

2020

THE PRESIDENCY OF THE PEOPLE COMMITTED TO PROTECTING AND PRESERVING NATURE AND THE ENVIRONMENT



Blessed and Always Free Nicaragua

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THE PRESIDENCY OF THE PEOPLE COMMITTED TO PROTECTING AND PRESERVING NATURE AND THE ENVIRONMENT

I. INTRODUCTION

The Good Government of Comandante Daniel Ortega and Comrade Rosario Murillo with Love for Nicaragua and Love for our Mother Earth, has developed a broad and complete policy of care, protection and preservation of Nature and the Environment, all of which is reflected in a development strategy based on the leadership of the Presidency of the People that contributes to improving the quality of life in harmony with the Environment and Mother Earth.

All policies and programs are based on the Model of Christianity and Solidarity with inclusion, dialogue, alliance and consensus. Workers, families and communities as protagonists, to achieve the objectives of sustainable development within the framework of the Project of Christianity

and Solidarity, with Justice, Freedom, Equality and Social Responsibility.

The Government of Reconciliation and National Unity has worked with an inter-sectoral emphasis with proposals from the main actors of the country and has made significant progress in public policies for the use, protection, conservation and restoration of Mother Earth, promoting the active participation of each and every Nicaraguan through shared responsibility.

In accordance with this policy, Nicaragua was the first signatory of the "Universal Declaration of the Common Good of the Earth and Humanity" in 2010.

II. THE POTENTIAL OF THE FOREST SECTOR IN NICARAGUA

The lands with a forestry vocation or mixed vocation in Nicaragua, cover approximately 78% of the soils. Currently, our Country has 30% of

its territory covered with forests, both pine and broadleaf, noting that the deforestation rate has decreased considerably during the last decade.

The potential of these forests is enormous for the economic, social and environmental development of our Country. Although its current contribution to the national GDP is only 1.2%, generating 80,000 jobs, the potential benefits of these forests can be a fundamental element for the future development of Nicaragua. Adequate management of hydrographic basins and their impact on soil conservation and the recharging of aquifers could be one of the many examples of these benefits that directly impact agricultural productivity.

Among other benefits, the provision of environmental services, such as the contribution to water resources, carbon sequestration, biodiversity, and crop pollination. In the socioeconomic aspect,

in addition to the supply of wood, exports and jobs, the importance of energy and its impact on the well-being of lower-income families, stands out. 54% of the country's energy supply comes from forests and the production of firewood and charcoal is vital for households, especially in rural and periurban areas.

The current consumption of firewood is 6.2 million cubic meters, which far exceeds the 133 thousand cubic meters of round wood that is destined for the timber industry, wood construction wood, furniture and handicrafts. The per capita consumption of firewood shows a downward trend, going from 1.36 m³ / capita in 1990 to 0.99 m³ / capita in 2017, showing a reduction of 27%, the effect of liquefied gas consumption and electrification, which has a positive impact on forest mass.

Technified forest management has increased, in such a way that the General Forestry Management

Plans (PGM) and the Annual Operational Plans (POA) have gone from 938 hectares under management per year in 1992 to 4,513 hectares per year in 2016.

The titling of indigenous and Afro-descendant territories, with a surface area greater than 37 thousand square kilometers, has had a strong impact on the conservation of forests, since 61% of these territories have some type of forest, which contrasts with minimum agricultural use. These territories present a reduction in forest coverage of only 20%, compared to that which existed four decades ago, which confirms the benefits of land titling over community forests.

Forest fires, which have repeatedly been a serious threat to our forests, have been drastically reduced in the 2007-2016 period, going from 1,257 events at the beginning of the period to only 197 in 2016. In terms of areas, the reduction has also been substantial, going from 56 thousand hectares of burned forests to

40 thousand hectares in 2016, which has allowed the recovery of many forest ecosystems.

Forest plantation initiatives, both by the public and private sectors, have risen to 70,000 hectares of planted forests. The private sector, integrated into the National Association of Reforesters (CONFOR), accumulates an area of 32,000 hectares, with investments that exceed 150 million dollars. Several of these reforestation companies have begun the use, industrialization and export of timber as a result of the first thinning activities within these plantations.

It is worth mentioning that, mainly cooperative initiatives, have begun to develop agroforestry and silvopastoral programs on farms, which have encouraged their owners to recover forestry activities that not only protect soils and water, but also impact the productivity of the sector, with techniques that increasingly convincing

them of the economic benefits of the implementation of these practices.

