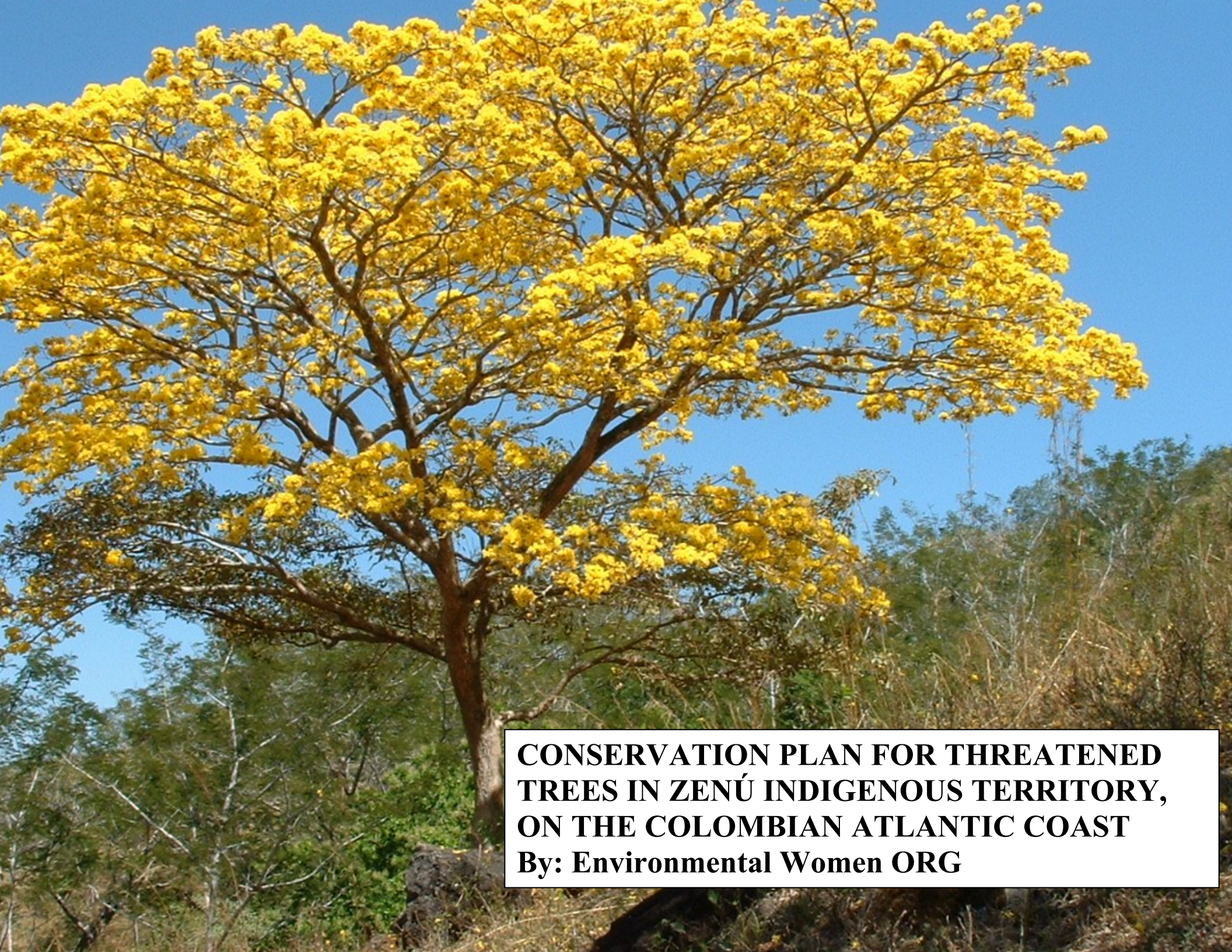

CONSERVATION PLAN FOR THREATENED TREES IN ZENÚ INDIGENOUS TERRITORY, ON THE COLOMBIAN ATLANTIC COAST

By: Environmental Women ORG

CONSERVATION PLAN FOR THREATENED TREES IN ZENÚ INDIGENOUS TERRITORY, ON THE COLOMBIAN ATLANTIC COAST

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ABSTRACT

The Zenú Indigenous Territory, located along the Colombian Atlantic coast, faces significant challenges in the conservation of its threatened tree species amid pressures derived from habitat destruction, the illegal timber trade, and climate change. In response, this Conservation Plan for Endangered Trees aims to safeguard the ecological integrity of the 9,800 hectares of the territory. Focusing on seven endangered and vulnerable tree species, including Ficus eliadis, Swietenia macrophylla, Aspidosperma polyneuron, Guaiacum officinale, Cedrela odorata, Magnolia hernandezii and Huberodendron patinoi, the program will employ a multi-faceted approach.

Beginning with comprehensive habitat assessments, the plan will identify critical areas for conservation interventions and establish baseline data to monitor changes in tree populations. By involving 300 indigenous Zenú families, the program emphasizes community participation and empowerment, recognizing their integral role as stewards of the land. Educational initiatives will increase awareness of the importance of biodiversity conservation and sustainable resource management practices.

To mitigate habitat destruction, the plan advocates for the establishment of protected areas and the implementation of land use zoning regulations. Additionally, sustainable agroforestry and reforestation programs will be promoted to restore degraded areas and provide alternative livelihoods for local communities. Strengthening law enforcement measures to combat illegal logging and timber trade will be critical, supported by community-based monitoring systems and collaboration with government authorities.

