



Received:
October 13, 2024

Accepted:
October 21, 2025

Published:
October 31, 2025

Vagão Sustentável: Extension Practices for the SDGs - Insights from a UFVJM Experience in the Mucuri Valley

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Abstract

This paper presents the results carried out at the Mucuri Campus of the Federal University of the Jequitinhonha and Mucuri Valleys (UFVJM), in Teófilo Otoni, Minas Gerais, held in reference to World Environment Day. The initiative aimed to raise awareness among the academic and local community regarding responsible consumption, environmental education, and solidarity. The actions included a swap fair, ecological thrift store, donation drive, selective waste collection, and seedling distribution, all conducted in an integrated and coordinated manner. Participants included students, faculty members, administrative staff, representatives from ASCANOVI, the State Institute of Forests (IEF), and elderly residents from the Vila Esperança neighborhood in the city. As outcomes, food and clothing were collected and donated to the “Pão Nosso de Cada Noite” Project, approximately 50 native and fruit tree seedlings were distributed by the IEF, and recyclable waste was properly disposed of, reinforcing the sustainable dimension of the activity. The experience was aligned with five Sustainable Development Goals (SDGs) from the UN’s 2030 Agenda: SDG 1 - No Poverty, SDG 11 - Sustainable Cities and Communities, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, and SDG 15 - Life on Land, demonstrating the potential of university extension as a tool for socio-environmental transformation and the strengthening of territorial sustainability.

Keywords: Exchange fair; Environmental sustainability; Responsible consumption; UN 2030 Agenda.

1. Introduction

University extension has been consolidated as an important instrument for promoting sustainable development, especially in regions marked by social and environmental vulnerabilities. In the context of the 2030 Agenda of the United Nations (UN), which establishes the 17 Sustainable Development Goals (SDGs) as global guidelines for poverty eradication, environmental protection, and the promotion of prosperity (UN, 2015), public universities play a strategic role by linking academic knowledge to social demands.

Recent research shows that extension activities, when aligned with the SDGs, enhance the social impact of higher education institutions by strengthening inclusion, social justice, and community innovation (Marcolin and Borsatto, 2024). In this sense, the incorporation of these goals into extension initiatives enhances academic practices focused on sustainability, demonstrating that the university is a privileged space for building collaborative and transformative solutions (Lenzi and Gomes, 2023).

In this scenario, the Federal University of the Jequitinhonha and Mucuri Valleys (UFVJM) plays a strategic role in the Mucuri Valley, a territory

characterized by significant socioeconomic and environmental challenges. Studies indicate that the region presents low income and human development indexes, along with negative health indicators such as infant mortality, which highlight its deep vulnerability (Fonseca, Souza and Aguiar, 2019). This reality reinforces the need for integrated actions involving public authorities, civil society, and higher education institutions to promote local sustainable development (Brazil, 1999).

In this context, UFVJM, through its territorial vocation and educational commitment, connects academic knowledge with regional demands through university extension. Activities such as the production and distribution of native seedlings exemplify the transformative potential of these initiatives, by promoting environmental education and encouraging ecological awareness among students and the community (Gonçalves et al., 2025).

The central problem of the study consists of understanding how such extension activities contribute to the advancement of the SDGs in university and peripheral community spaces.

Therefore, the study is justified by the role of public universities, such as UFVJM, in translating the 2030 Agenda into concrete practices that promote social inclusion, responsible consumption, and environmental education. University extension is consolidated as a transformative vector by linking the university with peripheral communities, democratizing knowledge, and fostering sustainable territorial development (Frota, 2017).

Thus, the present study aimed to present and discuss the results of an extension experience developed at the Mucuri Campus of UFVJM, in commemoration of World Environment Day, highlighting its contributions to promoting sustainability and advancing the SDGs through practices of responsible consumption, environmental education, and solidarity.

