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# USE OF THE PERUVIAN ENVIRONMENTAL CALENDAR AND ENVIRONMENTAL CITIZEN ENGAGEMENT IN REGULAR BASIC EDUCATION, 2025

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## ABSTRACT

***The objective of this research was to describe the use of the Peruvian Environmental Calendar and the level of environmental civic engagement in Regular Basic Education (EBR) educational institutions during the year 2025. Methodologically, its design corresponds to a non-experimental design and, according to its characteristics, descriptive and cross-sectional. The sample consisted of 105 Regular Basic Education (EBR) teachers, selected by non-probabilistic convenience sampling. The results showed that, regarding the use of the Peruvian Environmental Calendar, more than half of the educational institutions (54.3%) use it at a high level. 57.1% of the institutions have a moderate level of environmental civic engagement. Regarding the perception of the influence of the Peruvian Environmental Calendar, 53.3% reached a high level. 44.8% of teachers recognize that they have serious problems that hinder environmental education. It is concluded that the use of the Peruvian Environmental Calendar is consolidated and the majority of institutions show a moderate level of environmental engagement. Therefore, it is recommended to promote the active and sustained participation of students, teachers and families through projects and activities that foster environmental civic commitment.***

**KEYWORDS:** Environmental Awareness, Sustainable Development, Environmental Education, Regular Basic Education.

## 1. INTRODUCTION

Currently, the environmental crisis affects all countries worldwide, including Peru. Environmental education is a key tool for people to become more concerned about caring for the planet and living sustainably. Global organizations such as UNESCO and national governments agree that it is important to begin teaching children to be environmentally responsible from the moment, they enter school (UNESCO, 2017). In Peru, the Ministry of the Environment has created the Peruvian Environmental Calendar, an official resource designed to incorporate important environmental dates into education, promoting more sustainable habits, a more conscious way of thinking, and greater involvement of the educational community (Ministry of the Environment, 2025).

This calendar provides key guidelines for adapting and contextualizing activities and events that foster citizen engagement with the conservation and sustainable use of natural resources. Therefore, it is essential to promote its implementation in the development of teaching units, thereby facilitating learning management and ensuring that it fosters changes in behaviour, attitudes, and thinking that favour environmental care and preservation (Ministry of the Environment, 2025).

In Colombia, Pérez-Vásquez, Cadavid-Velásquez, and Flórez- Nisperuza (2021) implement School Environmental Projects (PRAEs) as training strategies in educational institutions in different regions. PRAEs must be based on the institutional curriculum and oriented towards the development of values, democratic participation, and the resolution of local environmental problems. Their implementation faces obstacles such as a lack of teacher training, limited student and community participation, and weak coordination with institutional objectives. In conclusion, environmental planning, if not properly contextualized and aligned with the development of civic competencies, can be reduced to isolated actions. The Peruvian Environmental Calendar proposal seeks to overcome these limitations by becoming a transversal pedagogical instrument that promotes civic engagement from school.

In Ecuador, Orrego et al. (2025) conducted a diagnostic study of the current state of environmental education in elementary schools. The results showed that its integration into curricular and pedagogical processes is still limited. They also identified weaknesses in teacher training, limited planning of activities with an environmental focus, and a restricted perception of the role of the educational community in sustainability. This background highlights the need for organizing tools such as the Environmental Calendar, which facilitate the integration of environmental education with pedagogical practice.

However, there are indications that this calendar has not yet been fully incorporated into the pedagogical planning of Regular Basic Education (EBR) educational institutions for the purpose of organizing teaching. Its implementation is limited or in its infancy, which limits students' opportunities to acquire skills related to environmental awareness and participation (Ministry of Education, 2020). This lack of consistent implementation impacts both the way institutions operate and progress toward the Sustainable Development Goals (SDGs), especially SDG 4 (Quality Education) and SDG 13 (Climate Action).

The Peruvian Environmental Calendar is a tool that allows organizing and planning educational activities aligned with significant dates that promote respect, conservation, and the responsible use of natural resources among citizens (Ministry of the Environment, 2025). On the other hand, citizen commitment seeks to promote an environmental culture that allows training responsible citizens committed to sustainable development, with values, attitudes, and lifestyles to live in harmony with nature and current and future generations (MINEDU, 2020, p. 9). Furthermore, it is a model that guides and ensures the quality of life and thinking of not destroying the resources necessary for future generations (Fernandes & Uhde, 2021).