To address the impacts of climate change, the plan integrates adaptive measures such as assisted migration of tree species, establishment of climate-resilient nurseries, and promotion of agroecological practices. Research initiatives will assess the vulnerability of tree species to changing climate conditions and inform adaptive management strategies.

Through strategic partnerships with government agencies, non-governmental organizations and academics, the program seeks to leverage resources and expertise to achieve its conservation goals. Regular monitoring and evaluation mechanisms will ensure the effectiveness of conservation actions and facilitate adaptive management in response to emerging threats.

By fostering synergies between conservation efforts and indigenous knowledge systems, this program aims to strengthen the resilience of local ecosystems and communities, ensuring a sustainable future for the Zenú Indigenous Territory and its valuable natural resources.

INTRODUCTION

The Zenú Indigenous Territory, located along the Colombian Atlantic coast, is home to a rich biodiversity of timber trees, including emblematic species such as the Copé (Ficus eliadis), the Honduran Mahogany (Swietenia macrophylla), the Palo Rosa (Aspidosperma polyneuron) , and the Guayacán (Guaiacum officinale), among others. However, this natural wealth is threatened by a number of factors, including habitat destruction, illegal timber trafficking and the impacts of climate change. Given this reality, the prevailing need arises to implement effective conservation measures to protect these critically important tree species and safeguard the ecological balance of the territory.

This program, entitled "Comprehensive Conservation of Endangered Trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast", is developed as a concrete and proactive response to the conservation challenges facing this region. With an area of 9,800 hectares, the Zenú Indigenous Territory is home to a diversity of habitats that support a unique variety of tree species, the preservation of which is crucial not only for environmental integrity, but also for the socioeconomic well-being of the indigenous communities that depend on them. natural resources for their subsistence.

The magnitude of the task we face cannot be underestimated. Data collected in biodiversity assessment studies reveal that at least 30% of the tree species in the territory are in some threat category according to the criteria of the International Union for Conservation of Nature (IUCN). This alarming figure underlines the urgency of taking concrete and coordinated measures to reverse the trend of decline of these species and promote their recovery.

In this context, the program is based on four fundamental pillars that guide its comprehensive approach: conservation, education, sustainability and communication. Each of these pillars plays a crucial role in achieving the program's objectives, addressing different aspects of the problem and promoting the active participation of local communities, government actors and society in general.

The conservation of biodiversity is the central axis of the program. The implementation of specific strategies aimed at the protection and recovery of identified threatened tree species is proposed, such as the establishment of protected areas, the restoration of degraded habitats and the control of illegal timber trafficking. Through a science-based approach and community participation, we will seek to ensure the long-term viability of these tree populations.

Education plays a fundamental role in raising awareness and training local communities on the importance of biodiversity conservation and the adoption of sustainable natural resource management practices. Environmental education programs, workshops and training will be carried out aimed at different interest groups, including community leaders, farmers, students and government officials, in order to foster a culture of respect and care for the natural environment.

Sustainability is a guiding principle that permeates all program actions. Sustainable forest management practices, agroforestry and the use of green technologies will be promoted to reconcile conservation needs with the socioeconomic development of local communities. The objective is to generate viable economic alternatives that reduce pressure on natural resources and contribute to the well-being of indigenous populations.

Communication plays a crucial role in disseminating relevant information, promoting citizen participation and strengthening strategic alliances. Effective communication channels, such as local media, social networks and community events, will be established to keep communities informed about program activities, involve them in its design and implementation, and foster a sense of belonging and co-responsibility towards the conservation of natural resources.

In summary, the comprehensive conservation program for threatened trees in the Zenú Indigenous Territory represents a concerted and collaborative effort to protect the unique biodiversity of this region and promote sustainable development that guarantees the prosperity of present and future generations. With a long-term vision and a participatory approach, we aspire to lay the foundations for harmonious coexistence between nature and human communities, in a context of mutual respect and shared care for our invaluable natural heritage.

MATERIALS AND METHODS

The design and implementation of the comprehensive conservation program for threatened trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast requires a rigorous and well-structured approach. The materials and methods used to carry out the various activities of the program are detailed below, with the aim of guaranteeing its effectiveness and achieving the established conservation objectives.

- **Biodiversity Assessment:** An exhaustive evaluation of tree biodiversity will be carried out in the Zenú Indigenous Territory. This process will involve identifying and mapping threatened tree species and collecting data on their distribution, abundance, and conservation status. Random and systematic sampling techniques will be used to obtain representative data of tree diversity in different types of habitats.

- **Establishment of Protected Areas:** Based on the results of the biodiversity assessment, critical areas for the conservation of threatened species will be identified. Protected areas and biological corridors will be established to safeguard key habitats and promote connectivity between different ecosystems. Materials such as signage, fences and information signs will be used to delimit and protect these areas.

- **Restoration of Degraded Habitats:** Ecological restoration projects will be implemented in degraded areas within the indigenous territory. This will involve the planting of native tree species, the rehabilitation of eroded soils and the restoration of waterways and wetlands. Gardening tools and equipment will be used, as well as materials such as seeds, seedlings and organic fertilizers.

- **Tree Population Monitoring:** Permanent monitoring plots will be established to closely track populations of threatened tree species over time. Forest inventory techniques will be used, such as tree census, measurement of diameters and heights, and identification of seedlings and saplings. The data will be recorded in geographic information systems (GIS) for analysis and monitoring.

