



NICARAGUA AND THE CARBON MARKET

CLEAN DEVELOPMENT NATIONAL OFFICE
MINISTRY OF THE ENVIRONMENT AND NATURAL
RESOURCES

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OBJETIVES OF THIS PRESENTATION



- GENERAL OVERVIEW OF WHAT NICARAGUA IS DOING IN THE CONTEXT OF THE CARBON MARKET.
- INTRODUCTION
 1. EXPLAIN THE INSTITUTIONAL SET UP FOR THE DNA AND FOR THE ENERGY SECTOR.
 2. DESCRIBE WHAT THE DNA HAS DONE SINCE IT WAS CREATED in 2002
 3. DESCRIBE NICARAGUAS POTENTIAL FOR CDM PROJECTS
 4. CHALLENGES AND OPPORNUNITIES NICARAGUA FACES IN THE CARBON MARKET

INTRODUCTION



- Ratification of the UNFCCC 1995
- Ratification of the Kyoto Protocol 1999
- DNA created and accredited in early 2002.
- First National Communication published in 2001
- LULUCF first source of GHG emissions
- Nicaragua, because of natural regeneration of vegetation, has positive balance.
- Second National Communication in progress
- GEF project
- EPA/NASA
- Vulnerability and adaptation project

Geographical location

- Nicaragua is located at the center of the Americas, serving as a bridge between North and South, and separating the Atlantic from the Pacific Ocean.