2. Methodology

The extension activity, entitled “Exchange Fair, Ecological Thrift Shop, and Food Collection for the Project Pão Nosso de Cada Noite,” was held on June 6, 2025, from 9:00 a.m. to 5:00 p.m., at the Mucuri Campus of the Federal University of the Jequitinhonha and Mucuri Valleys (UFVJM), located in Teófilo Otoni, MG. The initiative was carried out in partnership with the State Institute of

Forests (IEF, 2025), the Association of Recyclable Material Collectors Nova Vida (ASCANOVI) (ASCANOVI, 2003), and the NGO Project Pão Nosso de Cada Noite (Pão Nosso de Cada Noite, 2025). The practices implemented included the execution of the following activities:

1. **Exchange Fair and Ecological Thrift Shop:** Organization and execution of a fair aimed at exchanging clothing, footwear, household items, and books, previously discarded or unused by the participants. The redistribution of these goods sought to encourage reuse and circular economy practices, reducing the demand for new products and promoting sustainable consumption habits.
2. **Collection and Charitable Donation:** Gathering of food supplies and warm clothing intended for socially vulnerable populations served by the *Pão Nosso de Cada Noite* Project, reinforcing the socio-assistance dimension of the initiative.
3. **Seedling Distribution and Environmental Guidance:** The State Institute of Forests (IEF) participated in the initiative by donating approximately 50 seedlings of native and fruit-bearing species, as well as providing technical guidance on proper planting, with the aim of promoting urban afforestation and environmental conservation in the region.
4. **Selective Collection of Recyclable Materials:** The ASCANOVI Association of Waste Pickers carried out the collection and proper forwarding of recyclable materials brought by participants, highlighting their commitment to the adequate management of solid waste and the socio-economic inclusion of waste pickers.

The initiative was conducted with a focus on the integration of the university, community, and partner institutions, seeking to articulate academic knowledge and local demands in favor of sustainable development. It involved two university extension projects: Vagão Sustentável: Environmental Education and Territorial Sustainability in Support of the SDGs (PROEXC: 20251012025293551) and SDGs in Practice: Circular Economy and Social Sustainability with Exchange Fair, Ecological Thrift Shop, and Charitable Bazaar (PROEXC: 202203001379)

3. Results and Discussion

The extension experience carried out at the Mucuri Campus of UFVJM demonstrated significant social and environmental impacts, aligned with various SDGs. The results indicate that the direct participation of different actors – including 10 elderly members of the local community, administrative technicians, outsourced staff, students, and faculty – produced multiplier effects in the Teófilo Otoni region.

The Exchange Fair and the Ecological Thrift Shop were established as strategies to promote the reuse of goods and the circular economy, directly contributing to SDG 11 (Sustainable Cities and Communities) and SDG 12 (Responsible Consumption and Production).

These activities served to raise awareness among both the academic and local communities regarding the adoption of more conscious and sustainable consumption practices.

In parallel, the Collection and Charitable Donation was associated with SDG 1 (No Poverty) by promoting social inclusion and solidarity through the provision of clothing and food to people in vulnerable situations. This initiative reinforced the socio-assistance dimension of university extension, strengthening its role in community engagement by generating positive social impacts and aligning with the transversal nature of environmental education in reducing social inequalities, as highlighted by Jacobi (2003).

The distribution of native and fruit-bearing seedlings, together with technical guidance on proper planting, provided hands-on environmental education and encouraged urban afforestation and environmental conservation. This activity was linked to SDG 13 (Climate Action) and SDG 15 (Life on Land).

The Selective Collection of Recyclable Materials, conducted in partnership with ASCANOVI, was related to SDG 12 (Responsible Consumption and Production) by promoting proper solid waste management and valuing the socio-economic inclusion of waste pickers. Additionally, this initiative strengthened the integration between the university, community, and partner institutions, highlighting extension as a space for socio-environmental articulation and transformation.

The collaboration with ASCANOVI allowed not only the proper disposal of recyclable materials but also the expansion of knowledge on reverse

logistics and solidarity economy. Similarly, the support from IEF enhanced the distribution of seedlings and local biodiversity conservation practices, reinforcing the achievement of SDG 15 (UN, 2015; Toaldo and Meyne, 2013).

