

**THE GRAND INTEROCEANIC CANAL IN THE  
ECONOMIC DEVELOPMENT OF NICARAGUA,  
CENTRAL AMERICA AND LATIN AMERICA  
WORLD AND REGIONAL MULTIMODAL  
LOGISTICAL CENTER**

**DR. PAUL OQUIST**  
**Minister**  
**Private Secretary for National Policies**  
**Presidency of the Republic**  
**Nicaragua**

**TOBB**  
**ANKARA, TURKEY**  
**23 MARCH 2015**

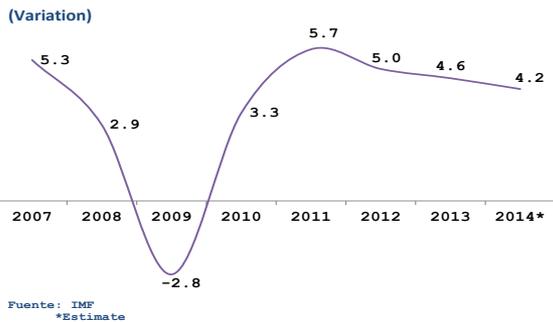
**NICARAGUA IS A COUNTRY WITH A DEMONSTRATED  
CAPACITY TO FORMULATE AND ACHIEVE STRATEGIC  
OBJECTIVES**

**NATIONAL HUMAN  
DEVELOPMENT PLAN 2007/2016**

**OBJECTIVE:  
ECONOMIC GROWTH WITH  
MACROECONOMIC STABILITY,  
JOB CREATION,  
POVERTY AND INEQUALITY REDUCTION**

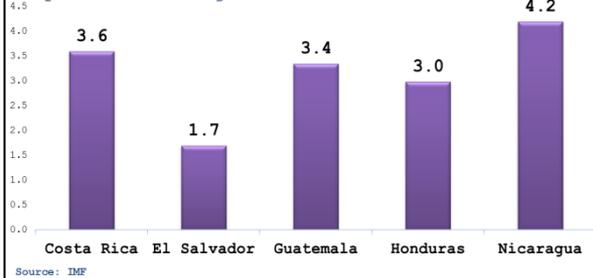
# Economic growth with macroeconomic stability

## Economic Growth 2007-2014



**5% average growth 2011-2013**

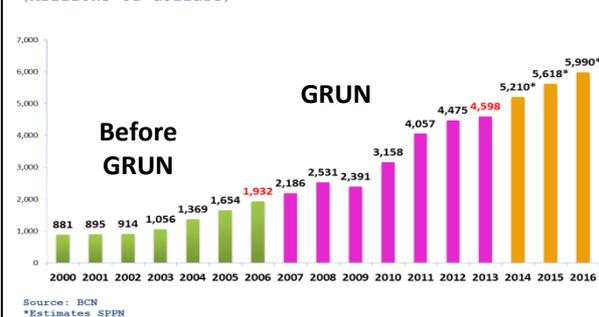
## Central America economic growth, 2014\*



**Highest Economic Growth in Central America**

## Export Dinamism

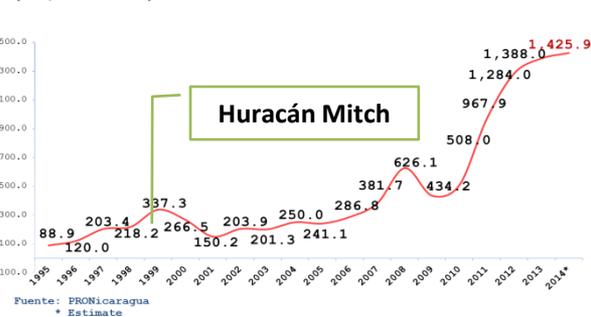
### Total Exports 2000 - 2016\*



**Exports doubled between 2006 and 2012**

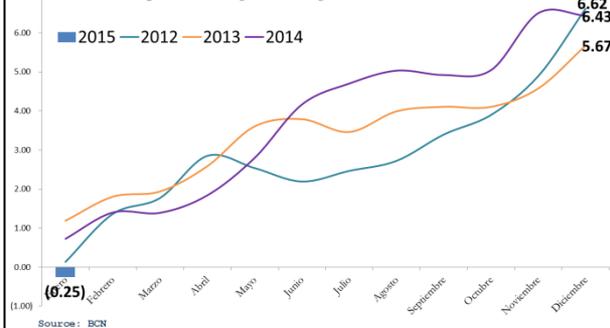
## Investment Boom

### Foreign Direct Investment, 1995-2014\*



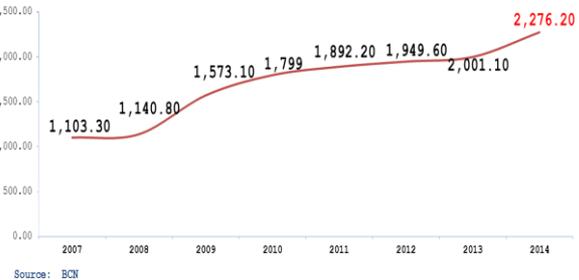
**Investment record: More than 5 times 2006**

### Consumer Price Index jan 2012- jan 2015



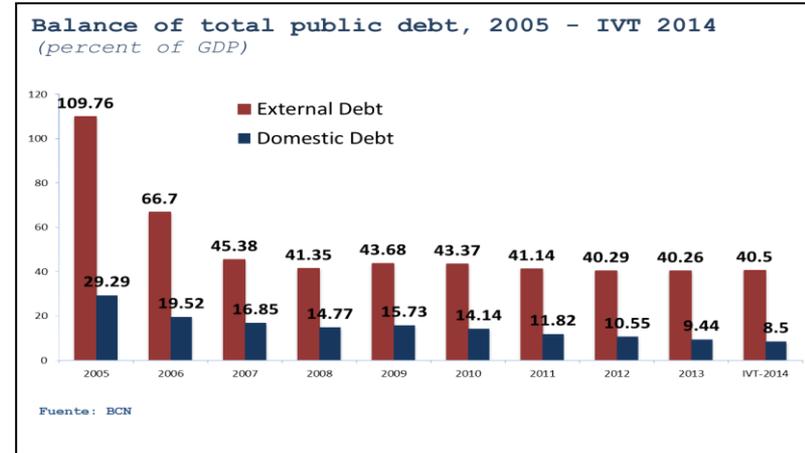
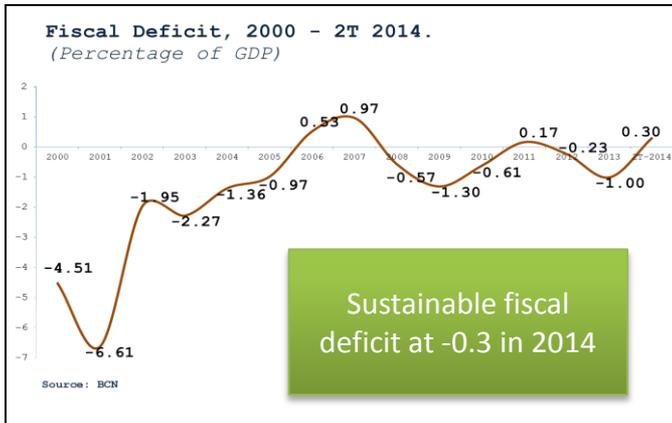
**1-digit inflation and decreasing**

### Gross International Reserves, 2007 - 2014



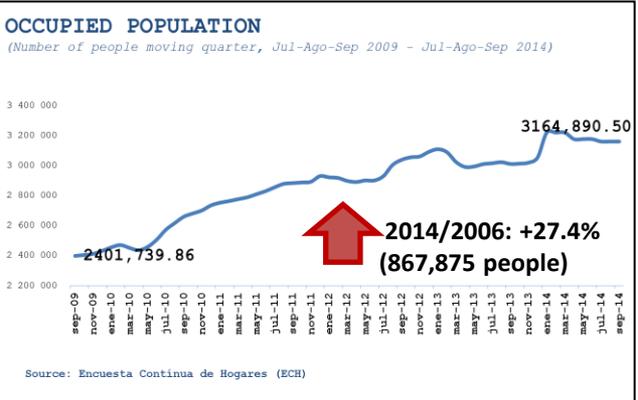
**High International Reserves: 2.8 times the monetary base, allows free exchange and currency stability**

# Fiscal Stability Increased work

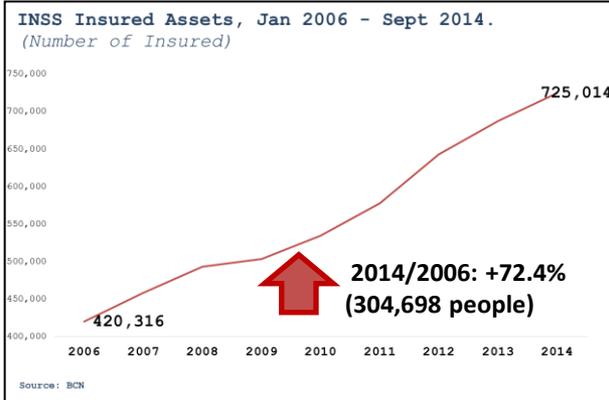


**Sustainable fiscal deficit**

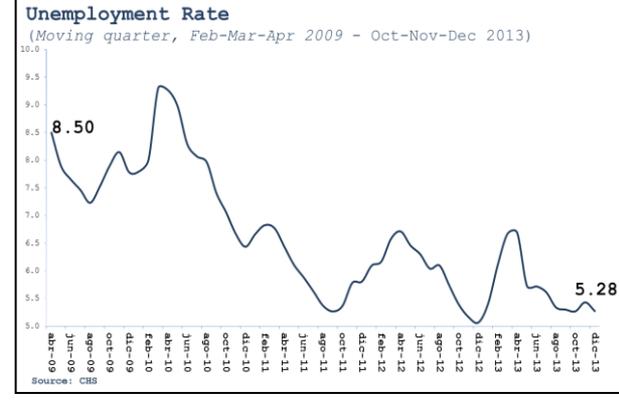
**Constant reduction of national debt**



**More work: 38.9% more than in 2006**



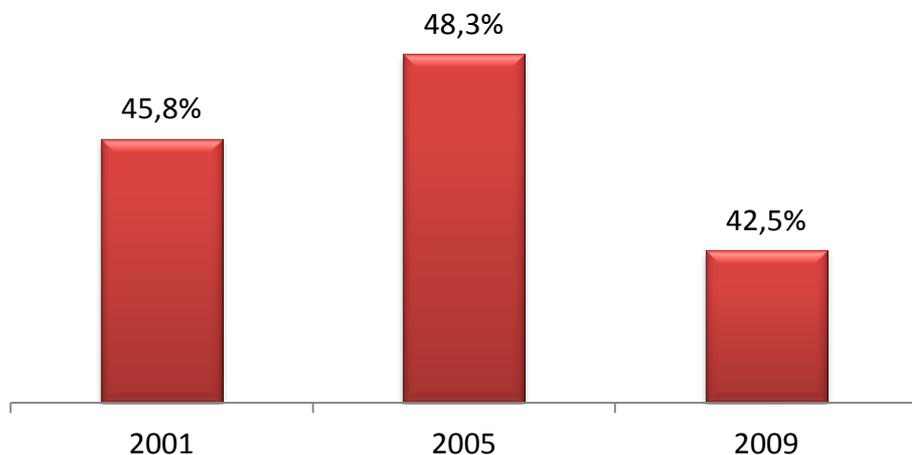
**Formal employment growth: 77.3% more people registered than in 2006**



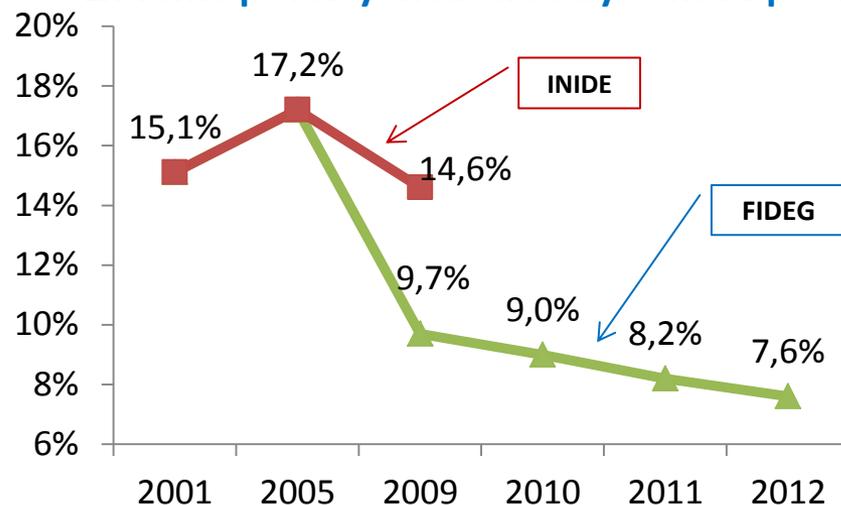
**Fewer unemployment**

# POVERTY AND INEQUALITY REDUCTION

General poverty measured by consumption



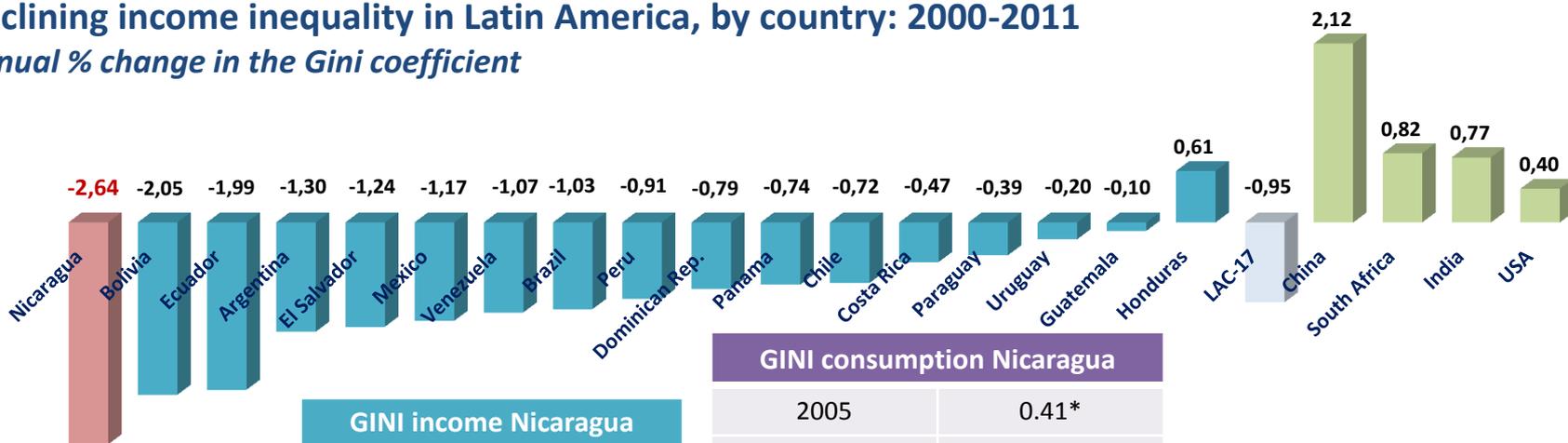
Extreme poverty measured by consumption



Poverty measured by income, poverty fell -10.6 percentage points and -15.7 in rural areas

## Declining income inequality in Latin America, by country: 2000-2011

Annual % change in the Gini coefficient



GINI income Nicaragua	
2005	0.51
2009	0.46

GINI consumption Nicaragua	
2005	0.41*
2009	0.37*
2010	0.35**
2011	0.34**

Source: World Bank, 2013.

# GREATER GENDER EQUALITY

## World Gender Gap Index 2013 -World Economic Forum, Davos-

Rank	Country
1	Iceland
2	Finland
3	Noway
4	Sweden
5	Denmark
<b>6</b>	<b>NICARAGUA</b>
7	Rwanda
8	Ireland
9	Phillipines
10	Belgium
11	Switzerland
12	Germany
13	New Zeland
14	Netherlands
15	Latvia
16	France
17	Burundi
18	South Africa
19	Canada
20	United States

From 90th  
in 2007 to  
6th in 2014

Nicaragua is #1 in the World with regard to women in the National Cabinet , 57% (IPU, 2013)

### "Women in Politics 2014"

#### Percentage of women in parliaments of the world

	COUNTRY	PERCENTAGE OF WOMEN	WOMEN / SEATS
1	RWANDA	63.8%	51/80
2	ANDORRA	50.0%	14/28
3	CUBA	48.9%	299/612
4	SEYCHELLES	43.8%	14/32
5	SWEDEN	43.6%	152/349
6	SENEGAL	43.3%	65/150
7	FINLAND	42.5%	85/200
<b>8</b>	<b>NICARAGUA</b>	<b>42.4%</b>	<b>39/92</b>
9	ECUADOR	41.6%	57/137
10	SOUTHAFRICA	44.8%	179/400

- ✓ It went from 18% in 2006 to 42% in 2012.
- ✓ The new law 50% -50% in the National Assembly and mayors, vice mayors and councilors, will take Nicaragua to **second place in the world in 2016.**

Women in positions of Minister of Defense, Minister of Interior, National Police Chief, General Prosecutor and President of the Supreme Court

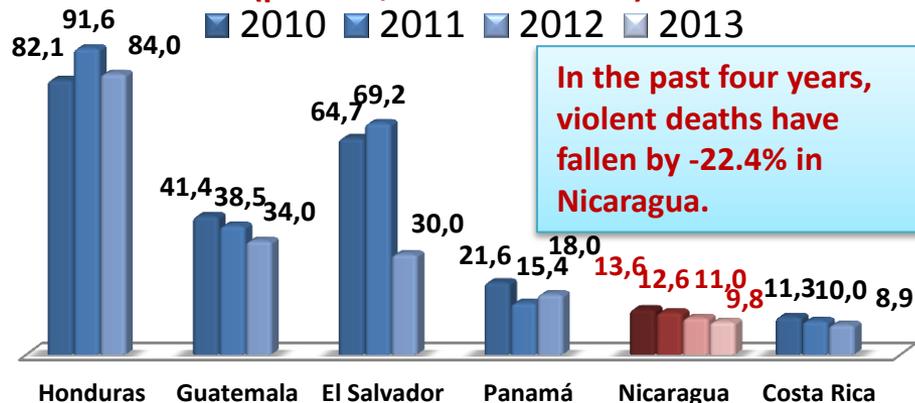
**SURVEY OF COST OF LIVING IN LATIN AMERICA:  
MANAGUA (POSITION 207 of 211) THE CITIES WITH  
LOWEST COST OF LIVING IN LATIN AMERICA**

LAC	2014	CITY	COUNTRY
1	49	Sao Paulo	Brazil
2	65	Rio de Janeiro	Brazil
3	70	Pointe-a-Pitre	Guadalupe
4	81	Port-au-Prince	Haití
5	86	Buenos Aires	Argentina
6	88	Santiago	Chile
7	98	Bogotá	Colombia
8	114	Montevideo	Uruguay
9	132	San José	Costa Rica
10	134	La Habana	Cuba
11	135	Lima	Perú
12	139	San Juan	Puerto Rico
13	144	Brasilia	Brazil
14	145	Panamá	Panama
15	149	Puerto España	Trinidad & Tobago
16	150	Mexico	Mexico
17	170	Guatemala	Guatemala
18	173	Santo Domingo	Dominican Republic
19	176	Asunción	Paraguay
20	177	Quito	Ecuador
21	183	Monterrey	Mexico
22	190	San Salvador	El Salvador
23	200	Tegucigalpa	Honduras
24	204	La Paz	Bolivia
<b>25</b>	<b>207</b>	<b>Managua</b>	<b>Nicaragua</b>

Source: MERCER

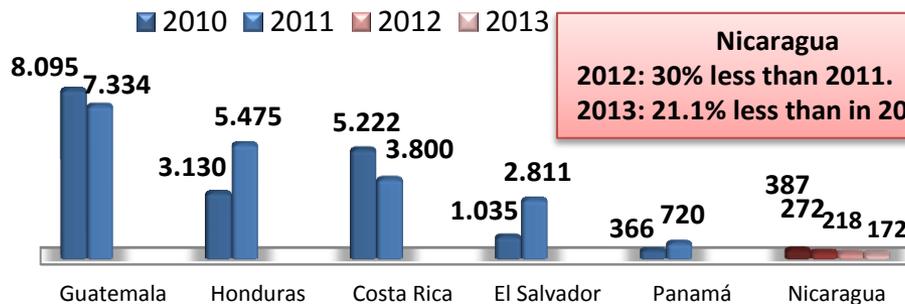
**THE BEST PUBLIC SAFETY IN CENTRAL AMERICA**

**Homicide Rates in Central America  
(per 100,000 inhabitants)**



In the past four years, violent deaths have fallen by -22.4% in Nicaragua.