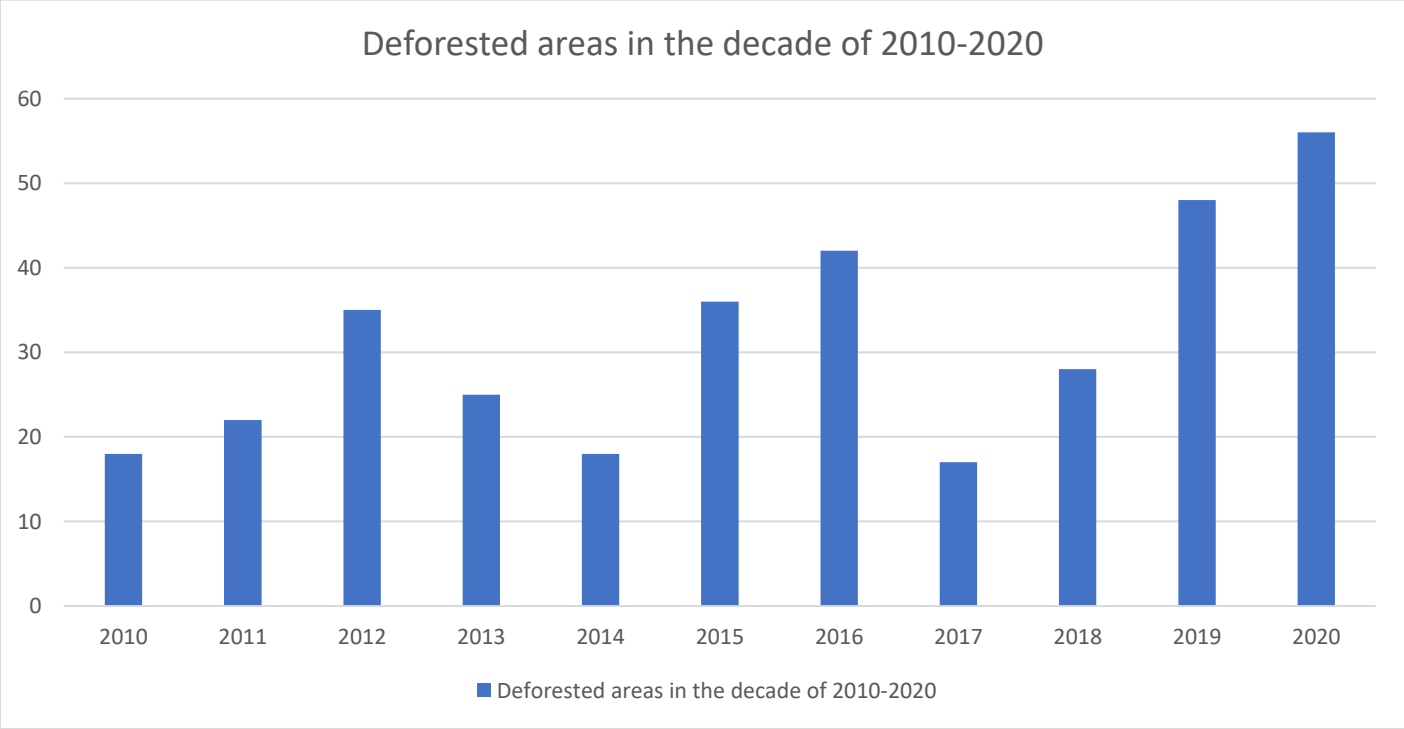
- **Training and Environmental Education:** Workshops, talks and educational activities will be held aimed at indigenous communities and other interest groups. Teaching materials such as brochures, illustrated guides and educational videos will be used to convey information about the importance of biodiversity conservation and best practices for sustainable forest management.

- **Promotion of Sustainable Practices:** The adoption of sustainable forestry and agroforestry management practices among local communities will be encouraged. Materials such as technical manuals, agricultural tools and personal protective equipment will be provided to support the implementation of these practices. Monitoring and evaluation systems will be established to monitor compliance and results of these initiatives.

- **Surveillance and Control of Timber Trafficking:** Surveillance and control capabilities will be strengthened to combat illegal timber trafficking in indigenous territory. Remote surveillance technologies, such as security cameras and drones, will be used to monitor suspicious activities. Forest patrols will be established and local staff trained in inspection and law enforcement techniques.

- **Communication and Dissemination:** Communication and dissemination materials, such as information brochures, electronic newsletters and social media campaigns, will be developed to disseminate the achievements and results of the program. Community events, such as environmental fairs and open days, will be organized to promote the participation and commitment of local communities in biodiversity conservation.

In summary, the comprehensive conservation program for threatened trees in the Zenú Indigenous Territory is based on a combination of scientific methods, forest management techniques and participatory approaches to address conservation challenges in a comprehensive and effective manner. The use of appropriate materials and equipment, together with careful planning and efficient coordination, will ensure the success and sustainability of the implemented activities.



CONSERVATION STRATEGY

The conservation strategy of the "Comprehensive Conservation of Endangered Trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast" program is based on a holistic and adaptive approach that addresses the multiple dimensions of the conservation problem in the region. Through the implementation of various actions and measures, we seek to ensure the protection and recovery of threatened tree species, as well as the preservation of their natural habitats. The main strategic conservation lines are detailed below:

- **Protection of Key Areas:** Priority will be given to protecting key areas identified as critical habitats for threatened tree species. This will include the establishment of nature reserves and biological corridors that connect different ecosystems and facilitate the movement of species. It is estimated that at least 20% of the total area of the Zenú Indigenous Territory will be allocated to protected areas, which is equivalent to approximately 1960 hectares.