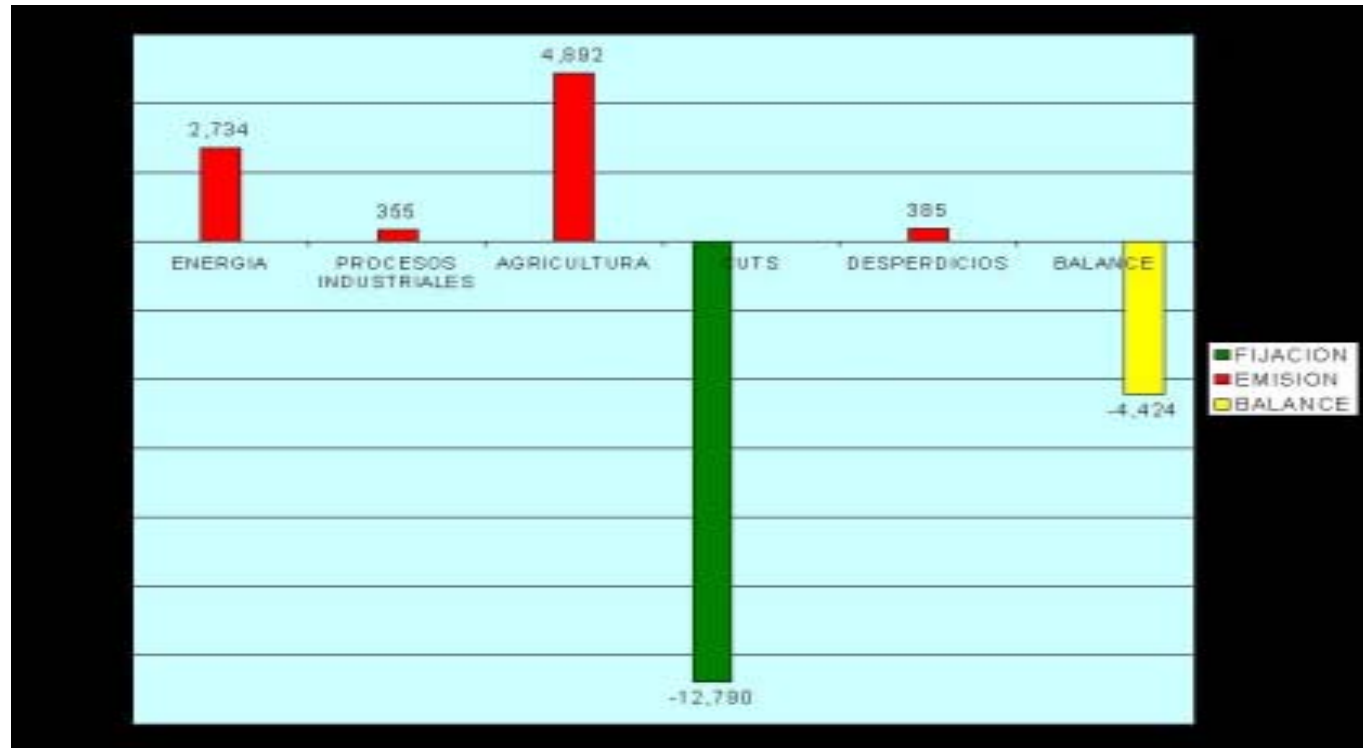


Economic Activities

Nicaragua's natural land disposition is for forest, but agriculture and cattle raising are the main economic activities. Most of the agricultural land available is used for cattle ranching, basic grain crops (rice, beans, and corn) harvested with traditional methods, and export agricultural products such as sugar cane, bananas, coffee, and peanuts, which use more modern methods. Cattle raising is one of the main foreign exchange earners.

Main Sectors Emitting GHG's

Balance de Emisiones y Fijaciones de CO₂ Equivalente en Gg
Nicaragua 1994



Nicaragua's First National Communication reflects the emission scenario as well as the capacity for GHG absorptions.

THE INSTITUTIONAL SET UP FOR THE DNA



- The Clean Development National Office (ONDL) was created early 2002 as deconcentrated entity of the Ministry of the Environment and Natural Resources in charge of climate change issues.
- Governed by a Executive Board composed of Government and private sector entities.
- Government entities represented in the Executive Board: Presided by the Ministry of the environment, Ministry of Agriculture, National Energy Commission, Foreign Affairs, Municipality Institute, Finance Ministry and the Central Bank of Nicaragua.
- Private sector entities: UNAG, UPANIC, CADIN, COSEP and CONADES
- Duties of the Executive Board: approve work plans, procedures and projects.

THE ENERGY SECTOR



- Installed capacity: 658MW
- Hydro 104MW; Geothermal 77MW; biomass 41MW; fossil fuels 436MW
- Electric Industry Law of 1998 – modernized a centralized and government owned energy sector. Horizontal separation of the activities of generation, transmission and distribution and allowed the participation of the private sector in generation and distribution.
- National energy Commission - CNE – inter institutional entity in charge of development of policies and strategic planning of the energy sector and rural electrification.
- National Institute of Energy – INE – regulates and supervises the energy sector– sets tariffs and gives generation and distribution licenses and concessions; sanctions and fines.
- Nicaragua Electricity Company – ENEL – in charge of the administration isolated energy systems.
- National Transmission Company - ENTRESA – transport of energy is government owned.
- Centro Nacional de Despacho de Carga – acts as an intermediary between distributors and generation agents – lower marginal cost
- Distribution – Disnorte y Dissur – owned by Union Fenosa.
- LIE – Generators can subscribe contracts with the distribution agents and with “big consumers”; can sell in the spot market or export.
- Electricity market: Bilateral contracts and the spot market (40 to 50MW)

DNA work - 2002 - 2005



- Approved procedures for giving letters of no objection and government approval for CDM energy projects.
- Two step simple process:
 1. PIN revised and a letter of no objection is given
 2. PDD is revised and the project has gone through a public hearing, the letter of endorsement can be given.
- In the process of approving procedures for forestry projects.
- Sustainable development criteria for energy projects and in the process of developing for forestry projects.

DNA work - 2002 - 2005

- Capacity building - Trained a group of experts on CDM project elaboration, procedures and small scale standardized baselines.
- Public awareness: Meetings with private sector and government entities.
- MOUs with: Canada, Finland, Denmark and Netherlands.
- Negotiating with Spain and Austria.

