United Nations
Framework Convention on
Climate Change

COUNTRY EXPERIENCE ON CONTINGENCY FINANCE: NICARAGUA

Fourth Forum of the Standing Committee on Finance

Dr. Paul Oquist Kelley
Minister
Private Secretary for National Policies
Presidency of the Republic

Member of the Standing Committee on Finance (SCF)
Advisor, Green Climate Fund (GCF)
United Nations Framework Convention on Climate Change (UNFCCC)

Manila, Phillipines, September 5, 2016

NICARAGUA: FOURTH AMONG THE TEN COUNTRIES MOST AFFECTED BY EXTREME WEATHER EVENTS (1995-2014)

(Global Climate Risk Index 2016, Germanwatch)

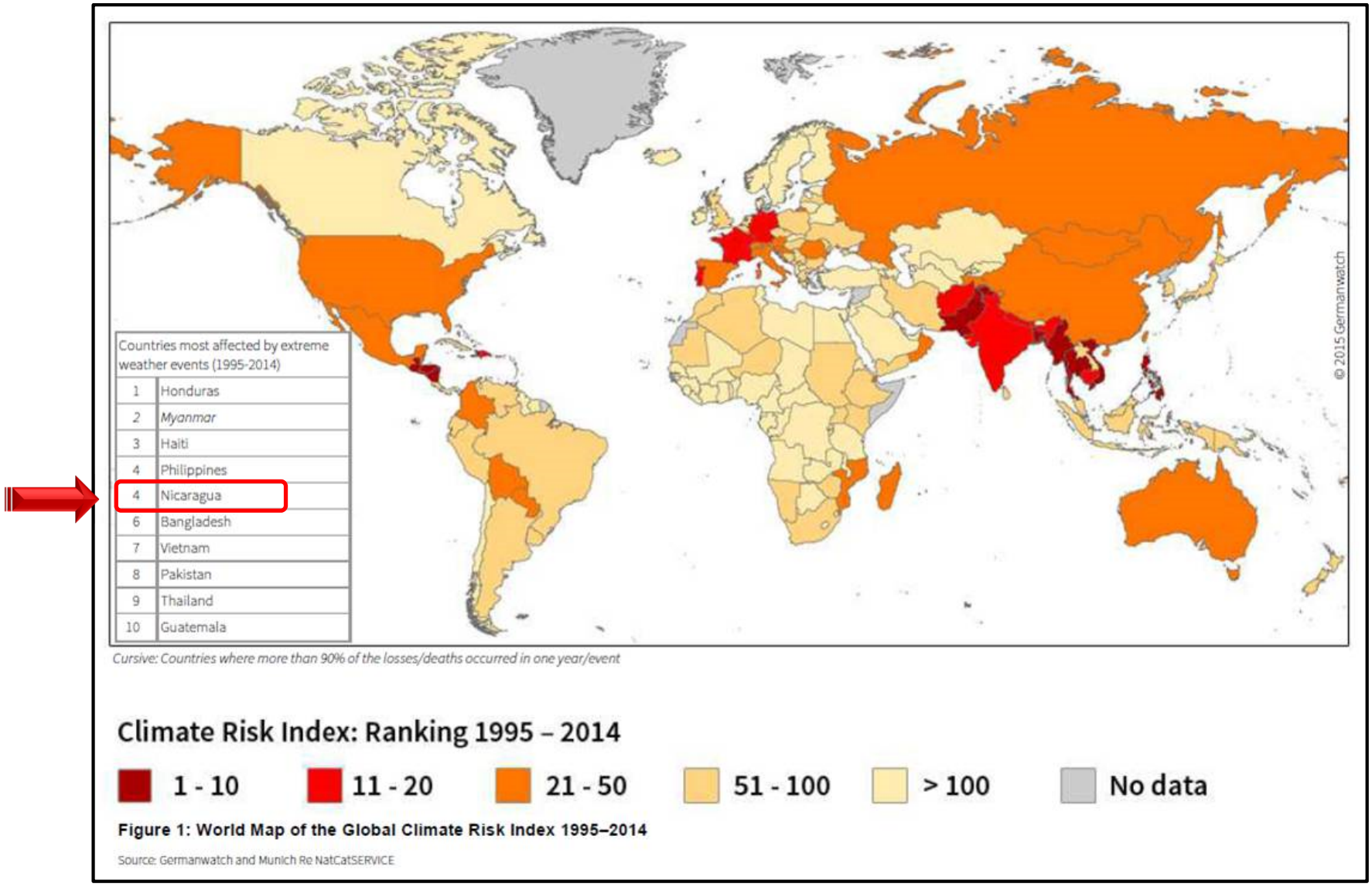


Figure 1: World Map of the Global Climate Risk Index 1995–2014

Source: Germanwatch and Munich Re NatCatSERVICE

SISTEMA NACIONAL PARA LA PREVENCIÓN, MITIGACIÓN Y ATENCIÓN DE DESASTRES (SINAPRED)

(National System for Prevention, Mitigation and Disaster Relief)

What is SINAPRED?

- It is a specialized and coordinated System in prevention, mitigation, preparedness and response to the occurrence of adverse events in Nicaragua, which present danger to the national population.

Who makes up the SINAPRED?

- All government institutions nationwide, coordinated by the Co-Director.

Creation

- Year 2000
- Law 337

STRUCTURE SINAPRED

President of the Republic

National Committee
Republic President
superior authority of each Government Institutions

CO / ADDRESS

Technical Liaison Units

CEPREDENAC National Commission

National Disaster Fund

CODE-SINAPRED

Technical Working Group

Sectoral Working Committees

National level

Departmental Delegates of the Interior and Regional Coordinators

Departmental and Regional Committees

Departmental and Regional Levels

Municipal mayors

Municipal committees

Municipal level

Local committee

Cabinets Family, Community and Life, other community organizations , Companies

SINAPRED WORKING APPROACHES

Prevention

Mitigation

Preparation

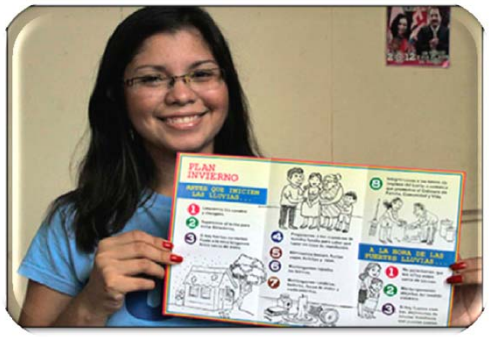
Alert

Answer

Rehabilitation

Reconstruction

SUCCESSFUL EXPERIENCES



Training

Drill

CLIMATE FINANCE IN LATIN AMERICA (ECLAC)

By 2014, the amount of assistance from the different climatic financial instruments in LAC totaled 21,144 billion dollars, not including data on private funds, foundations and NGOs, funds pension and insurance.

BANCO DE DESARROLLO DE AMÉRICA LATINA

BID

The **Inter-American Development Bank** (IDB) and the **Andean Development Corporation** (CAF) concentrated together, more than five billion dollars.

Brazil mobilized more resources and accounted for 67% of all of them.

It is followed by Peru (7%), Colombia (3.9%) and Ecuador (3.2%).

BANCO DE DESARROLLO DE AMÉRICA LATINA

84% of the funds managed by banks was destined mitigation.

Among the institutions, 44% of the resources of the **CAF**, was destined adaptation.

INSURANCE AND LOSSES IN LATIN AMERICA & CARIBBEAN

According to the Sigma study by Swiss Re (2015), economic losses due to natural disasters, averaged US$ 180 billion annually in the last decade. 70% of this total was uninsured.