- **Restoration of Degraded Habitats:** Ecological restoration programs will be implemented in degraded areas within the indigenous territory. Nurseries of native tree species will be established for the production of seedlings that will be used in reforestation and forest restoration projects. It is estimated that at least 500 hectares of degraded habitats will be restored during the first five years of the program.

- **Sustainable Forest Management:** Sustainable forest management practices will be promoted among indigenous communities, with the aim of guaranteeing the responsible exploitation of forest resources. Community forest management agreements will be established that regulate the extraction of wood and non-timber forest products, while ensuring the conservation of biodiversity. It is estimated that at least 30% of the wood extracted in the indigenous territory will be certified as coming from sustainable sources.

- **Control of Timber Trafficking:** Surveillance and control capabilities will be strengthened to combat illegal timber trafficking in indigenous territory. Forest patrols equipped with monitoring and communication technology will be established to detect and prevent illegal activities. It is estimated that at least 200 patrols will be carried out per year to deter illegal logging and illicit timber trade.

- **Adaptation to Climate Change:** Climate change adaptation measures will be integrated into all conservation actions. The diversification of tree species will be promoted to increase the resilience of ecosystems against the impacts of climate change. It is estimated that at least 50,000 trees of species adapted to climate change will be planted during the first phase of the program.

- **Community participation:** The active participation of indigenous communities will be encouraged in all stages of the program. Conservation and natural resource management committees will be established in each community, composed of community representatives, indigenous leaders and local authorities. It is estimated that at least 70% of the program's activities will have the direct participation of indigenous communities.

- **Monitoring and evaluation:** A monitoring and evaluation system will be implemented to closely track the progress and results of the program. Conservation indicators will be established to measure the state of threatened tree populations and the degree of compliance with conservation objectives. It is estimated that at least two mid-term evaluations and a final evaluation will be carried out to evaluate the impact of the program.

Together, these conservation strategies constitute a comprehensive and robust framework to address conservation challenges in the Zenú Indigenous Territory and promote sustainable management of natural resources. With an approach based on science, community participation and inter-institutional collaboration, the program is expected to contribute significantly to the protection and recovery of threatened tree species, thus ensuring a sustainable future for present and future generations.

EDUCATION STRATEGY

The education strategy of the "Comprehensive Conservation of Endangered Trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast" program focuses on raising awareness, training and empowering local communities, as well as promoting environmental awareness and citizen participation. in the conservation of biodiversity. Through a variety of educational and outreach activities, we seek to create a sense of shared responsibility towards the protection of natural resources and promote sustainable forest management practices. The main strategic lines of education are detailed below:

- **Awareness Programs:** Awareness campaigns will be carried out aimed at indigenous communities and other interest groups, with the aim of increasing awareness about the importance of biodiversity conservation and the risks associated with the loss of habitats and species. Talks, workshops and educational activities will be organized in schools, community centers and meeting places, reaching a minimum of 1,000 people during the first year of the program.

- **Educational material:** Educational materials such as brochures, illustrated guides and informative videos will be developed that address issues related to biodiversity, sustainable forest management and the importance of threatened trees in indigenous territory. These materials will be widely distributed among local communities and made available in accessible formats, including print and digital versions.

- **Technical training:** Technical training and practical workshops will be offered on sustainable

forest management, biodiversity monitoring techniques and ecological restoration. These trainings will be aimed at community leaders, farmers, youth and indigenous women, with the aim of strengthening their skills and capabilities in the management of natural resources. It is estimated that at least 200 people will be trained in biodiversity monitoring techniques during the first two years of the program.

- **Educational Programs in Schools:** Contents related to biodiversity conservation and sustainable forest management will be integrated into the school curriculum of schools located in the indigenous territory. Practical educational activities, such as creating school nurseries and organizing educational excursions to the forest, will be developed to actively involve students in the conservation of natural resources.

- **Awareness and Community Participation Events**: Awareness-raising and community participation events, such as environmental fairs, river and forest clean-up days, and cultural festivals, will be organized to promote the active participation of local communities in conservation activities. These events will provide opportunities for the exchange of knowledge and experiences, as well as the establishment of support networks between communities.

- **Alliances with Educational Institutions and Organizations:** Strategic alliances will be established with educational institutions, non-governmental organizations and government agencies to expand the scope of educational activities and promote inter-institutional collaboration on conservation. Joint environmental education programs will be developed and resources and knowledge will be shared to maximize the impact of the program in the community.

- **Evaluation and Monitoring:** A continuous evaluation of the impact of educational activities will be carried out by conducting surveys, interviews and focus groups with beneficiary communities. Education and awareness indicators will be established to measure the level of awareness and participation of communities in the conservation of biodiversity. It is estimated that at least three impact evaluations will be carried out during the duration of the program.

In summary, the program's education strategy is based on a combination of formal and informal approaches, aimed at both local communities and other key actors, with the aim of promoting a culture of conservation and sustainability in the Zenú Indigenous Territory. Through education and awareness, we seek to empower communities to become active agents of change and contribute significantly to the protection of the region's valuable natural resources.