In the Peruvian context, Ibarra (2024) implemented the educational program "Learning to Undertake" to foster environmental awareness among students at the "Micaela Bastidas" Initial Educational Institution - Tinta, Cusco. The objective was to determine how environmental awareness is shaped in students through the implementation of an educational program with an entrepreneurial focus. The research showed that children develop responsible attitudes toward environmental care. The study highlights the importance of incorporating transversal approaches in curricular planning, as well as active methodologies that involve the student as a transformative agent. Although it focused on the initial level, its results are relevant for the design of integrative educational proposals at the different levels of Regular Basic Education.

Given this situation, it is urgent to obtain concrete evidence to help us understand the extent to which the environmental calendar has been integrated into school settings. It is also important to understand how it links to the development of citizen attitudes

and behaviors regarding environmental care. Specifically, it is important to understand teachers' opinions on the matter and their commitment to the environment within educational institutions.

This study aims to describe the use of the Peruvian Environmental Calendar and the level of environmental civic engagement in regular basic education institutions during the year 2025. It seeks to offer a diagnosis that serves as a basis for strengthening curricular planning with an environmental focus and formulating sustainable strategies in the educational field. Furthermore, the results of this research will be useful for decision-making by teachers and educational communities interested in strengthening environmental education as a cross-cutting theme of learning. They will also constitute a valuable input for future research exploring the impact of the environmental calendar on the transformation of more sustainable school and civic practices (Domínguez & Krist, 2024).

## 2. METHODOLOGY

This research used a quantitative, descriptive approach, as it aimed to characterize the use of the Peruvian Environmental Calendar and the level of citizen engagement in educational institutions of Regular Basic Education during the year 2025. The methodological design was non-experimental and cross-sectional, since the variables were not manipulated, but rather the phenomena were observed as they occurred in their natural context, collecting information at a single point in time (Hernández et al., 2014).

The population consisted of teachers from public and private regular basic education institutions in Peru who had implemented the Environmental Calendar for at least one academic year. To select the sample, a non-probability convenience sample was used, consisting of 105 regular basic education teachers who met the established inclusion criteria and voluntarily agreed to participate in the study.

Data were collected using a survey technique. The instrument was a structured questionnaire validated by three environmental education experts. The instrument achieved a reliability of 0.804 using Cronbach's alpha, indicating adequate internal consistency. The questionnaire was organized into three aspects: Use of the Peruvian Environmental Calendar, Environmental Citizen Commitment, and Management and Strengthening of Environmental Education. Responses were mixed, using Likert-type and multiple-choice scales, depending on the nature of each item.

The data were subsequently processed using descriptive statistics using SPSS v27, which allowed for the generation of frequencies and percentages. Regarding ethical aspects, consent, confidentiality, and anonymity of the information were guaranteed. The principles of the Regulations for Scientific Integrity in Research of the Universidad Católica Los Ángeles de Chimbote (ULADECH, 2025) were followed, ensuring respect for rights, equity, and academic honesty at every stage of the research process.

## 3. RESULTS

In the sample (105), the 34-48 age group is the most represented, with almost half of the participants (46.6%). This indicates that people in this age range are the most predominant. 90.5% of the participants identify as female, which constitutes the majority. In contrast, the male group represents only 9.5% of the total. The study population is composed of singles (51.7%), married women (34.5%), and a minority in stable unions (13.8%).

***Table I: Use of the Peruvian Environmental Calendar: Diagnosis in Regular Basic Education Institutions, 2025.***

| | | Frequency | Percentage |
|---|---|---|---|
| | **LOW** | **4** | **3.8** |
| | **HALF** | **44** | **41.9** |
| | **HIGH** | **57** | **54.3** |
| | **Total** | **105** | **100.0** |

**Note: Questionnaire, November 2024.**

The results show that 57% of teachers make extensive use of the environmental calendar. These figures demonstrate that teachers incorporated environmental calendar activities into their curriculum planning.

***Table 2. Environmental Citizen Commitment: Diagnosis In Regular Basic Education Institutions, 2025***

| | | Frequency | Percentage |
|---|---|---|---|
| | LOW | 18 | 17.2 |
| | MODERATE | 60 | 57.1 |
| | OUTSTANDING | 27 | 25.7 |
| | **Total** | 105 | 100.0 |

**Note: Questionnaire, November 2024**

Regarding the environmental civic commitment demonstrated by teachers, 60% is at a moderate level, demonstrating that there is still a need to strengthen the training of environmentally responsible individuals capable of contributing to the country's sustainable development.

