

GREEN MUNICIPALITY SEAL PROGRAM: ENVIRONMENTAL HEALTH STRATEGIES IN SOBRAL, CEARÁ

*PROGRAMA SELO MUNICÍPIO VERDE: ESTRATÉGIAS DE SAÚDE AMBIENTAL
DE SOBRAL, CEARÁ*

*PROGRAMA SELLO MUNICIPIO VERDE: ESTRATEGIAS DE SALUD AMBIENTAL
EN SOBRAL, CEARÁ*

Leidy Dayane Paiva de Abreu¹ e Nájila Rejanne Alencar Julião Cabral²

ABSTRACT

Objective: to analyze the strategies developed by the Municipal Environmental Agency of Sobral/CE together with the Working Group in relation to environmental health actions for certification of the Green Municipality Seal Program – PSMV. **Methods:** a case study was conducted in the municipality of Sobral, Ceará, more specifically the participation of the municipality in the last certification of the Green Municipality Seal, carried out by the Secretariat of the Environment of the State of Ceará. The choice of Sobral is justified because this municipality has participated in the Green Municipality Seal Program (PSMV) since its first edition in 2004. A documentary research with a qualitative approach was conducted to understand the local reality. **Results:** It was possible to observe that the themes of the implemented projects focused on environmental health stood out. It is worth noting that the projects are developed by the environmental area in partnership with the health department. **Final considerations:** Thus, the program is an environmental management tool that seeks to educate the population about sustainability and environmental health, since it is focused on citizenship education. And its indicators encourage managers, through their initiatives, to promote improvements in environmental quality in various educational health care scenarios.

Keywords: *Environmental Health; Environmental Policy; Environment and Public Health.*

RESUMO


Objetivo: Analisar as estratégias desenvolvidas pela Agência Municipal do Meio Ambiente de Sobral/CE junto ao Grupo de Trabalho em relação às ações de saúde ambiental para certificação do Programa Selo Município Verde – PSMV. **Métodos:** Foi realizada uma pesquisa documental de abordagem qualitativa no município de Sobral, Ceará, mais especificamente a participação do município na última certificação do Selo Município Verde, realizado pela Secretaria de Meio Ambiente do Estado do Ceará. A escolha de Sobral justifica-se por este município ter participado do PSMV, desde sua primeira edição em 2004. **Resultados:** Foi possível observar que as temáticas dos projetos implantados e implementados, voltadas para saúde ambiental, se destacaram. Ressalta-se que os projetos são desenvolvidos pela área ambiental em parceria com a secretaria de saúde. **Considerações finais:** Assim, o programa é uma ferramenta de gestão ambiental que busca apropriar a população sobre a sustentabilidade e saúde ambiental, uma vez que é voltada para a formação cidadã. E seus indicadores incentivam gestores(as), por meio de suas iniciativas, a promover melhorias na qualidade ambiental em diversos cenários de cuidado educativo em saúde.

Descritores: *Saúde Ambiental; Política Ambiental; Meio Ambiente e Saúde Pública.*

RESUMEN

Objetivo: analizar las estrategias desarrolladas por la Agencia Municipal de Medio Ambiente de Sobral/CE junto con el Grupo de Trabajo en relación a las acciones de salud ambiental para la certificación del Programa Sello Municipio Verde – PSMV. **Métodos:** se realizó un estudio de caso en el municipio de Sobral, Ceará, más específicamente la participación del municipio en la última certificación del Sello Municipio Verde, realizada por la Secretaría de Medio Ambiente del Estado de Ceará. La elección de Sobral se justifica porque este municipio participa en el Programa Sello Municipio Verde (PSMV) desde su primera edición en 2004. Se realizó una investigación documental con enfoque cualitativo para comprender la realidad local. **Resultados:** Fue posible observar que se destacaron las temáticas de los proyectos implementados enfocados en la salud ambiental. Vale destacar que los proyectos son desarrollados por el área ambiental en asociación con la secretaría de salud.

1 Universidade Estadual do Ceará. Crateús/CE - Brasil. 

2 Instituto Federal de Educação Ciência e Tecnologia do Ceará. Fortaleza/CE - Brasil. 

Consideraciones finales: Así, el programa es una herramienta de gestión ambiental que busca educar a la población sobre sostenibilidad y salud ambiental, ya que se centra en la educación ciudadana. Sus indicadores incentivan a los gestores, mediante sus iniciativas, a promover mejoras en la calidad ambiental en diversos ámbitos de la atención sanitaria educativa.