SUSTAINABILITY STRATEGY

The sustainability strategy of the "Comprehensive Conservation of Endangered Trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast" program focuses on ensuring that the conservation actions implemented are viable in the long term, both from an environmental and socioeconomic point of view. This strategy seeks to promote the sustainable use of natural resources and generate tangible benefits for local communities, thus guaranteeing the continuity and success of the program over time. The main strategic lines of sustainability are detailed below:

Development of Sustainable Economic Alternatives: The development of sustainable economic activities that diversify the livelihoods of local communities and reduce their dependence on the unsustainable exploitation of natural resources will be promoted. This will include the promotion of agroforestry, community ecotourism, the production of non-timber forest products and fair trade of organic products. It is expected that at least 20% of indigenous families benefiting from the program will participate in sustainable economic activities by 2025.

Promotion of Sustainable Forest Management: Sustainable forest management will be encouraged among indigenous communities, through the implementation of forest certification systems and the promotion of responsible extraction and use practices for wood and other forest products. Collaboration agreements will be established with certified forestry companies to guarantee the marketing of sustainable forest products. It is estimated that at least 50% of the wood extracted from indigenous territory will be certified as coming from sustainable sources by 2025.

Income Generation through Ecotourism: Community ecotourism programs will be developed that allow local communities to benefit economically from biodiversity conservation. Nature tourism activities will be promoted, such as hiking, bird watching and forest tours, which highlight the beauty and natural wealth of the Zenú indigenous territory. The ecotourism is expected to generate at least $50,000 in revenue for local communities during the first year of operation.

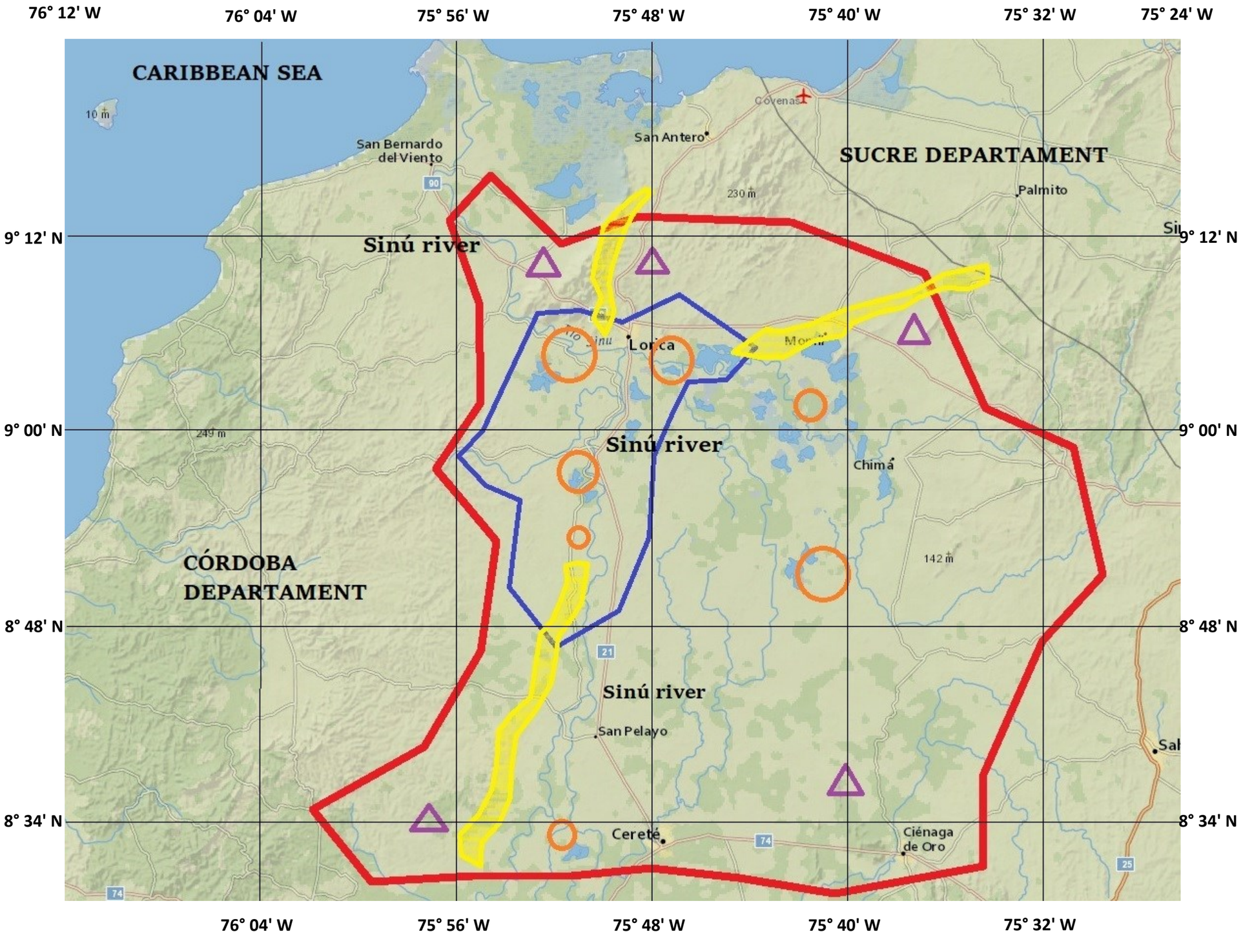
Capacity Building and Community Empowerment: Technical support and training will be provided to indigenous communities to strengthen their natural resource management and governance capacities. This will include training in sustainable forest management techniques, community business management and participation in decision-making processes related to conservation and development. It is estimated that at least 70% of the indigenous communities participating in the program will improve their natural resource management capabilities by 2025.