***Table 3: Perception Of the Influence of The Calendar on Environmental Practices: Diagnosis in Regular Basic Education Institutions, 2025.***

| | | Frequency | Percentage |
|---|---|---|---|
| | LOW | 10 | 9.5 |
| | HALF | 39 | 37.1 |
| | HIGH | 56 | 53.3 |
| | Total | 105 | 100.0 |

*Note:* Questionnaire, November 2024

Teachers' perceptions of the calendar's influence on environmental practices show that 56% are at a high level. For teachers, the environmental calendar is a fundamental tool for promoting environmental awareness and, consequently, for the conservation of the planet.

***Table 4: Pedagogical Resources Used: Diagnosis in Regular Basic Education Institutions, 2025.***

| | | Frequency | Percentage |
|---|---|---|---|
| | SCARCE | 36 | 34.3 |
| | ENOUGH | 46 | 43.8 |
| | ABUNDANT | 23 | 21.9 |
| | Total | 105 | 100.0 |

**Note: Questionnaire, November 2024**

The results show that 46% of teachers use sufficient resources to develop the environmental calendar, such as recycled materials and ICT tools; this helps raise awareness and educate students about the environment.

***Table 5: Institutional Difficulties in Environmental Education: Diagnosis in Regular Basic Education Institutions, 2025.***

| | | Frequency | Percentage |
|---|---|---|---|
| | LIGHT | 27 | 25.7 |
| | MODERATE | 31 | 29.5 |
| | GRAVES | 47 | 44.8 |
| | Total | 105 | 100.0 |

**Note: Questionnaire, November 2024**

Regarding institutional difficulties in environmental education, 47% of teachers considered them serious due to a lack of training, limited technological resources, and the administrative burden on teachers.

## 4. DISCUSSION

Sustainable development depends largely on the environmental management practices of educational institutions. Therefore, a diagnostic assessment was conducted to evaluate how regular basic education institutions use the Peruvian Environmental Calendar and measure civic engagement. This analysis seeks to connect the findings with the academic literature to identify strengths, challenges, and opportunities for improving environmental education in Peru.

### *4.1. Use Of the Peruvian Environmental Calendar*

The assessment of the use of the Peruvian Environmental Calendar in Regular Basic Education institutions during the year 2025 shows that, based on frequency of use, only 3.8% of teachers at the evaluated educational institutions (4 of 105) have a low use of the environmental calendar. Nearly 42% of teachers at educational institutions (44 of 105) show a moderate use of the Peruvian environmental calendar, and more than half of teachers at educational institutions (54.3%) have a high use of the calendar (Table 1).

The results reflect a significant adoption of this pedagogical tool for integrating environmental content into the national curriculum. Tilbury (1995) emphasizes that the integration of contextualized pedagogical instruments is necessary to promote effective and sustainable environmental education. The systematic use of the calendar as an educational resource facilitates the planning of activities that raise awareness and educate on environmental issues, improving the continuity and relevance of learning (UNESCO, 2017). Vásquez et al. (2022) mention that Peru, through the Ministry of Education and Environment, has implemented educational

policies to provide students with a solid environmental education; evidencing the interest in planning and implementing learning experiences related to the environmental approach.

However, Sauvé (2005) warns that some barriers, such as insufficient teacher training and a lack of adequate teaching resources to contextualize content to local reality, can limit its optimal implementation. This could explain why 45.8% of teachers use the calendar moderately or infrequently.

### *4.2. Environmental Citizen Commitment*

Regarding environmental civic engagement in Regular Basic Education institutions, more than half of teachers (57.1%) have a moderate level of engagement, only 25.7% show an outstanding level, and almost 1 in 5 teachers (25.7%) have a low level of engagement (Table 2). This situation reflects the gap between the integration of environmental knowledge and its practical application, both inside and outside the classroom.

Effective civic engagement requires going beyond awareness-raising. Therefore, it is necessary to promote active and integrative methodologies that motivate the educational community to engage in real environmental projects, thus transforming knowledge into active and sustainable engagement (Ardoin et al., 2013; Monroe et al., 2019). Likewise, Kollmuss and Agyeman (2002) highlight that teacher engagement is conditioned by social and organizational support, including favorable school policies and community cohesion.

Likewise, Abramovich and Miedijensky (2023) demonstrate that Education for Sustainability ( EfS ) is crucial for generating changes in environmental behavior, however, little is known about the environmental behavior of primary school teachers in charge of teaching EfS . Participants agreed that it was their duty to address environmental behavior in class, but less than half mentioned it when describing their actual behavior, however, the findings indicate that participants became more aware of how they could act in benefit of the environment and overcome obstacles related to environmental behavior and be the first step on their path to environmentally conscious citizenship.