Descriptores: *Salud Ambiental; Política Ambiental; Medio Ambiente y Salud Pública*

INTRODUCTION

Over the years, public institutions have been seeking management tools for decision-making in municipalities and local communities, in order to reduce environmental impacts and, consequently, improve environmental quality in cities and in the countryside. As a result, environmental management has been gaining a growing space in local public policies¹.

The Green Municipality Seal Program – PSMV is an environmental management tool that was instituted by Law No. 13,304/03, amended by Law No. 16,128, of October 14, 2016, and regulated by Decrees No. 27,073/03 and No. 27,074/03. It is a public environmental certification program that evaluates local governments and presents the environmental variable in the decision-making process at the local level, in which municipalities are evaluated based on supporting documentation, according to the evaluation form with 5 Thematic Axes (16 Indicators), which are: Municipal Environmental Policy; Environmental Sanitation and Public Health; Water Resources; Sustainable Agriculture and Biodiversity².

The environmental certification of the State of Ceará, established by the Municipality's Green Program Seal (PSMV) is a management tool that proposed to verify the contribution of public policies to the environmental management of the municipalities of Ceará, with the goal of promoting environmental protection, supported by the mobilization of the community and public agencies, verifying the compromise of the urban environment and environmental management².

The case presented is from the municipality of Sobral-CE, and the environmental health strategies aimed at environmental certification are carried out by the Municipal Environment Agency – AMA. Sobral is listed among 19 other municipalities in Ceará contemplated by the Secretariat of the Environment of Ceará (SEMA) with the Green Municipality Seal. Each of the 32 municipalities enrolled in the Seal was evaluated by an interinstitutional committee formed by 20 agencies³.

The PSMV indicators can be easily monitored, because they are qualitative and quantitative and can indicate whether municipalities are achieving local sustainability goals, and can contribute to the implementation of environmental and health public policies at the local level, but also globally through internationalization with the effective implementation of environmental public policies at the local level, as well as for internalization, through the incorporation of environmental issues in strategies and policies aimed at the social determinants of the municipalities of Ceará⁴.

Environmental health is related to the interactions between human health and the conditions of the natural and anthropic environment that determine, influence and condition individual and collective quality of life^{5,6}. Therefore, the use of instruments such as Environmental Certification, more specifically the Green Municipality Seal Program, seeks to improve public health and environmental policies through

intersectoriality, combined with the commitment of managers and technicians from all departments and autarchies, through commitment to environmental management.

Therefore, the following question arose in this research: do environmental health indicators work as a management instrument of the Green Municipality Seal Program, capable of presenting the best management for environmental certification? The hypothesis is: the municipality of Sobralense, through environmental health strategies, will have an improvement in its indicators and, consequently, the best environmental certification.

With this documentary study, we seek to analyze the potentialities and limitations of the Green Municipality Seal Program - PSMV, for better decision-making in the improvements in environmental health strategies. It is intended that the certification, through the PSMV, promotes the construction of a pedagogy for the promotion of environmental health, through actions that not only capture the risk, exposure, and injuries, but also protagonists who actively preserve and rebuild the socio-environmental space of the Sobralense community.

The study aims to analyze the strategies developed by the Municipal Environment Agency of Sobral/CE with the Working Group in relation to environmental health actions for certification of the Green Municipality Seal Program – PSMV.

Thus, this study is justified because, in addition to recognizing the importance of environmental management, it seeks to contribute to the process of conscious decision-making, qualification in relation to environmental health indicators and consequent reduction of public spending. It is configured as an induction tool, or not, for Sustainable Integrated Local Development in municipalities that, over the years in which they undergo the evaluation, have lost their certification.

METHODOLOGY

Case study on the Green Municipality Seal Program. A documentary research with a qualitative approach was carried out, to understand the local reality through the latest certification of the Green Municipality of Sobral Seal, more specifically the projects aimed at environmental health actions.

The adoption of the qualitative approach is based on the understanding that it involves the interaction between researchers and participants in the in-depth research, dealing with the interpretation of specific social realities⁷.

The qualitative approach seeks to better investigate the delimited and focused groups and segments, through social histories from the perspective of the actors; as well as the relationships of the subjects involved. In the process of analyzing discourses and documents, it also considers the subjectivity of this subject⁷.

The study area is the municipality of Sobral, in the state of Ceará (Brazil), with 184 municipalities and 93% of its territory is in the semi-arid Northeast^{8,9}.

In the regional context, the city of Sobral is located between Jericoacoara and Ubajara and can enter the tourist route as an alternative for those who want to experience the hinterland of the North Region, leaving the traditional tourist axis of beaches and mountains. The municipality of Sobral is located in the Northwest Region of the State of Ceará, approximately 230 km from the capital, Fortaleza^{8,9}.