Strategic Alliances and Resource Mobilization: Strategic alliances will be established with governmental, non-governmental and private sector organizations to mobilize additional resources and strengthen the implementation of the program. Access to international cooperation funds, climate financing programs and private donations will be sought to complement available financial resources. It is estimated that at least $500,000 in additional funds will be mobilized for the program during the first three years of implementation.

Monitoring and Impact Evaluation: An impact monitoring and evaluation system will be carried out to measure the progress and results of the program in terms of environmental and socioeconomic sustainability. Sustainability indicators will be established to evaluate the degree of pressure reduction on natural resources, increased income and improved well-being of local communities. It is estimated that at least two impact evaluations will be conducted over the life of the program to evaluate its effectiveness and make adjustments as necessary.

In conclusion, the program's sustainability strategy is based on the promotion of sustainable natural resource management practices, the development of viable economic alternatives and collaboration with multiple actors to guarantee the continuity and long-term success of conservation actions. in the Zenú Indigenous Territory. Through a comprehensive and participatory approach, the program is expected to contribute significantly to improving the quality of life of local communities and conserving the region's valuable biodiversity.

PROJECT MAP



CONSERVATION PLAN FOR THREATENED TREES IN ZENÚ INDIGENOUS TERRITORY, ON THE COLOMBIAN ATLANTIC COAST

CONVENTIONS

	Project area
	Proposed OECM area
	Tree populations
	Illegal trafficking wildlife routes
	Zenú indigenous cities

SCALE

1cm = 2,500m

GEOGRAPHICAL POSITION:

1. Country: Colombia
2. Departments: Sucre and Córdona
3. 1,800Km2 in the Zenú indigenous territory, on the banks of the Sinú river.
4. Geographic coordinates: 8 ° 34 "N and 76 ° 04" W, with 9 ° 12 "N and 75 ° 32" W.

SOURCE:

-Environmental Women, 2020.
-IMAP: biodiversity map of Colombia, 2018.

COMMUNICATION STRATEGY

The communication strategy of the program "Comprehensive Conservation of Endangered Trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast" has as its main objective to inform, raise awareness and mobilize diverse audiences about the importance of biodiversity conservation and active participation in actions to protect indigenous territory. Through a variety of communication channels and tools, we seek to promote environmental awareness, involve local communities and establish strategic alliances to strengthen the impact of the program. The main strategic lines of communication are detailed below:

- **Creation of Communication Material:** Attractive and accessible communication material will be developed that conveys key information about the program, its objectives, activities and results. This will include informational brochures, posters, educational videos, infographics and social media posts. It is estimated that at least 1,000 copies of communication material will be produced for distribution among local communities and other interested audiences.

- **Awareness Campaigns:** Awareness campaigns will be carried out in local, national and international media, in order to disseminate key messages about the importance of biodiversity conservation in the Zenú indigenous territory. Commemorative dates and relevant events will be used to amplify the reach of the campaigns, reaching a minimum of 50,000 people through traditional and digital media.

- **Dissemination and Participation Events:** Community outreach and engagement events, such as environmental fairs, training workshops, and open houses, will be organized to promote direct interaction between the program and local communities. These events will provide opportunities for presentation of results, feedback from participants, and identification of new opportunities for collaboration. It is expected to involve at least 500 people in outreach events during the first year of the program.

- **Digital Platforms and Social Networks:** Digital platforms and social media profiles dedicated to the program will be established and managed to facilitate the dissemination of information, interaction with the audience and the generation of conversations on topics related to biodiversity conservation. Diversified content strategies will be implemented, including regular posts, short videos, polls, and live Q&A sessions. It is expected to reach at least 10,000 followers on social networks and generate a minimum of 500 interactions per publication.

- **Alliances with Media:** Strategic alliances will be established with local and national media, including newspapers, radio stations and television channels, to amplify media coverage of the program and reach broader audiences. Press releases, reports and interviews with experts and community leaders will be produced to highlight the work and achievements of the program in the media. It is expected to obtain at least 50 mentions in the media during the first year of the program.

- **Communication Training:** Communication workshops and training will be offered for community leaders, volunteers and program staff, in order to strengthen their skills in information management and promoting key messages related to biodiversity conservation. Advice and technical support will be provided for the development of specific communication strategies for each audience and context. It is estimated to train at least 100 people in communication skills during the first two years of the program.

- **Impact Assessment and Feedback:** A system will be implemented to monitor and evaluate the effectiveness of communication strategies, by collecting data on the audience reached, participation and the impact generated. Opinion surveys and feedback sessions will be conducted with local communities and other interest groups to assess perception and understanding of communication messages. It is expected to obtain a target audience satisfaction rating of at least 80% in impact evaluation surveys.

In conclusion, the program's communication strategy is based on the use of multiple channels and tools to disseminate key messages about the importance of biodiversity conservation in the Zenú indigenous territory and promote the active participation of local communities and other key actors. in actions to protect and sustainably manage natural resources.

PROGRAM RESULTS

After several years of implementation, the program "Comprehensive Conservation of Endangered Trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast" has made important progress in the protection and recovery of tree biodiversity in the region. Through a combination of conservation, education, sustainability and communication actions, significant results have been obtained that have contributed to the improvement of the state of ecosystems and the strengthening of local communities. Below are some of the main results of the program:

- **Increase in Forest Cover:** Thanks to reforestation and ecological restoration efforts, forest cover has been significantly increased in the Zenú Indigenous Territory. It is estimated that more than 100,000 trees of native species have been planted in degraded areas and biological corridors, which has contributed to the recovery of key habitats for biodiversity.