The Government is currently managing a National Forestry Investment Fund to accelerate community forestry, with indigenous people and companies, carrying out agroforestry and silvopastoral projects, as well as establishing plantations.

Nicaragua has a Strategy for the Reduction of Emissions from Deforestation and Forest Degradation (ENDE-REDD +), prepared by MARENA, in consultation with all relevant stakeholders, which aims to address the causes of deforestation and degradation of forests. Likewise, it allows access to resources from international mechanisms on forests and climate change, for the implementation of programs and projects that benefit communities that have conserved forests for their survival.

Nicaragua has reached an agreement with an emission reduction program of the Forest Cooperative Fund (FCPF), to reduce emissions

caused by deforestation and forest degradation, by up to 11 million tons of CO₂, to be implemented on the Coast Caribbean of the country, as well as in two large biological reserves.

This program is directed toward Indigenous and Afro-descendant Communities, Regional and Territorial Indigenous and Afro descendant Governments (GTI), cooperatives, as well as small and large scale, agricultural producers. Participants will receive incentives against results of up to 55 million dollars, when fulfilling their commitments to reduce emissions from reforestation in five years.

Nicaragua has defined "reforestation" as composed of: trees, bamboo, coffee (arabica or robusta), cocoa and rubber. All are semi-perennial plants that capture greenhouse gases. This definition has been accepted by the World Bank and the Forest Carbon Society as legitimate, for the project to sequester 11

million tons of greenhouse gases and the US\$55 million in incentives.

In general, the broadleaf forest is not affected by pests and diseases, as opposed to the coniferous forests, which have been severely attacked by the bark beetle (*Dendroctonus frontalis*). Its incidence in the country since 1964 has been reported, with the period from 1999 to 2003 being the one with the highest incidence, particularly in the Departments of Chinandega, Estelí, Jinotega, Madriz, Matagalpa and Nueva Segovia. From these pest outbreaks, the Government of Reconciliation and National Unity promoted a Pest Management Plan and a Plan for Good Conservation Practices for Pine Forests, with the protagonists of the region having achieved excellent results.

III. NATIONAL SYSTEM OF PROTECTED AREAS (SINAP)

The National System of Protected Areas (SINAP) of Nicaragua, represents 25.5% of the national territory, with a surface of 3,330,521 hectares. made up of 72 protected areas, (64 terrestrial and 8 marine-coastal) organized into nine management categories: 2 Biological Reserves, 4 National Parks, 1 Natural Monument, 1 Historical Monument, 2 National Monuments, 6 Wildlife Reserves, 2 Reserves of Genetic Resources, 55 Natural Reserves and 2 Protected Landscapes and Seascapes. 111 Private Wild Reserves are part of SINAP with a surface area of 14,075.31 ha. Environmental indicators on the topic of Protected Areas are monitored, such as: Total Protected Areas; Protected Marine Areas; Protected Terrestrial Areas; Areas with Committees for Care and Protection, Joint Management and Administration; Municipal Ecological Parks; Community Environmental Projects in Protected

Areas; State Management of Protected Areas and Use of Natural Resources within Protected Areas.

IV. BIODIVERSITY, A SOLUTION BASED ON NATURE

Over the years, the Government of Reconciliation and National Unity (GRUN) has made biological diversity and its relationship with human development one of its main priorities.

For Nicaraguans, natural resources are valuable and vulnerable assets. In this regard, policies and actions have been established aimed at guaranteeing the sustainable use and management of biodiversity.

The GRUN focuses on strengthening the care, protection, conservation and responsible use of the natural resources of ecosystems and wildlife through the approach of creative solutions based on nature, within the context of sustainable and local development, mainly aiming to contribute to

the improvement of livelihoods and providing a socio-economic alternative based on nature.

In this sense, the NATIONAL STRATEGY "BIODIVERSITY, YOUR SOLUTION BASED ON NATURE" has been implemented, THROUGH THE REPRODUCTION IN CAPTIVITY AND THE MANAGEMENT OF WILDLIFE SPECIES FOR THEIR SUSTAINABLE COMMERCIALIZATION."

With this strategy, the skills of 9,000 protagonists are being strengthened for the reproduction in captivity of species, which includes the responsible management of wild fauna.

Through different strategic guidelines, diversification of local production and the profitability of trade in wildlife species:

- Trainings are being developed for 5,000 community members for the implementation of practices and technologies for the management and reproduction in captivity of wildlife at the community level.