Composed of 17 districts, including the main district, it has a territorial extension of an area of 2,123km², equivalent to 1.43% of the state territory. Its central geographic configuration, in the context of the Acaraú Valley, added to the socioeconomic activities of regional expression, reflects its expressive population contingent, estimated at 188,233 inhabitants, which represents 80.7% of the population in the headquarters^{8,9}.

The Municipal Environment Agency – AMA is governed by Law No. 1672, of October 4, 2017, which establishes its competence, structure and organization. Its purpose, according to Article 3, states that: The purpose of the Municipal Environment Agency (AMA) is to implement public policies related to the conservation and maintenance of the natural environment of the Municipality of Sobral, within the limits of its attributions^{10,11}.

The form with evaluation of the 2019/2020 biennium of the PSMV was used in the municipality of Sobral/CE. The municipality was classified in category B, with a score between 70 and 90, being one of the best evaluations in the state. This is the tenth time, since the foundation of the seal, in 2004, that Sobral has been awarded by the state initiative.

RESULTS

The *Green Municipality Seal* is an important initiative of the Government of Ceará, which aims to encourage municipalities to adopt sustainable practices and public policies aimed at environmental preservation and health promotion. The municipality of Sobral, as a participant in the program, has stood out in several environmental health actions, but also faces specific challenges related to the socio-environmental and infrastructure context of the region.

The selected projects were those that were scored for the Green Municipality Seal Program (PSMV). These projects are carried out by the AMA of Sobral/CE in partnership with other secretariats and public bodies and institutions.

The methodological structure of the PSMV is characterized by its dynamic form and multiprofessional and transdisciplinary application since the certification is the result of a collective effort. In this scenario, the Management Committee, the Technical Commission and COMDEMA develop their activities in an integrated and simultaneous manner.

The Technical Manual Green Municipality Seal Program, of the 13th edition - 2019/2020, aims to guide municipal managers and professionals who are part of the Technical Commission and the Management Committee of the PSMV, with the objective of supporting them in the process of evaluating environmental indicators, and analyzing the understanding of environmental variables, in addition to the municipality's capacity in the process of implementing actions focused on social determinants and the local territorial development.

The municipalities, in the aforementioned edition, are evaluated through the fulfillment of sixteen established indicators, being distributed in five thematic axes, totaling 100 points, as shown in Chart 1. The Environmental Sustainability Index (ISA) is the sum of all scores in the five axes.

Chart 1 - Thematic axes and Indicators for the evaluation of municipalities in the Green Municipality Seal Program, 13th Edition 2019/2020.

Thematic Eixo	Maximum Score
AXIS 1 – MUNICIPAL ENVIRONMENTAL POLICY	32
Indicator 1: Environmental Framework	15
Indicator 2: Effectiveness of the Municipal Councils for the Defense of the Environment (COMDEMA)	4
Indicator 3: Implementation of the Environmental Education Policy	12
Indicator 4: Deployment of Sustainable Technologies	1
AXIS 2 – ENVIRONMENTAL SANITATION AND PUBLIC HEALTH	36
Indicator 5: Integrated Solid Waste Management	10
Indicator 6: Final disposal of municipal solid waste	4
Indicator 7: Social inclusion of waste pickers	6
Indicator 8: <i>Aedes aegypti</i> infestation	5
Indicator 9: Sanitary Sewage System and Water Supply System	11
AXIS 3 – WATER RESOURCES	7
Indicator 10: Improvement of Water Quality	7
AXIS 4 – SUSTAINABLE AGRICULTURE	5
Indicator 11: Sustainable Management of Agricultural Production	3
Indicator 12: Capacity Building in Sustainable Agriculture	2
AXIS 5 – BIODIVERSITY	20
Indicator 13: Municipal Conservation Unit (CU)	5
Indicator 14: Urban Green Areas	5
Indicator 15: Biodiversity Preservation and Conservation	5
Indicator 16: Control of Deforestation and Fires	5
TOTAL CERTIFICATION POINTS	100

Source: Cabral; File; Azevedo (2019).

It should be noted that for the length of the 16 indicators and analysis of the documentation sent by each municipality is done by the Technical Commission, the municipalities are ranked by scores, which are divided into three categories (A, B or C) to be certified. The minimum score required is 50 points in the Environmental Sustainability Index (ISA). subsequently, the general classification of each municipality is released by the Department of the Environment of the State of Ceará (Chart 2).

Chart 2 - Environmental Sustainability Index and Categories, according to the classification of municipalities for certification in the Green Municipality Seal Program.