**Vehicle theft in Central America**



Nicaragua  
2012: 30% less than 2011.  
2013: 21.1% less than in 2012.

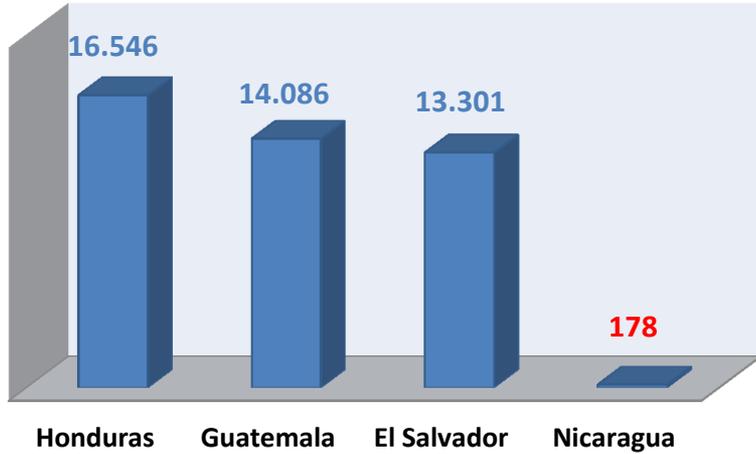
The National Police of Nicaragua (PNN) is a leader in Central America and in the world, as a police model with a "preventive, proactive and community" approach.

*UNDP. 2013. Regional Human Development Report 2013-2014. Public security with a human face: diagnosis and proposals to Latin America*

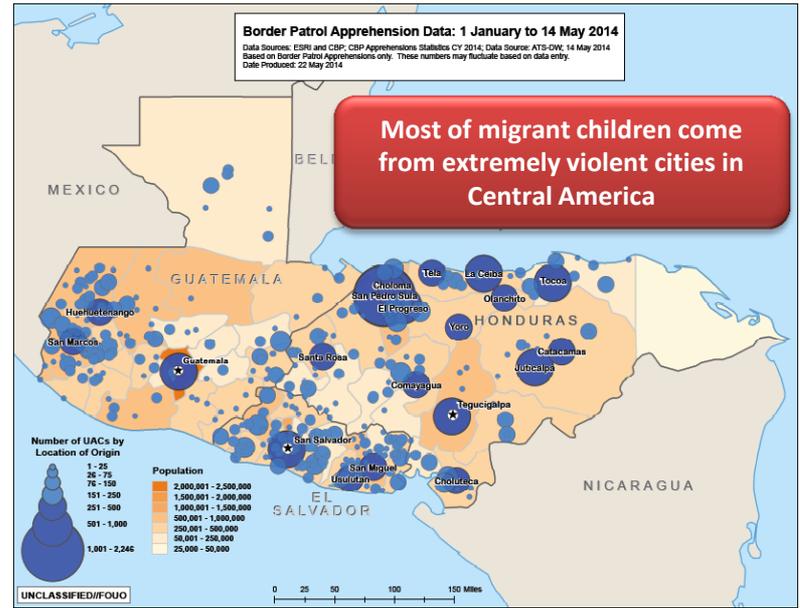


# UNACCOMPANIED MIGRANT CHILDREN

Captures of unaccompanied minors from Central America by the US "Border Patrol". By country (October 1st, 2013-july 30th, 2014)

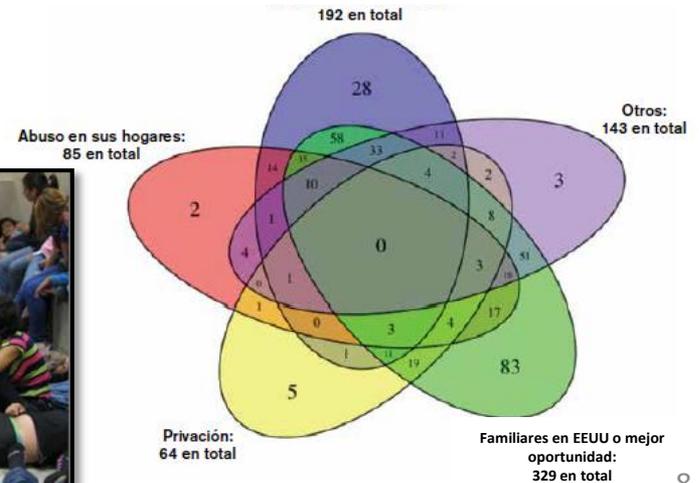


Fuente: BBC



Fuente: US Department of Homeland Security

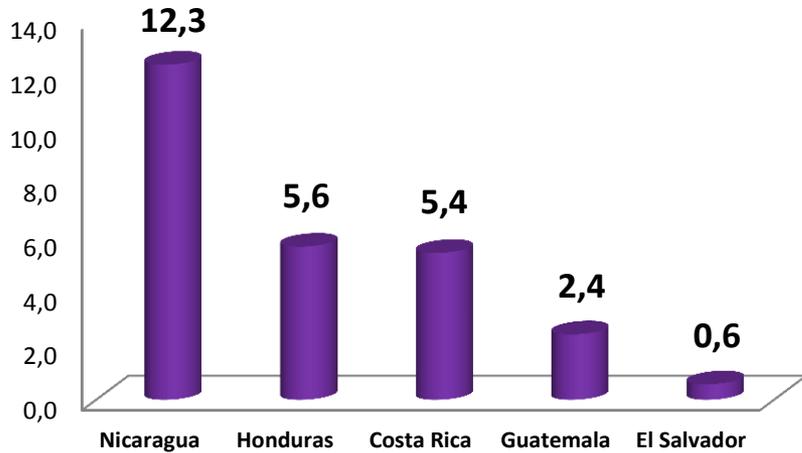
## The children's reasons to leave their homes



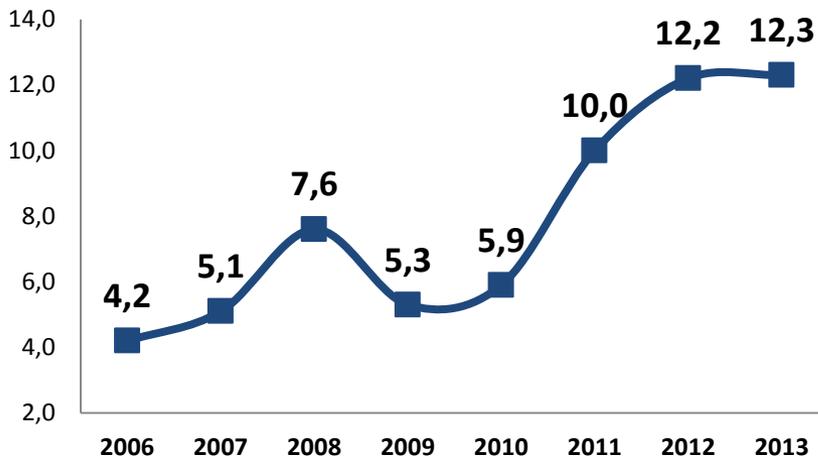
Fuente: ACNUR

# INVESTMENT BOOM

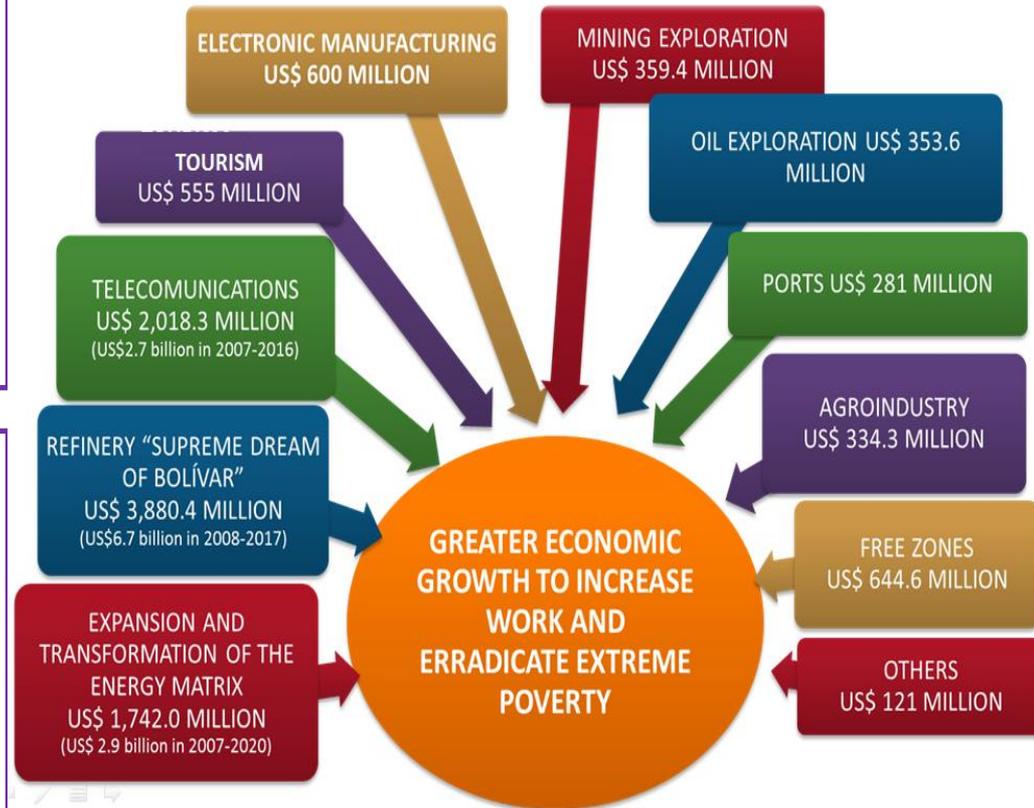
## Ratio FDI/GDP in Central America, 2013 (%)



## Ratio FDI/GDP, 2006 to 2013 (%)



## Investment Portfolio US\$ 10.9 billions by 2014



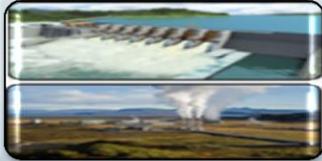
# INVESTMENTS 2015 BY SECTOR



## 1. Productive



## 2. Infraestructure



## 3. Expansion and transformation of the Energy Matrix

- Hydropower
- Geothermal
- Other projects



## 5. Refinery



## 6. Communications



## 7. Grand Interoceanic Canal

# INVESTMENTS 2015 BY PROJECTS



## 1. Tumarín & Boboké Hydroelectric Projects

- US\$ 1,345 million
- 323 MW



## 2. Aguas El Carmen Hydroelectric Project

- US\$330 million
- 85 MW



## 3. Geothermal Park

- +US\$1,754 million
- +364 MW



## 4. CEMEX New Plant

- US\$55 million



## 5. Cargill

- US\$50 million for refrigeration plant as part of US\$240 million expansion



## 6. Walmart Group

- US\$15 million



## 7. Harnesses and auto parts

- Yazaki
- Dräxlmaier

# PRODUCTIVE INVESTMENTS



**New Slaughterhouse: SUKARNE, FEDEGAN, Taiwan, Panama**  
**206 rural agro-industrial projects**

# TRANSPORT INFRAESTRUCTURE

## ROADS



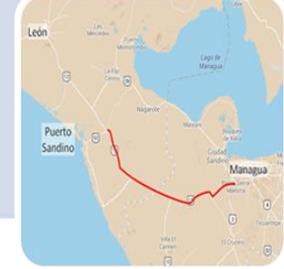
**Acoyapa-San Carlos & Santa Fe Bridges**



**Roads improvements in the Caribbean Coast**



**La Costanera;**  
Managua – Rama;  
La Libertad – Santo Domingo;  
Boaco – Muy Muy – Río Blanco;  
Ruta alterna a Masaya;



**Nejoba – Port Sandino**

## PORTS



**Deep sea Port in the Caribbean**



**Bilwi**



**Harbor Cruise, San Juan del Sur, Rivas  
(ROYAL CARIBBEAN)**

**AIRPORTS IN TOURIST SITES**



**Punta Huete  
(Managua)**



**San Carlos, Rio  
San Juan**



**San Juan de  
Nicaragua (Rio  
San Juan)**



**Montelimar  
(Managua)**



**Playa  
Iguana  
(Guacalito  
de la Isla)**



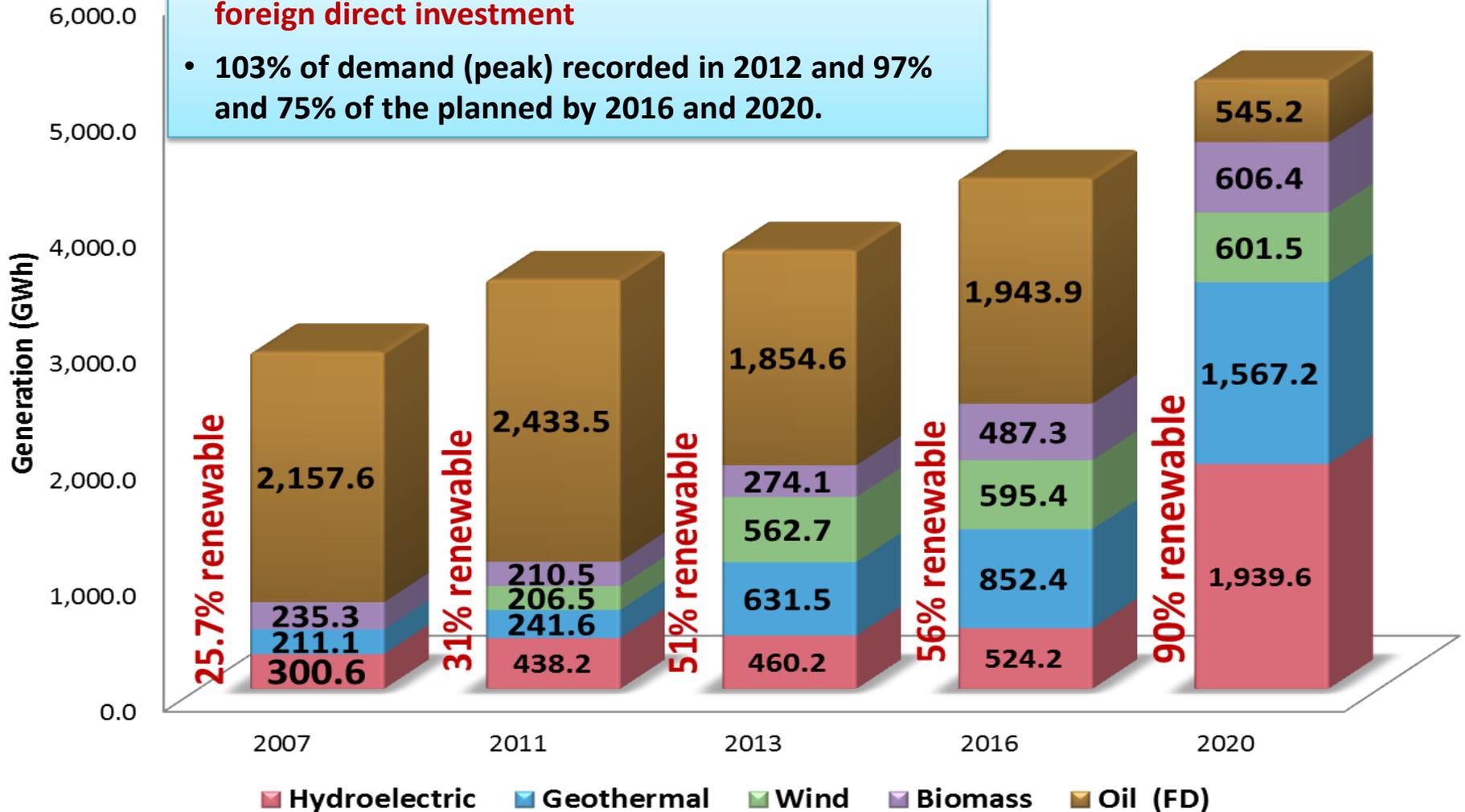
**Isla de  
Ometepe  
(Rivas)**



**Airports  
improvements in  
the Caribbean**

# EXPANSION AND TRANSFORMATION OF THE ENERGY MATRIX

- 2012-2020: U.S. \$ 2.9 billion investment, over mainly foreign direct investment
- 103% of demand (peak) recorded in 2012 and 97% and 75% of the planned by 2016 and 2020.



