Data and Metadata. 2024; 3:334 doi: 10.56294/dm2024334

ORIGINAL



Public policies in Ecuador to mitigate violence against children and adolescents

Políticas públicas en Ecuador para mitigar la violencia contra niños y adolescentes

Alexandra Marisol Barcia Maridueña¹ , Iván Andrés Muñoz Mata¹ , Marcia Lisbeth Verdugo Arcos¹ , Thalía Lilibeth Figueroa Suárez²

¹Universidad Estatal de Milagro. Ecuador.

Cite as: Barcia Maridueña AM, Muñoz Mata IA, Verdugo Arcos ML, Figueroa Suárez TL. Public policies in Ecuador to mitigate violence against children and adolescents. Data and Metadata. 2024; 3:334. https://doi.org/10.56294/dm2024334

Submitted: 01-01-2024 Revised: 08-03-2024 Accepted: 19-05-2024 Published: 20-05-2024

Editor: Adrián Alejandro Vitón Castillo 🕞

ABSTRACT

The article focuses on examining public policies in Ecuador to mitigate violence against children and adolescents, this in the context that the rates of violence in the country have increased over the years and the ways in which they are produces are diverse, as well as the aggressors are no longer only found in the family environment but also in the school environment and in other areas where the minor has participation. In this sense, a review of the regulations in force in the country is carried out to assess their coverage and effectiveness based on international instruments on which they are based. The result of this review has made it possible to identify that despite the diversity of legal instruments, children's rights continue to be violated, which infers the need for actions to reinforce the guarantees of their compliance.

Keywords: Laws; Rights; Abuse; State.

RESUMEN

El artículo se enfoca en examinar las políticas públicas en Ecuador para mitigar la violencia contra niños y adolescentes, esto en el contexto de que los índices de violencia en el país han aumentado a lo largo de los años y las formas en que se produce son diversas, así como los agresores. Ya no sólo se encuentran en el ámbito familiar sino también en el ámbito escolar y en otros ámbitos donde el menor tiene participación. En este sentido, se realiza una revisión de la normativa vigente en el país para evaluar su cobertura y efectividad con base en los instrumentos internacionales en los que se basan. El resultado de esta revisión ha permitido identificar que, a pesar de la diversidad de instrumentos jurídicos, los derechos de la niñez continúan siendo vulnerados, lo que infiere la necesidad de acciones para reforzar las garantías de su cumplimiento.

Palabras clave: Leyes; Derechos; Abuso; Estado.

INTRODUCTION

The environment in which children grow and develop is decisive for every society, since it is precisely in the family and educational environment in which future adults are forged as complete human beings, who can take charge of their lives and contribute. with their skills, criteria and feelings, to improve the conditions of coexistence of people, while achieving their personal constructions. For children and adolescents to achieve this objective, it is essential that parents, States and society are able to provide them with adequate access to food, education and health, among other aspects necessary for their development, being one of the most important. who have the possibility of growing up in an environment free of violence, both physical and psychological.

© 2024; Los autores. Este es un artículo en acceso abierto, distribuido bajo los términos de una licencia Creative Commons (https://creativecommons.org/licenses/by/4.0) que permite el uso, distribución y reproducción en cualquier medio siempre que la obra original sea correctamente citada

²Unidad Educativa Eloy Alfaro. Ecuador.

Victims of violence develop worries, alterations and psychological defense mechanisms that prevent them from thinking clearly and functioning naturally in an environment that they perceive as hostile and in which they continually feel the need to be on the defensive, either through concealment, inhibition or generation of aggressiveness. These attitudes, which soon become habits and later part of the personality of the victim, remain strongly linked to the character and way of being of the person, coming to have a determining influence on their subsequent actions, even more so when dealing with children and adolescents. in whom their malleable temperament, both positively and negatively, is still in the development stage.⁽¹⁾

Furthermore, the fact that, in most cases, the main aggressors of children are their own parents, relatives and teachers further aggravates the problem because the victim is not able to find for himself a way to escape from his situation, thus becoming a chronic situation that often accompanies the victim for much of their life. If we add to this situation the psychological manipulation exercised by the aggressor, the result is that very rarely these types of situations are reported or go beyond family intimacy, (2) so Presumably the problem is much bigger than the statistics show:

Table 1. Forms of relationships between children and parents in the event of an absence		
Forms of relationship	%	
Extreme violent abuse: hitting, locking up, bathing in cold water, insulting, taking people out of the house, leaving them without food.	38	
Indifference: not paying attention, not doing anything.	1	
Good treatment: Dialogue, help.	42	
Source: Prepared from the Social Observatory of Ecuador OSE (2019)		

Table 2. Forms of relationships between children and their teachers when they do not complete a task		
Forms of relationship	Percentage	
Non-violent: talk, lower grades, call a representative.	74	
Violent: hitting, insulting, leaving without recess.	26	
Source: Prepared from the Social Observatory of Ecuador OSE (2019)		

Likewise, the Pan American Health Organization⁽³⁾ has identified that around 30 % of children have received physical punishment from their parents and 8 % from their teachers. In this sense, it should be noted that of the complaints of child abuse recorded during 2020, 74 % corresponded to violence carried out by the parents themselves, with frequent beatings, cold water baths, insults and ridicule, followed by actions such as leaving them without food and taking them out of the house. Inappropriate treatment received at school, whether by teachers or classmates, deserves special attention, because, despite its relatively low frequency rate compared to other types of aggression, it contributes to increasing school dropout statistics. depressive disorders and even suicide. Humiliation, beatings and mockery are the main means by which children and adolescents are attacked in study centers. It is also of great importance to pay attention to the recently uncovered cases of sexual assaults by teachers, not only because of the seriousness of these events, but also because they occur in places where children are supposed to be safe and should have the sufficient confidence for them to remain in them.⁽⁴⁾

Another important source of violence is that which occurs in countries that are victims of the scourge of drug trafficking and gangs, in which children and adolescents are early spectators of acts of extreme violence such as murders, confrontations between gangs, hitmen, etc., many of them Sometimes their own parents or family members are involved in this type of activities. Sometimes, children and adolescents are frequent visitors to prisons, where they accompany their mothers or grandmothers to visit their fathers imprisoned for crimes as complex as drug trafficking, murder, human trafficking, among others, in this way society, many times with passivity and other times with helplessness, see how these children grow up surrounded by violent situations that end up hardening and desensitizing their characters and generating the idea of normality in order to overcome fear and find ways to survive and feel safe. (5)

In this environment, some children and adolescents are used as micro-traffickers, since drug traffickers take advantage of legal elements intended to not criminalize consumers, such as the current drug consumption table in Ecuador, as well as the ease minors have to enter study or sports training centers, to send their product to unsuspecting consumers through this means. Some minors, therefore, go from being witnesses to being participants in this type of activities in which they feel they receive "benefits" that allow them to cover their needs and sometimes contribute to their homes. (6)

3 Barcia Maridueña AM, et al

In this complex context, the most critical stages in the development of every human being unfold, such as childhood and adolescence, phases in which, as has already been pointed out, the characters and personalities of the adults are cemented. future they will have the mission of carrying forward the life of families, communities and even countries. It is to be hoped, therefore, that it is a fundamental concern and priority of the States to ensure that the comprehensive development of children and adolescents develops in an environment free of violence that allows them to develop their skills and characters in the most positive and constructive way possible. so that they can enhance their qualities for the benefit of themselves and society. It is for this reason that it has been proposed in this monograph to examine public policies in Ecuador to mitigate violence against children and adolescents.

Universal Declaration of Human Rights

Although the Universal Declaration of Human Rights does not explicitly mention the right to live a life free of violence, it does address the protection of human dignity and personal security, for example the following articles can be mentioned:

Article 3: "Every individual has the right to life, liberty and security of person", one to comply with this, States should establish appropriate measures and institutions and necessary to ensure the safety of all its citizens, including minors.

Article 5: "No one shall be subjected to torture or cruel, inhuman or degrading treatment or punishment", (7) thus protecting the physical and psychological integrity of individuals. It is noteworthy that this document does not refer to Governments or States, nor to any aggressor person or institution in particular, but to the fact of exercising violence against another, regardless of the relationship and condition that exists between the two, this means that They condemn "cruel, inhuman or degrading treatment" regardless of where it comes from, from a parent, teacher, friend or in general from any person or institution.