Interval of ISA	Category
$\geq 90 \leq 100$	A
$\geq 70 \leq 90$	B

$\geq 50 \leq 70$	C

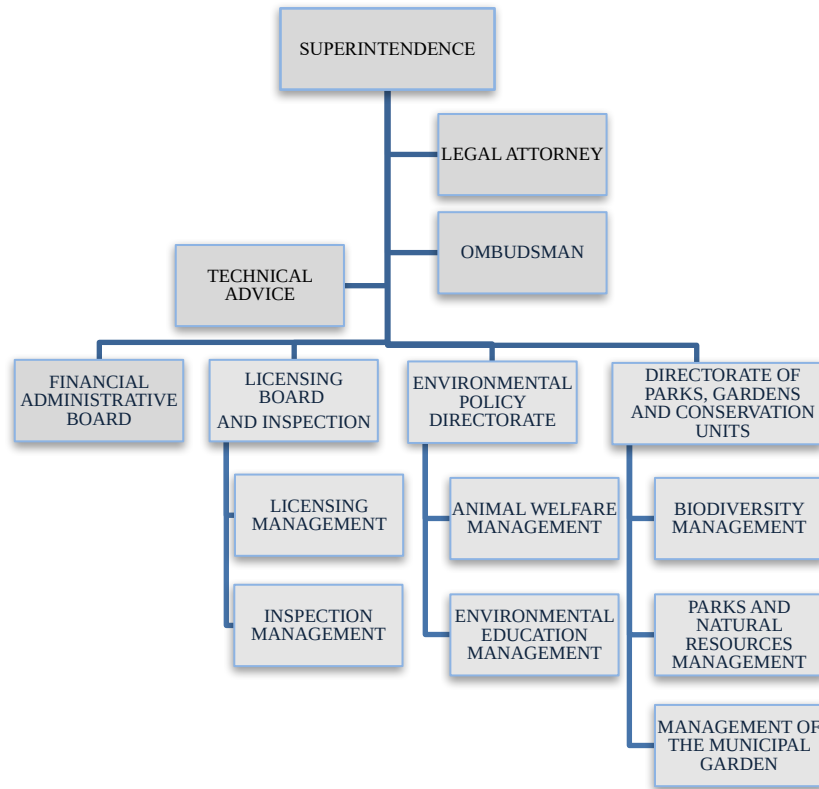
Source: SEMA, (2020).

It is highlighted in this study that environmental health strategies, through the Green Municipality Seal Program certification, are carried out by the Department of Urbanism, Historical Heritage and Environment – SEURB, Sobral-CE, through the Environmental Education coordination – CEA of the Municipal Environment Agency, which is linked to SEURB. She is responsible for managing actions aimed at the Working Group of the Green Municipality Seal Program - PSMV. It should be noted that, since its creation in 2003, the municipality of Sobral has participated and has received 11 titles but has not yet reached the maximum score for classification in the "A" category.

The group is made up of 11 agencies (Municipal Health Department; Secretariat of Culture, Youth, Sports and Leisure; Ombudsman Secretariat; Controllorship and Management; Attorney General's Office of the Municipality; Secretariat of Works, Mobility and Public Services; Secretariat of Labor and Economic Development; Secretariat of Security and Citizenship; Secretariat of Human Rights, Housing and Social Assistance; Autonomous Water and Sewage Service - SAAE; Municipal Environment Agency (AMA) and Secretariat of the Ombudsman, Management and Transparency).

AMA is linked to the Municipal Council for the Defense of the Environment – COMDEMA and the Management Council of the Socio-Environmental Fund of the Municipality of Sobral – FUNSAMS. The milestone for the strengthening of environmental policy in the municipality is materialized with the creation of the Socio-Environmental Fund of the Municipality of Sobral – FUNSAMS, recently approved through Decree No. 1552, of December 10, 2013, regulating its Management Council, form of use, operation and other measures (IOM, 2013: p. 1). It is also noteworthy the benefits that it will bring, since the amounts collected in payments of fines for environmental infractions will be reverted to the fund to enable the development of plans, programs and projects aimed at the rational and sustainable use of natural resources to better perform its activities.

Today AMA is formed by the Superintendence that manages the municipality's environmental policy, accompanied in the organizational chart by the Legal Attorney's Office, Ombudsman, Technical Advisory. It also has four directorates, which are: 1. Board of Directors; 2. Licensing and Inspection Board, with two managements (Licensing Management, and Inspection Management); Environmental Policy Board, with two managements (Animal Welfare Management; Environmental Education Management); and the Directorate of Parks, Gardens and Conservation Units, with three managements (Biodiversity Management, Parks and Natural Resources Management and Municipal Garden Management), as can be seen in Figure 1.