- 62 new national breeding farms are being promoted in accordance with the ecological characteristics of each region, mainly for cuajipales, quail, iguanas, lizards, turtles, Agouti paca and shrimp.
- Training is provided to 1,500 protagonists in efficient and environmentally safe methods and technologies for the management and reproduction of wildlife in captivity, in order to ensure low levels of mortality, increase productivity and reduce the effects of variability and Climate Change.
- The technical capacities of 2,000 producers are strengthened on the environmental legal framework for the management and reproduction of wild fauna in order to guarantee that these systems are carried out in compliance with the requirements and procedures established by the competent institutions.

- Departmental Assemblies are held with at least 2,000 producers on the safety during the reproduction and management of species of wild fauna raised in captivity, mainly the management of the offspring which is to be commercialized.

V. WATER AND SANITATION

Access to drinking water and sanitation, as well as sewerage services is a priority assumed by the Government of Reconciliation and National Unity, and coverage has been expanding year after year throughout the country. From 2007 to 2019, 90% of potable water services were benefitted in urban areas, by 2023 the goal is to reach 95%; In sewerage in 2019, 51% was reached and in three years it is projected to reach 70% including treatment of sewage. In 2007 there was only 30% coverage of sewerage and only 65% of drinking water.

According to data from the National Public Investment System (SNIP), within the period of 2007-2019, 59,527 million cordobas were executed within the Water, Sewerage and Sanitation sector.

The Central American Bank for Economic Integration is promoting a project, to improve and expand, the drinking water supply and sanitation systems of 19 cities in Nicaragua.

The project will provide different communities with nine wastewater treatment plants with their pumping stations, pressure lines and distribution network, and three other facilities of this type will also be rehabilitated.

In the Central Registry of Providers of Potable Water and Rural Sanitation Services, 284 CAPS were registered, providing potable water service to 127,164 inhabitants of different rural communities of the country, 392 new Boards of Directors were authorized, and 68 Energy Approvals were granted.

Likewise, technical training was provided to 156 rural service providers in their territories, who were given copies of Law No. 722, Special CAPS Law, as well as different Administration, Operation and Maintenance Manuals. Technical assistance was provided through the performance of 32 inspections of different drinking water supply systems and 29 water quality monitoring systems.

The Sewage Treatment Plant (WWTP) of the city of Managua, has contributed since 2008 to a significant reduction in wastewater discharges to The Xolotlán, for which the rehabilitation and expansion of the network of the sanitary sewage system is carried out simultaneously, thus making it possible to expand the connection to households and the increase of coverage, with the related benefits to health and the standard of living in the poorest neighborhoods of the capital.

This project and its subsequent expansion; improving the sanitary and aesthetic conditions, has allowed for the use of the lake for non-contact recreational activities.

Likewise, the ecological balance of the lake has been improved. In this regard, one of the environmental objectives of the Project has been to ensure that the wastewater treatment / disposal system does not contribute significantly to the development of processes that would result in an ecological imbalance with unpleasant consequences, thus contributing to conserving / improving aquatic life.

VI. PROTECTING THE ENVIRONMENT WITH SUSTAINABLE AGRICULTURAL PRACTICES

In general, the GRUN policies related to the agricultural sector have had the purpose of strengthening the family, community, cooperative and associative economy, as a way to reduce poverty and inequality, increase production and

productivity, strengthen food security and sovereignty and adapt the country to climate change.

In this regard, the GRUN has defined the social sustainability of its public policies in close relation to the environmental sustainability and the resilience of the livelihoods of families and communities, facing the effects of climate change.

Thus, for example, with the National Strategy for the Development of Bovine livestock, the producers are being capitalized and advised on the improvement of pastures, the establishment of silvopastoral systems and the improvement of livestock nutrition, at the same time, actions are carried out to improve livestock genetics.

The nutritional and genetic improvement of livestock, in addition to the increase in productivity and the availability of products (meat and milk) for domestic consumption and for

export, seeks to reduce the reduction of Greenhouse Gas emissions (GHG), particularly methane, the sequestration of CO₂e by greater plant coverage and the increase in biodiversity, by increasing food sources and places for roosting and nesting for birds, small mammals and other animals.

Similarly, both the National Strategy for the development of Nicaraguan Coffee Growing, as well as the National Strategy for the Development of Nicaraguan Fine Cocoa, are focused on the recovery, conservation and development of these two productive activities, which are vital not only because they constitute traditional crops for domestic consumption and export of the country, but also as forms of high value agroforestry production as carbon sinks and in the restoration and conservation of landscapes and local livelihoods.