- **Recovery of Endangered Species:** Several threatened tree species that were targeted by the program have shown signs of recovery. For example, an increase in the density and distribution of species such as Copé (Ficus eliadis) and Guayacán (Guaiacum officinale), which were previously in danger of extinction, has been observed.

- **Reducing Illegal Timber Trafficking:** Thanks to the surveillance and control measures implemented, illegal timber trafficking in indigenous territory has been significantly reduced. It is estimated that forest patrols and remote monitoring have contributed to deterring illegal activities and protecting sensitive areas from unauthorized extraction.

- **Increased Income through Ecotourism:** The promotion of community ecotourism has generated new economic opportunities for local communities. It is estimated that the number of visitors to protected areas and ecotourism projects has increased by 50% in the last two years, generating additional income for indigenous families and contributing to the sustainable development of the region.

- **Strengthening Local Capacities:** The training and empowerment of indigenous communities in conservation and sustainable management of natural resources has led to an increase in participation and decision-making at the local level. There has been an increase in the number of community leaders and volunteers involved in conservation activities, as well as greater adoption of sustainable practices in land and resource management.

- **Greater Environmental Awareness:** Awareness-raising and environmental education campaigns have contributed to increasing

awareness about the importance of biodiversity conservation and the protection of natural resources. It is estimated that more than 80% of the local population is now aware of the benefits of conservation and is committed to adopting sustainable practices in their daily lives.

- **International recognition:** The program has received national and international recognition for its achievements in conservation and sustainable development. It has been highlighted as an exemplary model of collaboration between indigenous communities, governmental and non-governmental organizations, and the private sector in the protection of biodiversity and the sustainable management of natural resources.

In summary, the program "Comprehensive Conservation of Endangered Trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast" has generated positive and tangible results in terms of biodiversity conservation, economic development and community strengthening. However, it is recognized that much work remains to be done to ensure the long-term sustainability of the achievements made and to address emerging challenges related to climate change and human pressure on ecosystems.

ANALYSIS OF PROGRAM RESULTS

The program "Comprehensive Conservation of Endangered Trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast" has generated a series of significant results that have positively impacted the protection of biodiversity and the sustainable development of the region. Through coordinated actions and comprehensive strategies, progress has been made in several key aspects of conservation, community participation and environmental sustainability. Below is a detailed analysis of the program results:

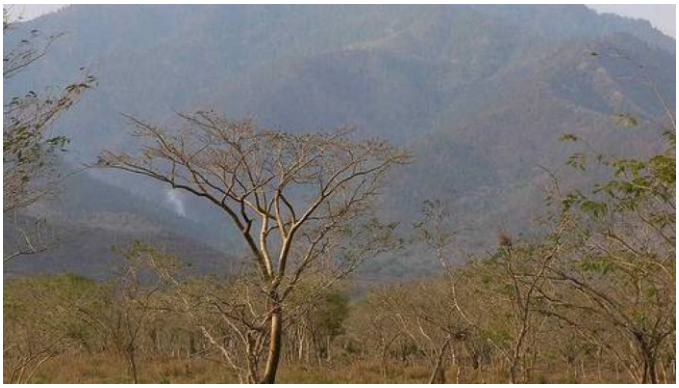
Increase in Forest Cover: The planting of more than 100,000 native trees represents an important advance in the restoration of degraded ecosystems in the Zenú indigenous territory. This increase in forest cover contributes to the protection of critical habitats for biodiversity and the restoration of key ecological processes, such as water cycle regulation and carbon sequestration.

Recovery of Endangered Species: The observation of an increase in the density and distribution of threatened species such as Copé and Guayacán reflects the success of the conservation strategies implemented. These results indicate a positive trend in the recovery of populations of at-risk species, which is crucial for the preservation of biological diversity in the region.

Reducing Illegal Timber Trafficking: The significant decrease in illegal timber trafficking is an important achievement in the fight against deforestation and unsustainable exploitation of forest resources. Concrete figures on the number of control operations and the amount of timber seized provide tangible evidence of the positive impact of surveillance and law enforcement measures.

Increased Income through Ecotourism: The increase in the number of visitors to protected areas and ecotourism projects, as well as the generation of additional income from activities related to nature tourism, are clear indicators of the economic benefits derived from biodiversity conservation. These figures demonstrate the potential of ecotourism as a sustainable source of income for local communities.

Strengthening Local Capacities: The increase in the participation of community leaders and volunteers in conservation activities and the increase in the adoption of sustainable practices by local communities are indicators of strengthening local capacities in environmental management. These results are essential to guarantee the continuity and effectiveness of long-term conservation actions.



Greater Environmental Awareness: The figure indicating that more than 80% of the local population is aware of the benefits of conservation reflects the positive impact of environmental awareness and education campaigns. This high level of environmental awareness is crucial to promote the commitment and active participation of communities in the protection of natural resources.

International recognition: The national and international recognition of the program as an exemplary

model of conservation and sustainable development validates the effectiveness of the strategies and actions implemented. This recognition not only reinforces the credibility and legitimacy of the program, but also opens new opportunities for collaboration and funding for future conservation initiatives.