Figure 01 - Organizational chart of the Municipal Environment Agency of Sobral, Ceará, 2021

Source: AMA data (2021).

According to the Management Committee (2008), the Green Municipality Seal Program – PSMV is a public Environmental Certification Program, established by State Law No. 13,304/03, amended by Law No. 16,128, of October 14, 2016, and regulated by Decrees No. 27,073/03 and No. 27,074/03. In table 01, the project, duration-period and place of execution can be seen.

Chart 3 - Projects involving environmental health implemented by the Municipal Environment Agency in municipal schools in Sobral – CE, 2019.

Recycling	Project	Period	Local
Selective collection (Sobral Program is the Greatest Cleaning)	Sobral Recycles	7 years – 2005 to 2011	Thirst
	My School is Greater Cleanliness	7 years – 2011 to 2017	Thirst
	My Education Center is Greater Cleanliness – All against <i>Aedes aegypti</i>	8 years – 2010 to 2017	Thirst
Garden	School Garden	1 year and 6 months – 2014 and 2015	Jordan District
Water	Chico Monte in the wake of Water Reuse and Reuse	4 months – 2015	Taparuaba District
Environment	Sowing Ecology	7 years – 2007 to 2013	Thirst

Source: Own authorship.

It is observed that the working group (WG) of the Green Municipality Seal Program (PSMV) is formed by 11 bodies (Municipal Health Department; Secretariat of Culture, Youth, Sports and Leisure; Ombudsman Secretariat; Controllershship and Management; Attorney General's Office of the Municipality; Secretariat of Works, Mobility and Public Services; Secretariat of Labor and Economic Development; Secretariat of Security and Citizenship; Secretariat of Human Rights, Housing and Social Assistance; Autonomous Water and Sewage Service - SAAE; Municipal Environment Agency (AMA) and Secretariat of the Ombudsman, Management and Transparency). And it is observed that the projects involving environmental health are carried out by the AMA, in partnership with other departments. Despite the participation of the Health Department, it is seen that none of the projects that score in the PSMV has its coordination.

It was possible to verify, through the analysis of the documents sent for the environmental certification process, that the municipality of Sobral has an Environmental Education Policy and a Municipal Environmental Plan. These actions are developed in an intersectoral way, in partnership with several public and private institutions. The responsibility for the execution of these initiatives lies with AMA, which coordinates more than seven projects aimed at promoting environmental health, sustainability, and environmental preservation.

It was found that between 5% and 10% of the teachers of the municipal elementary school network participated in training and qualification processes in health and environmental education, with a minimum workload of 40 hours, promoted by the Municipal Environmental Authority of Soral (AMA). In addition, more than 20% of the managers and technicians of the Municipal Department of the Environment received training in the environmental area, with a minimum workload of 20 hours

In the 12th edition of the Green Municipal Sustainability Program (PSMV), held in 2018, the municipality of Brasil obtained the B classification. For comparison purposes, the average score of the municipality of Sobral in this same indicator was 7.25 points.

It is observed that all projects are interconnected to environmental health and the sustainability of the actions, with an execution duration that can extend for up to seven years. However, one limitation identified refers to the actions developed in the school environment, which tend to be more punctual, with an average duration of up to two months. Overall, the projects reached approximately 3,000 elementary school students from the municipal public network, with the support of institutional partnerships.

The analyzed projects present discussions on the interference of man in fauna, flora, natural resources, solid waste and health, with an emphasis on environmental health. However, the projects lacked interventions in critical and collective training that would induce the public to reflect and transform reality as citizens actively participating in the process of building their surroundings.

The importance of the actions of the projects carried out was seen, being able to promote a significant change in the habits of the students, in addition to the autonomy

and a critical reflection of the environmental health problems in the school and its surroundings, thus allowing an effective critical and ecological awareness necessary for the protection of natural resources and the environment.

Some limitations were observed in the monitoring process of the projects under the responsibility of the AMA, such as the non-follow-up of the school projects after the actions. Another limitation is the lack of technicians, with a small technical staff to carry out the actions, monitoring and supervision.

Among the potentialities, it is noteworthy that several schools have already been, and continue to be, benefited from the installation of water reservoirs, the result of the "Chico Monte no Despertar da Água" project, which also includes the implementation of school gardens. In addition, it is observed that there are some projects with greater duration and continuity, marked by sustainable practices inserted in the school development process and conducted by different administrations over time. However, the challenge still persists that most initiatives are punctual, which makes it difficult to consolidate actions with quality and continuity.

