backgrounds, life experiences and experimentation with environmental challenges and previous solutions—knowledge that naturally contributes to the discussions and proposals for the Agenda and its implementation.

The combination of disciplinary plurality and socio-cultural diversity in the construction of the Agenda, which will potentially have a direct impact on its implementation process, proved to be challenging for the priority-setting stage that is central to the effectiveness of the Agenda as an institutional management tool. The discussions held in the seminars and workshops of the XXIII and XXIV Environmental Weeks managed to gather many ideas for the sustainable transformation of the university, projects and dreams that were not consistent enough in the prioritization of actions, a task that was completed by the NIMA team.

In the profusion of ideas and projects proposed by the community in the collective construction of the agenda, the greater emphasis was certainly given to the use of new technologies for sustainability solutions in the ecological aspect, not excluding the direct interference in the economic aspect. Therefore, the themes “biodiversity”, “water”, “energy”, “waste” and even “mobility” and “constructed and interaction spaces” received more concrete and emphatic proposals, such as the recovery and expansion of green areas with ecological function, improvement of the quality and reduction of water consumption, waste management, reduction of consumption and local generation of energy, reduction of the use of automobiles, expansion of areas of permanence, social interaction and study on campus, among others. Although the

emphasis on technological innovation has undoubtedly arisen in these areas, which is compatible with its more concrete nature, this has not happened to the detriment of consistent proposals in terms of investment in social capital, reinforcement of collaboration networks, improvement of the interaction environment in order to make it more creative and aligned with the ongoing transformations in the society, associated with the proposals of transformation in the curricula experienced by students in a day-to-day basis, mostly in the collaboration group, thus also emphasizing the “education” theme.

However, more arid and less concrete issues—such as “health”, “resilience to climate change”, “information technology” and “communication”—were addressed as “transversal” in the Agenda for this very reason—were not excluded from the interest of the community, although the proposals were more moderate. Certainly, these issues are crucial to fostering sustainability in society and in the contemporary context and require special care in the preparation of the Agenda by the institution’s technical team, given the lack of familiarity with the community-at-large, demonstrating a challenge to be overcome.

4 Conclusion

The contemporary world is characterized by an unprecedented crisis between society and nature, expressed in the unbridled use of finite natural resources, from unsustainable actions that compromise the services of life support. The *Laudato Si’* Encyclical clearly shows this contradiction and calls for the citizens of the planet to act locally and globally in a coordinated way to search for sustainable models of coexistence that can assure adequate living conditions for present and future generations.

In this context, universities face a major challenge in their three dimensions: in teaching, research and academic extension. Thus, the scientific effort requires multidisciplinary approaches and different participatory methodologies that generate integral solutions with a sustainable bias. Such research needs to interact and reformulate segmented teaching dynamics with transverse contents that provide students with an integral view of the individual-nature relationship. In the same approach, academic extension gains a new weight in offering concrete and affordable solutions to society by allowing the student and the researcher to consolidate the process of and the commitment to a new paradigm of sustainability in an integrated and multifaceted action.

The example presented by PUC-Rio, which describes the long participative process of consolidating sustainability at the University, clearly shows the dynamics, comprehensiveness and complexity of the agents involved, suggesting the importance of a clear and objective commitment of the University administration, of its teachers and students groups and of its employees, to new concrete and daily actions for sustainability as a goal and challenge for all.

The present study confirms the importance of the instrument used, the review of the Socio-environmental Agenda of PUC-Rio, in order to outline the holistic and

multidisciplinary vision that the sustainable management of a university campus demands. The option to use Laudato Si' as a conceptual framework of the process was very promising, as well as the different levels and methodologies of articulation and action such as lectures, workshops, seminars, research projects coordinated by teachers, students and scholarship student of the Institutional Program for Scientific Initiation, were found to be tangible actions with a strong impact on the University as a whole. The organization of the synthesis-document, which mirrors the results of the process, was renewed and expanded, as the guidelines and goals branched out into projects, responsibilities and indicators, as well as the number of topics raised from seven to eleven, in order to incorporate the substantive dimension of humans in the configuration of PUC-Rio's new Social and Environmental Agenda.

In conclusion, the process presented in this article proved to be constructive and evolutionary, capable of stimulating the sustainability of the University, which can be used by other universities undertaking the commitment for transformation, aligning the dynamics to local realities with regional and global scales.

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