MAPA DE LA REPÚBLICA DE NICARAGUA

ESCALA 1 : 525,000



LOS TERRITORIALES

# Nicaragua Energy Projects

**SOLAR PANELS, MICRO AND SMALL HYDROELECTRIC PROJECTS FOR ISOLATES AREAS**

**HYDROELECTRIC TUMARIN AND BOBOKÉ, RAAS 323 MW (253MW + 70MW ); US\$ 1.345 million**

**Geothermal**  
 Momotombo  
 San Jacinto-Tizate  
 Planta Binaria  
 Casita-San Cristóbal  
**(138 MW; US\$ 485.0 mill)**



**Solar**

- La Trinidad, Diriamba (50.5MW)
- Chinandega (4 stages of 25MW; 100MW)



**Amayo I, II, III Eolo (Rivas)**  
**La Fe San Martín (Rivas)**  
**ALBA Rivas (Rivas)**  
**(187 MW; US\$ 264.2 mill)**



**Other hydroelectric projects:**

- Copalar
- El Carmen
- Piedra Fina
- Corriente Lira



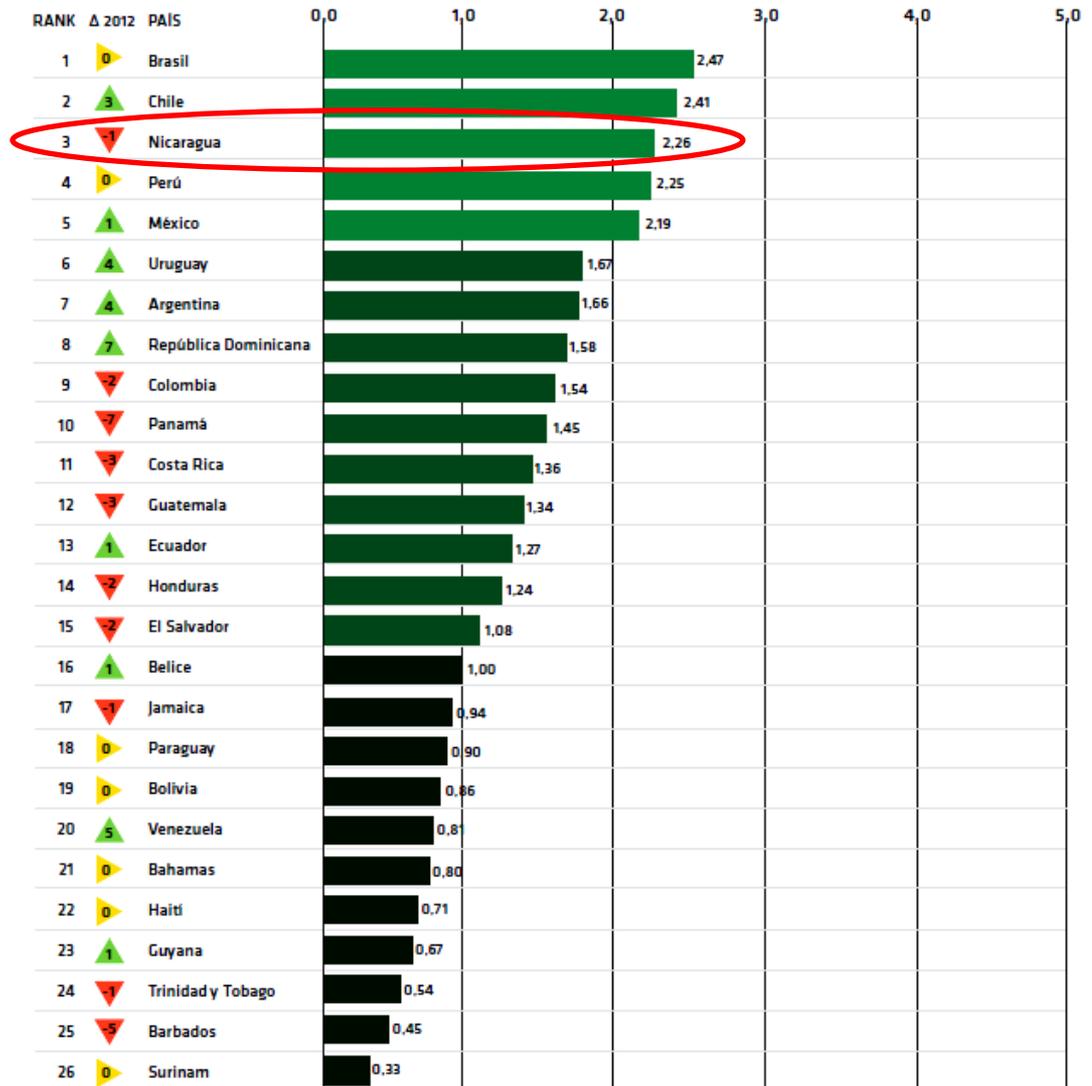
**Electricity coverage rose from 54% in 2007 to 76% in 2013, with the target of 85% by 2017**



# BLOOMBERG'S

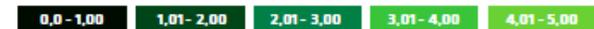


- In the Bloomberg and Interamerican Development Bank (IDB) *Climatescope*, second edition, Brazil, Chile and Nicaragua top the list of most attractive markets for clean energy in Latin America and the Caribbean.
- Despite being the second poorest country in the region, Nicaragua was ranked among the first three, just behind Brazil and Chile, due to the high penetration of renewables in its energy matrix and significant flow of investment in proportion to its small economy.
- Nicaragua was the country that received the highest score in the categories “*Suitable Setting and Clean Energy*”, “*Investment parameters*” and “*Loans to Projects relating to Climate Change*”.
- In 2012, Nicaragua saw its installed renewable energy capacity grow 40% due to the US\$ 292 million that was allocated to clean energy market in the context of an economy of US\$ 10,500 million.



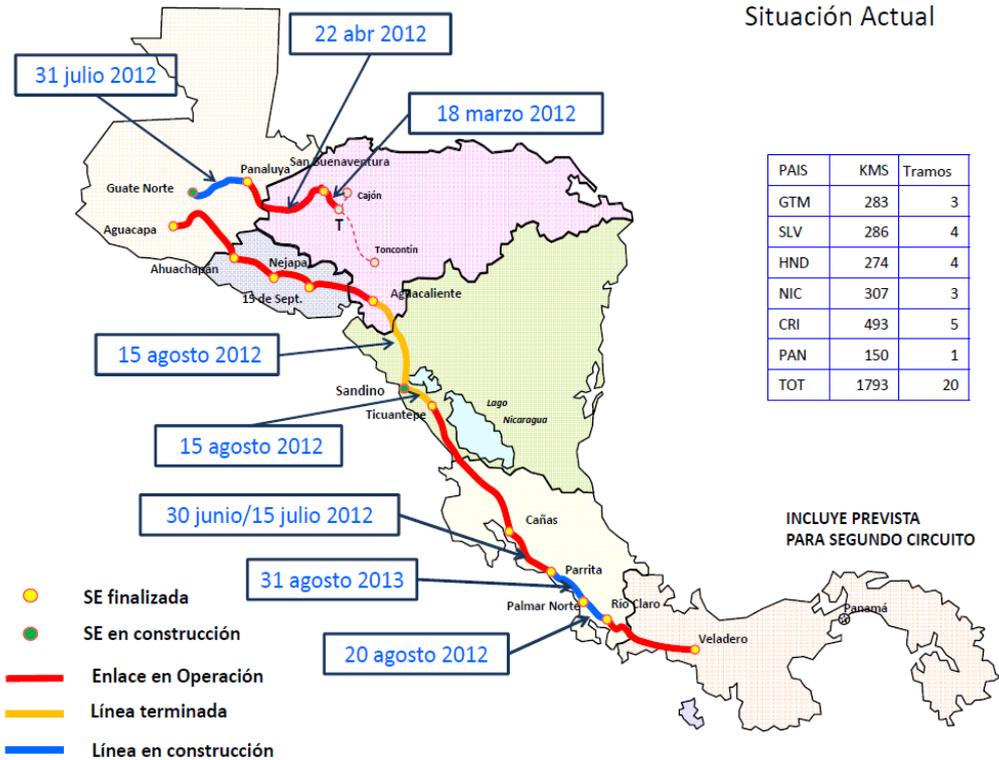
La flecha verde se refiere al incremento, la roja a la disminución y la amarilla indica que no se ha producido ningún cambio

Color según rango de puntuación

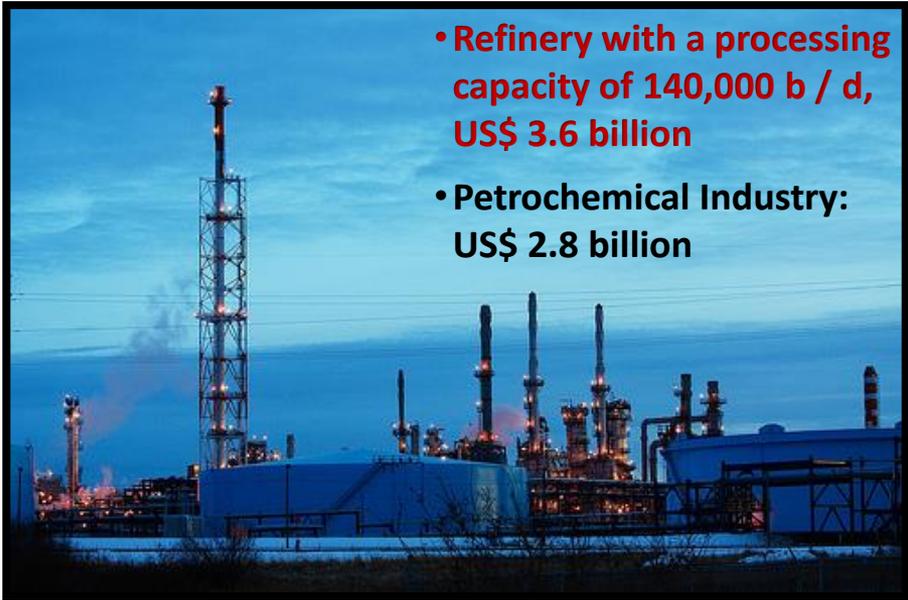


# SIEPAC PROJECT

## DESCRIPCION DEL PROYECTO LINEA SIEPAC PRIMER SISTEMA DE TRANSMISION REGIONAL



# INDUSTRIAL COMPLEX "SUPREMO SUEÑO DE BOLIVAR"



- Refinery with a processing capacity of 140,000 b / d, US\$ 3.6 billion
- Petrochemical Industry: US\$ 2.8 billion

## FUEL STORAGE COMPLEX IN MIRAMAR



Fuel Distribution Plant Miramar **1.08 million barrels, US\$ 306 million**



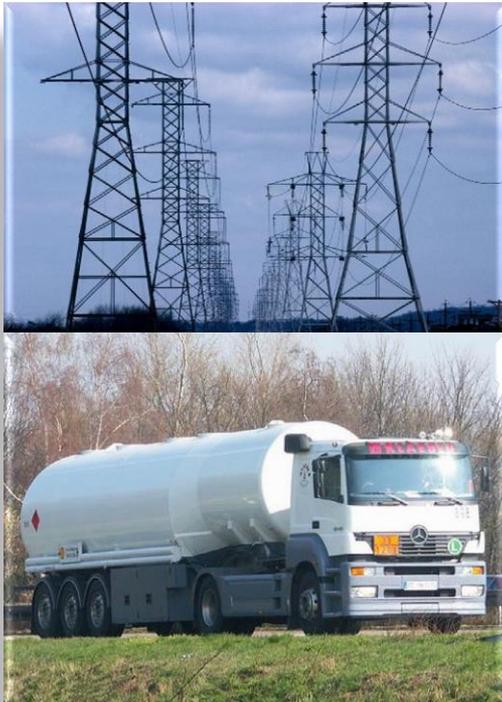
- Pipeline Monkey Point- Puerto Sandino: \$ 270 million
- GLP Project: US\$ 25.9 million



Storage complex in Corinto

**Total Industrial Complex Investment : US\$ 6,700 million**

**In 2006-2007, Nicaragua was a country of "blackouts" by 8, 10 and even 12 hours a day**

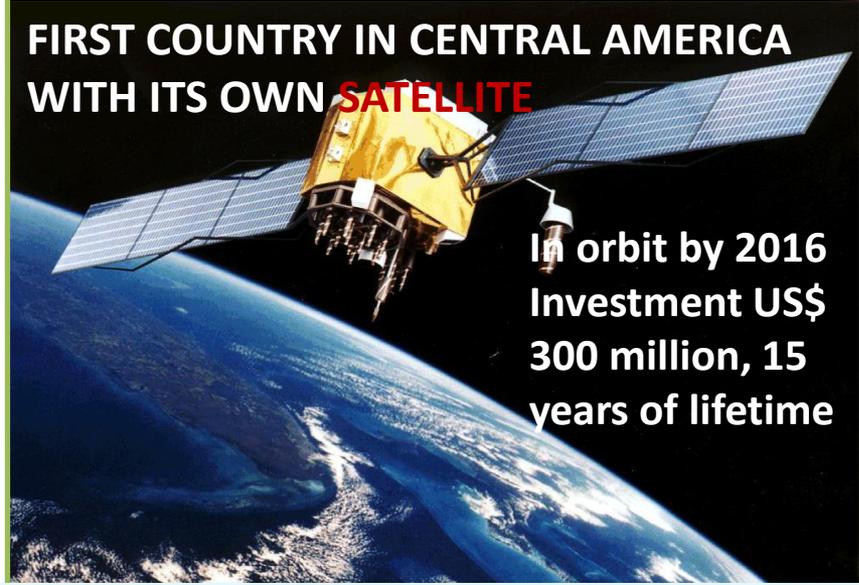


**In 2020, Nicaragua will be a net exporter of electricity and petroleum**

# COMMUNICATIONS INFRASTRUCTURE

## NICASAT 1

FIRST COUNTRY IN CENTRAL AMERICA  
WITH ITS OWN **SATELLITE**



In orbit by 2016  
Investment US\$  
300 million, 15  
years of lifetime

2017: A Second Satellite, US\$ 300 million

With support of China and Korea

**Expansion of Broadband**  
**US\$ 400 million**

**WORLD CLASS COMMUNICATIONS FOR A REGIONAL AND GLOBAL LOGISTICS  
CENTER**

**REGIONAL CENTER FOR ADVANCED STUDIES  
IN BROADBAND FOR DEVELOPMENT**



The Center will train over the next 10 years to 12 thousand professionals linked to telecommunications throughout the Central American region.

With support of Korea and IDB.

# **BIGGEST INVESTMENTS**

- **ENERGY**
- **INDUSTRY**
- **AGROINDUSTRY**
- **COMMERCE**
- **FREE ZONE**

# INVESTEMENTS BY SECTOR

The 25 biggest investments in 2014 represented US\$780,607,530

Investments income by sector. 25 biggest investment.  
3rd quarter 2014

SECTOR	INCOME IN THOUSANDS OF US\$
Industry	294,945.80
Finance	144,170.76
Mines	129,437.79
Agriculture	93,071.70
communications	69,181.48
Energy	49,800.00

Source: BCN, MIFIC, PRONicaragua. Data to the third quarter 2014.

# HYDROELECTRIC PROJECT

## “AGUAS EL CARMEN” (MATAGALPA)

- Project currently under preparation of feasibility studies.
- Will be developed by Aguas El Carmen, S.A.
- When operating, will supply up to 10 percent of the energy needs of Nicaragua.
- Aguas El Carmen will have an anticipated investment of US\$330 million to generate 85 MW.
- It will be funded by the Business Development Bank of the Netherlands (FMO, for its acronym in Dutch) and other local and regional partners.

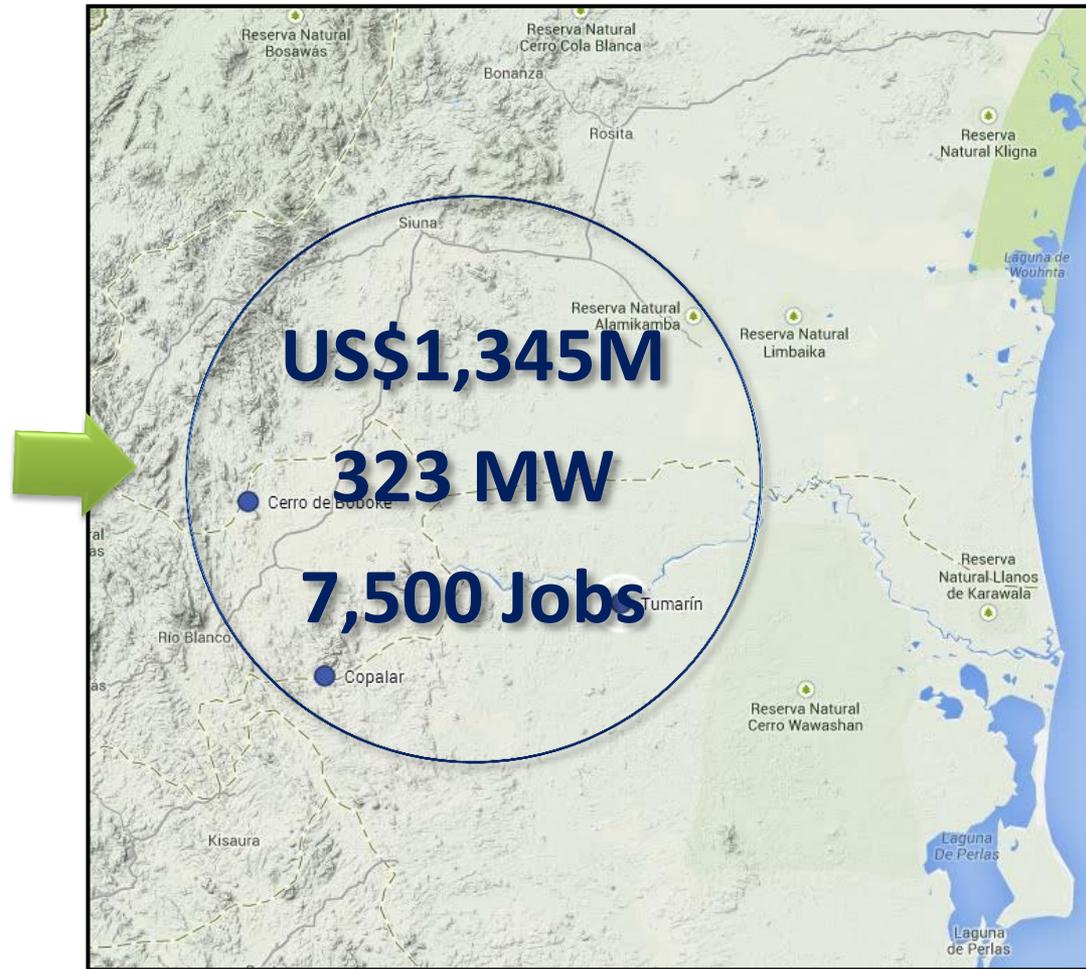


# CENTRAL HIDROELÉCTRICA DE TUMARÍN, RAAS

**TUMARÍN**  
US\$1,100M  
253 MW  
5,000 Jobs



**BOBOKÉ**  
US\$235M  
70MW  
2,500 Jobs



# NEW GEOTHERMAL PARK

- Icelandic investment.
- Includes 3 Geothermal and 1 Hydroelectric Project.
- Currently being studied granting the License.



Geothermal Project	Capacity	Estimated Cost
Caldera de Apoyo	153 MW	US\$ 734.4 M
Volcán Mombacho	111 MW	US\$ 532.8 M
Caldera de Masaya	99.5 MW	US\$ 477.6 M
	<b>363.5 MW</b>	<b>US\$ 1,744.8 M</b>

# CEMEX CONSTRUCTS A NEW PLANT

## Construction of a new cement grinding plant in Nicaragua

- ✓ Announced in Monterrey on May 5, 2014
- ✓ cost of US \$ 55 million.

- *First phase:*
  - *First half of 2015*
  - *US \$ 30 million in the installation of a cement factory in Ciudad Sandino*
  - *Production capacity of 220,000 tons.*
- *Second phase*
  - *End of 2017*
  - *The installation includes a second grinding mill*
  - *Capacity of 220,000 tons.*



**Positioning for Central American development pole of the century in Nicaragua.**



The company has operated in Nicaragua for 14 years.

**It is expanding its production plant and constructing a new refrigerated storage facility. The investment is US\$50 million as part of a US\$240 million expansion in Nicaragua**

The expansion project will run over a period of 36 months, and it will guarantee the supply of chicken with international standards and quality standards in Nicaragua.

The new distribution center will have 8 million square feet of storage space; 18 gates to meet trucks of all sizes, and it will use the latest technology .



## WALLMART GROUP

Walmart has invested US\$ 300 million in the country since its opening.

In 2014 the investments were more than US\$25 million

The Walmart group in Nicaragua directly employs about 3,270 people in stores, distribution center, agribusiness development plants and headquarters.

