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Promotion of responsible use of drinking water from educational-environmental plans

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Abstract: The improper use of water has caused problems due to a lack of environmental awareness. This has led the government to implement water and energy rationing policies. This situation has affected the entire country, especially areas of Greater Caracas, such as Petare, La Urbina, and Maca. Therefore, the purpose of this research was to raise awareness among the student community of the Sisomartiniana school, through community service, about the importance of the responsible use of drinking water, by developing an environmental education plan. The paradigm used was socio-critical action research, following the stages of Teppa (2006): diagnosis, planning, implementation, and evaluation. The techniques used were observation and interviews, and the instruments included a questionnaire and field notes. The contribution was the consensus-based process of raising awareness and understanding not only among the student community but also among the surrounding communities, to guarantee the sustainability of water resources.

Key words: educational plan; environment; awareness; drinking water; responsible consumption

1 Introduction

Historical developments demonstrate that, since ancient times, human populations have tended to settle and migrate to areas with access to water resources. These water sources enabled communities to develop and establish stable settlements, particularly in regio

In other words, human settlements have evolved over time to meet their basic needs. A concrete example is provided by Mourín (2012), who notes that by the late fourth century of the third millennium BCE, civilizations in the Near and Far East had settled in the alluvial valleys of the Nile, Tigris, and Euphrates rivers, as well as in the fertile basins of the Ganges and Indus, and the Yellow and Blue Rivers, home to the civilizations of India and China. This geographical setting enabled these societies to develop, primarily because agriculture constituted the fundamental productive foundation of that era, relying directly on the availability of water from river systems.

In Venezuela, the areas where resources were concentrated for early civilizations were located near Lake Maracaibo and Lake Valencia in the northern region. Meanwhile, settlements in the southern and eastern areas were situated along the banks of the Orinoco River. These settlements were shaped by predominant agricultural activities, as water resources served as the fundamental necessity for crop cultivation and for meeting the basic needs of indigenous communities such as the Caribes, Timotes and Cuicas peoples.

Thus, these communities benefited from the country's geographical location, since the main hydrographic basins worldwide are located on this continent, placing it in a privileged position in reference to the availability of drinking water for human consumption globally.

However, as stated by the Ministry of Environment and Natural Resources (2010), in various areas worldwide, regarding the availability and quality of water, "if the existing water at the local level is contaminated and there are no economically viable alternatives, access is in fact impossible. More than 1 billion people in the world lack access to safe water" (p. 4).

This is why a large number of people die from diseases caused by contaminated water, and there are also nations that invest a large amount of money in water purification, which has caused the population to find itself in a situation of high health and environmental risk, associated in most cases with inadequate management of water resources causing the progressive deterioration of the quality of life.

In this regard, Navarro (2019) states that in the particular case of Venezuela, the drinking water and sanitation systems have robust but severely deteriorated infrastructures; the values of physical losses are estimated between 53% and 75% of the water produced, losses that are generated in the permanent breaks and leaks in the networks, which are caused by the lack of maintenance, the inadequate operation of the system and the wear and tear of the equipment produced over time, facts that are repeated in other cities of the world.

Therefore, the Inter-American Development Bank -IDB- (2019) stated that the United Nations General Assembly recognized since 2010 "the human right to water and sanitation (HRS), reaffirming that clean drinking water and sanitation are essential for the realization of all human rights, according to resolution A/RES/64/292" (p. 3).

This justifies the fact that within Sustainable Development Goal 6 (SDG), the targets establish that by 2030, among other aspects: achieve universal and equitable access to safe and affordable drinking water for all; 6.2: equitable access to adequate sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and people in vulnerable situations; 6.4: substantially increase water-use efficiency across all sectors and ensure the sustainability of freshwater withdrawals and supply to address water scarcity and substantially reduce the number of people suffering from water scarcity.

Consequently, as indicated by the IDB (2019) for "Latin America and the Caribbean (LAC), the importance of community organization lies in its closeness to the needs of the population, which builds, manages and implements the service" (p. 3). This approach aims to address promptly and appropriately any issues that may arise regarding the distribution and use of drinking water within communities, contributing to the sustainability of water resources and ensuring both the quality of water supply services and the quality of the water resource itself.

However, the problem of drinking water, particularly in Venezuela, has worsened in recent years due to various natural and human-caused issues. Firstly, there are rationing problems caused by water scarcity resulting from the country's recent climatic conditions.