Children's rights convention

An important precedent regarding the concern for the care of children is found in the Geneva Declaration on the Rights of the Child, which dates back to 1924 and was approved at the time by the League of Nations. It contains 5 articles that have served as a basis and inspiration for subsequent agreements and deals with fundamental aspects such as material and spiritual development, food, health, education, orphanhood, disaster relief, among others. Notable is article 2 which says: "The hungry child must be fed; the sick child must be cared for; the handicapped child must be helped; the maladjusted child must be re-educated; the orphan and abandoned must be taken in and helped". (8)

Subsequently, in 1959, the Declaration of the Rights of the Child was approved, which expanded the concepts already considered in the Geneva Declaration on the Rights of the Child, in this context, the Convention on the Rights of the Child, a document promoted by the United Nations. United Nations, recognizes children and adolescents as subjects of rights and special protection in view of their vulnerable condition, grants parents or guardians, as well as the State, responsibilities in their harmonious development and warns against the risks of lack of access to health, education, nutrition, among others, as well as exposure to situations of physical and psychological violence. Unlike the Universal Declaration of Human Rights analyzed in previous paragraphs, the Convention on the Rights of the Child is binding on the countries that have ratified it (196 in total), which means that governments have the obligation to establish laws and public policies aimed at their effective practical application. This document recognizes the need to protect them from all forms of violence, abuse and exploitation, establishing a series of provisions to guarantee their safety and well-being, for example:

Article 2, paragraph 2: "States Parties shall take all appropriate measures to ensure that the child is protected against all forms of discrimination or punishment on account of the status, activities, expressed opinions or beliefs of his or her parents, or their guardians or their relatives", (9) children are thus excluded from any consequences for acts or expressions for which they are not responsible, but of which they have historically been direct or indirect victims. be it from governments, educational institutions or communities that, in the best of cases, have excluded them and, in the worst of cases, have punished them, for acts or opinions of their parents or guardians.

Article 19: "States Parties shall take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental harm or abuse, neglect or negligent treatment, ill-treatment or exploitation, including sexual abuse, while the child is in the custody of the parents, a legal representative or any other person who has charge of him or her", (9) this article, the first that explicitly addresses the problem of abuse, establishes fundamental responsibilities for States and includes for the first time "neglect or negligent treatment" as part of the abuse and violence to which children are subjected.

Ecuadorian case

Ecuador is characterized by two aspects, on the one hand, high figures of violence against children and

adolescents have been evident that occur despite the laws and policies to protect the comprehensive rights of minors, even violating the Constitution itself in which it is considered to children and adolescents as part of a population group for priority attention. (10) Added to this is the recurrence of acts of violence, which are usually present in up to a third of the cases that are reported, according to research in this context. (11)

On the other hand, Ecuador, as a country committed to the protection of the rights of children and adolescents, has established various laws and public policies aimed at preventing and mitigating violence that affects this vulnerable group of the population. These legal frameworks are based on international human rights principles, and aim to guarantee a safe and appropriate environment for the comprehensive development of children and adolescents. In this sense, it is necessary to review these legal bodies.

Constitution of the Republic of Ecuador

The Constitution is the most important legal body of the country and establishes the structural bases of the State, it contains the essential elements that define the nation and establishes the relationships between individuals and of these with the natural environment, in its article 44 it prioritizes comprehensive development of children, guaranteeing the full exercise of their rights and explicitly recognizing their best interests, consequently, article 45 recognizes the rights of girls, boys and adolescents to:

Physical and mental integrity; to your identity, name and citizenship; to comprehensive health and nutrition; to education and culture, to sports and recreation; to social security; to have a family and enjoy family and community life; to social participation; to respect their freedom and dignity; to be consulted on matters that affect them; to educate themselves as a priority in their language and in the cultural contexts of their peoples and nationalities; and to receive information about their absent parents or relatives, unless it would be detrimental to their well-being. (12)

Article 46 obliges the State to take protection measures in favor of children against labor and sexual exploitation, violence, abuse, among others, as well as to provide them with assistance in nutrition, health, education, etc. In accordance, article 69 of the same legal body refers to responsible parenthood, establishing the obligation for parents to care, raise and educate their children, while protecting parents so that they can fulfill these responsibilities. (12)

Code of Childhood and Adolescence

The Code of Children and Adolescents is the fundamental pillar in the protection of the rights of children and adolescents in Ecuador, since it tries to guarantee their respect and comprehensive protection, including the right to live a life free of violence. The code covers various aspects related to the protection of minors, such as the prevention and care of mistreatment, sexual abuse, child labor, and access to health and education services; Additionally, institutional abuse is recognized, holding the legal representatives of the institutions responsible for acts committed by teachers or officials against children, either due to inaction and permissibility, as well as for the existence of practices that allow or promote the use of abuse. as a pedagogical tool.