In LAC, between 1974 and 2014, more than 80% of the earthquakes were not covered by insurance and almost 100%, did not cover storms.

FINANCIAL INSTRUMENTS IN LATIN AMERICA AND THE CARIBBEAN LINKED TO LOSS AND DAMAGE

Caribbean Catastrophe Risk Insurance Facility (CCRIF)

Catastrophe bonds of Mexico (2006, 2009, 2012)

MultiCat program (BM, Swiss Re, Munich Re, Goldman Sachs)

Green bonds

THE CASE OF NICARAGUA

Financial instruments

- Caribbean Catastrophe Risk Insurance Facility (CCRIF)
- Contingent Loan for Natural Disaster Emergencies
- Social protection (Programs and analysis of public expenditure)

CCRIF SPC

The Caribbean Catastrophe Risk Insurance Facility

Facility catastrophic risk insurance in the Caribbean was formed in 2007.

To limit the financial impact of the damage and losses caused by natural events by providing financial liquidity immediately when the policy is activated.

It was developed under the technical direction of the World Bank and a grant from the Government of Japan, it was capitalized through contributions to a Multi-Donor Trust Fund (MDTF).

Coverage and exceptions:

- It is a parametric insurance mechanism or joint reserve that allows Caribbean governments quickly access liquidity in case of rare but very destructive (hurricanes and earthquakes) catastrophic events.
- There is also a product for torrential rains that could be in the medium term at the disposal of the Central American countries.
- This instrument does not provide full coverage for losses.
- Not an instrument to cover relatively little frequent and destructive catastrophic events, nor is it a tool that will protect the fiscal accounts alone.
- It is not a substitute for investments in prevention and mitigation of risk.

CCRIF SPC

The Caribbean Catastrophe Risk Insurance Facility

In 2014 the Mechanism was restructured into a Segregated Portfolio Company (SPC), to facilitate the introduction of new insurance packages and new geographical areas, including Central America

Nicaragua signed the agreement what became the first nation in Central America to have that Disaster Risk Insurance

TERMS CCRIF INSURANCE POLICY - NICARAGUA

Terms of the policy for hurricanes

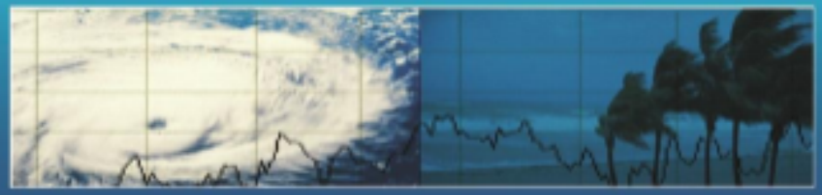
	2015/2016
Deductible (US$)	607,577.00
Limit of coverage (US$)	83 667,096.00
Percent of cession (%)	9.742%
Limit – Deductible (US$)	83 059,519.00
Maximum disbursement (US$)	8 091,944.07
Minimum payment (= prime) (US$)	500,000.00
Deductible (years)	10
Limit of coverage (years)	100
Prime (US$)	500,000.00

Terms of the policy for earthquakes

	2015/2016
Deductible (US$)	20 958,698.00
Limit of coverage (US$)	286 748,494.00
Percent of cession (%)	3.75%
Limit – Deductible (US$)	265 789,796.00
Maximum disbursement (US$)	9 964,458.65
Minimum payment (= prime) (US$)	500,000.00
Deductible (years)	10
Limit of coverage (years)	100
Prime (US$)	500,000.00

CCRIF SPC
The Caribbean Catastrophe Risk Insurance Facility

On behalf of
Caribbean EQ/TC SP



CASE STUDY: EARTHQUAKE IN Puerto Morazan, Chinandega JUNE 9, 2016 (June 10 UTC).

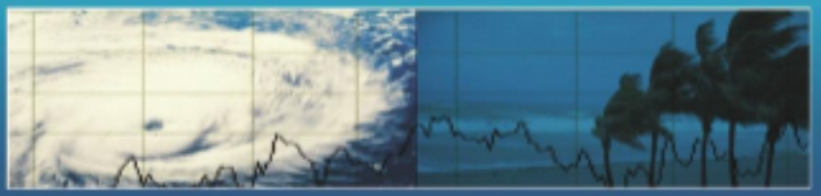
- An earthquake of magnitude 6.1 at 21:25:23 pm on June 9, 17 km east of Puerto Morazan, Chinandega, at a depth of 10 km, according to data from the Center US Geological Survey (USGS).
- This event was reported as a suitable protocol trigger damage calculation Multi-Profile Risk Estimation System (MPRES) by CCRIF to enforce the policy purchased by Nicaragua.
- Product of management report, Nicaragua received on June 23, 2016, US$ 500,000.

CCRIF SPC

The Caribbean Catastrophe Risk Insurance Facility

On behalf of

Caribbean EQ/TC SP



CCRIF SPC
The Caribbean Catastrophe Risk Insurance Facility

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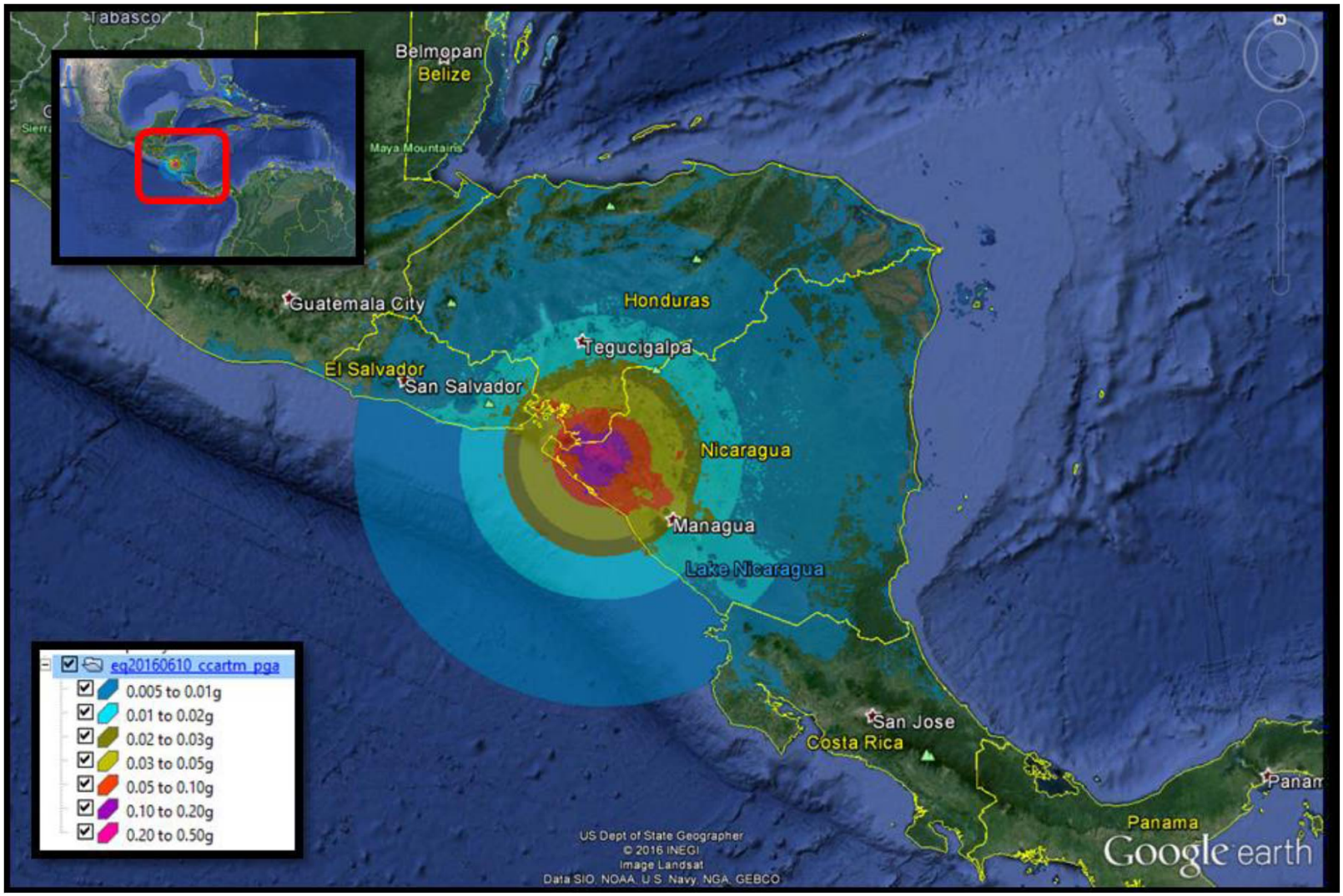
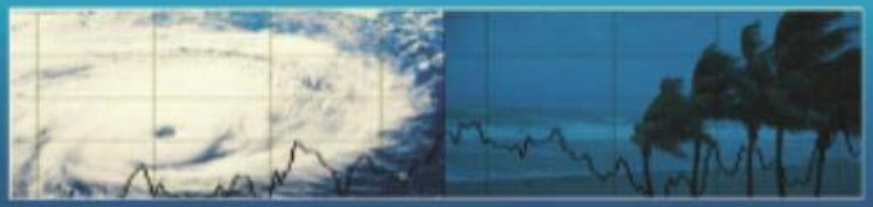