Secondly, due to inadequate equipment maintenance, coupled with the public's lack of understanding regarding the consequences of improper and irresponsible drinking water use—both in terms of health risks that threaten basic needs fulfillment and community-wide issues stemming from unsanitary conditions, improper water disposal and storage. These communities lack the necessary guidance to mitigate such problems, which arise from inadequate resource management and failure to comply with water sanitation and purification regulations.

Based on these premises, the following questions arise: What skills and training do students at the José Manuel Siso Martínez Pedagogical Institute of Miranda (IPMJMSM) require to promote responsible drinking water use in local communities? What theoretical and methodological content should be included in the environmental education plan to foster responsible drinking water usage through the IPMJMSM? And what has been the scope of implementation of the environmental education programme aimed at promoting responsible drinking water use in neighbouring communities by

the IPMJMSM?

To that end, the present research was proposed from the Libertador Experimental Pedagogical University, with the purpose of developing an educational-environmental plan that allows the student community of that institution to be aware of the importance of the responsible use of drinking water to guarantee the sustainability of the resource. This is primarily because this context is key to establishing the foundations of environmental education, given the potential of teacher training to drive societal transformation and improve the quality of life of the population.

To achieve this objective, the following specific targets were formulated in relation to students: to identify their training needs for participating in the promotion of responsible drinking water use; to design an environmental education plan that incorporates theoretical and methodological aspects to encourage responsible water consumption in neighbouring communities surrounding the institute; and to implement this environmental education initiative, as well as to assess its impact on fostering responsible drinking water practices in local areas near the IPMJMSM. These objectives were developed based on the integration of Community Service activities and the professional competencies required of education graduates. Future educators must be trained to act as community advocates, enabling them to address environmental challenges. This work also strengthens and enriches the theoretical framework for future research in social science fields, including environmental education and its sustainable practices.

2 Method

The research was conducted using a qualitative approach, which, according to Bogdan (1998), represents "a set of assumptions about reality, about how it is known, the concrete ways, methods, or systems of knowing reality, from an ontological, epistemological, and methodological point of view" (p. 23). Accordingly, adopting this approach allowed for the observation, description, analysis, and understanding of the context surrounding water resource use in areas adjacent to the institute. The objective is to propose viable solutions to the problems arising from drinking water waste, scarcity, poor sanitation, inadequate distribution, and water rationing.

Based on the objectives of this research, the study is grounded in the socio-critical paradigm applied to education, focused on human emancipation, the distribution of power and societal resources. This framework is framed within an action research approach, which constitutes one of its most distinctive manifestations.

In this regard, Kemmis (1984), a pioneer of action research, points out that in the educational field it constitutes:

> A form of self-reflective inquiry carried out by participants (such as teachers, students, or administrative staff) within social contexts—including educational settings—to improve the rationality and fairness of: (a) their own social and educational practices; (b) their understanding of these practices; and (c) the environments and institutions where such practices take place (for example, classrooms or schools). (p. 3)

In other words, this process is approached from a critical perspective of science, one that allows researchers to actively engage in research. The aim is to conduct work collectively and systematically, planning and implementing actions to address practical real-world challenges faced by participants in the study. This is achieved within an ethical, transparent, and mutually agreed framework, negotiated and approved by all parties involved. The ultimate goal is to improve both educational and socio-cultural systems, leading to sustainable resource management and enhanced quality of life.

Thus, the research conducted within the framework of this paradigm has enabled the systematization and coordination of conceptual changes, as well as the proposal of such changes, for participating students in the community service project entitled Drinking Water Management. This work aims to foster the continuous improvement of the natural environment, which has been degraded and overexploited by human activity. Such damage undermines resource sustainability for future

generations, especially in the context of a globalized world and the rapid advancement of science and technology—developments that, in many cases, bring severe environmental consequences.

From the perspective of action research, this study fosters awareness, emancipation and empowerment in relation to water resource management issues, addressing conflicts associated with the responsible use of water resources, to ensure that future generations can have access to this resource under equal conditions and with sustained quality.

Furthermore, it is important to highlight that the research was developed considering the stages proposed by Teppa (2006):

1. Diagnosis: to know the training needs of the students of IPMJMSM, to promote the responsible use of drinking water in the communities.