Some strategies and potentialities of the program are observed in the municipality of Sobral, which are:

- **Environmental Education:** Raising awareness of environmental and health issues has been a priority. Sobral carries out campaigns and events to encourage sustainable attitudes, such as recycling and reducing water and energy consumption.
- **Solid Waste Management:** The city has implemented selective collection programs and encouraged the creation of waste pickers' cooperatives to help reuse recyclable materials. This initiative seeks to reduce the environmental impact of improper disposal and prevent diseases.
- **Recovery of Degraded Areas:** Sobral carries out reforestation activities and recovery of degraded areas to improve air and soil quality, in addition to promoting local biodiversity.
- **Water Resources Monitoring:** Water quality monitoring programs and actions to protect water sources are important practices in Sobral, given the water scarcity that characterizes the region.
- **Preventive Health Promotion:** In conjunction with the local health system, the municipality seeks to combat endemic diseases, such as dengue, zika, and chikungunya, through programs to combat the *Aedes aegypti* mosquito and other preventive initiatives.

It is seen that the PSMV is an environmental management tool for communication, monitoring and evaluation of local environmental public policies, which has as actors the municipal public management and the civil society of Ceará.

DISCUSSION

GREEN MUNICIPALITY SEAL PROGRAM (PSMV) AND ENVIRONMENTAL HEALTH STRATEGIES

The environmental certification instrument is a mechanism to assess the legitimacy of a process, based on certain criteria essential to the validation of this process. The evaluation methodology of the environmental certification program in Ceará was used by the *Forest Service of the United States Agriculture Development* (1986), in order to enable, through the adaptation of this methodology, a systematic, holistic, and hierarchical approach to the environment¹².

According to Azevedo⁵, the difficulties and adversities that are part of the reality of the municipalities of Ceará can be observed. Among these can be mentioned problems of unemployment, shortages in education and health services, lack of adequate basic sanitation, etc. Thus, the effective implementation of environmental preservation and conservation actions is not verified, as these are not among the main concerns and priorities of the vast majority of public managers, and therefore do not receive the deserved prominence in the scope of municipal public policies.

The PSMV is conceived as a stimulus for the municipalities of Ceará to implement and carry out local environmental policies, in addition to the active participation of society and managers in the identification of their needs, demands, potentialities and in the definition of their priorities, with a focus on debate and environmental responsibility¹².

The PSMV was established by State Law No. 13,304/03, regulated by Decrees No. 27,073 and No. 27,074, of 2003, with the purpose of annually identifying the municipalities of Ceará, voluntarily registered, that meet pre-established criteria for conservation and sustainable use of natural resources, promoting a better quality of life for the present and future generations. Due to its socio-environmental characteristic, it may encourage municipalities to implement environmental public policies that promote the improvement of the population's quality of life. It also provides for an award to the municipality that best meets the environmental quality criteria: The Environmental Sensitivity Award¹².

For municipalities to participate in the Green Municipality Seal Program (PSMV), they must have a Municipal Council for the Defense of the Environment (COMDEMA), which is responsible for the data sent to the program, as well as for the mobilization and social articulation of the local community¹³.

In order to ensure credibility and transparency, sustainability, feasibility, legitimacy, reliability and selective equity, the entire process of implementation, operation and control of the activities that attest to and confer the seal to the municipalities is carried out and monitored by the Management Committee, a collegiate unit of an interinstitutional nature, of deliberative decision, composed of members of civil society, professional and educational class entities, by the government and universities, whose presidency is exercised by the Council for Environmental Policies and Management (CONPAM), with the State Superintendence of the Environment of Ceará (SEMACE) as Executive Secretariat¹⁴.

The importance of the National Environmental Policy and Environmental Education actions in the scores of Sobral, Ceará, is emphasized, clearly presenting that they are fundamental for the improvement of municipal environmental health. The National Environmental Policy brings environmental education as an indispensable tool

for the protection of the dignity of human life, established at all levels of education, including the education of the community, aiming to enable it to actively participate in the defense of the environment^{15,16}.

The Green Municipality Seal Program, implemented in Ceará, Brazil, is an initiative that evaluates and certifies municipalities with sustainable practices and policies aimed at the environment. The importance of the results of a study on this program for environmental education, environmental health, and public health is manifested in several aspects.

Municipalities that win the seal end up becoming models for other cities and regions, promoting a culture of sustainability, education and environmental health that can positively influence public policies in other locations.