Country	Nicaragua
Claim Number	N/A
Event Type	EARTHQUAKE
Date of Event	10 June 2016
Preliminary Event Loss Amount	$24,297,930.00
Policy Attachment Point (for relevant peril)	$20,958,698.00
Policy Exhaustion Point (for relevant peril)	$286,748,494.00
Coverage Limit (for relevant peril)	$9,964,458.65
Previous Payments per Policy Year/Peril	$0
Preliminary Policy Payment Amount	$500,000.00

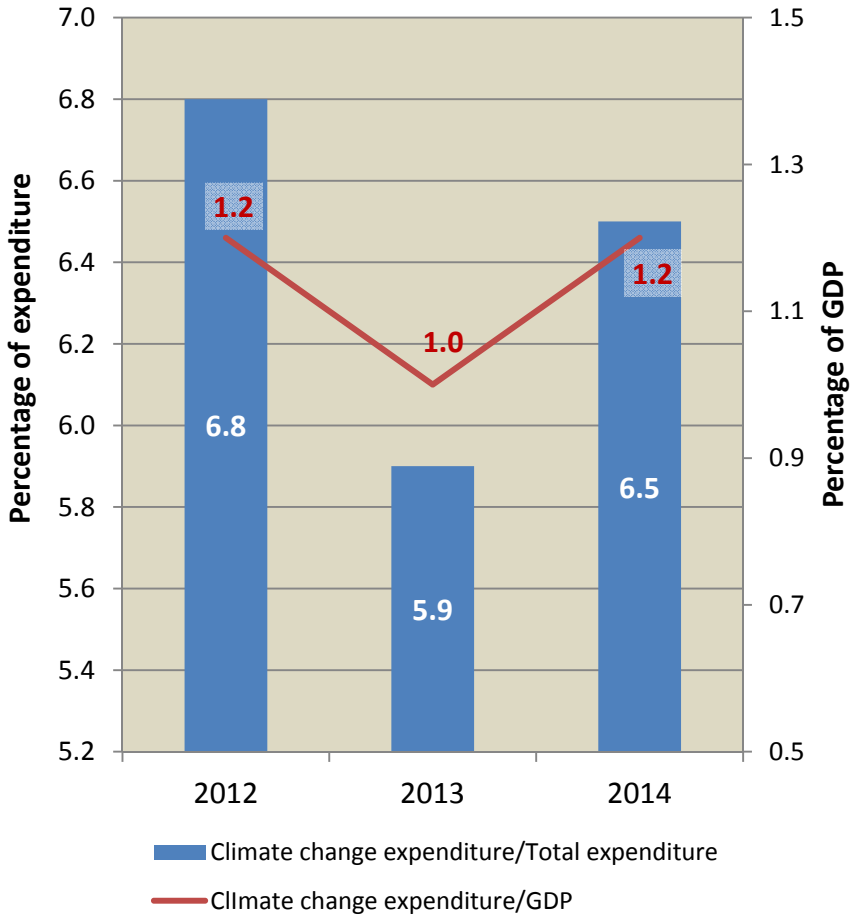
Table 2 Policy parameters for Nicaragua

For this earthquake event the Preliminary Policy Payment Amount for Nicaragua is $500,000.00 USD.

NICARAGUA

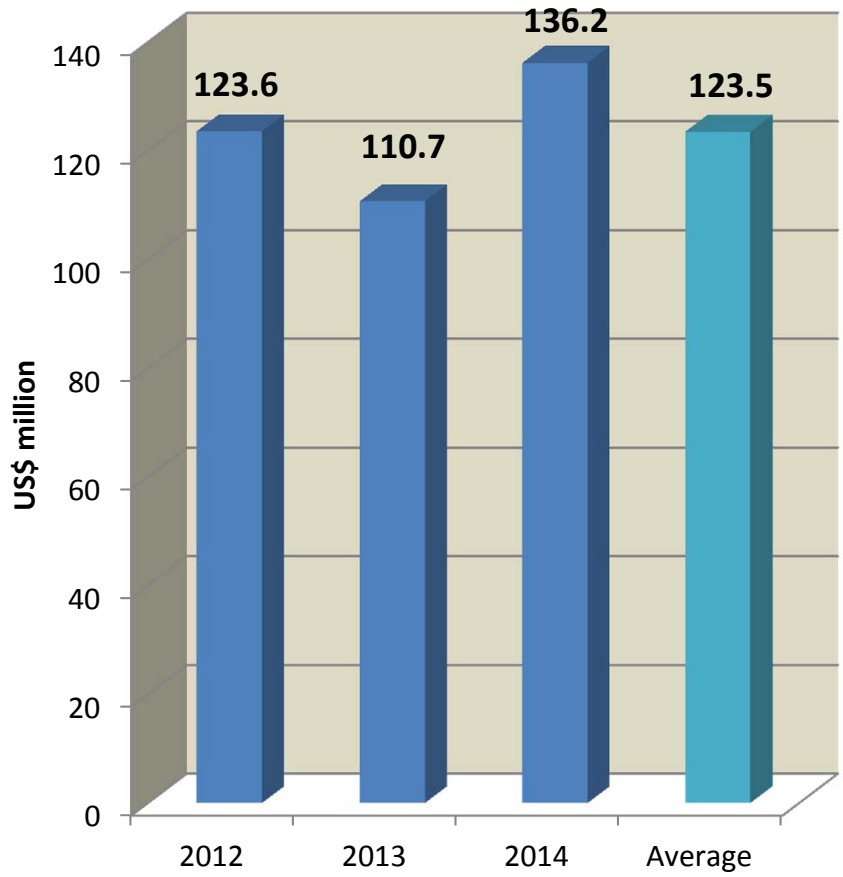
PUBLIC EXPENDITURE LINKED TO CLIMATE CHANGE

In the period 2012-2014 , the central government public spending linked to climate change was US$ 123.3 million, representing 6.4 percent of total expenditures executed through the General Budget of the Republic