2. Planning: Prepare and organize the activities and actions to develop the environmental education plan and address, through the community service project entitled "Drinking Water Management", the conflicts generated by this situation.

3. Implementation: Carry out the planned actions to resolve the problems caused by the inadequate management of water resources in some of the communities adjacent to the institute.

4. Evaluation: Assess the actions carried out by the students to promote the proper use of water in the communities.

5. Systematization: Reconstruct the experiences of the entire research process to strengthen the educational plan.

Regarding the process involved in each of these stages, from a research perspective, it should be stated that the methodology was based on a systematic, detailed and in-depth study of the conflicts that have arisen in the vicinity of IPMJMSM in recent years as a result of the inappropriate use of water resources. For this purpose, a series of activities were carried out to obtain and disseminate relevant knowledge through interaction among individuals, and to promote social changes, enabling consensus-based intervention to transform the behaviour of both participants in the process and the wider community.

While the practical efforts focused on the design of an environmental education plan, this plan included awareness raising, consciousness-building and the organization of social activities, aiming to promote the responsible use of drinking water in the community from a pedagogical perspective.

The scenario set for this research corresponded to the communities adjacent to the IPMJMSM, especially La Urbina, San José de Petare and Maca, located in the Petare parish of the Sucre municipality, Capital District. These areas experience conflicts related to drinking water usage, including issues with water distribution, availability, rationing and scarcity. For this reason, these communities were chosen as the research context for this study.

Regarding the research participants, they consist of key informants, directly comprised of students from the Sisomartiniana community, enrolled in different academic disciplines and advanced study years, including Physical Education, Geography and History, Preschool Education, Industrial Technical Education and Comprehensive Education.

The methods employed include participant observation, document analysis, group discussions, and structured interviews. The research tools used are data recording journals, questionnaires, and a set of guiding questions. To facilitate data collection, audio recording devices and photographic equipment were utilized.

It is important to note that each of the objectives set was met and the educational plan was strengthened so that it can later be applied in other contexts where there are problems associated with the improper use of drinking water.

To this end, the analysis employed categorization, triangulation, peer or expert discussion, and knowledge transfer. In the case of triangulation, the information was classified, conceptualized, and coded.

This was carried out to contrast and interpret the data appropriately. Furthermore, the incidents were categorized in light of the review of the theoretical framework and the diagnosis, on the understanding that the categories and

subcategories, according to Hurtado and Toro (1997), represent:

> One of the fundamental elements to be considered is the formulation and distinction of topics based on collected and organized data. For this purpose, we distinguish between categories, which denote a topic in its entirety, and subcategories, which detail the topic at a micro level. (p. 64)

Thus, these constitute the aspects, elements and factors that can take on different values each time they are examined, or that reflect distinct characteristics depending on the context in which the research process takes place. Consequently, based on the proposed objectives, the categories and subcategories presented in Table 1 were established.

Chart 1. Categorization process

Categories	Definition	Subcategories
Training	Knowledge, skills, and abilities aimed at continuous updating, for innovative, organized, and systematic learning in order to transform concepts, techniques, values, and attitudes. (Godoy, 2011)	Knowledge /Skills Disposition/ Values
Educational plan	It constitutes a series of pedagogical procedures, based on continuous assessments, aimed at offering educational services that respond to the real needs and concrete problems of the context in which the student develops.	Participation /Social Action / Educational Practice
Scope	Elements that directly and indirectly define the influence or importance of the procedures applied during the plan, which contribute to the social, family and cultural quality of life of the participants.	Importance /Strengths /Effectiveness
Influence of the Plan	Effects exerted by the educational plan on the behavior of those involved in the training process, focused on the use of drinking water.	Transformation/Awareness-raising/Impact

In accordance with the information presented in the previous table, the categories and subcategories proposed above are consistent with both the documentary review conducted in this research and the assessment carried out on the participants of the study. This approach aims to facilitate the analysis and interpretation of the collected data.

3 Results

In order to address the research objectives, the results were analyzed in accordance with each of the stages outlined for the study, following the structure set out below:

Diagnostic stage: This stage was based on identifying the training needs present in students of the IPMJMSM community, taking into account their expressed interest and motivation to participate in the community project as part of their academic process, which motivated their decision to take part in the initiative.