**In 2015 Walmart will construct a new store. The project will have an estimated investment of US\$15 million.**

**It expected to create 100 direct jobs and 10,000 indirect jobs**



## Auto Parts

**Exports of automotive harnesses under the free zone regime have risen from 2.7 million in 2002 to 574 million in 2013, an increase of 21.159 percent.**



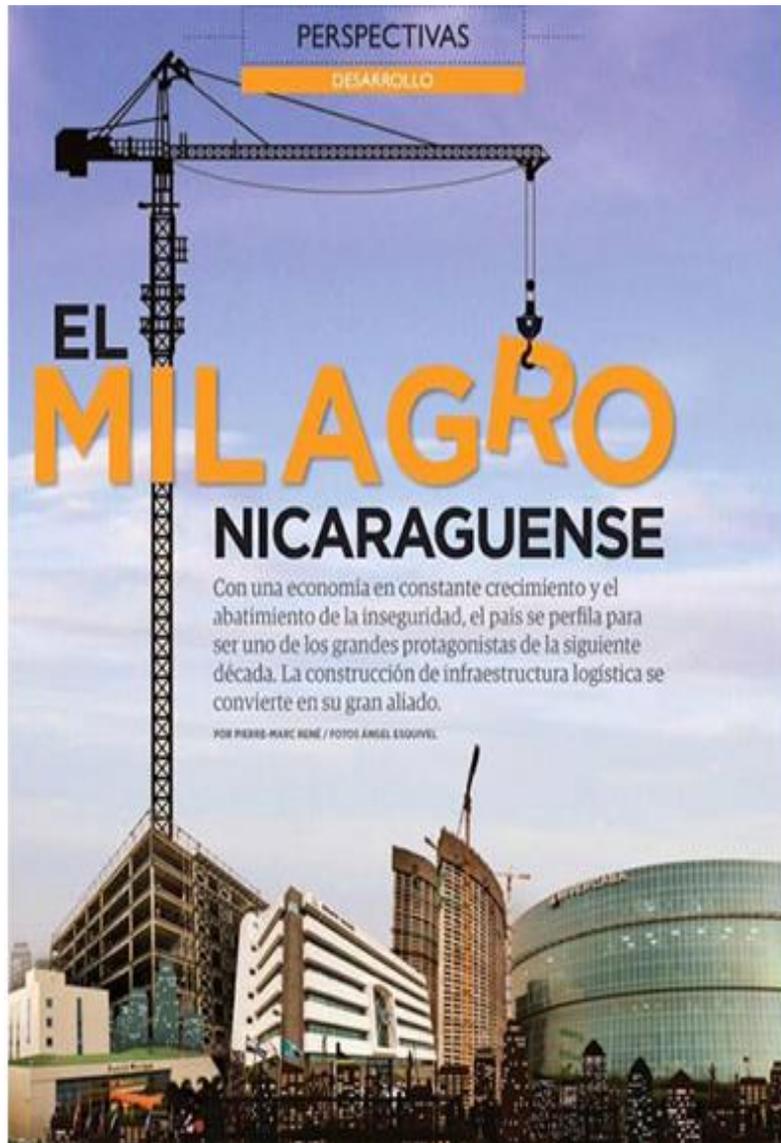
In 2015, Yazaki, located in the city of León, will have 13,700 workers, 3,300 more than 2014, thanks to the expansion of its operations

It employs 1,400 people. It is expected that in 2015 employment will rise to between 1,700 and 1,800 people in the production of harnesses and auto parts.



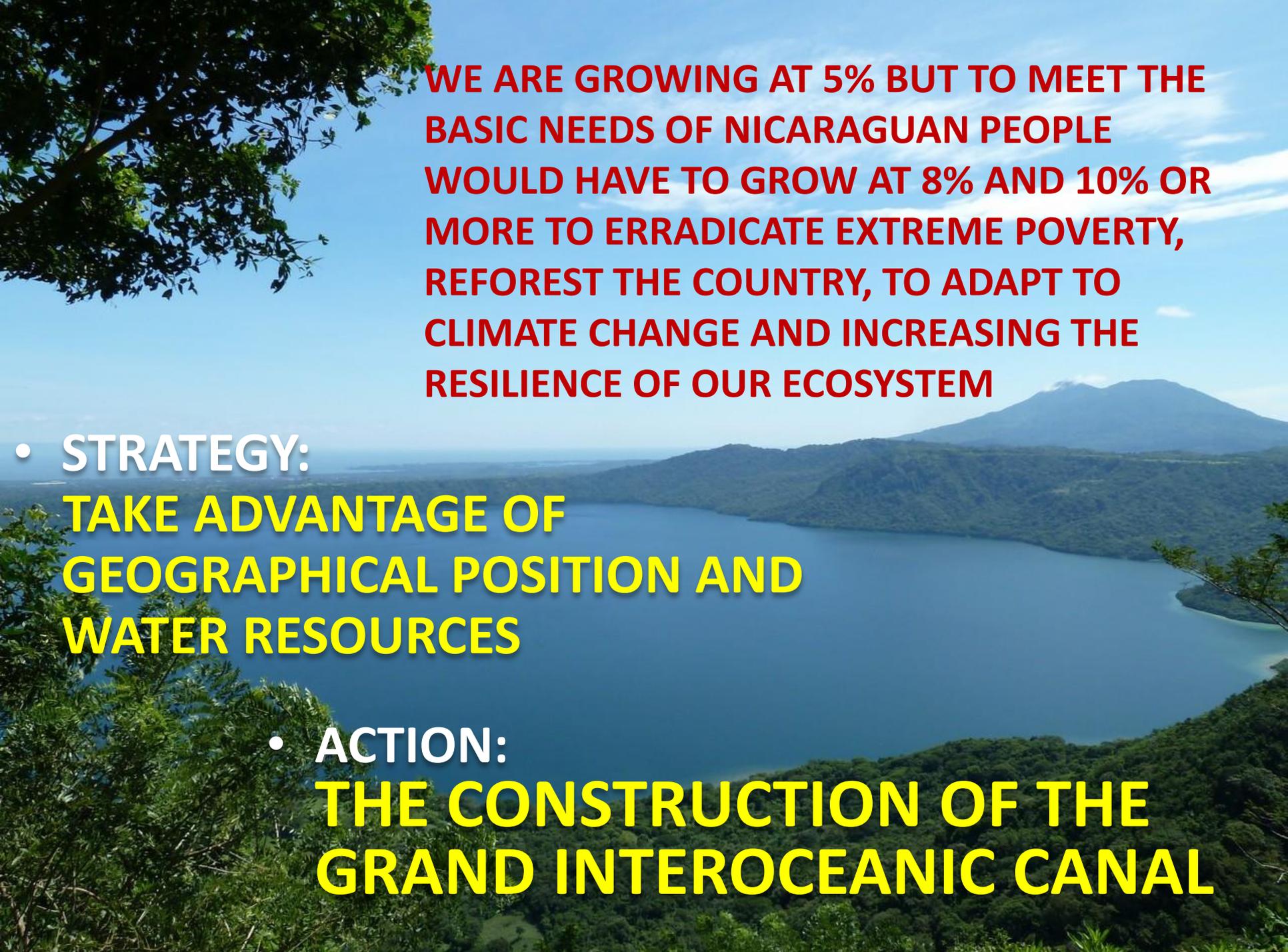
"The policies of the government of Daniel Ortega continue attracting even more investment and interest by international companies especially Chinese, Russian and American"

"Nicaragua is now an interesting destination for business because of the consensus reached between the government and the private sector"



**FORBES MAGAZINE FOR CENTRAL AMERICA IN JULY, 2014**

"Another issue that is drawing international attention is the project of construction of Nicaragua Canal, an initiative that the government of President Daniel Ortega seeks to develop in order to compete with Panama and offer an alternative to the transport of goods'



**WE ARE GROWING AT 5% BUT TO MEET THE BASIC NEEDS OF NICARAGUAN PEOPLE WOULD HAVE TO GROW AT 8% AND 10% OR MORE TO ERRADICATE EXTREME POVERTY, REFOREST THE COUNTRY, TO ADAPT TO CLIMATE CHANGE AND INCREASING THE RESILIENCE OF OUR ECOSYSTEM**

- **STRATEGY:**

**TAKE ADVANTAGE OF GEOGRAPHICAL POSITION AND WATER RESOURCES**

- **ACTION:**

**THE CONSTRUCTION OF THE GRAND INTEROCEANIC CANAL**

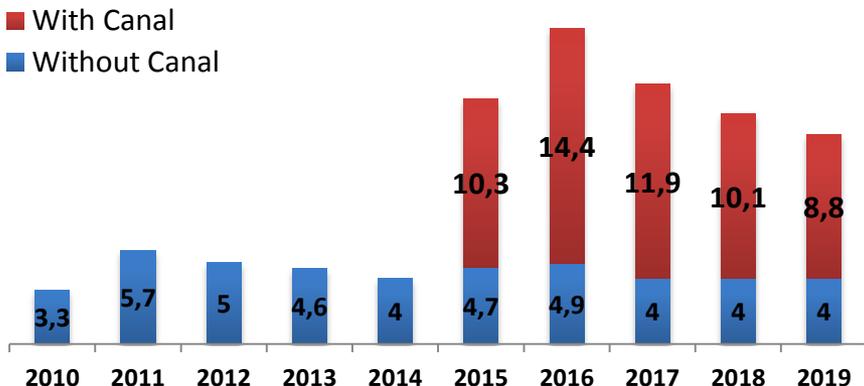
A wide river flows through a lush green forest. The sky is blue with scattered white clouds. The text is overlaid on the lower half of the image.

**WHAT ARE THE EXPECTED  
ECONOMIC AND SOCIAL IMPACTS?**

# THE GRAND INTEROCEANIC CANAL OF NICARAGUA: MAIN IMPACTS EXPECTED

## Economic Growth in Nicaragua with and without Grand Canal

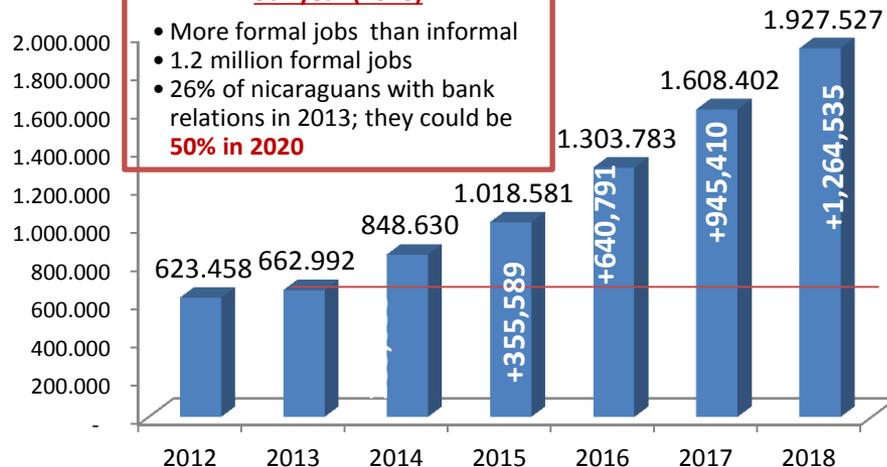
(Percentage change)



## Formal employment in Nicaragua 2012-2018

5th year (2018)

- More formal jobs than informal
- 1.2 million formal jobs
- 26% of Nicaraguans with bank relations in 2013; they could be **50% in 2020**



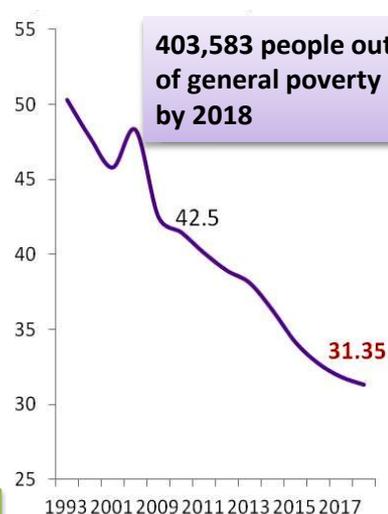
Source: PEF, IMF & Own estimates

The increase in Government revenue, will be a source of funding to fight extreme poverty.



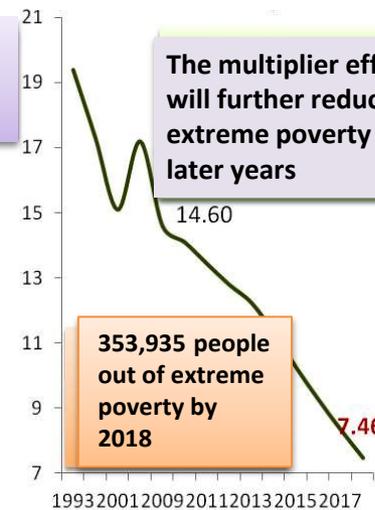
+115.10% more than 2013

## General Poverty in Nicaragua (Percentage points)



403,583 people out of general poverty by 2018

## Extreme Poverty in Nicaragua (Percentage points)



The multiplier effect will further reduce extreme poverty in later years

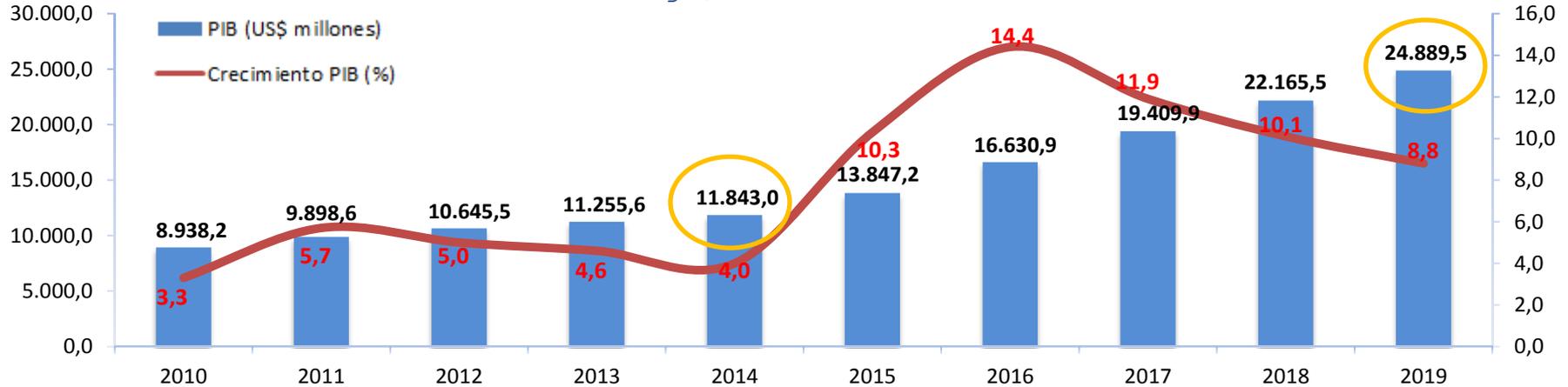
353,935 people out of extreme poverty by 2018

Fuente: INIDE (1993-2009) & Estimaciones Propias

# GROWTH GDP: NICARAGUA AND PANAMÁ

## Nicaragua Economic Growth with Canal

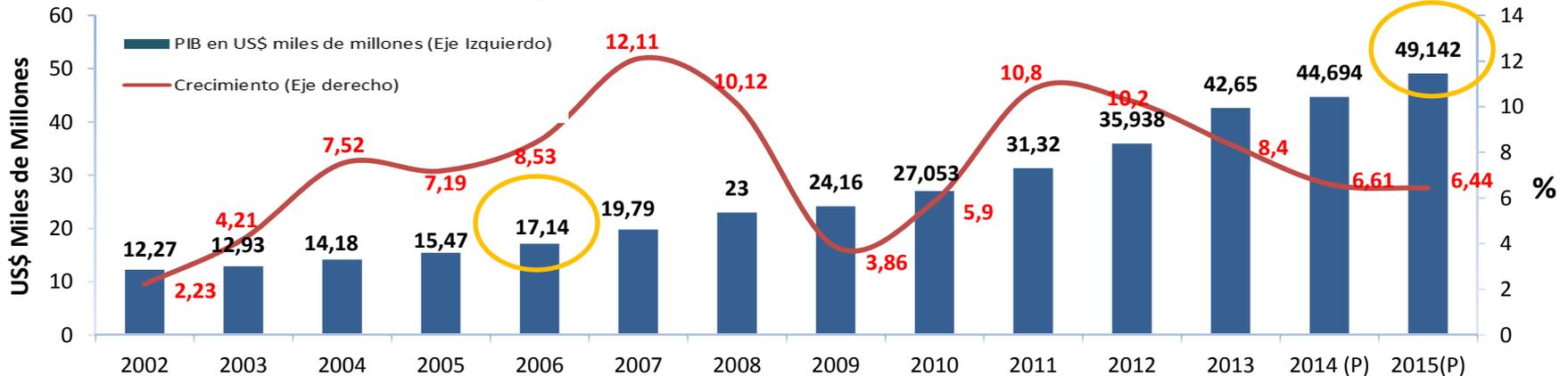
(US\$millions / Percent change)



Fuente: BCN, FMI y Estimaciones SPPN

## Panamá's economic growth with Canal expansion

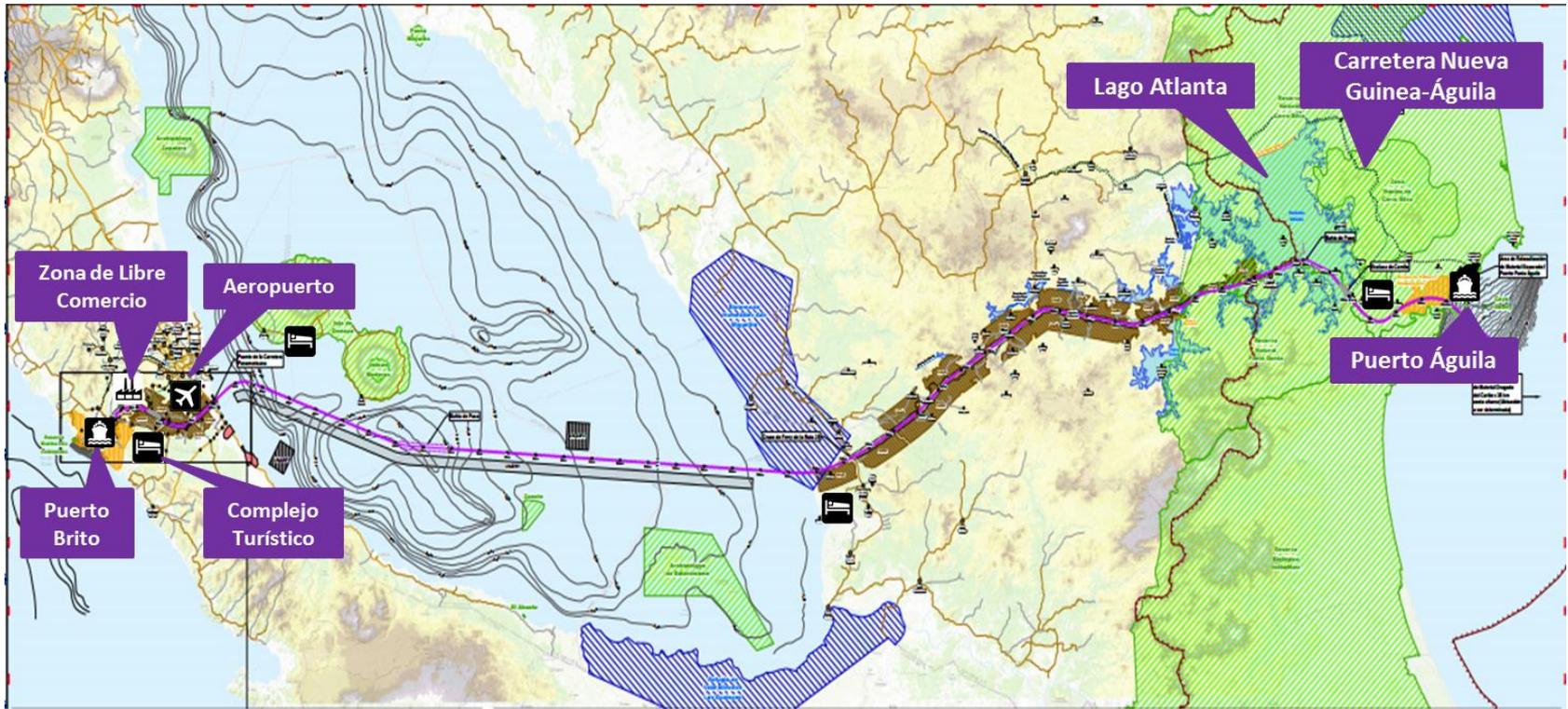
(GDP U.S. \$ Billion, Growth in Percent)



Fuente: CEPAL, FMI.