It should be noted that environmental education is a continuous educational tool, which is articulated with formal, non-formal and informal teaching modalities. Environmental education strategies seek to consider local realities and historical trajectory, reflecting cultural and social aspects of audiences with specific needs and real conditions of those involved¹⁷. And environmental health is the interaction between human health and the natural and built environments, which influence the quality of life of man and the community⁶.

The program encourages policies and actions to improve the environmental quality of municipalities, which directly impacts the health of the population. Cleaner environments, with lower pollution rates and greater preservation of natural resources, result in lower rates of respiratory diseases, dermatological problems and conditions associated with degraded environments. Sustainability practices, such as correct waste management, sewage treatment, and preservation of green areas, are essential for the prevention of infectious and parasitic diseases. Certification motivates municipalities to invest in basic sanitation and rainwater management, reducing foci of transmission of diseases such as dengue, zika, and chikungunya^{2,4,17}.

With the incentive of the seal, public managers engage in developing environmental and sustainability policies that integrate health and the environment. These actions benefit the entire population, with public health that is more integrated with the environment. The results of studies that evaluate the impact of the Green Municipality Seal Program can foster citizen awareness about the importance of sustainable practices. This knowledge leads to healthier habits and a community that collaborates to preserve the local environment, positively impacting public health^{17,18}.

Therefore, studies that evaluate the Green Municipality Seal Program show the impact and effectiveness of environmental policies on public health, supporting and justifying the continuity and improvement of public policies that relate health and the environment.

FINAL CONSIDERATIONS

In view of the fragility of the health sector in relation to environmental health projects for scoring in the certification of the Green Municipality Seal Program (PSMV), the Municipal Environment Agency (AMA), of Sobral, through the

Environmental Education Management, takes the lead in environmental education actions.

It is seen that the projects implemented by AMA addressed themes related to the environmental health issues that Sobral faces. It was also found that the strategies have intersectoral participation. Therefore, the projects seek to bring a critical reflection on *on-site actions* in relation to changes in habits, health and the environment in the school setting. Therefore, it is essential to have an educational work with schools, in an intersectoral and transdisciplinary way.

The importance of the actions of the projects carried out was seen, since it presented positive results for the PSV score, being able to promote a critical reflection of environmental health problems, thus allowing an effective critical and ecological awareness necessary for the protection of natural resources and the environment.

Regarding the limitations, it is observed that the projects were carried out by the AMA. Therefore, it is necessary that other sectors, such as the Department of Health, take the lead or implement and implement projects on environmental health at some points in the environmental certification processes, thus making the sectors participating in the PSMV working group co-responsible. Therefore, environmental activities require constant investment, and the limitation of financial resources can compromise the reach of some actions, especially in medium-sized municipalities such as Sobral.

Despite the efforts, there are still structural limitations, such as the lack of complete sanitary sewage systems in all areas of the city, which impacts public and environmental health. The need for active community participation is also emphasized. The involvement of the population is essential, but engagement is not always uniform in all regions of the city, especially in more peripheral areas. Another problem is the lack of up-to-date data. The absence of up-to-date and detailed information on environmental quality and health indicators makes it difficult to monitor progress and formulate effective policies.

The Program also has several potentialities, such as partnerships with educational institutions. Sobral has partnerships with universities and research centers, which can contribute to studies on environmental health and innovative strategies to overcome local challenges. Recognition by the Green Municipality Seal can open doors for more state and federal investments and support the implementation of long-term environmental public policies.

In this way, the program can be directed to the specific needs of the semi-arid region, such as living with drought and the sustainable management of natural resources, making Sobral an example of environmental resilience. Therefore, the Green Municipality Seal Program is considered an environmental management instrument for the practice of citizenship or citizen learning, considering that its indicators stimulate managers through their actions to improve environmental quality.

REFERENCES

1. Pott CM, Estrela CC. Histórico ambiental: desastres ambientais e o despertar de um novo pensamento. *Estud Av.* 2017 jan./abr;31(89).
2. Cabral NRAJ, Lima PVPS, Azevedo MSF. Manual Técnico Programa Selo Município Verde. Fortaleza: Secretaria do Meio Ambiente, 2019.