It could be interpreted that the students only had basic knowledge about the definition of drinking water as an essential resource for life; in addition, some of the respondents stated that they had little information about the importance and conceptualization of the resource. However, whilst they are aware that it comes from various dams, they do not know which ones these are or how they operate.

Furthermore, it was observed that the majority of respondents in the selected localities (La Urbina, Petare, and Maca) were unaware of the role of the responsible water utility (HIDROCAPITAL), as well as the conditions that cause drought and the reasons why the national and regional governments constantly implement water rationing measures. Additionally, they were ignorant of the water treatment process required for consumption and even how to properly store water during periods of scarcity.

Consequently, both the group of students from the institution and members of the local communities recognized the need for talks, forums, workshops, the dissemination of information on the subject in communal areas, educational campaigns, recreational activities and even the use of social media to provide them with information on the subject.

In the case of the students, it was also demonstrated that, despite having little information on the subject, they possess

educational and teaching tools that prove to be a strength when carrying out awareness-raising activities in communities, making them the ideal advocates for this important issue.

These statements are summarized in Table 1 below, which sets out some of the comments made by the group of informants (students and community members) on this topic, in relation to the subcategories identified within the "Training" category.

Table 1. Informant comments for constructing the "Training" category

Informants	Subcategories Knowledge	Skills	Disposition	Values
1	Drinking water is water that can be used for human consumption because it has been treated to make it potable.	As a participant in the community outreach project, I believe I have better tools.	I am motivated because I believe this problem is of utmost importance.	Water is very important for human beings, as are all other natural resources.
2	Water from reservoirs subjected to various treatment processes.	Giving information is one thing, and training is another; just talking about the topic does not guarantee that students will acquire positive values and attitudes.	I would give talks during my community service hours.	Water is important for the life of living beings.
3	Drinking water is water that comes bottled or purified by home filters.	I would participate as support in carrying out games and models; there is a lot of variety for children.	I can collaborate in the activities that the students will carry out in the community.	Everyone must be informed so that they care for the planet.
4	It is treated water.	If I have them.	If I have the time available.	It is very important.
5	Water purified with various treatments.	I consider that I possess the tools.	I would attend and invite my students.	It is extremely important for everyone.
6	Natural water is potable.	It depends on what it is.	I would go to workshops and talks.	It is vital for everyone.
7	Clean water, boiled or filtered.	Use of some tools.	I would attend if possible.	It is of great importance.

Based on these comments, the need to intervene within communities across different areas to address various environmental conflicts was confirmed. Although there appears to be greater awareness of these problems, evidence shows a deterioration of water infrastructure, misuse of water resources, improper disposal of solid waste, low energy conservation, and other issues. These problems arise from the community's lack of knowledge on the subject.

Therefore, it proved to be of vital importance to implement plans, projects and initiatives aimed at raising environmental awareness and achieving key environmental goals. Accordingly, the environmental education program developed from the diagnostic stage included comprehensive public awareness initiatives, whose primary objective, as stated by Godoy and Hidalgo (2015), is as follows:

> To address the problems caused by the inappropriate use of drinking water resources and environmental protection, supported by the creation of appropriate strategies, tools, and materials for community education, oriented toward technical-pedagogical learning that will allow them, among other things, to achieve meaningful learning, act as multipliers of information, raise awareness among the general population and the communities in which they operate, and, through knowledge and commitment, promote the empowerment of environmental knowledge and a culture of responsible consumption. (p. 56)

In other words, each of these elements must be included within the educational plan in order to obtain satisfactory results and optimize its implementation within each of the locations selected for this purpose.

Planning stage: In order to address Objective 2 of this study regarding the development of the environmental education plan, and taking into account the theoretical and methodological aspects that promote the responsible use of drinking water, this work draws on both the insights obtained from group discussions with key participants (see Table 2) and the observations recorded throughout the research process. Accordingly, it was established as a primary measure that the plan should incorporate all these findings to enhance its effectiveness and meet the training and awareness- raising needs of each community.