THE PANAMA ECONOMY HAS DOUBLED DURING THE LAST 7 YEARS DESPITE THE FINANCIAL AND ECONOMIC CRISIS

# DIRECT IMPACTS OF THE CANAL AND SUB PROJECTS IN THE EMPLOYMENT



50,000 jobs in the construction stage

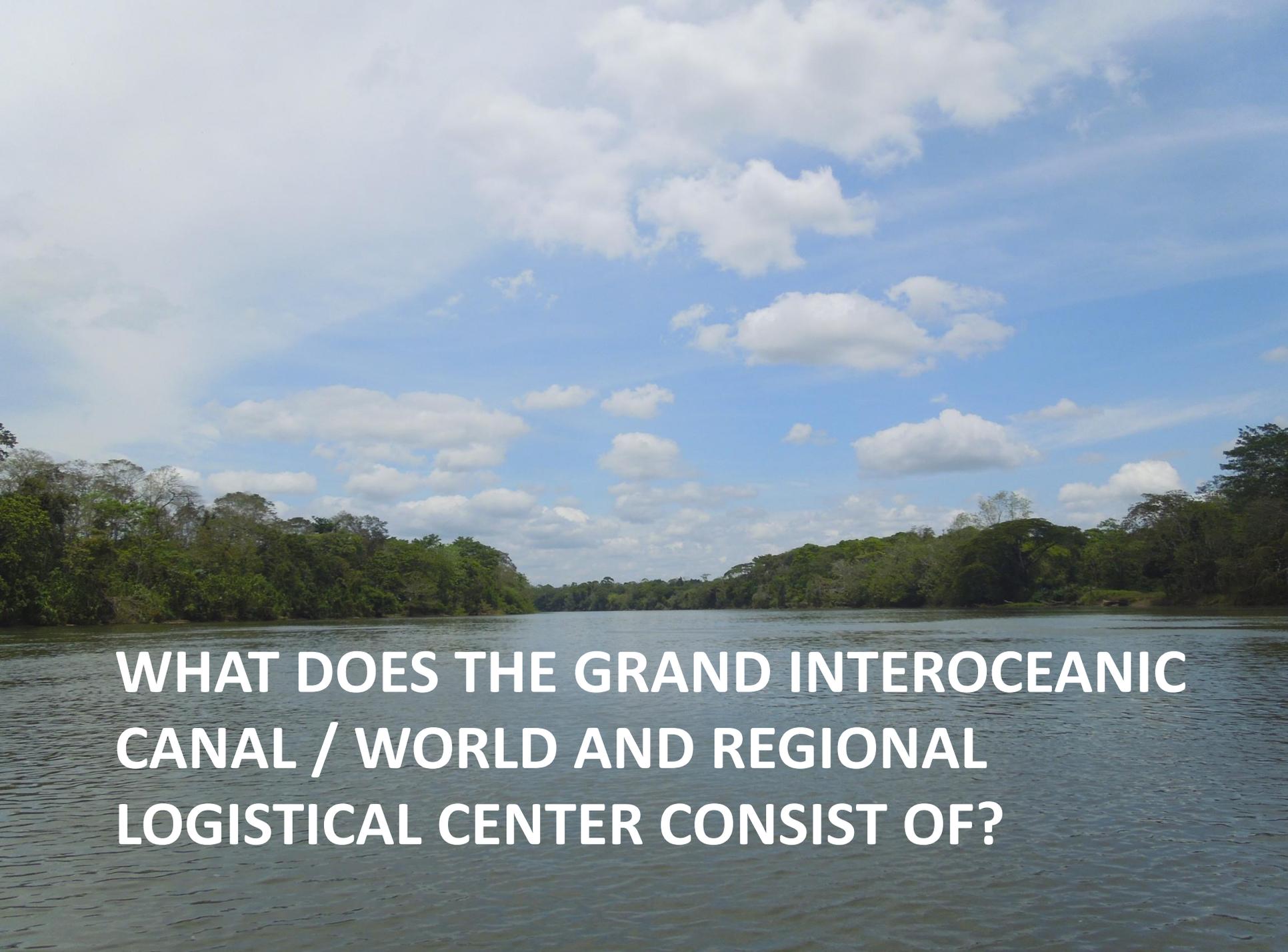
Operation:  
3,700 jobs in 2020  
12,700 in 2050

113 thousand jobs in free trade zone

More than 3000 jobs in resorts

**PLUS MULTIPLIER EFFECTS IN EMPLOYMENT THROUGHOUT THE ECONOMY**

- 25,000 foreign workers
- 25,000 nicaraguan workers



**WHAT DOES THE GRAND INTEROCEANIC  
CANAL / WORLD AND REGIONAL  
LOGISTICAL CENTER CONSIST OF?**

# The final proposal : 7 sub proyectos

## THE GRAND INTEROCEANIC CANAL OF NICARAGUA: MULTIMODAL LOGISTIC CENTER FOR REGIONAL AND GLOBAL TRADE



**1. A Ship Canal joining  
the Caribbean Sea and  
the Pacific Ocean**



**2. A Port at Punta  
Águila in the Caribbean  
coast**



**3. A port at Brito in the  
Pacific coast**



**4. A Free Trade  
Zone on the  
Pacific coast  
(Rivas)**



**5. An  
International  
Airport in Rivas**



**6. 595.66km of  
Roads, highways,  
access roads and  
2 bridges**



**7. Tourist  
Complexes (Lodging  
for  
construction/operation,  
opening to tourism later)**

**US\$40 TO 50 BILLION INVESTMENT**

# SELECTION PROCESS OF ROUTE

## Previously Identified Routes

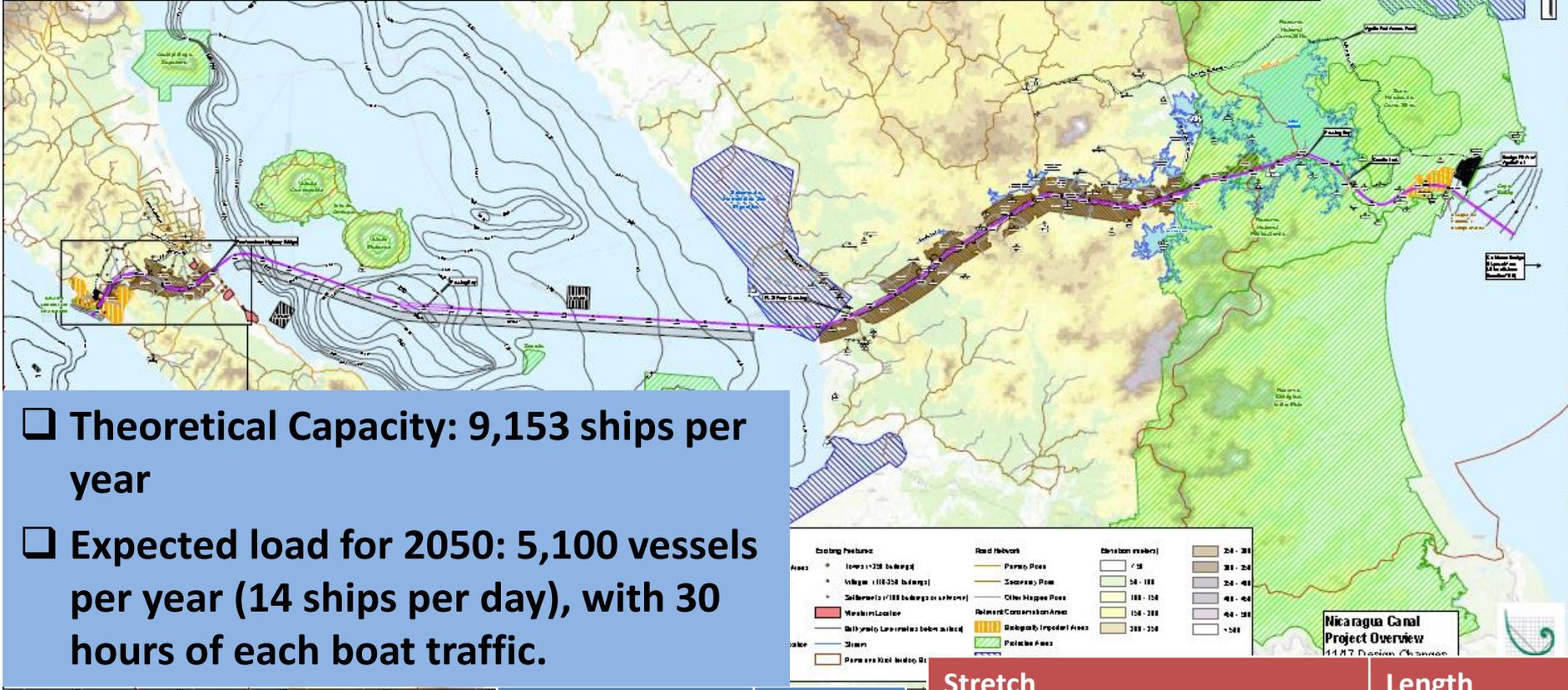


### Eastern Segment of Routes:

- 1, 2 - Bluefields Bay and north of the Cerro Silva Reserve
- 3 - Bluefields Bay and central Cerro Silva
- 4 - Punta Gorda and Tule River
- 5 - Punta Gorda, Rio San Juan, San Carlos
- 6 - Indio Maiz, Rio San Juan and San Carlos

# Choice of route 4: It has superior economic cost, but it is the route with the lowest environmental and social impact

**275.5Km Length, 280 m wide base, 30-33m depth**



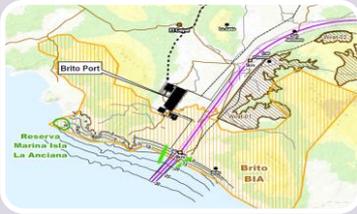
- ❑ Theoretical Capacity: 9,153 ships per year
- ❑ Expected load for 2050: 5,100 vessels per year (14 ships per day), with 30 hours of each boat traffic.

Stretch	Length
West Section (Rivas)	25.9 Km
Caribbean Coast (mainland)	90.8 Km
<b>Length by land</b>	<b>116.7 Km</b>

Stretch	Length
Lake Atlanta	35.9 Km
Lake Nicaragua	106.8 Km
Pacific stretch	1.7 Km
Caribbean stretch	14.4 Km
<b>Length by water</b>	<b>158.8 Km</b>

Stretch	Length
West section	25.9 Km
East section	126.7 Km
Lake Nicaragua	106.8 Km
Stretches Pacific and Caribbean	16.1Km
<b>Total Length</b>	<b>275.5 Km</b>

# Adjustments on Route 4



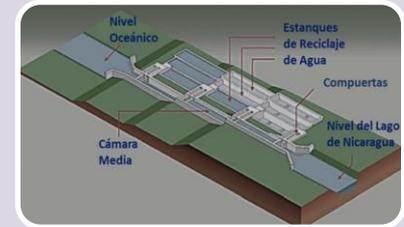
A Road linking the Port to Tola  
A Rock Bund to be designed to enable better mix of salt and fresh water to mangrove.



Most of the Río Brito and healthy mangroves will NOT be affected



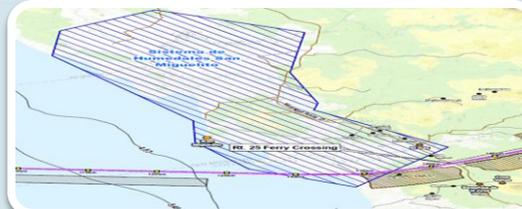
Canal alignment and airport location changed to minimize impact in Rivas



The Grand Canal project has been designed to not make net use of water from Lake Nicaragua  
The locks will capture water from the Punta Gorda River Basin, or the Zarca Water Reservoir.



There will be hydraulic dredging (suction) of sediment. There will be no blasting inside the Lake.  
Sand and hard materials will be distributed along the south side of the Canal route.



The alignment has been changed for the output from the Lake to the eastern area of the Canal, in order to minimize the impact on the wetlands of San Miguelito

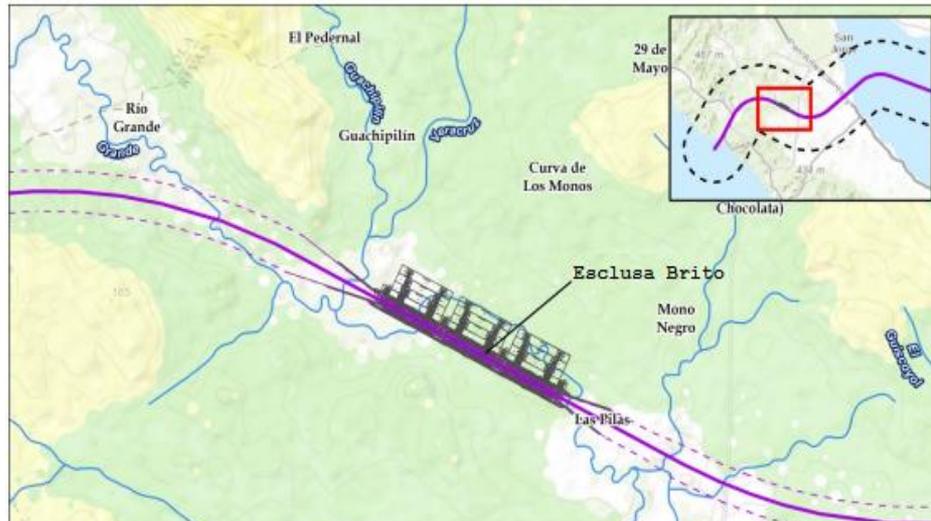


Port Punta Aguila will be on dredge filled reclaimed land with minimal impact on the Indigenous People.  
Canal route avoids impact to Booby Cay.

# Brito & Camilo Locks: 3 Chambers & 9 water recycling pools

Same design for both: three consecutive chambers, which would raise the boats over 10 meters by chamber, for a total of approximately 30 meters.

Effective dimension for each one of the three chambers: 520 meters (long) x 75 meters (W) x 27.6 meters deep (threshold).



**Brito Lock : located on the west segment of the canal, near the Mono Negro River, approximately 14.5km from the Pacific Ocean.**



**Camilo Lock : located in the East segment of the Canal, near the confluence of Punta Gorda with Camilo Cano, approximately 13.7km from the Caribbean coast.**

# Comparison between the locks in the world

## **BERENDRECHT LOCK**

- **Current World's largest lock**
- **Dimensions: 500 m x 68 m x 20 m**
- *Equipped with rolling gates*
- *No water saving basins*
- *Rik Thomas was design & construction manager (1984-1989)*



## **NEW PANAMA LOCKS (3rd lane)**

- *Design based on Berendrecht lock*
- *Dimensions: 427 m x 55 m x 18.3 m*
- *Equipped with rolling gates*
- *Water Saving Basins*
- *SBE performed the reference design*

## **DEURGANCKDOK LOCK**

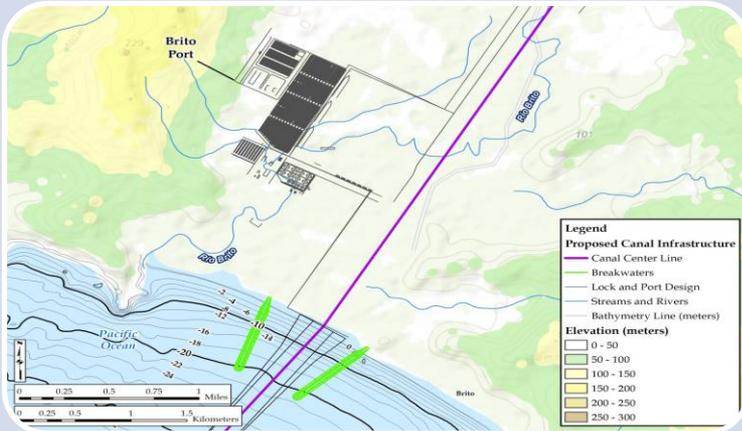
- **Future largest lock in the world (2016)**
- **Design based on Berendrecht lock**
- **Dimensions: 500 m x 68 m x 22 m**
- *Equipped with rolling gates*
- *No Water Saving Basins*
- *SBE is Owner's Engineer*

## **BRITO & CAMILO LOCK'S (CARIBBEAN COAST)**

- **Future largest lock in the world (2020)**
- **Design based on Berendrecht lock – new Panama Locks**
- **Dimensions: 520 m x 75 m x 27.6 m**
- *Equipped with rolling gates*
- *Water Saving Basins*
- *SBE is Owner's Engineer*

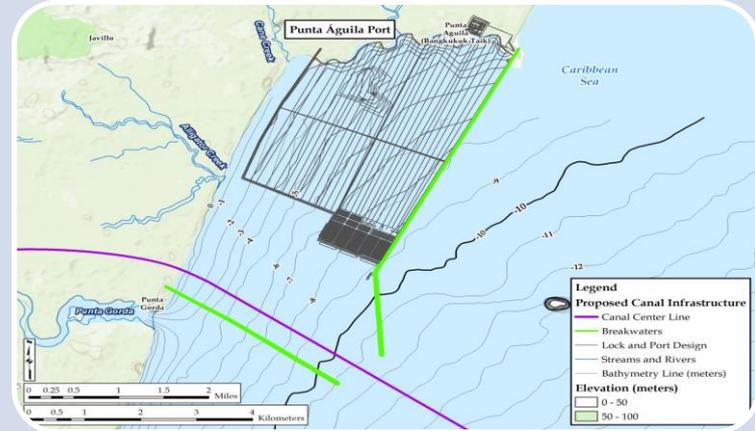
# TWO PORTS WILL BE BUILT, 1 IN THE PACIFIC AND OTHER IN THE CARIBBEAN

## BRITO PORT



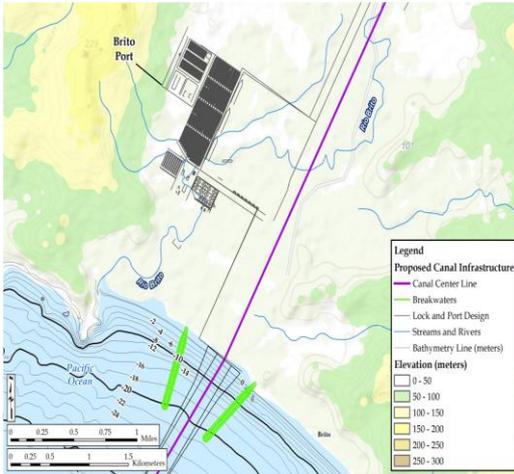
- Design capacity: 1.68 million TEU / year . Approximately 80<sup>th</sup> in top 100 world's container ports
- North Wharf Structure, 1.100 meters long, capable of supporting 200,000 DWT bulk carriers or 25,000 TEU container ship;
- West Wharf berthing facilities, 1,200 meters long, with capacity for:
  - \* Three container berths 70,000 DWT;
  - \* A jetty oil / fuel of 30,000 DWT;
  - \* 13 workboat berths
- Other marine services.