Likewise, since they are crops that have traditionally been rooted in areas within or adjacent to the core and buffer zones in protected landscapes of Nicaragua, they also constitute a vital part of the strategies for the establishment of the rural population in the territories and to stop the advance of the agricultural frontier and the invasion of settlers in the respective nature reserves.

For its part, the National Strategy for the production of honey, seeks to promote the sustainable production of bees and meliponas, species recognized as indicators of the environmental quality of the territory; therefore, promoting honey production is also a way to induce the adoption of more environmentally sustainable practices among family producers. On the other hand, the production of meliponas consequently leads to the preservation of these and other species that are endemic to tropical America and with them, of traditional ways of

life and activities in our small producer and / or native population.

Within the National Strategies for increasing the production of crops such as beans; plantain, banana and guinea banana (musaceae); vegetables, fruits and bower crops; irrigated and dry rice; vegetables; Roots and tubers, and non-traditional crops, the production of seeds plays a fundamental role, in some cases from the preservation and reproduction of Creole varieties and cultivars, with their qualities of greater resistance to variable environmental conditions as a result of climate change.

On the other hand, National Strategies such as those aimed at the development of the Nicaraguan porcine sector, the development of small and medium production of eggs and poultry meat, the promotion of small-scale aquaculture and incentives for the production of sheep, goats and rabbits, together with the aforementioned National Strategy

for the Development of Bovine Livestock, also imply the creation of capacities and technical assistance for the processing of animal manure within the farm and its use, both for energy production as well as for the recycling of nutrients towards agricultural or forage plots, while reducing the pollution of water sources and GHG emissions, particularly methane.

At the same time, all these strategies collaborate to increase the roots of the rural population within the territory, strengthen social cohesion and thus reduce migration within and outside of Nicaragua, in order to finally stop the advance of the agricultural frontier and lay the foundations for local development.

VII. DRY ZONE

Central America and the Caribbean are among the most vulnerable regions to climate change in the world. In Mesoamerica, southern Mexico and Central America, there is a dry zone becoming increasingly

arid where 3.6 million subsistence peasant families live. If, as a result of climate change, the economy of that region collapses, some 18 million people would have to swell the poor neighborhoods of the cities of the region or emigrate. That is why the Government of Reconciliation and National Unity will continue to promote a permanent strategy to protect and defend our Mother Earth from the onslaught of Climate Change and achieve long-term sustainable development in our blessed and always free motherland.

In this regard, the GRUN has been working on the formulation and execution of various Programs and Projects with cooperating organizations such as COSUDE, AECID, World Bank, CABEI, FAO, FIDA, among others, some of them as part of a Central American regional initiative to improve the livelihoods of the families that live in the

territories affected by the Mesoamerican Dry Corridor.

These projects include actions to strengthen the capacities of families for the integrated management of water and soil resources, as well as the use of crop varieties, breeds and crosses of livestock and agricultural practices adapted to the climatic conditions of these territories.

Likewise, programs and projects are carried out aimed at stopping deforestation of the watersheds and reforestation, in particular, of the upper parts of the watersheds, as well as the establishment of agroforestry and silvopastoral systems, including windbreaks to reduce wind erosion and the consequent loss of soils and increased their vulnerability to water erosion.

In addition, breeding farms for species such as reptiles, for example, green iguana and lizard, which are endemic to these territories, are being

promoted as economic alternatives for producer families. These breeding farms are spaces for the sustainable use of species of wild fauna in captivity, some of them in extinction.

On the other hand, the GRUN carries out strategies and policies aimed at restoring the rights of families, for example, through a reinforced school lunch for school-age boys, girls and adolescents, particularly for those who perform signs of chronic malnutrition in the measurements of weight and height that are implemented periodically in schools and local health centers.

VIII. SPECIAL CARE OF MARINE RESOURCES: FISHERIES AND AQUACULTURE SECTOR

The National Policy for Mitigation and Adaptation to Climate Change is applicable to all state entities, natural or legal persons, national or foreign, throughout the national territory. It is in this aspect that the national Fishing Sector also has

this approach in favor of caring for the Environment and Mother Nature.

The Nicaraguan fishing and aquaculture sector has been working for many years based on the National Human Development Plan and the aforementioned guidelines on the National Policy for Mitigation and Adaptation to Climate Change in the development of a Comprehensive Strategy for the Sustainable Development of the sector, with an ecosystem approach to fisheries and aquaculture.