In this regard, several subcategories emerged, as shown in Table 2:

Table 2. Incidents and comments from informants for the category "Educational Plan"

Informants	Subcategories Participation	Social Action	Educational Practice
1	I was able to stimulate and guide community members to direct their initiative, creativity, leadership, and ability to participate in order to solve this problem that affects us so closely.	We were able to develop effective social initiatives based on shared responsibility, individual accountability, and respect for ourselves and the environment, with the aim of fostering social capital.	The methodology applied with pedagogical intent enabled me to consolidate knowledge through engagement in practical service, yielding multiple benefits.
2	To provide a trustworthy and secure environment that fosters interaction, enabling awareness of the need for responsible drinking water usage.	We reaffirm the need to create opportunities for active participation among community members.	Preparing to communicate with elderly people enabled me to improve my teaching strategies, fostering awareness within this group.
3	Despite setbacks, thanks to community support, we were able to carry out the planned activities and consolidate the water technical working groups.	It was rewarding that they achieved meaningful learning, especially considering the vital importance of this natural resource.	This environmental education plan provided me with valuable support in teaching practice. Subsequently, I was able to convey to my students the great value of water.
4	What strengthened us as service providers was collaborative teamwork within a participatory, cooperative and supportive environment, where each individual made use of their own strengths.	I greatly enjoyed participating in this project, and as a result, we have formed a youth community group in my locality to protect Waraira Repano. Since environmental education is of great importance, safeguarding the environment means protecting life itself.	Working with university students allowed me to understand the importance of educating and raising awareness among the general population, regardless of age. The key is to develop effective strategies to capture people's attention and help them understand the intended message.
5	The implementation of the plan opened up opportunities to disseminate information regarding drinking water, not only within the school setting but also in the communities where we live and engage.	Information was disseminated to people of all ages, who participated actively and showed great motivation to learn about the proper use of water in order to secure a sustainable future.	We were able to carry out various activities, including posters, leaflets, informational displays, and educational talks, among others.
6	From my perspective, I only contributed a few ideas to support the work of my students and strengthen their community service efforts.	There was no statement indicating their participation in this field.	I was able to observe through the activities carried out by my students that they have developed the skills and abilities acquired throughout their university studies.
7	I have coordinated several drinking water management groups as part of community service, while also addressing this topic in environmental education courses.	Personally, I believe that working within a community is the most appropriate approach to address the difficult situations encountered locally and to help resolve their real problems through social shared responsibility.	In the introductory workshops on drinking water-related community service, students are provided with the necessary resources to develop the plan based on their respective areas of specialization.

In this context, the educational-environmental plan was structured based on consensus among the participants, and was structured as follows:

Environmental education plan

Foundation: The plan encompasses personal, motivational, conceptual, social, economic, ecological, methodological and political factors. Therefore, its impact depends on the individual and collective commitment of those involved, considering human responsibility regarding the use of water resources in all aspects. However, education can foster an effective awareness-raising process to drive behavioural change. As stated by Gazzola (2008): "Education is the pathway to channel knowledge within society and apply it according to sustainable principles" (p. 8).

Therefore, the educational plan is based on the concept of environmental education for sustainability, derived from the transformation of ideas, opinions and perspectives. It fosters the development of responsible citizens and social groups who respect natural environments, where they live and interact continuously to meet their needs and pursue a better quality of life. This is achieved through harmony between humans and nature, grounded in the equitable distribution of available resources and goods.

Justification: From an ontological perspective, it is an evident reality that the excessive growth of Venezuela's population and its concentration in the country's main metropolises have considerably increased water consumption in these areas. Combined with the lack of construction of new reservoirs, the availability of water has decreased. Consequently, various communities have been affected by the shortage of this resource.

From an axiological perspective, fostering awareness of responsible water resource consumption among members of the university community represents a challenge for sustainability-focused higher education. This educational process aims to help individuals embrace a new cultural mindset and transform their behaviors, thereby promoting a better quality of life. As Leff (1997) points out, environmental issues constitute a social problem that extends beyond university activities, encompassing the retraining of professionals and the reorientation of higher education.

From an epistemological standpoint, environmental education should not be regarded as a branch of science, but rather as the core of training that fosters favorable attitudes toward nature conservation, knowledge transformation, and the promotion of social change, grounded in academia and freedom of thought. Environmental knowledge drives transformations in understanding by problematizing real-world conditions. Accordingly, the design and implementation of an environmental education plan aimed at raising community awareness regarding the responsible use of drinking water are highly valuable and essential for the conservation and preservation of natural resources.

Purpose of the plan: To raise awareness in the community adjacent to the IPMJMSM about the responsible use of drinking water.