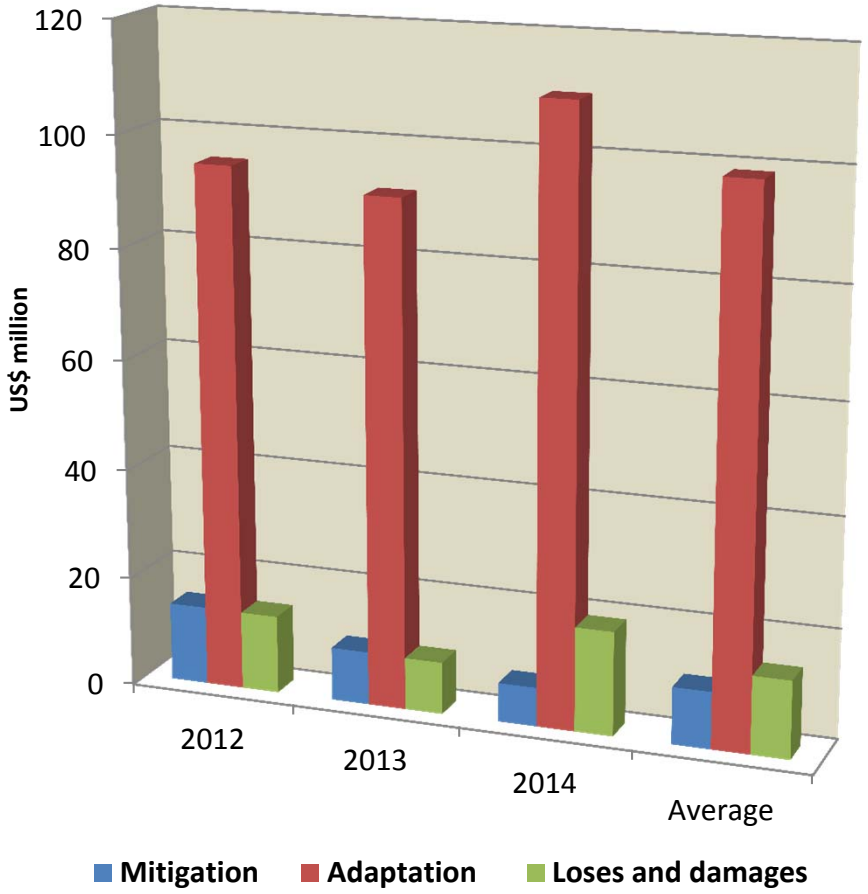
TOTAL PUBLIC SPENDING ON CLIMATE CHANGE

In terms of GDP, amounts identified as climate change spending on average represent 1.1 percent of it.

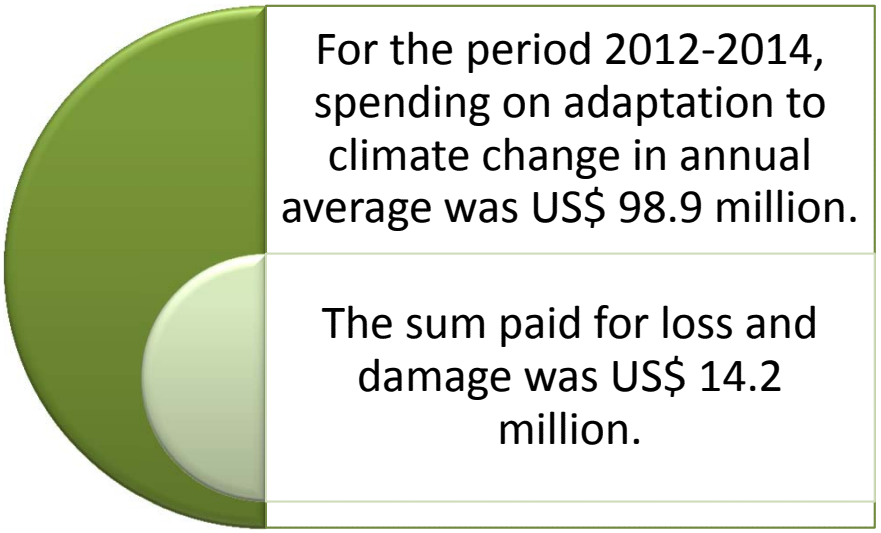


PUBLIC EXPENDITURE LINKED TO CLIMATE CHANGE BY CATEGORY

Spending on adaptation is growing, in response to priority country redirect resources to addressing climate change, from a holistic perspective to address the reduction of poverty and inequality.

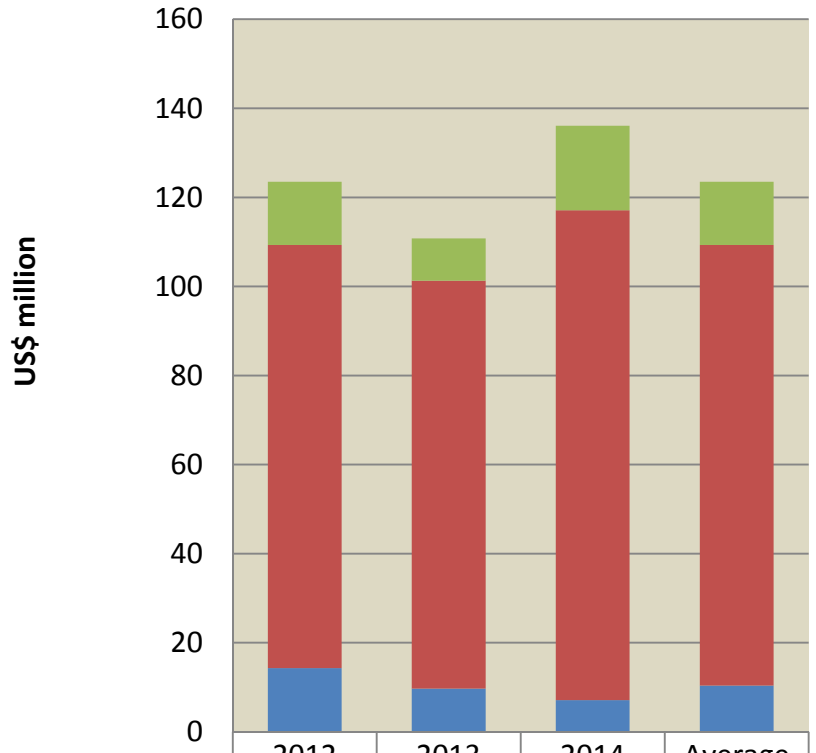


PUBLIC EXPENDITURE LINKED TO CLIMATE CHANGE BY CATEGORY



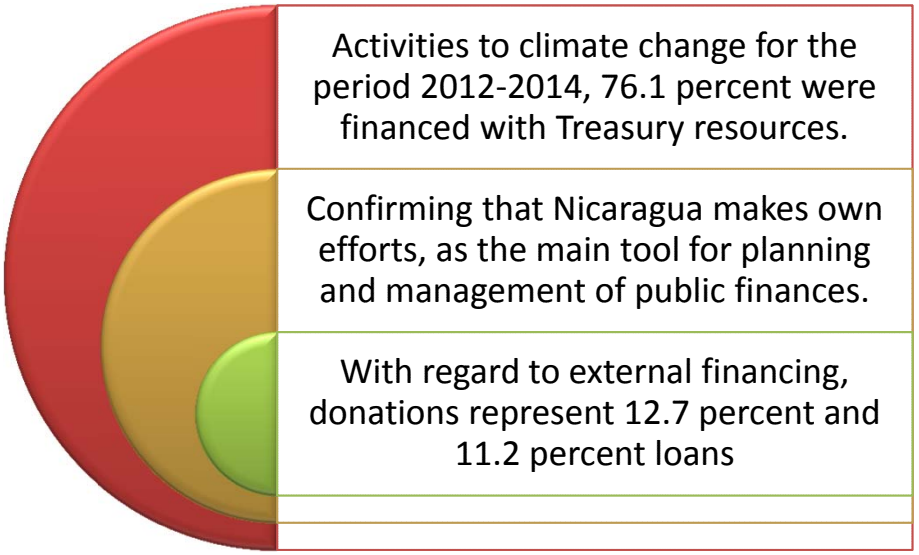
For the period 2012-2014, spending on adaptation to climate change in annual average was US$ 98.9 million.