In this way, INPESCA has the National Strategy for the promotion of small-scale Aquaculture (2020-2023), which aims not only to stimulate the improvement of the capacities of aquaculture production of fish and molluscs for Nicaraguan families by the strengthening of technologies, but also by applying good environmental practices that thus facilitate a greater promotion of private, national and foreign investments, under

a controlled, surveillance and monitoring model that guarantees the sustainable use of resources through technological improvement.

Another way in which the Fishing and Aquaculture Sector is in line with caring for the environment and mother nature is the application of fishing closures, which are decreed by the laws and legal regulations in Nicaragua. One of the most recent resolutions is the one approved on March 5, 2020, Mechanisms for the implementation of Bans in the Exclusive Economic Zone (EEZ) of the Caribbean of Nicaragua in 2020 (EXECUTIVE RESOLUTION-PA- No. 001-2020), which resolves closed periods for shrimp, lobster, turtles, sea cucumbers and snail.

The Government of Reconciliation and National Unity has established comprehensive policies for the protection of the resources of our oceans with the aim of protecting the environment and ensuring the economic, food and cultural resources of the

coastal population in particular and the Nicaraguan people in general.

IX. ENERGY PRODUCTION AND CONSUMPTION IN HARMONY WITH THE ENVIRONMENT

Change of the Energy Matrix

At the end of 2019, there was a generation matrix based on 70% of renewable resources and as of today, with the contributions of solar, wind, hydroelectric, geothermal, biomass generation, it is almost 80%, having been 26% in 2007. In addition to this, electricity coverage is 97.2% and the goal for this year is to reach 98.4%, having been 54% in 2007. There is a regulatory body in charge of proposing and evaluating the Electricity Sub-Sector policy and those related to renewable energy resources, and of proposing and/or issuing, as the case may be, the necessary regulations for the Electricity Sub-Sector and renewable energy resources.

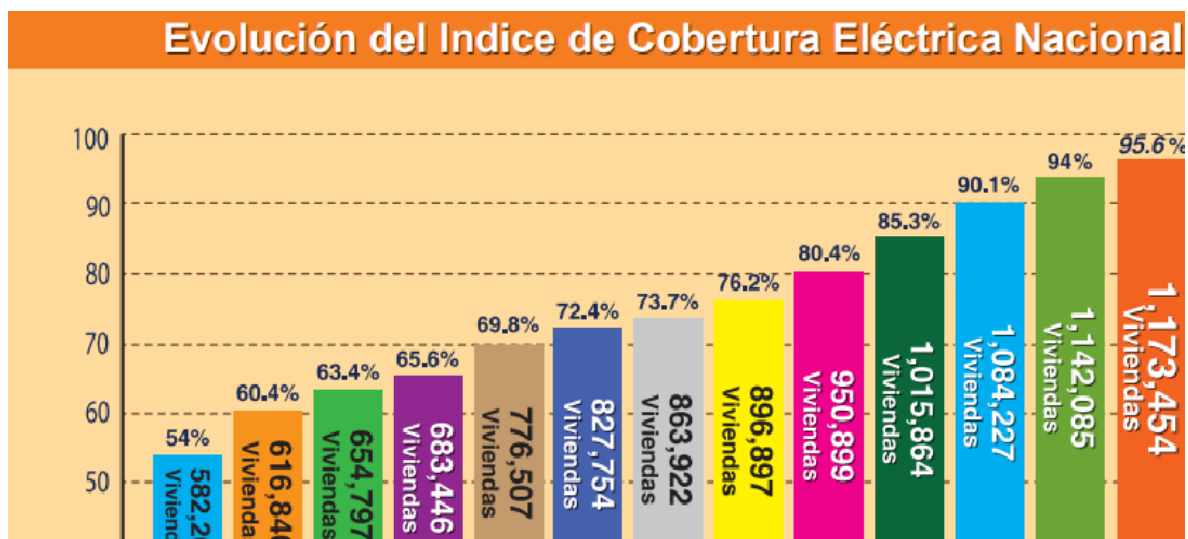
During the presentation of the report "The Global State of Renewables", the Representative of the Global Climate Initiative of the World Wide Fund for Nature (WWF), Kim Carstensen, pointed out that emerging countries such as Nicaragua are leading worldwide efforts in the use of renewable energy and reduction of carbon dioxide emissions. "Countries such as Nicaragua, Honduras, Uruguay, Morocco, South Africa and Jordan are investing more than 1% of their GDP to promote the use of clean energy and reduce pollution," said Carstensen. On the same hand, "Clean Energy XXI" highlights that Nicaragua is one of the few countries with well-defined goals and plans in energy and mitigation of the effects of climate change.