Actions: The plan's activities were organized for an average of 20 weeks and were planned based on consensus between the students involved in the Drinking Water Management project and the communities to be addressed.

Time of execution of the plan: The educational plan was executed in order to respond to objective 3 of the present research and developed on the basis of the diagnosis, therefore, various activities were developed aimed at the acquisition and strengthening of knowledge related to drinking water.

First, a meeting was held between the researcher and the project participants. She presented a general overview of the current conflicts caused by the shortage of drinking water at the global, national, regional, and local levels, highlighting those affecting the communities surrounding Siso Martínez. Subsequently, a series of visits to state institutions were planned in order to receive advice and gather relevant materials, enabling the design and implementation of an informational and outreach campaign focused on drinking water, its importance, proper use, and related topics.

In this regard, under the guidance of the researcher, the group of participants first visited HIDROCAPITAL, the company responsible for drinking water supply in the metropolitan area. There they obtained key outreach materials for the

awareness campaign, which was later carried out across all local communities.

To obtain additional information, visits were made to the Lagartijo Reservoir, which supplies water to the areas near the institute, in order to assess its current conditions. In this regard, it is important to note that the group was denied access to the site. Security staff reported that the reservoir was out of service and that visits were prohibited. Nevertheless, the deteriorated and abandoned state of the reservoir could be verified.

Finally, the group visited the Ministry of Ecosocialism (MINEC) to gather relevant information. They were provided with a range of materials, which served as input for creating informational posters, brochures, and other materials used in community awareness campaigns.

Additionally, a series of activities were carried out, including the distribution of informational brochures, the creation of posters in some schools in the area, the placement of posters and information in places of access to the communities, the creation of a Facebook group called Drinking Water Management, and the holding of talks, workshops, and house-to-house visits to distribute informational material.

Once these informational activities were completed, it was observed that the participants had acquired relevant knowledge through the materials provided by these resources. This helped them, to a certain extent, change their mindset regarding the proper use of drinking water. In addition, some participants stated that they had taken these recommendations into account and applied them in their daily household routines.

Assessment stage: In accordance with the fourth objective of this research, which focuses on evaluating the impact of the environmental education plan in encouraging the responsible consumption of drinking water, it was observed that when community service is undertaken through service-learning methodology, the experience becomes more enriching. It fosters mutual exchange and comprehensive growth as individuals, professionals, and citizens. The country is currently going through unique social circumstances that require collective effort from everyone, in accordance with each person's capabilities and social roles.

Furthermore, putting into practice a set of knowledge and skills to encourage responsible drinking water use within these communities has strengthened community councils and promoted the reestablishment and operation of technical water committees. These bodies aim to address problems related to water consumption, distribution, sanitation, and rationing in each community.

Reflection Stage: As a result of the research process, reflection was made on the essential need for university students to receive quality education. This encompasses both curricular subjects and other institutional activities, so as to foster a strong sense of civic responsibility in learners. Such education provides them with freedom of thought, decision- making autonomy, and the necessary tools to address current social dynamics, which are reflected in the environmental problems currently affecting Venezuelan society.

4 Conclusion

From the perspective of community service provision, educators become key community servants. Beyond being members of the community themselves, they take on the responsibility of guiding, listening, assisting, solving problems, facilitating processes, and raising awareness. This is rooted in the micro-society that teachers encounter every day in their professional practice.

This educational plan brought about a significant improvement in knowledge regarding the importance of drinking water, both among the student community of Siso Martínez and the populations served by community service providers. Participants became agents of change capable of spreading good practices, thereby promoting the responsible use of water. This will allow for more effective management of water resource challenges at the household level, fostering greater

awareness and ensuring long-term sustainability.

The environmental awareness-raising process enabled the community to develop concrete learning regarding the interaction between society and the environment, through the construction and reconstruction of knowledge, while fostering new relationships, attitudes, and behaviors toward nature. It is highlighted in these final remarks that the mindset of community members has been transformed to a certain degree. Currently, there is less improper dumping and water waste, a result of the intensive awareness campaigns implemented throughout the development of this research.

In short, establishing effective links between the university and local communities is highly beneficial for addressing practical problems. This makes it possible to identify, strengthen, and implement appropriate strategies and solutions to tackle the ongoing environmental crisis affecting the Venezuelan population.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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