## ÁGUILA PORT

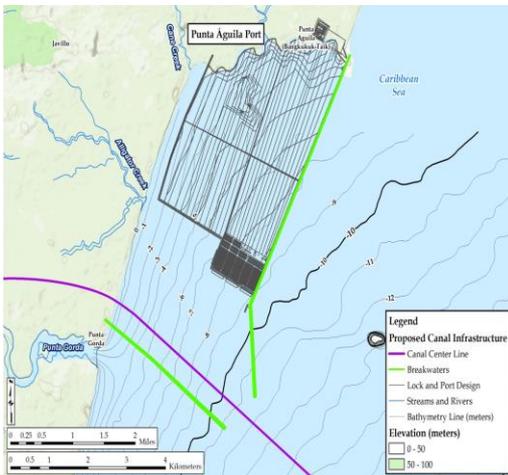


- Design capacity: 2.5 million TEU / year. Approximately 58<sup>th</sup> in top 100 world's container ports
- Wharf Structure for container ship 200,000 DWT;
- Berthing Facilities 1,300 meters long, with capacity for:
  - \* Three container berths 150 thousand DWT;
  - \* A jetty oil / fuel of 30,000 DWT;
  - \* 8 working boat docks;
- Other marine services.

# SEAWALLS



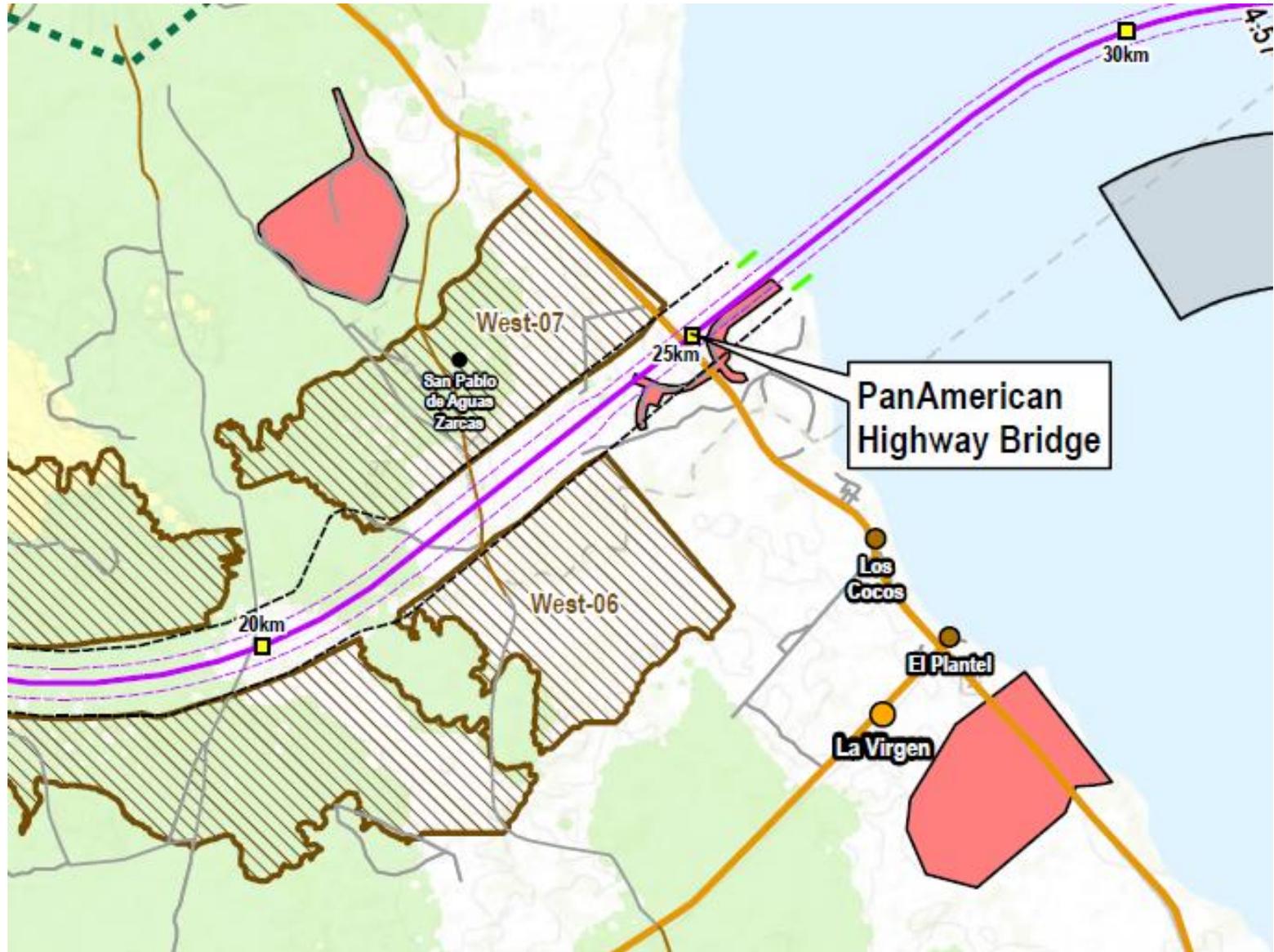
The Pacific breakwater would extend approximately 800 m from the shoreline on both sides of the canal. It will be constructed with armor rock sourced from the Brito Lock. The overall footprint of each breakwater will be about 62,000 square meters (m<sup>2</sup>), or 124,000 m<sup>2</sup> total for the two breakwaters.



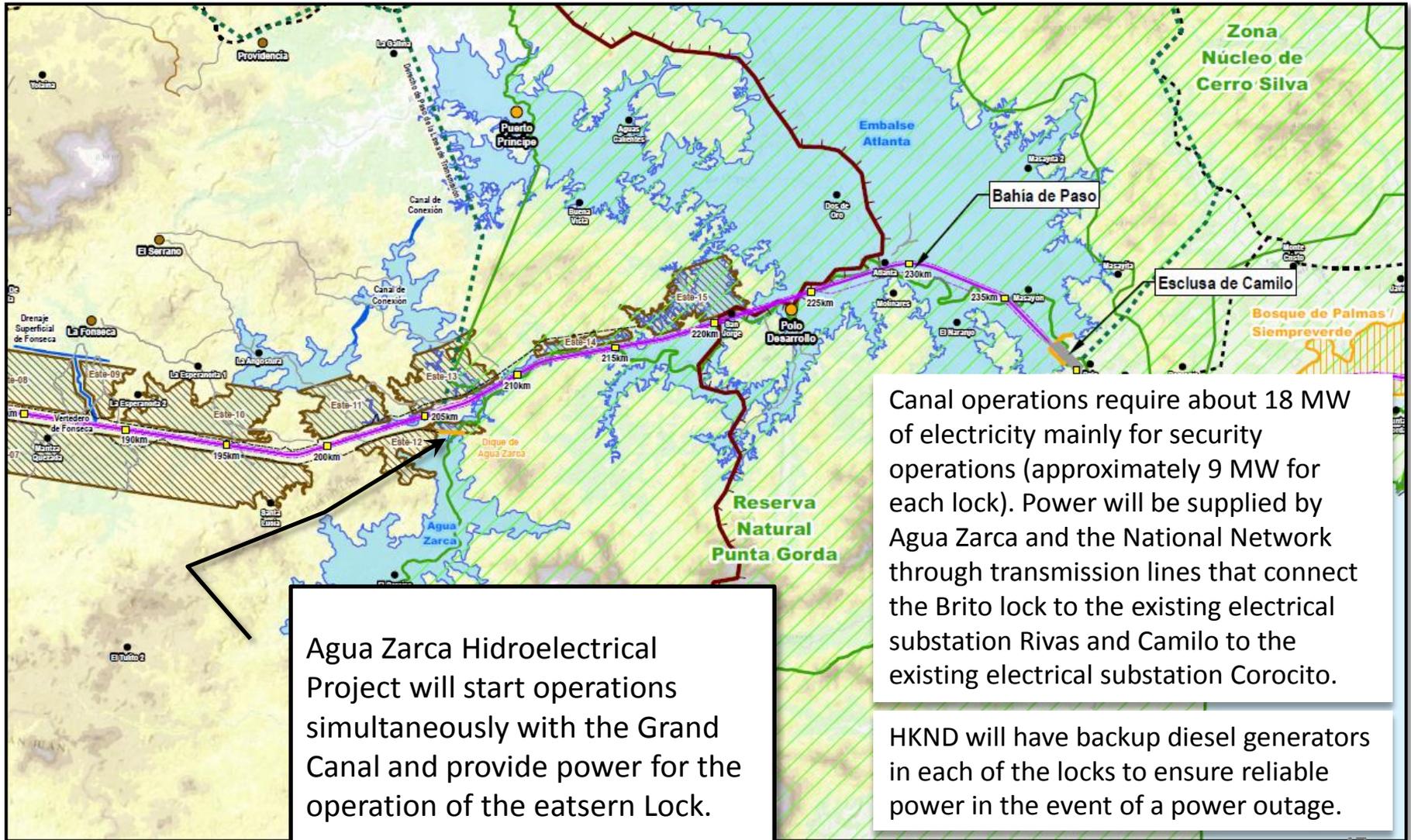
The Caribbean breakwater would include two different structures, one at each side of the canal. The breakwater located to the north of the canal would extend south from Punta Aguila approximately 7 kilometers to a location about 3 kilometers southwest of Booby Cay. The breakwater located to the south of the canal would be located about 1 kilometers north of the mouth of the Rio Punta Gorda and would be oriented perpendicular to the shoreline and extend approximately 3.5 kilometers. The overall footprint of north breakwater would be about 238,000 m<sup>2</sup>. The overall footprint of the south breakwater will be about 105,000 m<sup>2</sup>. Combined, this would be approximately 343,000 m<sup>2</sup> total for the two breakwaters.

# Bridge over the Panamerican Highway

## 80M high & 600M long



# AGUA ZARCA HIDROELECTRICAL CENTRAL 10 MW



Agua Zarca Hidroelectrical Project will start operations simultaneously with the Grand Canal and provide power for the operation of the eastern Lock.

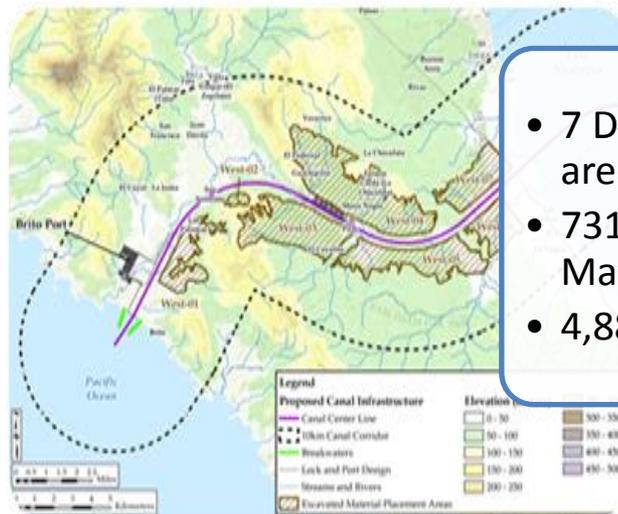
Canal operations require about 18 MW of electricity mainly for security operations (approximately 9 MW for each lock). Power will be supplied by Agua Zarca and the National Network through transmission lines that connect the Brito lock to the existing electrical substation Rivas and Camilo to the existing electrical substation Corocito.

HKND will have backup diesel generators in each of the locks to ensure reliable power in the event of a power outage.

# The Canal will be the largest civil earthmoving operation in history

- 5,000 Mm<sup>3</sup> of excavated material
  - 4,019 Mm<sup>3</sup> of "dry" material from upland (rock and soil)
  - 980 Mm<sup>3</sup> marine and freshwater dredging.
- 35 areas for material disposal along the canal
  - 3,400 Mm<sup>3</sup> storage volume and a total area of 179 km<sup>2</sup>
  - These areas have been located to minimize environmental and social impacts 715Mm<sup>3</sup> of lake sediment will be placed in 3 disposal sites in the Lake
- *The final surface of these areas will be graded so that they can be restored to agricultural or forestry.*

## Excavated material disposal areas (West)



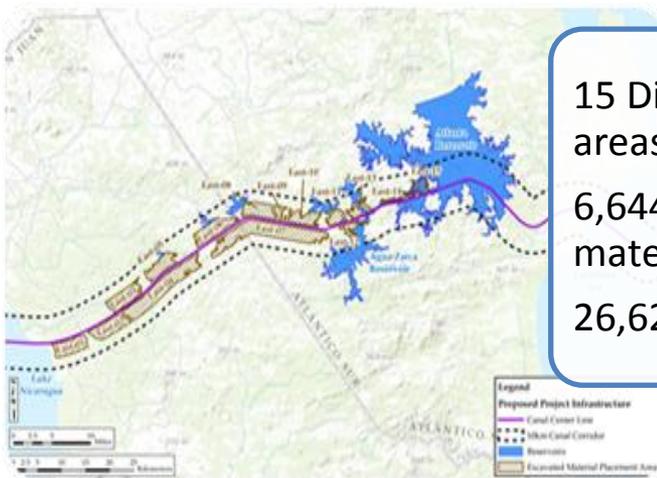
- 7 Disposal areas
- 731Mm<sup>3</sup> Material
- 4,880ha. area

## Disposal sites for dredged material (Lake Nicaragua)



- 3 material disposal sites
- 610Mm<sup>3</sup> of dredged material

## Disposal sites for dredged material (East)



- 15 Disposal areas
- 6,644Mm<sup>3</sup> of material
- 26,620ha Area

# CANAL STEP BY STEP

**JULY, 2014**

- **PRESENTATION OF THE ROUTE**

**AUGUST 23-OCTOBER 15, 2014**

- **CENSUS FROM POPULATION AND PROPERTY**

**NOVEMBER 20, 2014**

- **PRESENTATION OF THE GRAND CANAL PROJECT**

**DECEMBER, 2014**

- **PRESENTATION OF FESEABILITY STUDIES**

**DECEMBER 22, 2014**

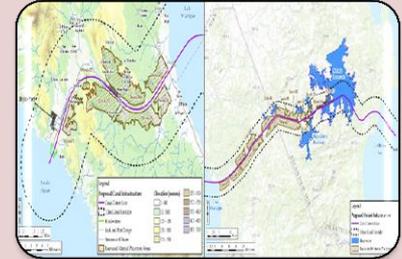
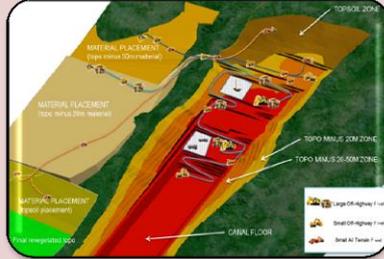
- **CONSTRUCTION STARTS**

**DECEMBER 2019**

- **CONSTRUCTIONS ENDS**

# UPCOMING TENDERS

- “REFERENCE DESIGNS”
- “TENDER BRIEFS”



Locks

Land  
movements

Ports

Dredging

A wide river flows through a lush green forest. The sky is blue with scattered white clouds. The text "WHAT IS THE LOGIC OF THE GRAND INTEROCEANIC CANAL?" is overlaid in white, bold, uppercase letters across the middle of the image.

**WHAT IS THE LOGIC OF THE GRAND  
INTEROCEANIC CANAL?**

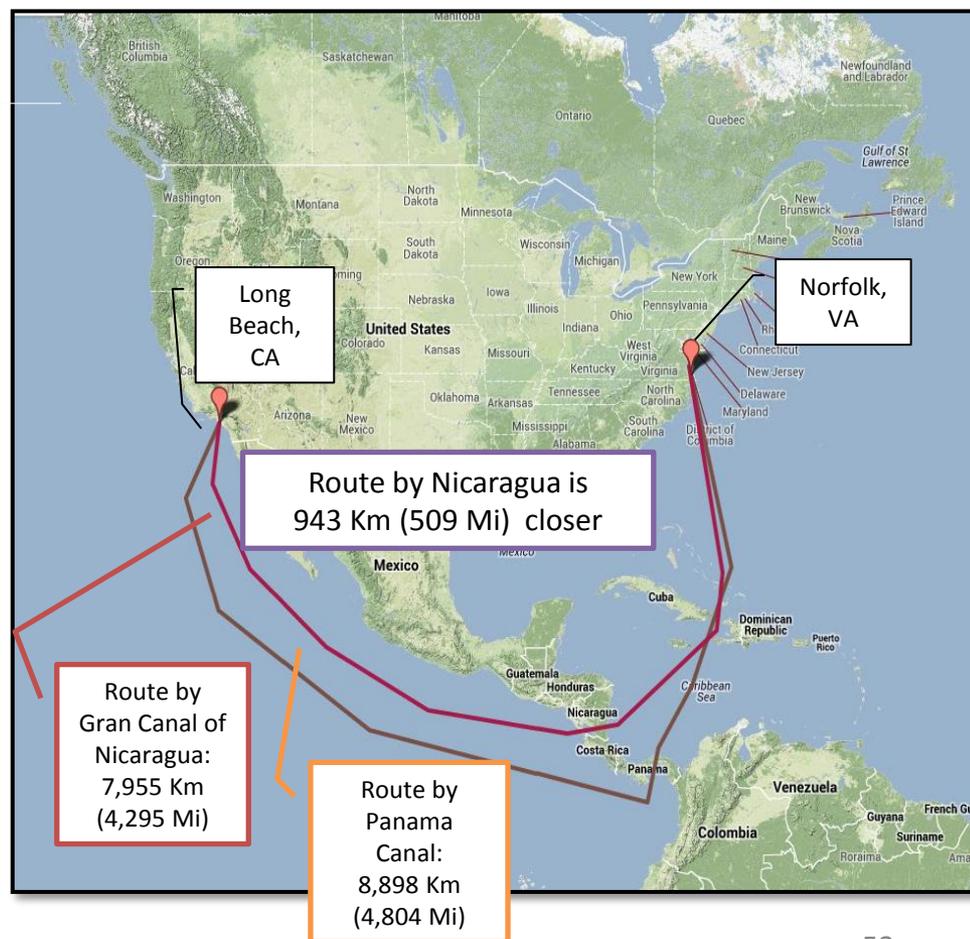
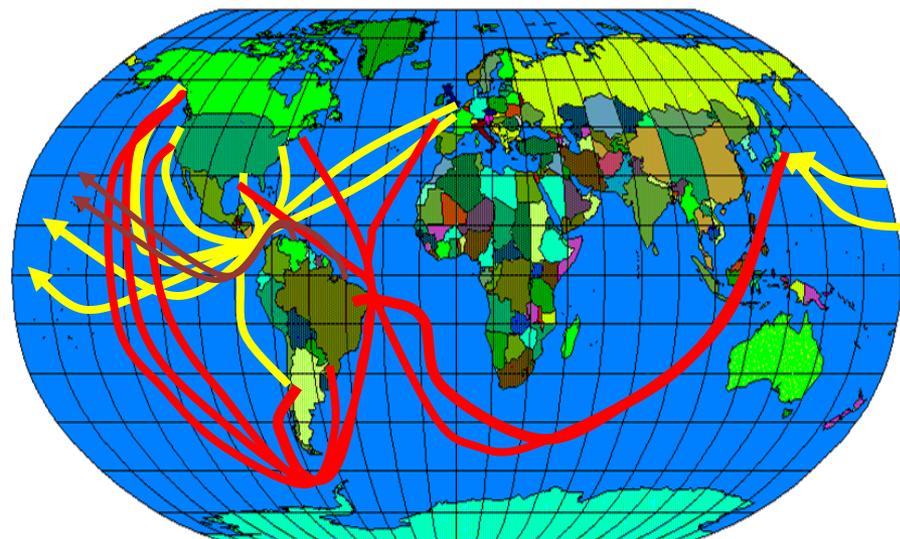
# GEOGRAPHICAL POSITION OF NICARAGUA