Article 11 of this law recognizes the best interest of the child, establishing the duty of the authorities to adjust their actions and decisions to comply with this principle, as well as article 15 recognizes girls, boys and adolescents as subjects of rights and guarantees, enjoying the same rights that all individuals have, in addition to the specific ones necessary for their age, placing emphasis on those related to protection and care. Article 58 prevents mistreatment, abuse, sexual exploitation and trafficking of minors, article 67 against kidnapping, and article 77 against labor exploitation. (13)

Article 73: "It is the duty of all people to intervene immediately to protect a child or adolescent in flagrant cases of mistreatment, sexual abuse, trafficking and sexual exploitation and other violations of their rights; and require the immediate intervention of the administrative, community or judicial authority", (13) this article extends the responsibility for the care of minors in the event of abuse to society in general, that is, the parents or Guardians and the State are responsible for care, but the guarantors of protection end up being all citizens.

National Agenda for Intergenerational Equality

This is a public policy instrument promoted by the National Council for Intergenerational Equality that acts under the coordination of the Ministry of Economic and Social Inclusion. It is based on the fact that, due to their age, children and adolescents are not capable of to exercise autonomy, so their situation of vulnerability is multiplied, since they depend on parents or guardians for their subsistence. In this sense, it tries to ensure respect for the rights of minors, both in the family and institutional spheres. (14)

Unfortunately, more than laws or guidelines, these are more or less aspirational and generic statements such as eradicating child labor, violence, begging, homelessness, among others; Therefore, it can be said that, apart from a declarative nature, it does not have greater practical application, because it does not institutionalize protection issues, it does not establish responsibilities for prevention or control, nor does it have a sanctioning regime. This document also suffers from a lack of practicality in terms of not setting out a clear route for the

implementation of the aspirational statements it contains.

National Plan for the Prevention of Violence against Children and Adolescents

The Vice Presidency of the Republic of Ecuador promoted this plan in the absence of a centralized and coherent policy in terms of protection of this vulnerable segment of the population and the absence of a centralized entity specialized in protecting the rights of children and adolescents. The stated objective is to "eliminate unequal and violent treatment against girls, boys and adolescents so that their human rights are not or continue to be violated". (15) In this document, after long introductory chapters, definitions and diagnoses, there are no clear provisions or guidelines that lead to the fulfillment of the declared objective.

There are other legal bodies in which the protection of minors is mixed with that of other vulnerable groups, so their problems and treatment are subordinated and subject to apparently more priority situations. This is the case of the Comprehensive Penal Code in which their situation is linked to that of women and/or older adults, something similar happens with other legal instruments with clear gender orientation such as the Law to prevent and eradicate Violence against Women or the National Plan for the Eradication of Gender Violence, towards Children, Adolescents and Women.

Cantonal Rights Protection Boards

The Organic Code of Territorial Organization, Autonomy and Decentralization, (16) includes in the powers of the Decentralized Autonomous Governments the implementation of entities that ensure the exercise of rights, among them those of children and adolescents, these entities are the Cantonal Boards for the Protection of Rights that have the power to issue mandatory administrative decisions in order to restore violated rights and prevent aggressors from continuing to attack those attacked. These measures can be taken ex officio or through a complaint and must be ratified in a subsequent judicial instance.

DISCUSSION

En el contexto de las leyes, políticas públicas e instituciones analizadas, se puede afirmar que Ecuador has established a series of provisions that demonstrate its commitment to the protection of the rights of children and adolescents. Some of these legal frameworks and policies are more effective than others and seek to prevent, care for and institutionalize the protection of children, as well as facilitate its comprehensive, harmonious and sustainable development. However, it is essential to continue strengthening these efforts and promoting a culture of respect and protection of the rights of young people, a process in which the active participation of civil society, institutions and the community in general is essential to achieve a society free of violence towards children and adolescents.

Faced with this reality, a clear aspect of improvement is the education of minors about their rights, providing them with information and practical guidance on how to act in complex and dangerous situations that endanger their integrity. In this regard, Fernández (17), have made a great contribution that is worth adding to this analysis since they considered the importance of social Marketing as a strategy to reduce child violence in Ecuador, identifying that motivational messages as well as information regarding how to report have had a considerable impact on the population, especially in cases of sexual, physical and psychological violence. Furthermore, they were able to recognize that social action campaigns are those that have had the greatest awareness-raising effects in the population for the early identification of abuse.