DNA work - 2002 - 2005



CDM project portfolio

- 1 Biodigester – process of signing ERPA with CAF
- 1 Geothermal – 60MW Developed PDD in process of obtaining their letter of approval.
- 3 Biomass – 2 Sugar cane industries and one coffee plant
- 3 Wind – 20 MW each; undergoing their feasibility studies
- Umbrella project for several small hydro – 30 PCH, 9 MW.
- 1 Reforestation project accepted by the Biocarbon fund of the World Bank.

San Jacinto Tizate Geothermal Power Project

- Capacity 60 MW
- Construction Start Up Phase
- Approximately 295,000 TCO₂/ year

Atlantic Biomass Project

- Capacity 5MW
- Feasibility Study Phase
- 32,000 TCO / year

Monte Rosa Biomass Cogeneration

- Capacity 50 MW
- Sugar Cane Bagasse
- Expected to start in 2005
- Engineering design phase
- Estimated 107,000 TCO₂/ year

NICARAGUA'S POTENTIAL FOR CDM PROJECTS



Energy sector

- Almost 80% of electricity is produced with fossil fuels; two of the mayor plants outdated.
- Annual growth in energy demand of approximately 4%; expected to be 6% per year in the next 20 years.
- More than 50% of rural population is without electricity.
- Economic growth, expansion of the grid and outdated plants make necessary the installation of 800 MW in the next 10 years.
- Abundant Renewable Energy Resources:

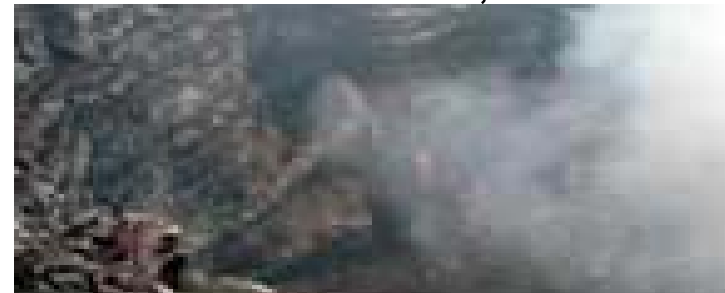
Geothermal – 1000 MW

Hydro – Greater than 15 MW the potential is 5582MW; less than 15 MW is 200MW.

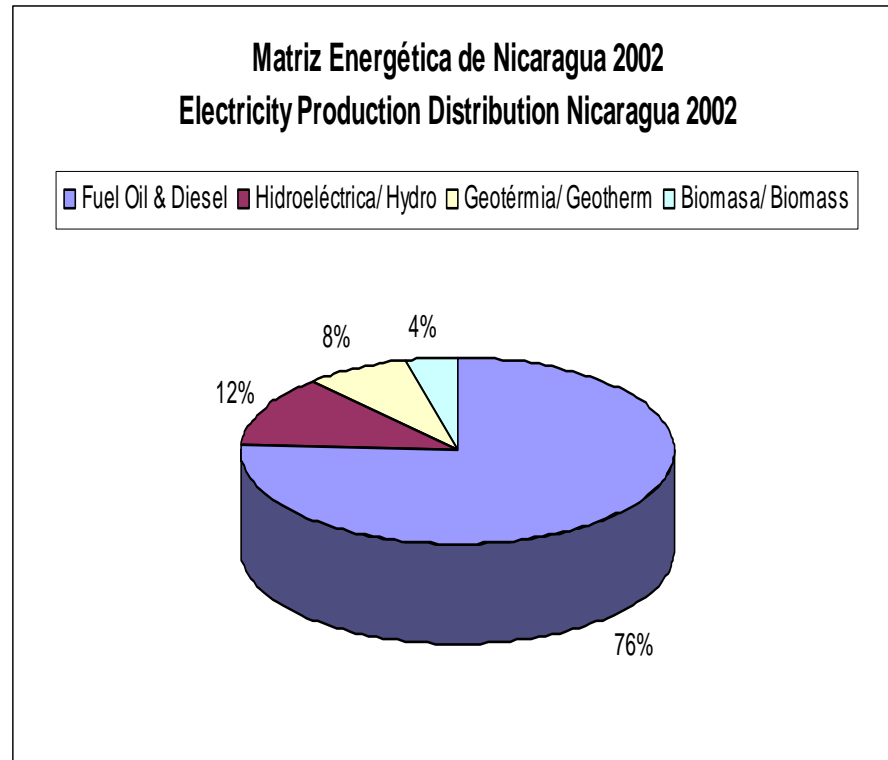
Wind – South East of the Country there are abundant resources, 3 feasibility studies underway.