## GEOGRAPHICAL PROXIMITY

### Norfolk – Long Beach route

(Distances between Panama Canal and Grand Canal of Nicaragua)

## WORLD SEABORNE TRADE



# WATER RESOURCES

**WATER** NICARAGUA.....BLESSED WITH THE LARGEST WATER RESOURCES BETWEEN U.S. GREAT LAKES AND GUARANI ACQUIFER OF PARAGUAY BUT WITH THE LOWEST LEVEL OF UTILIZATION

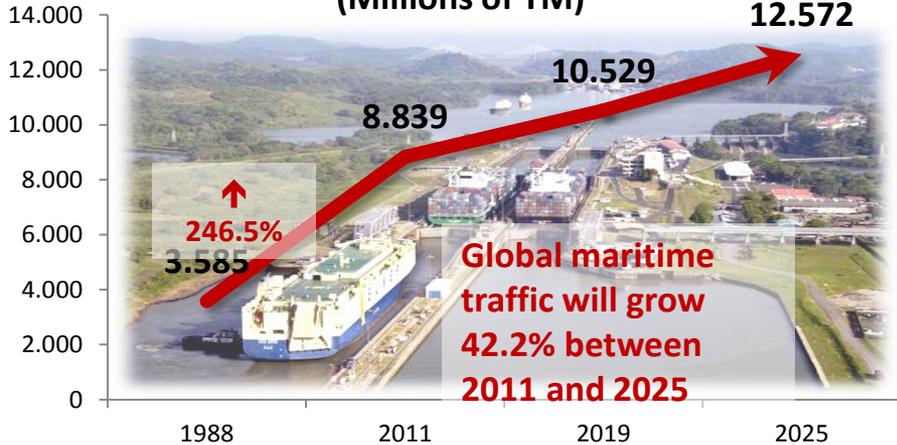


AVAILABILITY: 38,668 CUBIC METERS PER YEAR PER CAPITA (M3/YEAR)

# THE WORLD NEEDS A LARGER CANAL

## TRIPLE E SHIPS DOMINATE WORLD SEABORNE TRADE

World seaborne trade  
(Millions of TM)



World exports of goods, by value,  
2000-2020

Billones de USD, precios actuales



From US\$ 19.9 trillion to US\$35.6 trillion in 2020

Source: HKND-Group.com

Evolution of container ships

TEU: twenty-foot equivalent units,  
length x width x depth below water in metres

### Transiting the Panama Canal today



**Early container ship (1956-)**  
500 – 800 TEU, 137x17x9m

**Fully Cellular (1970-)**  
1,000 – 2,500 TEU, 215x20x10m

**Panamax (1980-)**  
3,000 – 3,400 TEU, 250x32x12.5m

**Panamax Max (1985-)**  
3,400 – 4,500 TEU, 290x32x12.5m

**Post Panamax (1988-)**  
4,000 – 5,000 TEU, 285x40x13m

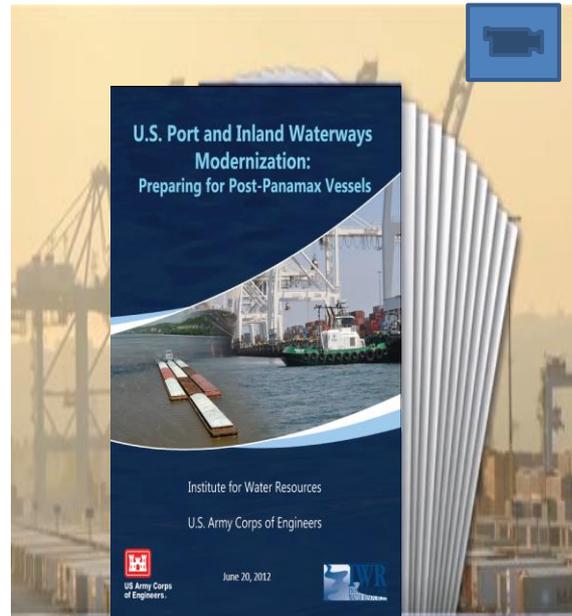
**Post Panamax Plus (2000-)**  
6,000 – 8,000 TEU, 300x43x14.5m

**Mega container, (2014-)**  
13,500 TEU, 366\*49\*15.2m

**Triple E (2013-)**  
18,000 TEU, 400x59x15.5m

### Can transit the Panama Canal after expansion

### Can not transit by Panama Canal even after expansion



By 2030 post-Panamax vessels will represent 30% of all vessels and 60-70% of world trade

Vessels of 10,000 TEUs and over accounted for 48% of the order book as of October 2011. It is evident that large ships are displacing smaller ships in all trade routes due to cost efficiencies of larger ships

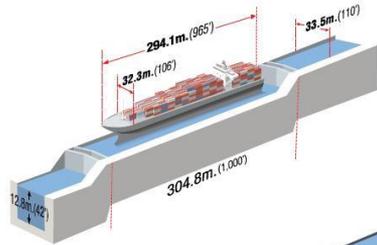
US Army Engineers Corps, 2012

Adapted with permission from The Geography of Transport Systems, Jean-Paul Rodrigue

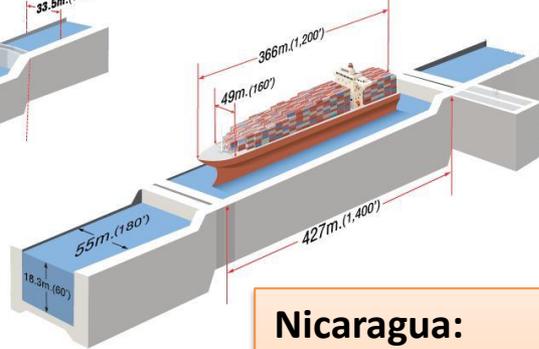
TEU:20-foot container equivalent unit

# LIMITATIONS OF THE PANAMA CANAL FOR LARGER VESSELS

## Current Locks



## New Locks

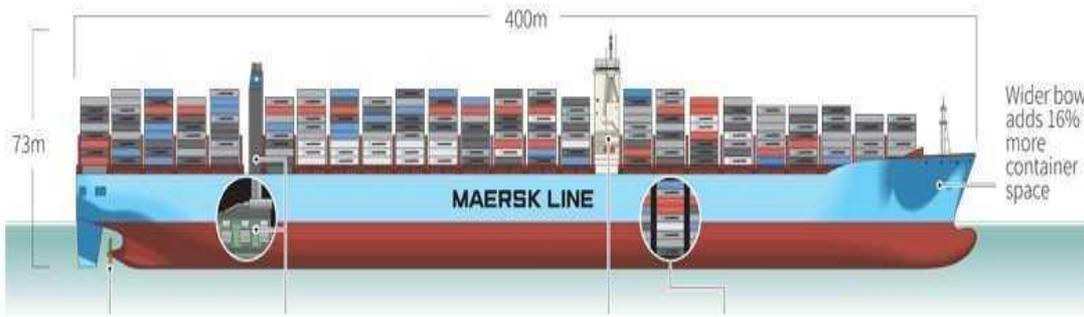


### Panama (new):

Length: 427m  
Width: 55m  
Depth: 18.3m  
Height: 61.3m

### Nicaragua:

Length: 520m  
Width: 750m  
Depth: 27.6m  
Height: 80m



Two four-blade propellers run by twin 32MW engines

Engines moved backwards to increase stability

Bridge moved forward to improve the line of sight and allow containers to be stacked higher

U-shaped hull design provides more space below deck

Vessel is too wide for the Panama Canal and too tall for all ports in the U.S.

Maersk EEE

## Las Américas bridge



# EEE VESSELS REDUCE TRANSPORT COSTS AND CO2 EMISSIONS



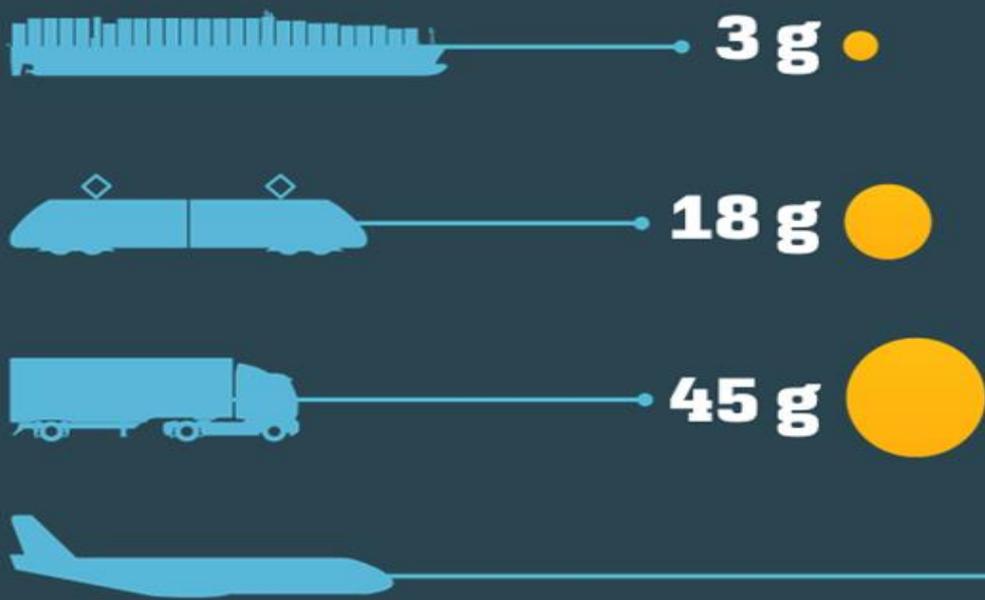
400 meters long, 59 meters wide y 73 meters high, 12.6 meters deep

Reduce CO2 emissions by 50% per twenty-foot-equivalent units (TEU), compared to industry average on the Asia-Europe trade.

Consumes approximately 35% less fuel per container than the 13,100 TEU vessels

Emits less grams of CO2/ton km than other forms of transport

UP TO 30% REDUCTION IN COST OF METRIC TONNE SHIPPED



Grams of CO<sub>2</sub> emitted by transporting 1 ton of goods 1 km

560 g

# The largest ships in the world



## 1. MSC «OSCAR» (January 2015)

- Capacity: 19.224 TEU
- 395.4 m. in length
- 59m breadth
- 16m depth

Property of **China's Bank of Communications**

## 2. CSCL GLOBE (December 2014)

- Capacity:19,100 TEU
- 400 m. in length
- 58.6 m breadth
- 15m depth
- Consumes 20% less energy than a ship of 10,000 TEUs

Property of **China Shipping Container Lines**



**MAERSK LINE (Triple E's owner) plans to build six ships of 19,000 TEU by 2017**

# SOME OF THE WORLD'S LARGEST SHIPYARD



1. Hyundai Heavy Industries, Korea.
2. Samsung Heavy Industries, Korea.
3. Daewoo Shipbuilding & Marine Engineering, Korea.
4. STX Offshore & Shipbuilding, Korea.
5. Jiangsu Rongsheng, China.
6. Oshima Shipbuilding Co., Japan.
7. Hudong-Zhonghua Naval Shipbuilding, China.
8. Jiangsu New YZJ, China.
9. Changxing, China (under construction).

# WHO BUILT THE LARGEST SHIP IN THE WORLD?



Maersk EEE was built by **Daewoo Shipbuilding** in Okpo, South Korea, 2013



Prelude FLNG is the largest ever built first floating liquefied natural gas platform in the world and the ship. The Prelude is being built by **Samsung Heavy Industries** in Geoje, South Korea, by Royal Dutch Shell.



**Hyundai Heavy Industries** has begun the construction of the first of five container ships of 19,000 TEUs of China Shipping Container Lines.

# Dimensions and capacities of the Grand InterOceanic Canal of Nicaragua

## Grand InterOceanic Canal of Nicaragua

- Length: 275.5km (106.8km on Lake Nicaragua)
- Width: 280m
- Depth: 30-33m
- Capacity: 5,100 ships a year(2050), with 30 hours of transit each boat.
- The Canal will allow the transit of:
  - **25,000 TEU container ships,**
  - bulk ships of 400 thousand dwt,
  - Oil tankers of 320 thousand dwt.



The capacity of a Triple-E vessel is 18,800 TEU

## Panama Canal

Actual:

- Length: 80Km
- Width : 91-300m
- Depth : 12.8m (Atlantic), 13.7m (Pacific)
- **4,500 TEU vessels, maximum**

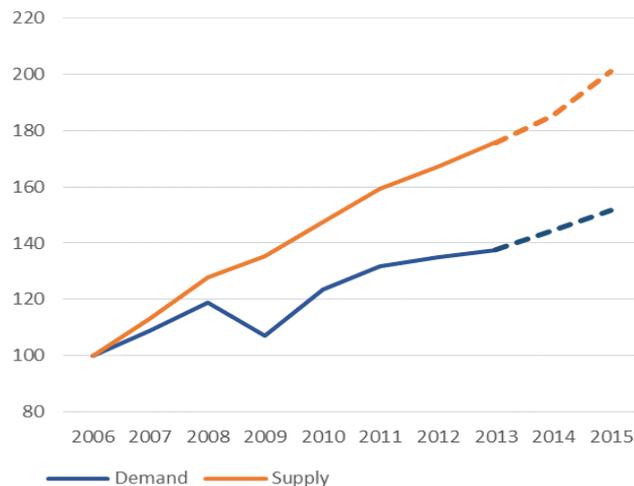
With the ampliation:

- **13,000 TEU vessels, maximum**
- Bulk ships of 200 thousand dwt
- Oil tankers of 120 thousand dwt

# Estimating the state of demand for maritime transport in 2050

## Present day

- The gap Supply / demand of ships has been increasing



- Cumulative loss of \$ 6 billion in the period 2009-2013 for the 18 companies who have published their results.
- Without Maersk Line and CMA CGM, the remaining 16 companies have an accumulated loss of US \$ 10.4 billion.
- **Strategy for survival: larger, more efficient ships to save the gains.**

## In 2050

- Assuming a 2% average growth per year, the growth will be from 150 million today to 450 million TEUs in 2050. With 4% this would become 640 million TEU.
- Entire fleet will be replaced.
- **If a fleet three times larger than the current is assumed, US \$ 600 billion would be needed to acquire biggest new fleet. The largest ships are constructed in China, South Korea and Japan**

Fuente: Lars Jenssen, CEO SeaIntel Consulting.

# THE INTEROCEANIC GRAND CANAL OF NICARAGUA: THE ROUTE FOR EXTERNAL COMMERCE

The Grand Canal will assume **5%** of the world trade transport



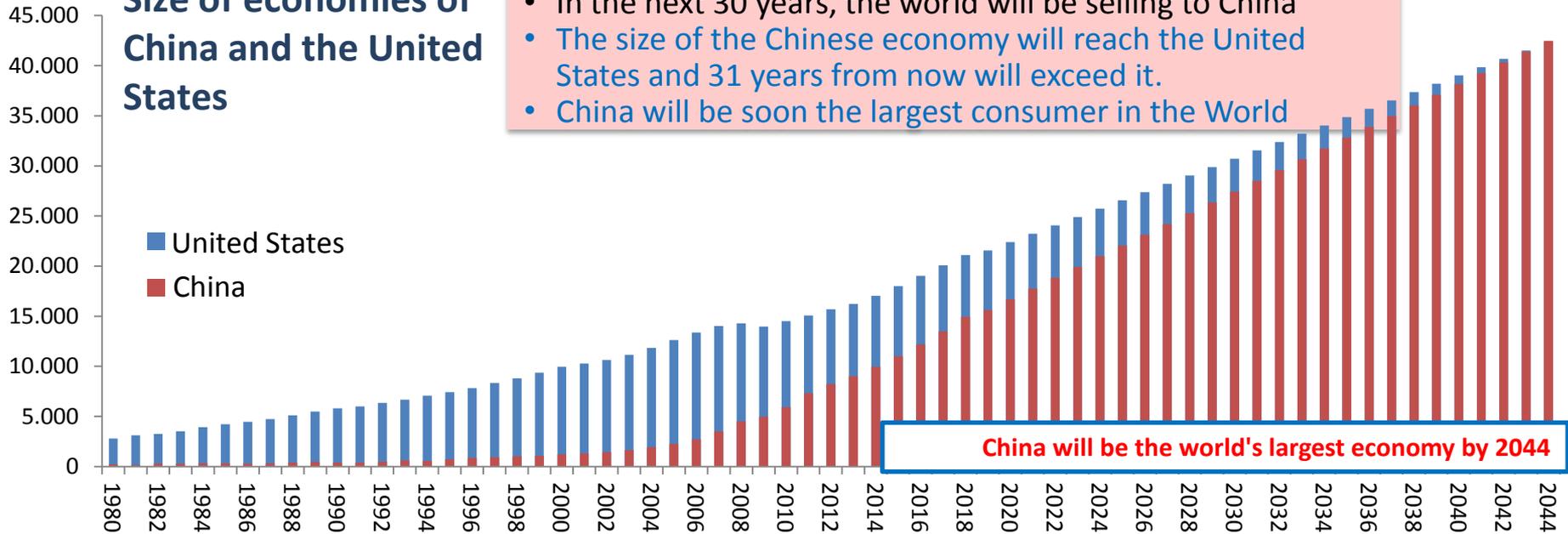
**900 million tons per year will transit by the Canal**

- Iron, oil, gas from Venezuela and Brazil, soybean production from South America to Asia
- Oil and gas from the United States and Canada (Keystone XL Pipeline) to Asia
- Asian manufactured goods to USA, South America and Europe and vice versa
- Route of copper, fruit and wine from Chile and Peru to Europe and European manufactured goods to the west coast of South America
- Route from the West Coast USA to Europe and vice versa

# CHINA: FROM SELLER TO BUYER

## Size of economies of China and the United States

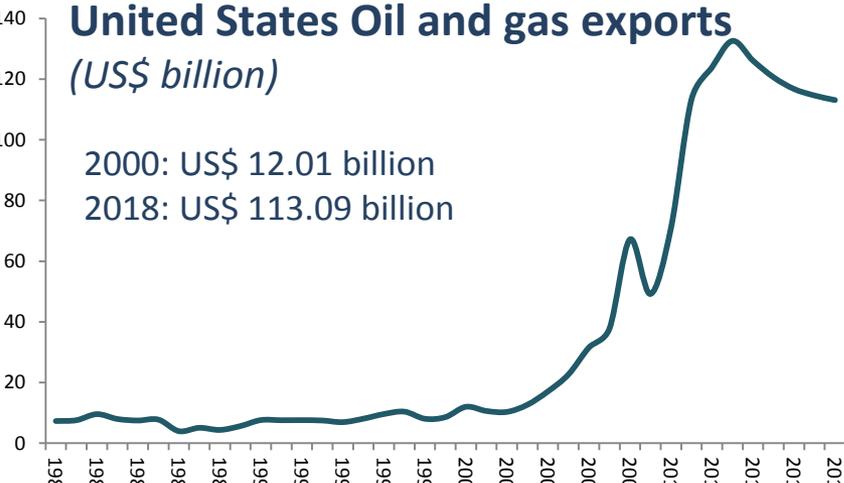
- In the past 30 years, the world was buying from China
- In the next 30 years, the world will be selling to China
- The size of the Chinese economy will reach the United States and 31 years from now will exceed it.
- China will be soon the largest consumer in the World