Despite the efforts made, if there is an improvement in addressing the needs of minors in terms of education and health, even the legal bodies multiply in this sense and thus can be list, in addition to those already analyzed in previous paragraphs, others such as the Organic Law of Disabilities, the Organic Law of the Food Sovereignty Regime, the Organic Law of Intercultural Education, the Organic Law of Health, etc. These laws and their respective regulations establish an important strength in terms of attention to needs related to health, education, food and others, which constitutes an undoubted advance on the right path and contributes significantly to achieving the objective of having a childhood and youth who grow and develop in favorable environments, but who, on the other hand, open and maintain a gap in terms of protection against violence.

In this sense, exposure to violence prevails as a fundamental problem for the harmonious development of children and adolescents, even more so if one considers the presence of gangs and drug trafficking, as well as alcoholism and drug addiction, which have led this problem to levels never before imagined. In the current state of things, in which reality far exceeded any prediction of the legislator and the levels of violence exceed those that can be observed at the domestic level, having reached limits never seen before, an update is necessary more than ever. of current legislation and adequate and transversal coordination between all functions of the State to improve the environment in which children who today are witnesses and sometimes participants in these acts develop. Since, currently they are victims of complex situations for which clearly neither legislation nor institutions are prepared and in which greater efforts are urgently needed to successfully achieve the objective of ensuring that children and youth enjoy a harmonious development that enhances their

qualities and capabilities. Prevention will always be preferable to punishment and in this sense, education has a fundamental role with its role of comprehensive training in values and not only transmitting knowledge. Guidance for parents, neighborhood work and economic reactivation will be fundamental in this aspect.

It is also necessary to bring the authorities and institutions to the youngest people since, in view of their lack of autonomy, they are not always in a position to be the ones to report or simply to find out about processes, so it is important that they develop a State strategy in which officials from educational institutions act as counselors and facilitators in order to provide agility to these processes. Beyond declarations, laws and regulations, the State must be efficient in the protection of minors and in the effective protection of their rights by eliminating bureaucratic obstacles and unnecessary procedural burdens, minimizing waiting times that today only add to the risk to victims. Thus, given the above, the following proposals are proposed as part of the strengthening and compliance with the laws for the protection of children and adolescents in the country:

- Creation of specialized centers for the care of children and adolescents who have been victims of abuse or violence in the facilities where the greatest number of cases are recorded.
- Creation of communication spaces in community, public and even private media for the participation of the population around the prevention of violence against children and adolescents.
- Incorporate affective education in local educational units through government psychologists duly prepared for it, with priority intervention in centers where acts of violence have occurred.
- Increase in the means to receive and process cases of violence against children and adolescents in rural areas free of charge.
- Preparation of audiovisual content regarding the causes and consequences of violence against children and adolescents that are widely disseminated in traditional and digital media.
- Participation in cultural and social fairs in which communication strategies are managed to position and give credibility to the issue as a social problem with great impact.
- Provide information in State health agencies through family medical consultation, so that health professionals consider this aspect through instructions that remind them to carry it out with patients.
- Consider the inclusion at the ministries and municipal level of the application of social marketing as a strategy to modify the opinion, attitude and behavior of people in relation to violence against children and adolescents and to obtain improvements in this regard.
- Promote non-violence against children and adolescents in all possible social contexts through campaigns to raise awareness and sensitize the population.
- Coordinated actions with community or local leaders as well as widely accepted social organizations to undertake awareness and sensitization campaigns regarding the issue.

Finally, it is very important to involve the private sector in that its action to generate greater social impact in campaigns and programs can be very favorable and effective thanks to the experience that companies have developed in the competitive business environment.