X. ENERGY EFFICIENCY, A WAY TO REDUCE EMISSIONS

In 2006 electricity coverage was 54%. In August 2020 we reached 98.10%, and the goal for the end of the year is 98.42%, going to 99% in 2021.

Rural electrification has meant the social and economic change of 3.4 million Nicaraguans, who from 2007 to August 2020 have seen their homes and

communities illuminated, thanks to the fact that the Sandinista Government has had a vision for development, which involves guaranteeing the access to quality electrical service.

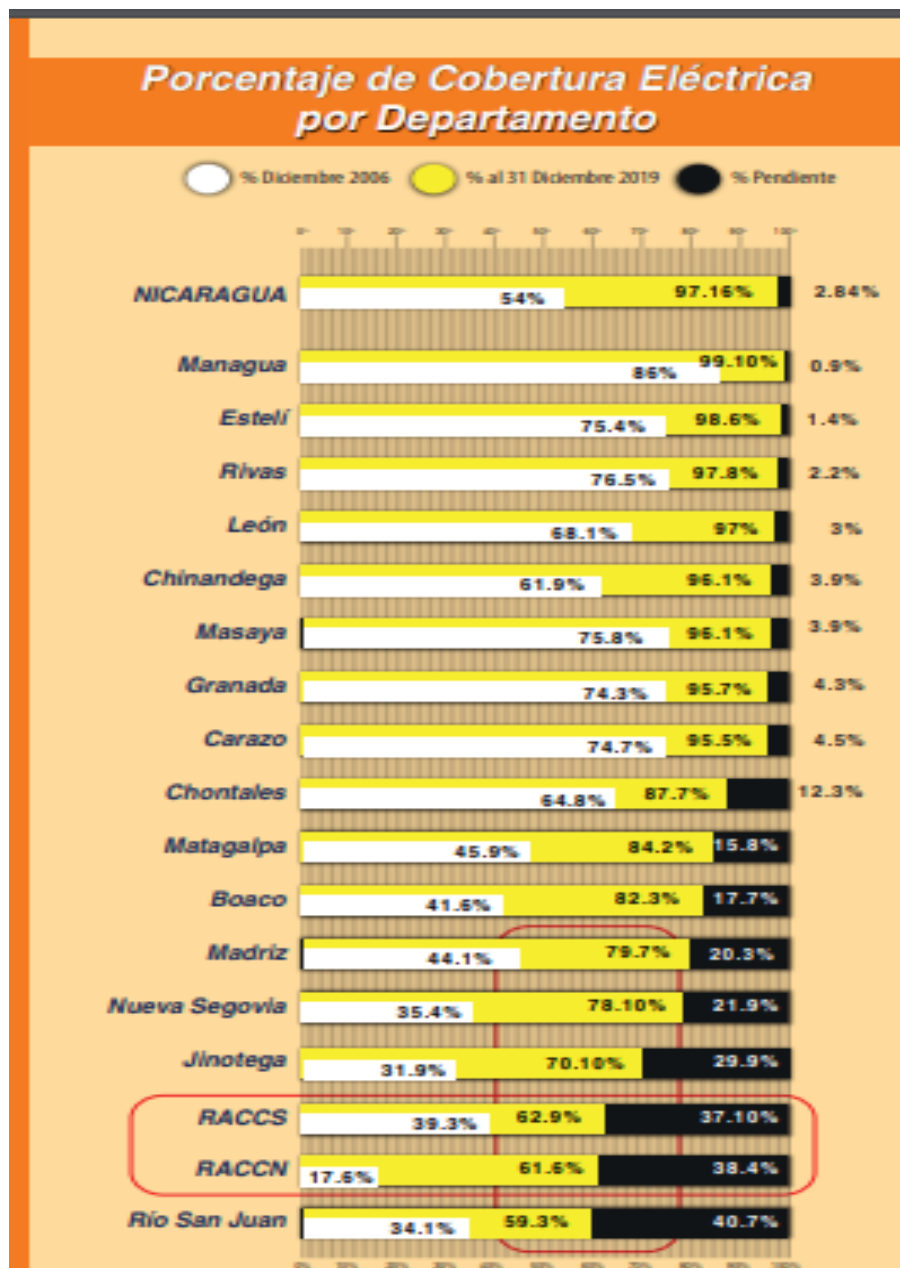


Achievements 2007-2019

-Electrified houses

- 1,205,657 homes with energy

- 3.4 million protagonists



In the most lagging regions, the change has been spectacular. The Autonomous Region of the Northern Caribbean Coast has gone from 17.5%

in 2006 to 61.8 in 2019. The Autonomous Region of the Southern Caribbean Coast has gone from 39.3% in 2006 to 62.9% in 2019.