The sum paid for loss and damage was US$ 14.2 million.



	2012	2013	2014	Average
Loses and damages	14.2	9.5	19	14.2
Adaptation	95	91.6	110	98.9
Mitigation	14.3	9.7	7.1	10.4

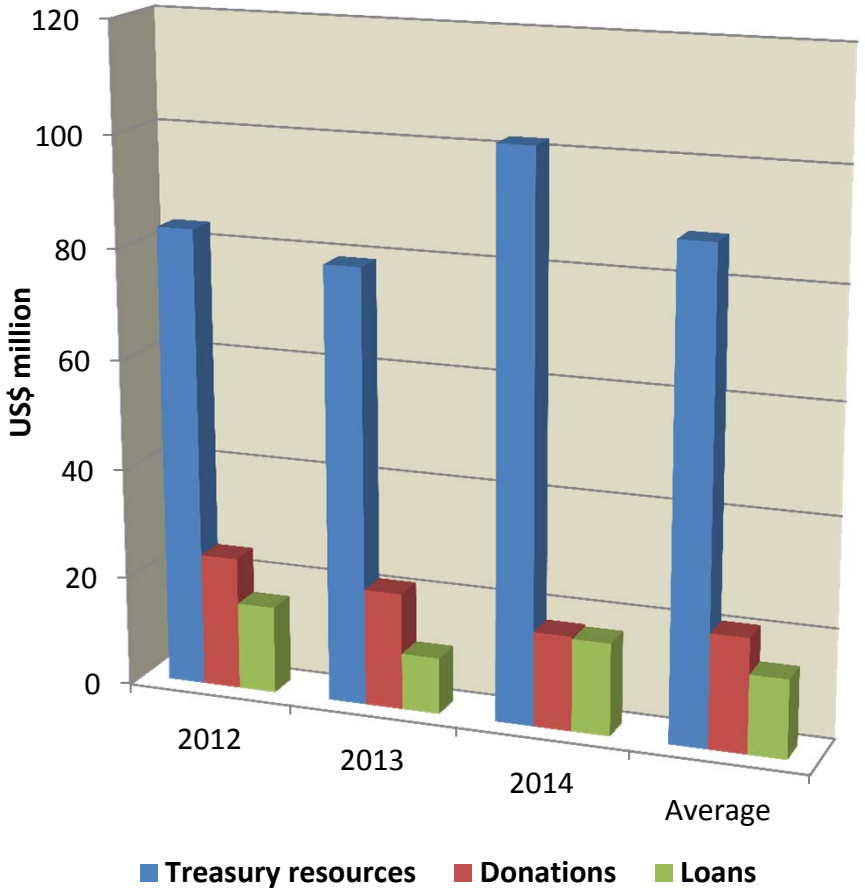
PUBLIC EXPENDITURE LINKED TO CLIMATE CHANGE BY FUNDING SOURCE



Activities to climate change for the period 2012-2014, 76.1 percent were financed with Treasury resources.

Confirming that Nicaragua makes own efforts, as the main tool for planning and management of public finances.

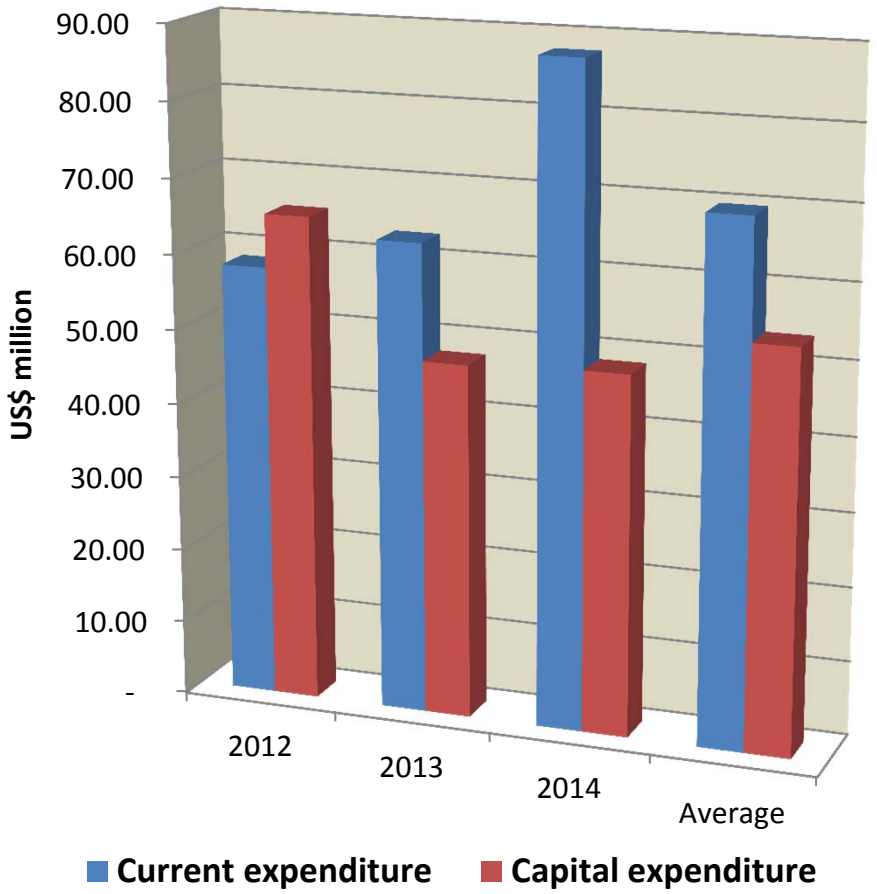
With regard to external financing, donations represent 12.7 percent and 11.2 percent loans



PUBLIC EXPENDITURE LINKED TO CLIMATE CHANGE BY ECONOMIC CLASSIFICATION

The current climate change spending accounts for 56 percent, for 2012-2014, aimed at capacity building and awareness

Capital expenditures are aimed at investments in the electrification, productive bond and transportation.