BIBLIOGRAPHIC REFERENCES

- 1. Souza J, Kerry. Atendimentos Psicossociais a Crianças e Adolescentes Vítimas de Violência Sexual: Percepções de Psicólogas de um Creas/Paef. Psicologia: Ciência e Profissão. 2022; 42.
- 2. Tsani M. The role of parental education on verbal abuse and its impact on the mental health of young adults. Salud Mental. 2023; 46(1).
- 3. Organization. PAH. Prevent and respond to violence against girls and boys in the Americas region. Report on the regional situation 2020. Washington DC: Pan American Health Organization. 2022..
- 4. Martínez A, Paz E. Analysis of situations of violence that occurred or detected in the educational system of Ecuador. A school ethnography with conclusions and recommendations. Andean Journal of Education. 2021; 5(1).
- 5. Chaves L, Narváez J. Approaches to the Study of Sociocultural Deprivation from the School, Family and Community Systems. Guillermo de Ockham. 2023; 21(1).
- 6. Motta A, Rudinicki, Maia J. Drug Trafficking and Youth Mortality in Brazil: An Expression of Human Rights' Violations. Opinión Jurídica. 2018; 17(34).
- 7. Assembly UNG. Universal Declaration of Human Rights. Paris. [Online].; 1948. Available from: https://www.un.org/es/about-us/universal-declaration-of-human-rights.

7 Barcia Maridueña AM, et al

- 8. Nations So. Geneva Declaration on the Rights of the Child. Geneva: League of Nations.. [Online].; 1924. Available from: https://www.humanium.org/es/ginebra-1924/.
- 9. Assembly UNG. Declaration of the rights of the child. Geneva: United Nations General Assembly. [Online].; 1959. Available from: https://www.humanium.org/es/declaracion-1959/.
- 10. Acurio G, Alfaro M, Andrade O, Beltrán J. Protection in cases of violence of children and adolescents in Ecuador. Conrado. 2021; 17(83).
- 11. Oliveira M, Costa F. Violência recorrente contra crianças: análise dos casos notificados entre 2011 e 2018 no Estado do Espírito Santo. Epidemiol. Serv. Saude. 2021; 30(3).
- 12. Ecuador CotRo. National Assembly. Quito: National Assembly. 2008. Available from: https://www.oas.org/juridico/pdfs/mesicic4_ecu_const.pdf.
- 13. Adolescence CoCa. Quito: National Congress. 2003. Available from: https://www.igualdad.gob.ec/wp-content/uploads/downloads/2017/11/codigo_ninezyadolescencia.pdf.
- 14. Equality NCfI. National Agenda for Intergenerational Equality 2021-2025. Quito: National Council for Intergenerational Equality. 2022. Available from: https://www.igualdad.gob.ec/wp-content/uploads/downloads/2022/04/ANII_2021-2025-sign.
- 15. Inclusion MoEaS. National Plan for the Prevention of Violence against Children and Adolescents. Quito: Ministry of Economic and Social Inclusion. 2019. Available from: https://www.registroficial.gob.ec/index.php/registro-oficial-web/publicacio.
- 16. Organic Code of Territorial Organization AaD. Quito: National Assembly. 2010. Available from: https://www.oas.org/juridico/pdfs/mesicic4_ecu_org.pdf.
- 17. Fernández A, Ortiz J, Estévez C, Gualotuña V, Vega C, Santoyo A. Influencia del marketing social en la disminución de la violencia infantil. Revista Cubana de Medicina General Integral. 2019; 32(2).

FINANCING

Authors declare that there is no financing.

CONFLICT OF INTEREST

Authors declare that there is no conflict of interest.

AUTHORSHIP CONTRIBUTION

Conceptualization: Alexandra Marisol Barcia Maridueña, Iván Andrés Muñoz Mata.

Data curation: Alexandra Marisol Barcia Maridueña.

Formal analysis: Iván Andrés Muñoz Mata.

Acquisition of funds: Alexandra Marisol Barcia Maridueña, Iván Andrés Muñoz Mata.

Research: Marcia Lisbeth Verdugo Arcos, Thalía Lilibeth Figueroa Suárez. Methodology: Alexandra Marisol Barcia Maridueña, Iván Andrés Muñoz Mata.

Project management: Alexandra Marisol Barcia Maridueña, Iván Andrés Muñoz Mata.

Resources: Alexandra Marisol Barcia Maridueña, Iván Andrés Muñoz Mata

Software: Thalía Lilibeth Figueroa Suárez. Supervision: Thalía Lilibeth Figueroa Suárez.

Validation: Marcia Lisbeth Verdugo Arcos, Thalía Lilibeth Figueroa Suárez.

Display: Marcia Lisbeth Verdugo Arcos.

Drafting - original draft: Alexandra Marisol Barcia Maridueña, Iván Andrés Muñoz Mata-

Writing - proofreading and editing: Alexandra Marisol Barcia Maridueña, Iván Andrés Muñoz Mata.