Biomass – Agricultural and waste sources

Solar – a solar map has been developed



Description of the Power Sector



NICARAGUA'S POTENTIAL FOR CDM PROJECTS



- National Energy Policy calls for the use RE
- National development Plan aims at reducing dependency on fossil fuels for electricity production and increasing rural coverage.
- Law for the Promotion of Renewable Energy is being analyzed in the National Assembly.
- LIE – tax free import of equipment for energy generation, transmission and distribution.
- Central American interconnection.

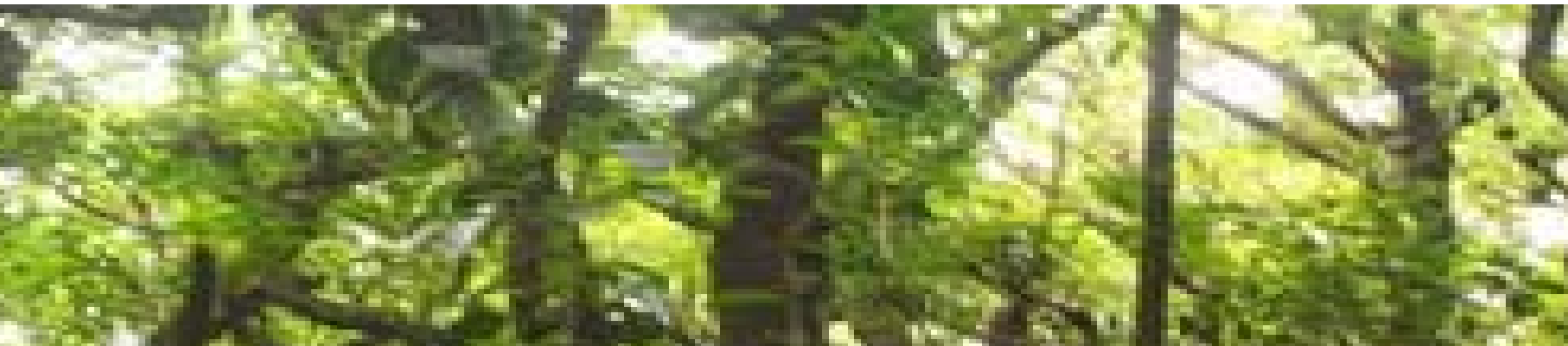
CDM POTENTIAL



Forestry Sector

70% of the country territory is suitable for forestry

Forestry Cluster – one of the priority areas for development identified in the National Development Plan.



CHALLENGES AND OPPORTUNITIES NICARAGUA FACES IN THE CARBON MARKET



- High transaction costs due to formulation, validation and certification processes.
- Capacity building to help bring them down.
- Provision of information and technical assistance to project developers.
- Rural electrification projects – umbrella projects
- Design programs that could use the CDM to finance themselves; work with Associations and municipalities.
- Transport and Agricultural sectors.
- Transformation of the ONDL to promote all environmental services, not just climate mitigation, but local markets and services.
- Synergies between mitigation, reduction of the environmental vulnerability and adaptation to climate change.

Rural electrification





Thank you for your attention

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