Finally, from an institutional perspective, inter-institutional partnerships with IEF and ASCANOVI were strengthened, corroborating the need for collaborative networks to consolidate local environmental policies. The implementation of practical actions oriented toward the SDGs reaffirms the potential of universities as agents for articulating global goals at the local level (UN, 2015) (Figures 1 and 2).



Figure 1 – Representatives from the IEF, the community, and UFVJM faculty members.

Overall, the results demonstrate that the initiative integrated educational, environmental, and social dimensions in a balanced manner, promoting not only knowledge but also community mobilization and positive socio-environmental impact.

This interdisciplinary and intergenerational configuration allowed not only the exchange of knowledge but also the creation of sustainable practices that can be replicated in other contexts, consolidating the humanizing dimension of environmental education, as argued by Tozoni-Reis et al. (2013) and Moro and Grabauska (2001). The active participation of elderly individuals highlighted the transformative potential of social inclusion, reinforcing that community engagement amplifies the impacts of extension activities (Figure 2).



Figure 2 – Elderly residents from neighborhoods surrounding UFVJM and representatives of ASCANOVI participating in the extension activity.

In summary, the observed multiplier effects indicate that the extension initiative was able to generate lasting impacts by fostering integration between the university, civil society organizations, and the community. The extension activity demonstrated effective collaboration between students and members of the local community, consolidating the university's role as an articulating agent between academic knowledge and social demands, contributing to the development of active and environmentally conscious citizenship (Figure 3).



Figure 3 – Active participation of students in the extension activity.

The activity was successful, achieving its educational, environmental, and social objectives. Interaction with elderly participants promoted inclusion and the valorization of community knowledge, strengthening the intergenerational perspective advocated by the National Environmental Education Policy (Brazil, 1999).

The initiative demonstrated the transformative potential of university extension activities when integrated into the territory and with the local realities regarding the importance of the

inseparability between theory, practice, and social commitment (Colombo, 2014).

The continuation of similar initiatives is recommended, with an expansion of the target audience and the inclusion of new institutional partners, thereby broadening the diversity of knowledge and practices. It is also proposed to systematize the results and impacts of future editions, aiming at the development of continuous evaluation indicators that allow for measuring the effective contribution to the achievement of the SDGs and to socio-environmental transformation in the Jequitinhonha and Mucuri Valleys region.

The replicability of activities such as “exchange fairs, selective collection, seedling distribution, and donation drives” suggests that similar projects can be implemented in other locations, consolidating networks of cooperation and contributing to social, environmental, and educational sustainability. The experience confirms that university extension is a strategic instrument for the construction of applied knowledge and territorial transformation.

4. Conclusions

The extension activity carried out at the Mucuri Campus of UFVJM, in commemoration of World Environment Day, highlighted university extension as a strategic instrument for socio-environmental transformation by integrating practices of responsible consumption, solidarity, environmental education, and waste management.

The results demonstrated effective contributions to SDGs 1, 11, 12, 13, and 15 through intergenerational and institutional engagement that strengthened community ties and expanded territorial impacts.

It is concluded that the continuity and replication of similar initiatives can enhance the construction of collaborative networks and consolidate the university's role as an articulating agent of sustainability at the local level.

5. Acknowledgments

The authors express their gratitude to the *Núcleo de Biodiversidade* (NUBIO) of the *Instituto Estadual de Florestas* (IEF-URFBio Nordeste); to the *Associação dos Catadores de Materiais Recicláveis Nova Vida* (ASCANOVI); to the organization *Pão Nosso de Cada Noite*; to the *Pró-*

Reitoria de Extensão e Cultura (PROEXC); to the Instituto de Ciência, Engenharia e Tecnologia (ICET); and to the Universidade Federal dos Vales do Jequitinhonha e Mucuri (UFVJM).

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