- **Installation of public lighting**

- 36,030 luminaires.

- **-Construction of transmission lines**

- 2,994 kilometers of transmission lines in 138 and 230 kV.

- **-Installation of power transformers**

- 51 power transformers installed, increasing the transformation capacity by 195 Megavolt Amps (MVA).

XI. DEVELOPMENT OF SUSTAINABLE AND JOB CREATING TOURISM ACTIVITIES

The tourism industry in the country has recovered and reactivated, step by step, after the failed attempted coup of 2018 and the impact of the COVID-

19 Pandemic in 2020, with the combined efforts of businessmen and women, entrepreneurs and families who want to work and enjoy in peace and tranquility. The domestic tourism has been able to re-establish itself as a first phase for the subsequent repositioning of Nicaragua in international markets.

At the end of 2019, 1,295,218 tourists entered the country, which represents a growth of 3.2% compared to the end of the previous year. The highest percentage of tourists who enter Nicaragua came from Central America (74.7%), followed by North America (15.2%), Europe (3.9%), South America (1.8%) and other regions (4.5%). 67.8% of tourists entered by land, 31.6% by air and 0.6% by sea.

The Nicaraguan Institute for Tourism (INTUR) has been implementing and updating the classification and categorization tools of tourism companies, which contain among their requirements, the issues related to environmental quality and climate change, these with the aim of raising awareness among tourism

companies of the importance of caring for resources and applying sustainable tourism.

Likewise, manuals for the use of 43 tools for the classification and categorization of tourism companies were prepared, so that national tourist inspectors have the necessary tools to advise tourism companies on the requirements they must comply with.

Also, 6,380 tourism companies were authorized nationwide, with an installed capacity of 65,826 tables, 263,563 chairs, 17,441 rooms and 25,619 beds. These authorized companies generated 35,004 jobs, 18,366 for women and 16,638 for men. 94.4% of the authorized companies correspond to micro, small and medium-sized companies.

The Nicaraguan Institute for Tourism (INTUR) has promoted panels, congresses and trainings for protagonists of the tourism sector, which aim to promote the development of sustainable and

responsible tourism with the caring and preservation of nature.

In 2019, Nicaragua received the “Global tourism destination respectful of the environment” award, granted during the World Tourism Fair “World Travel Market” in London, which generated publications among the wide scope media, impacting the tourism industry at the international level.

3 agreements and/or collaboration agreements were subscribed at the CXII Ordinary Meeting of the Central American Tourism Council and LVI Meeting of CATA Board of Directors, San Salvador, signed in favor of the Celebration of World Tourism Day, Letter of Intent 2019: Year of progress in integration, development and job creation through sustainable tourism.

Sustainable development has been planned in cities in order to promote business, commerce, services and housing areas; incorporating comprehensive

management criteria for disaster risk reduction and adaptation to climate change.

From the institutional entity, compliance with the implementation of the national policy of mitigation and adaptation to climate change and its link to the

tourism sector, environmental, social and economic sustainability is supervised in the tourist routes such as the Volcanoes Routes, Colonial Route, Water Route, Coffee Route, Orchid Route and the Sandino Route, as well as the profile of the tourist who demands sustainable destinations.

With the mitigation and adaptation policies to climate change, the tourism sector can achieve investments and take advantage of these resources for tourism purposes, also caring and preserving it with good and friendly practices for the environment. The local tourism protagonists need to learn how live with nature and climate change, in order to promote sustainable tourism.

The key is to strengthen small businesses that are working, those that may suffer the most on the coastal areas and islands where there are local communities that pretend to live on tourism and that are having problems due to climate change. If natural capital is lost, people will also lose tourist opportunities.

XII. THE CREATION OF THE SYSTEM FOR THE PROTECTION AGAINST NATURAL DISASTERS, THE EXAMPLE OF SINAPRED

With the actions aimed at strengthening the culture of integral disaster management; individual, family and community awareness has increased on the effects and causes of disasters. National Television Channels and social networks, which today are the main spaces for interaction of the different segments of society, have been used to the maximum in order to carry the message and exchange information. The implemented actions are:

- 43 editions of the Tv Program "Nicaragua, Beautiful and Secure" broadcast nationwide on Channel 6 and Channel 98 of the National Assembly.
- 110 audio-visual materials produced and disseminated nationwide, all published on social networks (FACEBOOK, TWITTER, YOUTUBE, INSTAGRAM AND WEBSITE) and disseminated through the television program "Nicaragua, Beautiful and Secure".