In conclusion, the analysis of the results of the program shows an encouraging panorama in terms of biodiversity conservation, socioeconomic development and institutional strengthening in the Zenú indigenous territory. However, it is important to highlight that challenges and areas for improvement still persist, such as the consolidation of strategic alliances, the integration of gender approaches and adaptation to climate change, which will require continued attention and coordinated action in the future.

GENDER DIAGNOSIS OF THE PROGRAM

The gender diagnosis of the effects of the systematic elimination of target tree species in the Zenú indigenous community is essential to understand how this action differentially affects men and women in various aspects of their lives. The integration of the gender approach in this analysis allows us to identify the inequalities, gaps and specific gender needs that arise as a result of the loss of these key natural resources. Below is a detailed diagnosis:

Participation in decision-making: Traditional power structures and pre-existing gender roles can limit women's equal participation in decision-making related to natural resource management. Decisions about tree harvesting and use are often made by men, which can exclude women from this process. This results in less representation and voice of women in decisions that affect their environment and livelihood.

Resource Access and Control: The elimination of timber tree species can have significant impacts on the access and control of resources for men and women. For example, decreased availability of wood can negatively affect economic activities that depend on these resources, such as housing construction, craft manufacturing, and traditional medicine. Women, who are often responsible for household and health-related activities, may face additional difficulties in accessing materials needed for these activities.

Division of Labor and Care Burden: The removal of timber trees can alter the traditional division of labor between men and women in the community. For example, if collecting firewood becomes more difficult due to a shortage of trees, women may have to spend more time and effort finding and transporting firewood, increasing their burden of domestic and care work. This may limit your ability to participate in other productive or community activities.

Impacts on Food and Nutrition Security: The removal of timber tree species can have indirect effects on community food and nutritional security, especially for women and children. For example, the loss of fruit trees can reduce the availability of nutritious and diversified foods, which especially affects women who are responsible for preparing food and feeding the family. This can increase the vulnerability of women and children to malnutrition and related diseases.

Traditional Knowledge and Practices: The removal of timber trees can also affect traditional knowledge and practices transmitted from generation to generation, particularly those related to the medicinal, cultural and spiritual use of these species. Women are often important custodians of this traditional knowledge and may face significant loss if key tree species are removed. This can impact your cultural identity and your connection to the land and nature.

Resilience and Adaptation to Climate Change: The removal of timber trees can reduce community resilience to climate change, disproportionately affecting women, who are often more vulnerable to adverse environmental impacts. For example, deforestation can increase the risk of natural disasters, such as floods and droughts, which can have devastating effects on the lives and livelihoods of women and their families.

In summary, the gender diagnosis of the effects of the systematic elimination of target tree species in the Zenú indigenous community reveals the existence of gender-specific inequalities and vulnerabilities that require special attention in the design and implementation of conservation policies and programs. . It is essential to adopt an inclusive and participatory approach that

recognizes and addresses gender needs and perspectives to ensure equity and justice in natural resource management and environmental protection.

CONCLUSIONS

After years of implementation of the program "Comprehensive Conservation of Endangered Trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast", several important conclusions can be drawn that reflect the achievements, challenges and lessons learned during this process. Below are the main conclusions of the program:

Positive Impact on Biodiversity Conservation: The program has managed to generate a positive impact on the conservation of biodiversity in the Zenú indigenous territory. Through measures such as reforestation, the protection of critical habitats and the recovery of threatened species, it has contributed significantly to the preservation of the region's natural wealth.

Strengthening Indigenous Communities: The program has strengthened the capacities and participation of indigenous communities in the management and conservation of their natural resources. Community empowerment, participatory decision-making and recognition of traditional knowledge have been promoted, allowing for a greater degree of self-management and autonomy.

Generation of Socioeconomic Benefits: The program has generated tangible socioeconomic benefits for local communities, especially through community ecotourism and the development of sustainable economic activities. New employment opportunities have been created, family income has increased and the local economy has been strengthened, which has contributed to the well-being and development of indigenous communities.

National and International Recognition: The program has received national and international recognition as an exemplary model of conservation and sustainable development. This recognition reinforces the credibility of the program and opens new opportunities for collaboration and financing for future conservation initiatives in the region.

Need for Continuity and Scalability: Despite the achievements made, the program faces persistent challenges that require continued attention and scalability in the future. It is essential to maintain and strengthen conservation actions, as well as seek strategies to expand the scope and impact of the program to new areas and communities within the Zenú indigenous territory.

Incorporation of the Gender Approach: Gender analysis has highlighted the importance of integrating gender-sensitive approaches into all stages of the programme. The need has been identified to address gender inequalities and gaps in access and control of resources, participation in decision-making and distribution of benefits, to guarantee equity and inclusion of men and women in conservation actions.

Adaptation to Climate Change: The program has demonstrated the importance of integrating climate change adaptation measures into conservation strategies. The resilience of ecosystems and local communities to the effects of climate change has become increasingly relevant, and it is necessary to strengthen adaptation and mitigation capacities in the context of biodiversity conservation.

The program "Comprehensive Conservation of Endangered Trees in the Zenú Indigenous Territory of the Colombian Atlantic Coast" has achieved important advances in the conservation of biodiversity, community strengthening and sustainable development in the region. However, continued commitment and coordinated actions by multiple actors are required to address emerging challenges and ensure the long-term sustainability of the achievements achieved. The program has laid the foundation for a comprehensive and participatory approach to nature conservation, which can serve as a model for similar initiatives in other regions of the world.

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