3. Sobral. Lei nº 1672, de 04 de outubro de 2017. Estabelece a competência, estrutura e organização da Agência Municipal do Meio Ambiente. Diário Oficial, Sobral, CE, nº 162, p. 14-15, vol. 1, de 5 de outubro de 2017. Acesso em: 07 ago. 2019.
4. Ceará. Manual Técnico Programa Selo Município Verde 2021/2022 – 14ª Edição. Secretaria do Meio Ambiente. Comitê Gestor do Programa Selo Município Verde. Organização de conteúdo e autoria dos textos: Cabral, Nájila Rejanne Alencar Julião; Lima, Patrícia Verônica Pinheiro Sales; Azevedo, Maria do Socorro Ferreira de. Fortaleza: Secretaria do Meio Ambiente do Estado do Ceará, Instituto Federal de Educação, Ciência e Tecnologia do Ceará, 2021, 36p.
5. Azevedo MSF. Programa Selo Município Verde: promovendo a qualidade ambiental do Ceará. Artigo apresentado no Seminário “ICMS Ecológico do Ceará: A conservação da natureza nos municípios”. Secretaria da Fazenda do Estado do Ceará, 2005. Cartilha UFC/Associação Caatinga, 2006.
6. Desingrini D, Somavilla G, Cicheleiro J. A saúde ambiental no cotidiano escolar. Os múltiplos olhares para o ensino de Biologia. Organizadores: Ana Maria dos Santos; Andréa Aline Mombach; Gabriela Cássia Consalter. Passo Fundo: Editora Berthier, 2010. p. 83-101.
7. Minayo MCS. Pesquisa social: Teoria, método e criatividade. Rio de Janeiro: Vozes, 2016.
8. Instituto Brasileiro de Geografia e Estatística (IBGE). Distribuição espacial e nível de abrangência das redes de saneamento. Disponível em: http://www.ibge.gov.br/home/estatistica/populacao/atlas_saneamento/pdfs/cap01.pdf. Acesso em: 07 jul. 2019.
9. Instituto Brasileiro de Geografia e Estatística (IBGE). Cidades e Estados: Sobral/Ceará, 2022.
10. Sobral. Lei nº 1672, de 04 de outubro de 2017. Estabelece a competência, estrutura e organização da Agência Municipal do Meio Ambiente. Diário Oficial, Sobral, CE, nº 162, p. 14-15, vol. 1, de 5 de outubro de 2017.
11. Sobral. Prefeitura Municipal de Sobral. Sobral recebe a certificação do Selo Município Verde dia 21 de novembro. Acesso em: 07 fev. 2020. Disponível em: <http://www.sobral.ce.gov.br/informes/relevantes/sobral-recebe-certificacao-do-selo-municipio-verde-dia-21-de-novembro>.
12. Cabral NRAJ. Análise do Programa Selo Município Verde como instrumento de política ambiental: o caso dos municípios de Caucaia e Tauá/CE. Projeto de Pesquisa PIBIC/CNPq 002/2011 PRPI. Fortaleza: CNPq, 2011.
13. Heck V, et al. Land use options for staying within the Planetary Boundaries: Synergies and trade-offs between global and local sustainability goals. Glob Envir Change-Human Pol Dim. 2018;49:73-84. DOI: 10.1016/j.gloenvcha.2018.02.004.
14. Girão MS de LF. O índice de sustentabilidade ambiental como um instrumento operacional para o desenvolvimento sustentável: o caso do Ceará [Dissertação de Mestrado]. Fortaleza: IFCE/ Programa de Pós-Graduação em Tecnologia e Gestão Ambiental, 2010.
15. Brasil. Lei nº 6938, de 31 de agosto de 1981. Política Nacional do Meio Ambiente. Brasília: DOU, 1981.
16. Ribeiro H. Saúde urbana e sustentabilidade em tempos de globalização. In: PHILIPPI JR, A.; BRUNA, G. C. Gestão Urbana e Sustentabilidade. Barueri: Manole, 2018. p.114-28. Disponível em: <https://repositorio.usp.br/item/002903852>. Acesso em: 05 mar. 2020.
17. Abreu LDP de, Cabral NRAJ, Souza LA de, Martins EC, Viana ACM. Estratégias de Educação Ambiental nas Escolas Municipais de Sobral/CE com Ênfase no Programa Selo Município Verde. In: X Congresso Brasileiro de Gestão Ambiental., 2019, Fortaleza. Anais [...]. IBEAS – Instituto Brasileiro de Estudos Ambientais. Disponível em: VII-100.pdf (ibeas.org.br). Acesso em: 09 nov. 2024.
18. Ramos MJM, Bezerra MIC, Paiva GM. Saúde, ambiente e qualidade de vida: Reflexões da experiência da Residência Multiprofissional em Saúde da Família e Comunidade de Fortaleza-CE. Cadernos ESP [Internet]. 2019 30 set.[citado 2024 nov. 01];7(2):53-65. Disponível em: <https://cadernos.esp.ce.gov.br/index.php/cadernos/article/view/84>.