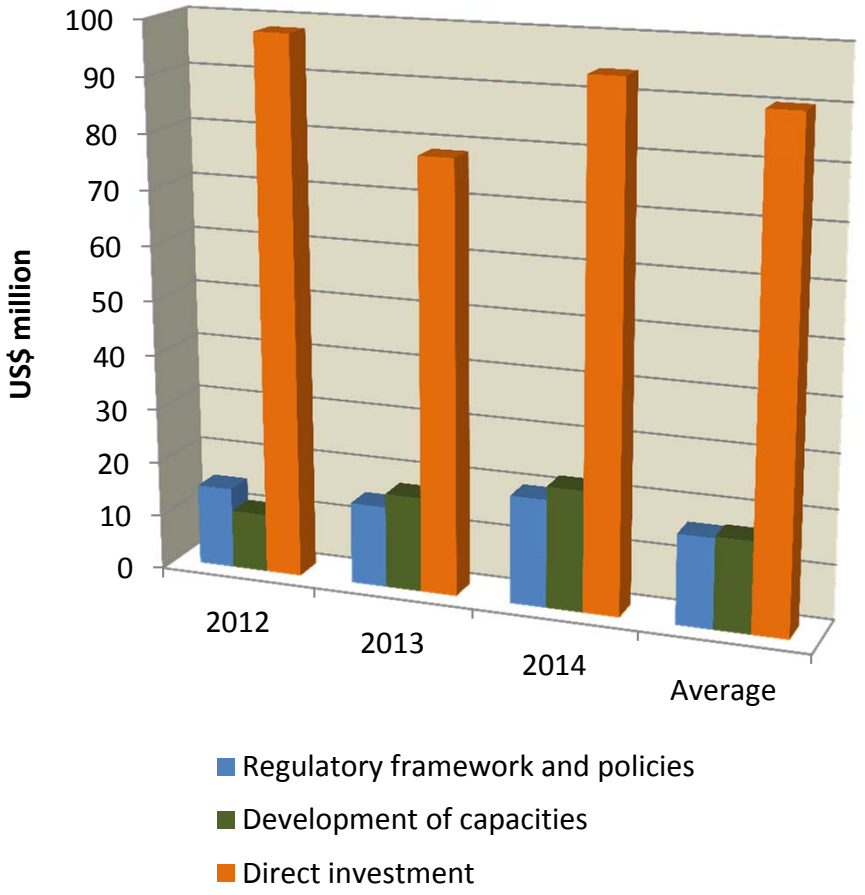


PUBLIC EXPENDITURE LINKED TO CLIMATE CHANGE BY TYPE CPEIR

For the period 2012-2014, the highest concentration of spending on climate change is in direct investments, representing between 71.4 to 79.8 percent.

The main programs related to direct investments are:

- Improvement of potable water and sewerage
- Food production program, highlighting the capitalization and technical assistance
- Conservation of the road network
- Electricity and renewable resources.



ADAPTATION PROJECTS IMPLEMENTED AND RUNNING

Draft	Financing	Amount (millions)	Execution
Environmental Disaster and Climate Change Management Program	BID-FND	US$ 13.0	2011-2016
Risk Reduction Program and vulnerability to floods and droughts in the Estero Real basin	Adaptation Fund	US$ 5.0	2011-2015
Adaptation to Climate Change in the Sector Water and Sanitation	World Bank	US$ 6.0	2013-2016
Reduction of Vulnerability and Adaptation to Climate Change in the region of Las Segovias – Nicaragua	Switzerland	US$ 3.2	2013-2016
Integrated Watershed Management Apanás – Asturias	GEF_BID	US$ 4.0	2013-2016
National strategy for reducing emissions from deforestation and forest degradation	FCPF_BM	US$ 3.8	

CONTINGENT LOAN FOR NATURAL DISASTER EMERGENCIES

Financing	• Inter-American Development Bank (IDB)
Date of hire	• January 21, 2014
Financing amount	• US$ 186 000,000 • This funding can come from the Ordinary Capital Fund or for Special Operations
Executing agencies	• Ministry of Finance and Public Credit

CONTINGENT LOAN FOR NATURAL DISASTER EMERGENCIES

Loan Purpose

- Cushion the impact of severe or catastrophic natural disasters could eventually have on the public finances of Nicaragua, through increased availability , stability and efficiency of funding for the care of emergencies caused by such events.

Elements of the contract

- **Eligible Event**: an event that brings features and conditions of the type, location and particular intensity for the use of contingent financing resources.
- **Automatic Rerouting List**: the list of approved loan operations available to the Borrower whose undisbursed resources and may be used under this operation.
- **Operating Regulations**: include applicable operational processes, the Program for Comprehensive Risk Management of Natural Disasters, the description of Eligible Events, parametric triggers and the methodology for calculating the maximum amount that may be disbursed.

CONTINGENT LOAN FOR NATURAL DISASTER EMERGENCIES

Interests

- The portion of contingent financing under the Ordinary Capital Financing at a rate to be determined in accordance with the provisions of the General Standards based on LIBOR.
- The portion of contingent financing paid under the Financing Fund for Special Operations, to the General Standards prescribed fee.

Amortization

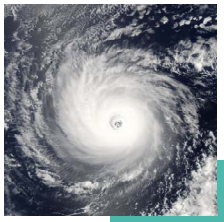
- The first installment corresponding to the portion of contingent financing paid under the Ordinary Capital Financing amortization will be paid at seventy-two months from the date of each disbursement.
- The portion of contingent financing paid under the Financing Fund for Special Operations will be amortized in a single payment to be made at forty (40) years from the date of each disbursement.

CONTINGENT LOAN FOR NATURAL DISASTER EMERGENCIES

Eligible Events

Earthquakes:

- According to reports from the United States Geological Survey (USGS) published within a period of 72 hours immediately after the occurrence of the event, reporting at least a tremor with an intensity VI or higher depending on the Modified Mercalli Scale, which it has affected at least 2% of the population within the coverage area.



Hurricanes:

- Exclusively tropical cyclones and, according to reports from the United States National Oceanic and Atmospheric Administration (NOAA) published within a period of 5 days immediately after the occurrence of the event, reporting at least one measurement point within the coverage area, have produced at least:
  - Winds with a sustained speed of 73 miles per hour or higher on the Saffir-Simpson scale.
  - Precipitation associated with an average of at least 25.4 millimeters in a continuous prisoner 24 hours.

Precipitation:

- According to the reports of the Tropical Rainfall Measuring Mission (TRMM) published within a period of 5 days immediately after the occurrence of the event, reporting in at least one measurement point within the coverage areas of high population density (ADP) defined for such events (~2.25), have produced rainfall least an average of at least 15 inches on a continuous period of 24 hours.

THE CASE OF MANAGUA

GENERAL INFORMATION

It covers an area of 270 square kilometers and is 82.97 meters above sea level.

Managua is located in the dry corridor, with a dry tropical climate.