### *4.3. Perception Of the Influence of The Environmental Calendar*

The perception of the influence of the Peruvian Environmental Calendar in educational institutions, which is key data to understand how educational actors (teachers, directors) value the real impact of this tool in environmental training, the predominant perception is high (53.3%), more than half of the teachers of the institutions consider that the calendar has a significant influence on their environmental educational work, 37.1% perceive its influence as medium and only 9.5% consider their perception of its influence at a low level. Better results can be achieved when the calendar is adapted to local particularities to increase its relevance.

Stevenson (2007) recommends that maximizing pedagogical impact requires cultural and contextual adaptation of materials, which makes students feel more identified and motivated with environmental content and activities. The calendar includes commemorative dates and environmental events, which are used as fundamental tools to make ecological issues visible and contextualize them. Integrating it into the basic education curriculum responds to the urgent need to develop conscious citizens committed to caring for the environment.

Thus, the relevance of dates such as World Water Day and World Environment Day in schools not only raises awareness but also motivates the entire educational community to participate in transformations toward sustainable behavior (Harrow Kunming International School, 2025). It also allows students to associate actions and learning with meaningful contexts, strengthening their emotional connection with nature and their motivation to participate in everyday ecological practices (Husin et al., 2025).

### *4.4. Available Pedagogical Resources*

Regarding pedagogical resources for environmental education in Regular Basic Education institutions, these data are essential for identifying gaps and opportunities in the practical implementation of the Environmental Calendar and other initiatives. Among the sufficient resources (43.8%), almost half of the institutions (46/105) consider that they have adequate resources to work on environmental education, while those with scarce resources (34.3%) report significant deficiencies at the scarce level, and those with abundant resources (21.9%) have access to outstanding resources (see Table 4).

This deficiency prevents institutions from implementing high-quality environmental strategies and activities. According to Ernst and Theimer (2011), investment in teacher training and materials is vital for achieving effective educational processes, since adequately available resources facilitate active and meaningful teaching about the environment. Investing in teaching materials is key to strengthening environmental education. By learning

active and creative methods, teachers can use resources that transform theoretical concepts into practical and meaningful experiences. This approach enhances critical reasoning and motivates students to actively participate in the search for solutions to environmental challenges that are necessary to promote sustainable habits and engaged citizenship.

### *4.5. Institutional Difficulties*

The diagnosis of the institutional difficulties faced by educational institutions in implementing environmental education is alarming, requiring immediate and well-focused actions. There are Critical findings, Serious Problems (44.8%) where almost half of the teachers in the institutions face severe obstacles, Moderate difficulties (29.5%) have manageable but significant challenges, and Minor problems (25.7%) report minor difficulties (see Table 5). These problems may be associated with limitations in teacher training, resources, administrative support, and institutional commitment. In line with these results, UNESCO (2024) reports the reality of many educational institutions that face serious structural challenges, lack of resources, insufficient teacher training, and curricular integration problems to effectively implement environmental education. It is identified that nearly half of the institutions have serious problems that hinder environmental education (44.8%). Moderate and mild difficulties that require targeted actions to overcome are also recognized. Hungerford and Volk (1990) maintain that if educational institutions do not provide firm support and well-defined policies, environmental education cannot be effectively established or endure in schools.

## 5. CONCLUSIONS

This study demonstrated that the use of the Peruvian Environmental Calendar is well-established in regular basic education institutions, with more than half of the teachers at the institutions analyzed reporting a high level of implementation. The data reflect a significant adoption of the calendar as a teaching tool, suggesting that its incorporation into the curriculum has favored the systematization and continuity of environmental education. However, barriers to the full and uniform application of this tool persist, which could be related to insufficient teacher training, resource limitations, or a lack of adequate contextual integration.

Regarding environmental civic engagement, the assessment reveals a more complex picture. A majority of institutions show a moderate level of environmental engagement, only a minority reached an outstanding level, and a worrying proportion maintains a low level of engagement. This situation suggests that environmental knowledge is present but not consistently translated into effective and participatory actions within the educational community, which limits the real impact of environmental education on the development of environmentally responsible citizens.

Given these findings, there is a need to strengthen teacher training and technical support processes to optimize the use of the Environmental Calendar, linking it to active methodologies that generate concrete environmental reflections and practices. It is also essential to promote the active and sustained participation of students, teachers, and families through projects and activities that foster environmental civic engagement. Implementing these recommendations will not only contribute to consolidating a more robust and participatory environmental education system but will also foster the development of citizens committed to local and national sustainable development.

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