Studies, permanent surveillance and early warning systems have been implemented for natural (seismic, climatic) and territorial phenomena, from the community model and local governments.

Early Warning Systems allow detecting, processing and reporting on the occurrence of natural phenomena at the national and international level, managing to inform the population in a timely manner, preventing it from possible risks.

In order to attend the population in a timely manner in the face of natural events that could negatively affect the communities, the Information, Facilitation, Analysis and Follow-up Unit (UIFAS) was equipped, in this way the meteorological, hydrometric, graphic, hydrogeological and geophysical surveillance network of the country is strengthened.

The capacities of families, communities, institutions and local governments in emergency situations are continuously strengthened to respond effectively in the recovery, rehabilitation and reconstruction processes, carrying out activities such as: Training in Comprehensive Risk Management, forums, exercises to respond to the population before disasters, preparation of plans and methodological guides. There is also a National Platform for Comprehensive Risk Management of SINAPRED, which conducts drills at the national level with massive participation,

periodic visits to cooperatives and producers, and virtual classrooms.

SINAPRED also provides accompaniment and supportive, effective, timely, quality and warm caring to the families affected by natural disasters, socio-natural phenomena and those caused by humans.

As a solidarity measure to provide effective and timely assistance to families affected by disasters or natural events, 1,062 families have been attended with love and warmth in 2019, which represent 5,310 people affected by different phenomena; by delivering food packages, hygiene kits, zinc sheets, mats, blankets, hammocks, among others.

Until 2015, 2,157 homes were delivered to the same number of families affected by natural disasters or critical living points.

XIII. THE PERMANENT CHALLENGE OF MERCURY CONTAMINATION

In Nicaragua, the mining sector has been characterized by being largely artisanal, which is commonly known as guiriseros, this type of mining involves a great challenge due to the large amount of mercury used by these small miners.

However, over the years there has been a joint effort between the Ministry of Natural Resources

(MARENA) and the Nicaraguan Company of Mines (ENIMINAS) to reduce the environmental and health impact of this type of mining. The strategy is to offer the service of mercury-free chaff treatment plants to manage the extraction as of more than double of the mineral, allowing the economic success of the strategy.

All this is done to reduce the impact of mercury contamination, all in accordance with the Minamata Convention that was adopted at the

Plenipotentiary Conference in 2013 in Kumamoto, Japan, and entered into force in August 2017.

The objective of this global treaty is to protect human health and the environment from anthropogenic emissions and releases of mercury and its compounds. It includes provisions on public information, environmental education, promotion of participation and capacity building.

XIV. THE SOLID WASTE PROCESSING POLICY

The GRUN, through MARENA, is promoting a strategy for the management of hazardous and non-hazardous solid waste, which will benefit 13,500 base recyclers that exist in the country, taking into account that these recyclers are already organizing and have cooperatives.

Within the strategy, a series of trainings are planned, as well as the process of handling hazardous and non-hazardous waste to another very important link which is the collection centers.

The main objective of this strategy is to consolidate and improve the living and working conditions of recyclers in Nicaragua and protect the environment.

For forty years, La Chureca was considered the largest open-air landfill in Latin America with 40 hectares of extension, located in the Acahualinca neighborhood in Managua, where 1,500 tons of garbage are deposited daily.

The project began in May 2008 and was executed by the Managua Mayor's Office with the support of the Spanish Agency for International Development Cooperation (AECID).

Three components were developed:

- Environmental Component: To improve the conditions of environmental degradation in the neighborhood. It includes the sealing of the landfill and with it, among other things, the cleaning of the Xolotlán Lake in Managua,

the installation of a waste sorting plant and a composting plant.

- Habitability Component: For the improvement of the conditions of the families that live near the landfill. More than 250 houses have been built under the parameters of social housing, the inhabitants have a health post, school, Child Development Center (CDI), green areas and recreation for families.
- Socioeconomic Component: For the improvement of the socioeconomic conditions of the people who live in La Chureca and who work in garbage collection. This component allows a job opportunity in decent conditions, the preparation of young people in the Acahualinca Workshop School in construction trades that will represent a tool for them to offer themselves within the national labor market and the strengthening of community organization.