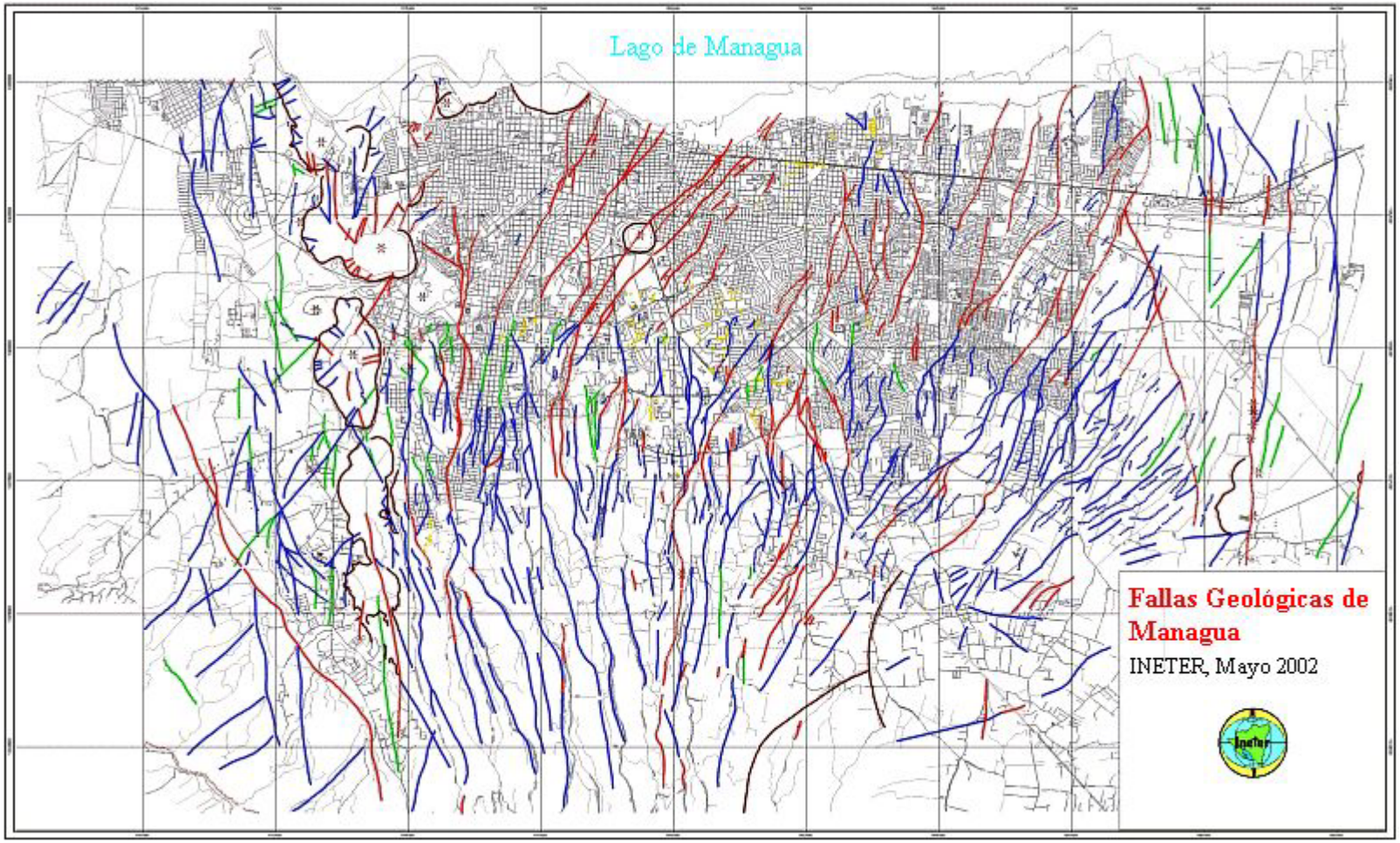
It has an average annual rainfall of 1,100 mm on the low side and 1,380 mm in the south.

Annual average temperatures between 24°C at the top of Managua and 27° C at the bottom.

Socioeconomic indicators:

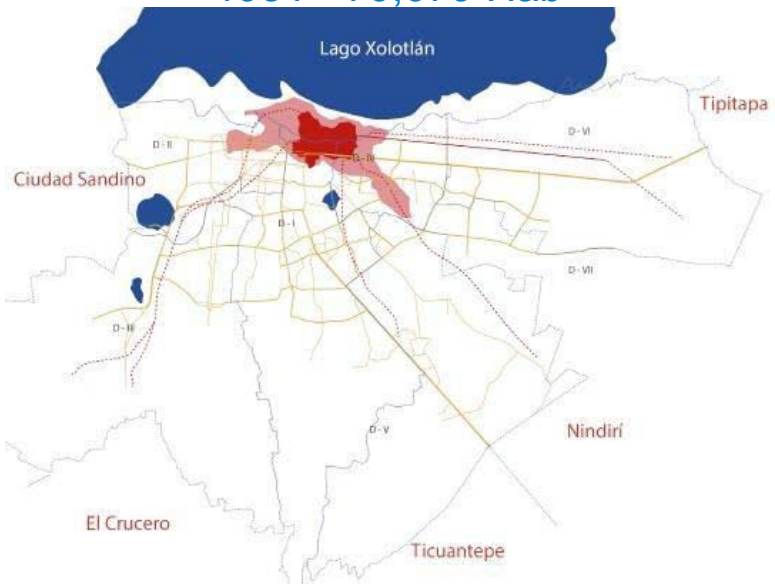
- Estimated population of 1,559,948 inhabitants (47 % men and 53% women).
- It is a predominantly young population with an average age of 26.5 years.
- Population density: 5,558 inhabitants x km2
- Average age of the population: 26.5 years.
- The economy is based mainly in trade and services, then this sector and manufacturing industry.

LOCAL GEOLOGICAL FAULT VULNERABILITY

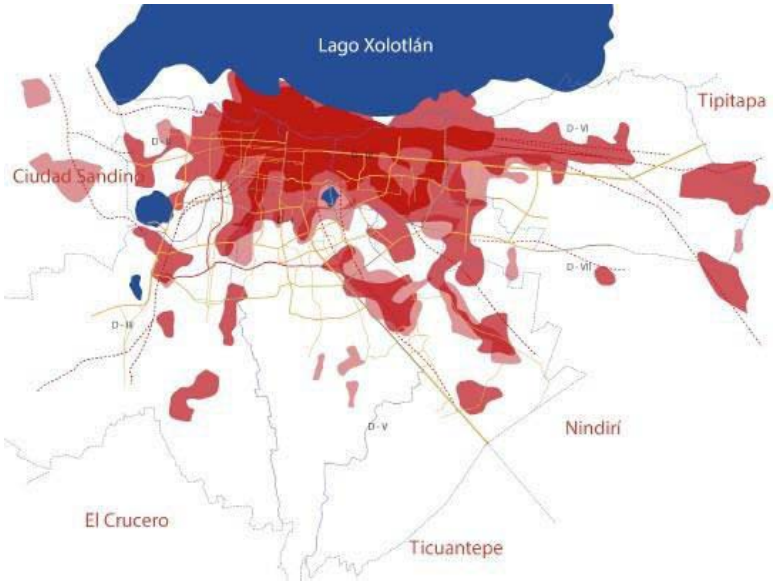


TERRITORIAL GROWTH

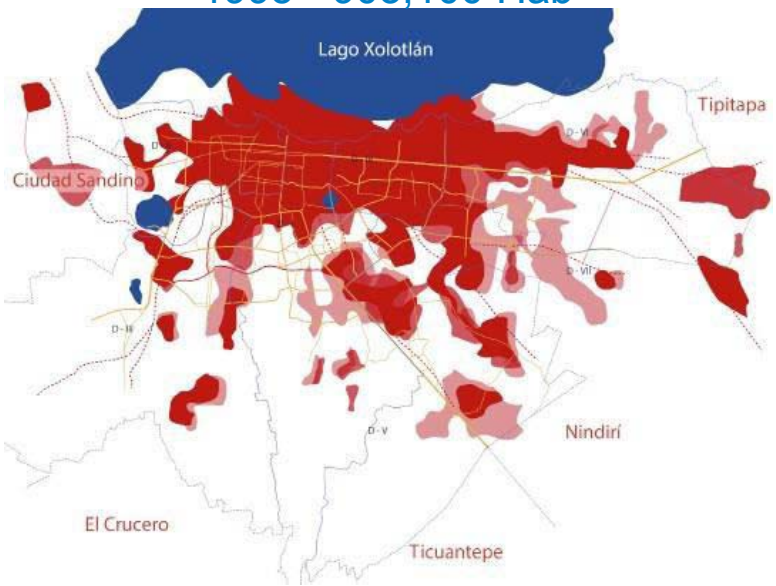
1931 - 79,679 Hab



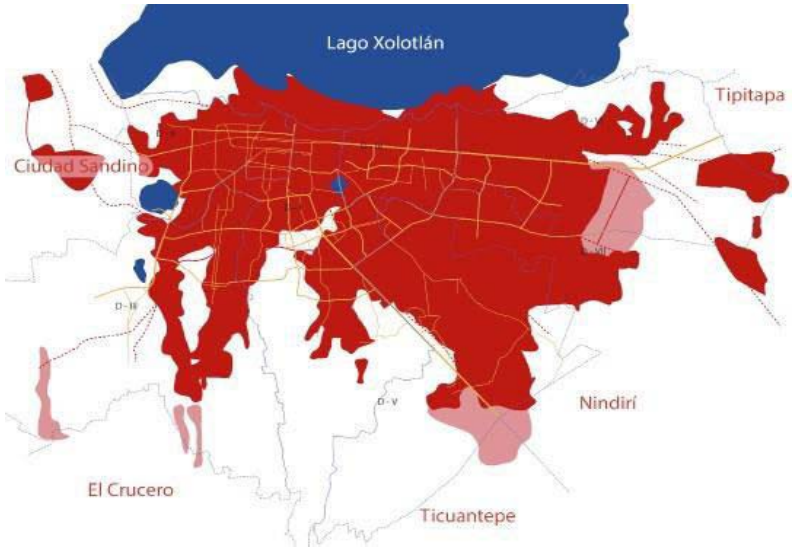
1972- 444,214 Hab



1995 - 903,100 Hab

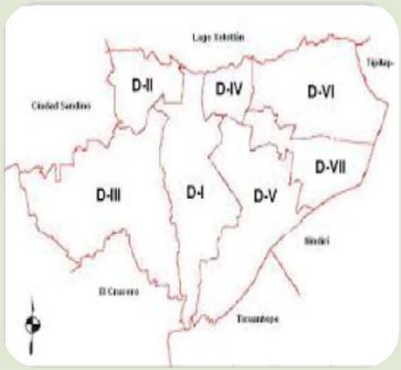


2015 - 1,559,948 Hab



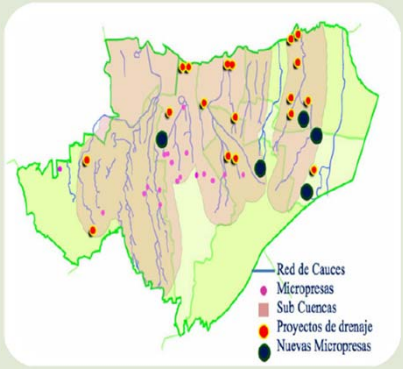
WHAT WE'VE DONE AND WHERE WE GO?

Reduce vulnerability



Managua has 711 territories, districts and spontaneous settlement as a result of uncontrolled growth.

We have developed 389 projects to expand the network of storm drains of the city of Managua, which we have reduced flooding.



We currently have a drainage network:

- 30 channels
- 21 minidams
- 61 km of channels coated
- 84 km of channels uncoated

We have built 10,035 decent homes with what we have dignified the lives of over 56.667 people (3.7 % of the total population) who were living in conditions of high vulnerability.

WHAT WE'VE DONE AND WHERE WE GO?

Environment

We have been developing actions to convert Managua as a beautiful and friendly city, which we have invested more US$ 80 million in the construction of a treatment plant wastewater and collecting all sewage, to prevent further draining sewage into the lake.

We have reduced 80% drain sewage into the lake, taking advantage of its natural beauty.

We have been recovering the coastal area, rebuilding the levee of Managua, allowing take advantage of the environmental and landscape value of the lake.

We are improving the system of garbage collection.

Before starting the period of government, we had a garbage dump open pit (*La Chureca*) on the shores of Lake Managua, today we have a treatment plant solid waste.

WHAT WE'VE DONE AND WHERE WE GO?

Environment

Chureca **in past time**

Processing facilities

WHAT WE'VE DONE AND WHERE WE GO?

Recovery of public spaces

They have been built or rehabilitated 186 parks

The sports equipment Managua is comprised of a total 159 courts

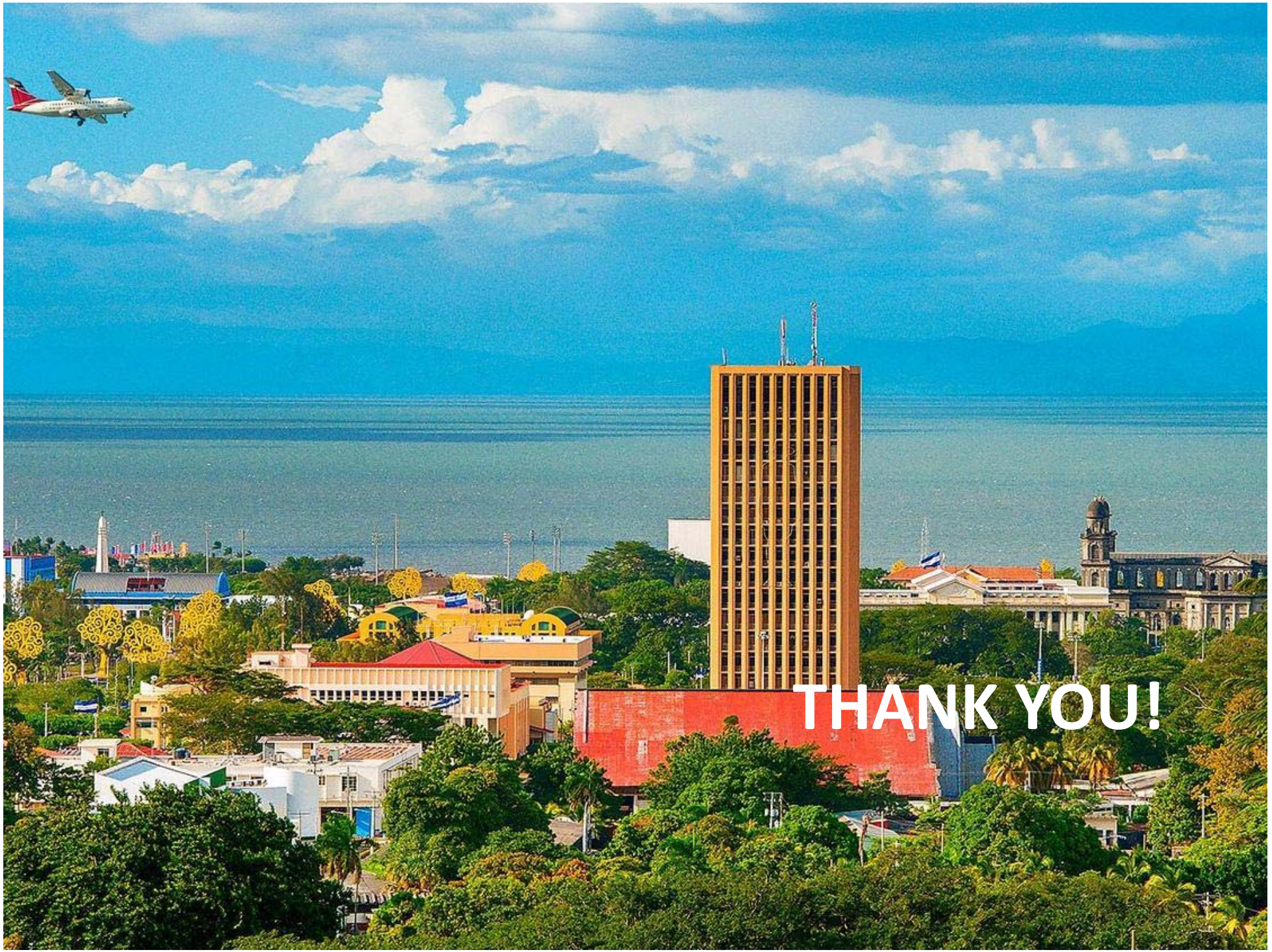
WHAT WE'VE DONE AND WHERE WE GO?

Road and Transportation Solutions

In these 7 years it has made the construction of more than 12,834 blocks in asphalt and hydraulic concrete paving stone.

Renewal of transport fleet with 1,087 taxis and 830 buses. Modernization Buses units using charge for *TUC card*.

Modernization Semaphore Network


THANK YOU!