Source: IMF (1980-2018) & Own estimates (2019-2044)

## United States Oil and gas exports (US\$ billion)

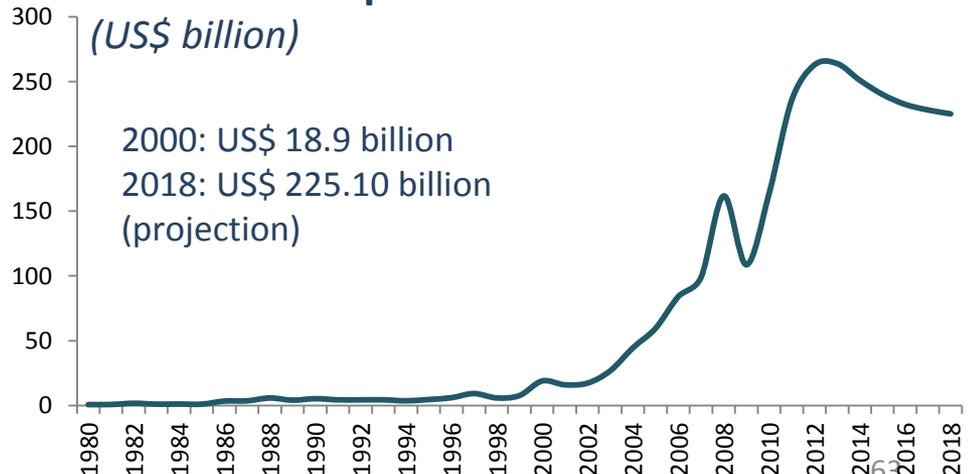
2000: US\$ 12.01 billion  
2018: US\$ 113.09 billion



Source: IMF

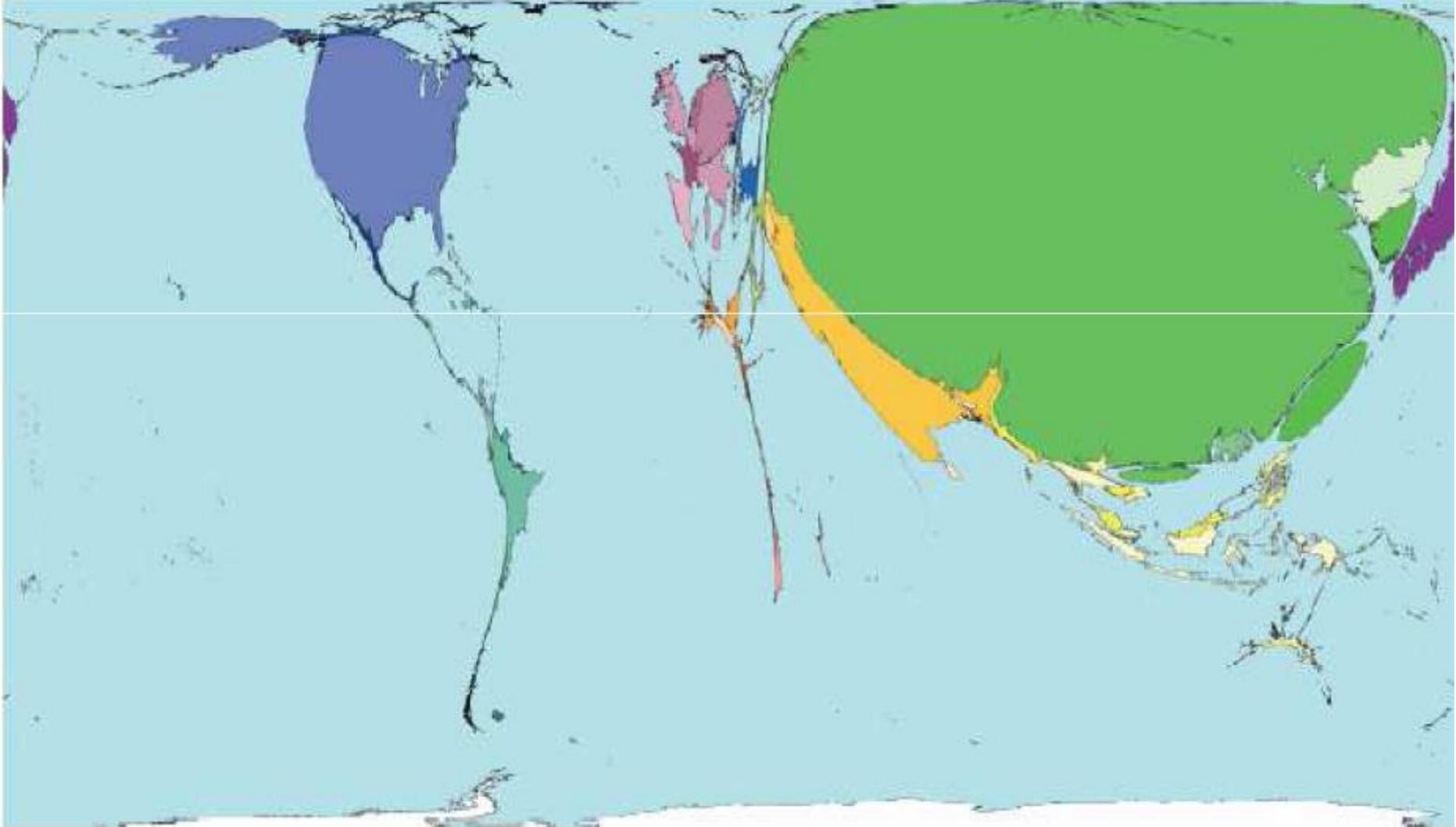
## China's Oil imports (US\$ billion)

2000: US\$ 18.9 billion  
2018: US\$ 225.10 billion (projection)



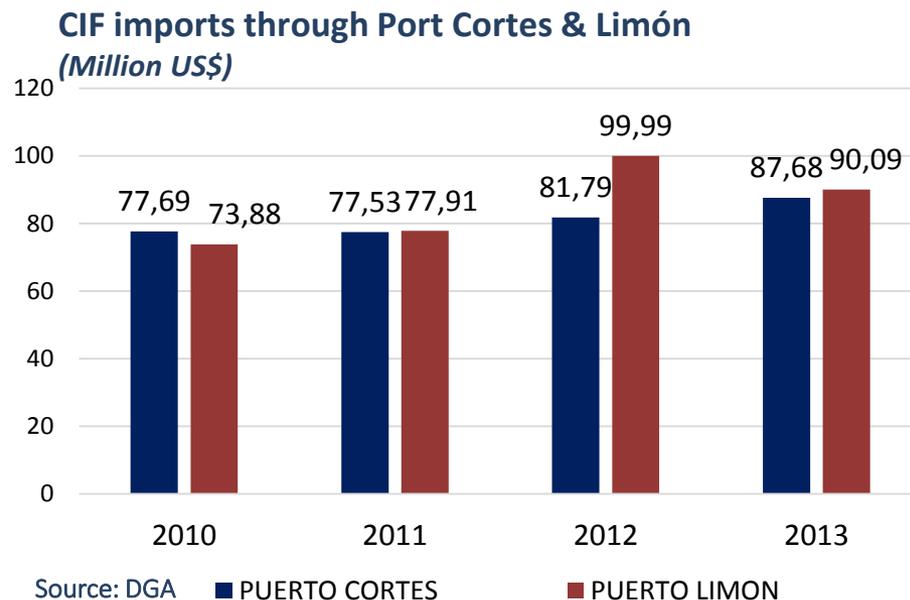
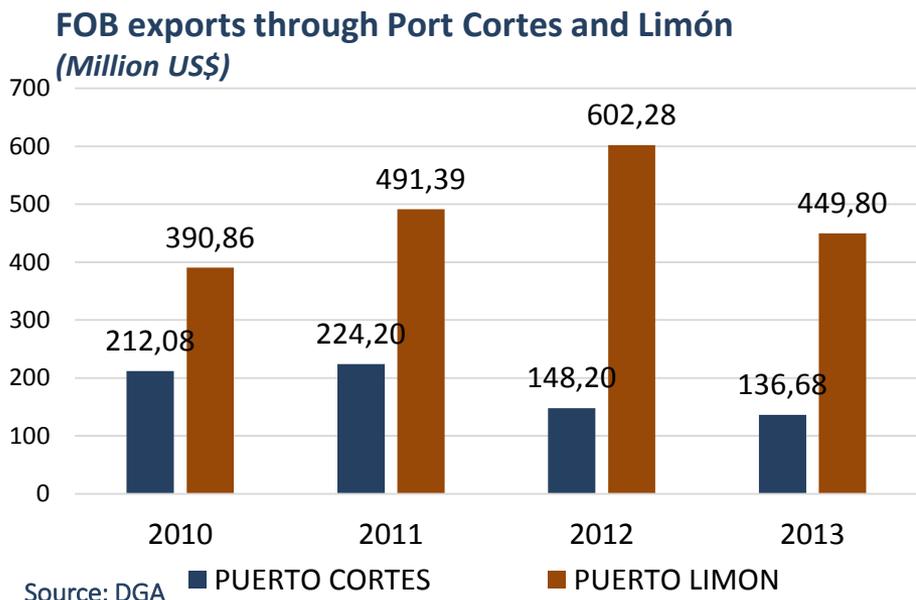
Source: IMF

## Port Throughput by Relative Share (Containers)



Source: Gonzalez Iaxe, Freire & Pais (2011)

# NEW PORT IN THE CARIBBEAN WILL REDUCE COSTS OF IMPORTS AND EXPORTS IN NICARAGUA



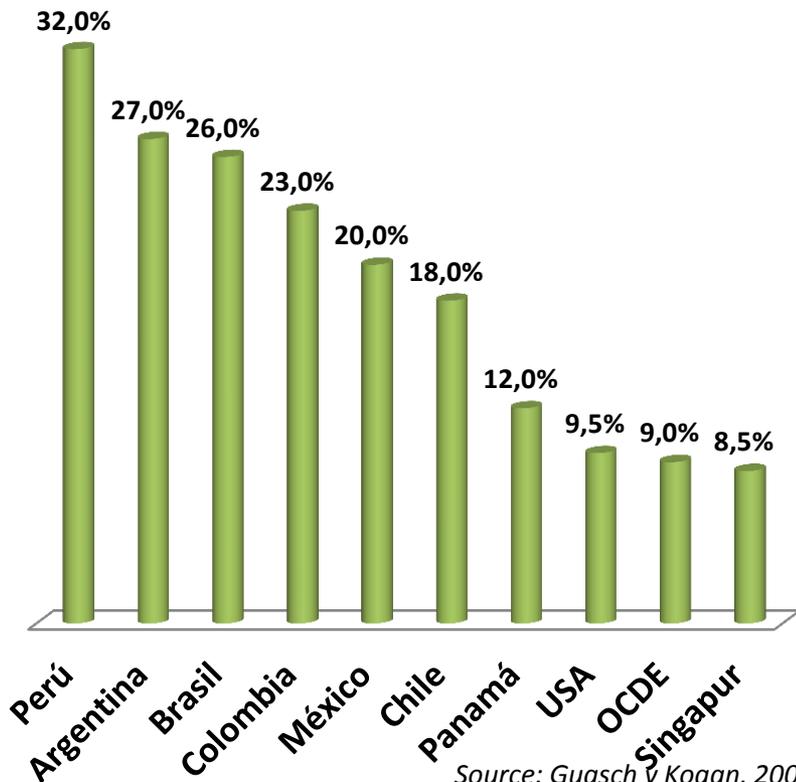
## Annual Logistics Cost Savings to the Home Economics

Calculation of Cost Savings		
Concepts	% of GDP	US\$ million
Nicaragua GDP, 2013	100%	11,255.60
Logistics costs without Port Aguila	25%	2,813.91
Logistics Costs with Port Aguila	13%	1,463.23
Savings generated by Port Aguila	12%	1,350.67

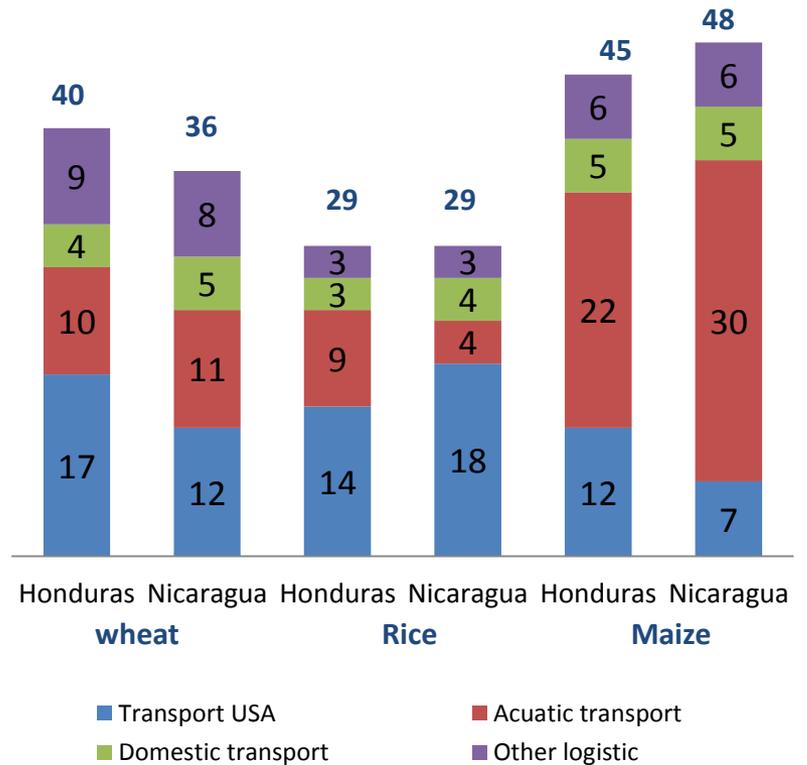
Source: Martínez & Piñeiro (2014)

# Transportation and Logistic Costs

Logistics costs as a percentage of GDP



Logistics costs as a percentage of the final price of the product



Source: Economics Unit, World Bank, 2010

# Freight Estimated Savings in the main exports to Asia

Considering that the transport of goods in larger vessels reduce the cost of freight by 30% per ton.

FOB exports from Brazil to Asia (excluding Middle East) January-September 2014.  
example: 3 main products (million tons. and US \$ million)

	Weight (TM.)	US\$	Approximate cost of freight	Estimated Savings
<b>General Total</b> (others included)	250.94	59,320.65	4,449.05	1,334.71
<b>Soy</b>	35.60	18,127.05	1,359.53	407.86
<b>Iron ore</b>	167.72	12,481.26	936.09	280.83
<b>Oil*</b>	7.21	45,45.65	340.92	102.28

\*It will grow with offshore fields

Ministry for Development, Industry and Foreign Trade, Brazil

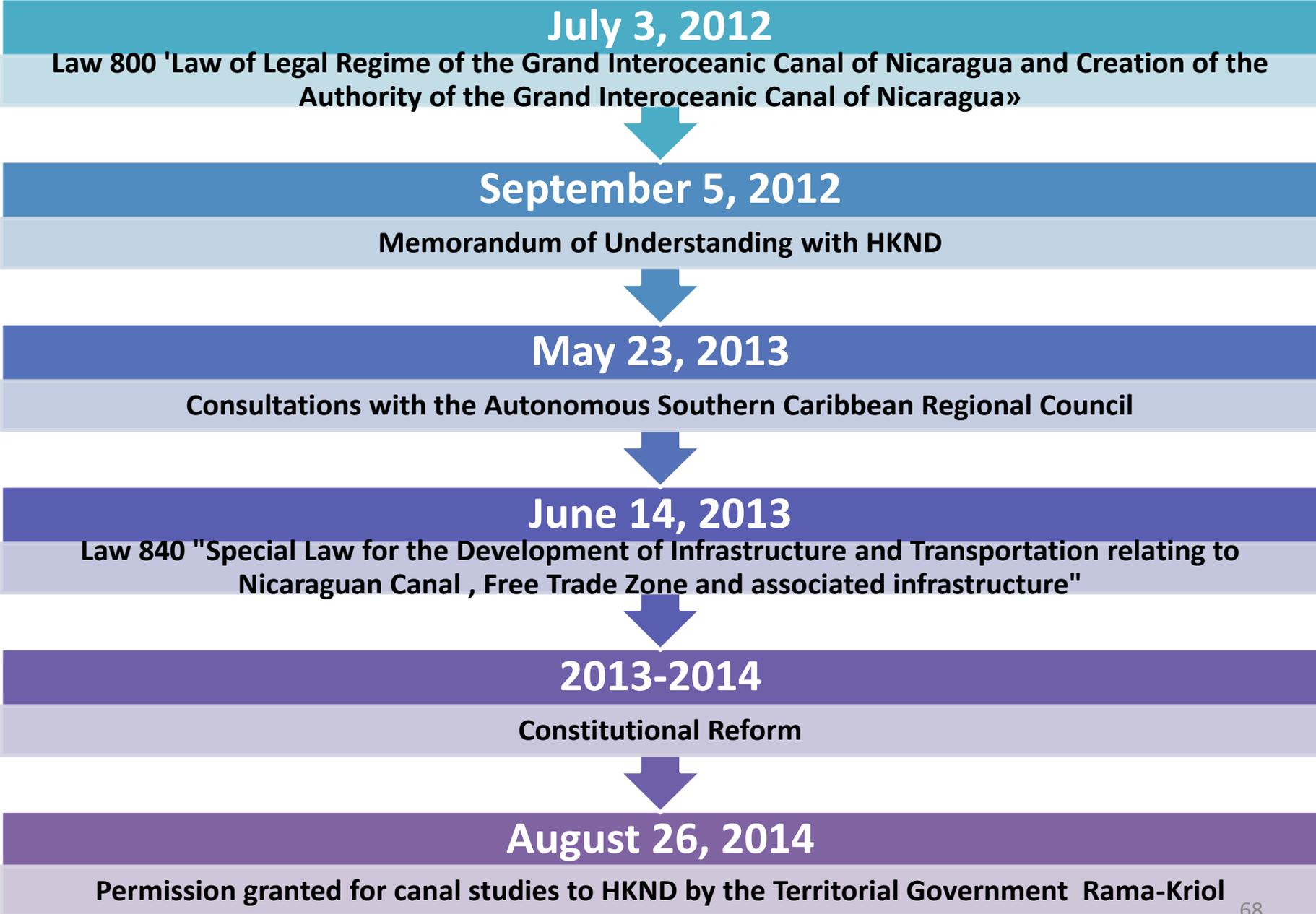
**Venezuela fuel exports to Asia.  
2012**

	US\$ millions
<b>Total</b>	38,363.3
<b>Approximate cost of freight</b>	2,877.2
<b>Estimated Savings</b>	863.2

**Total exports from Argentina to  
China. 2012**

	US\$ millions
<b>Total</b>	5,900
<b>Approximate cost of freight</b>	442.5
<b>Estimated Savings</b>	132.8

# Development Process of the Gran Interoceanic Canal Legal Framework



# Law 840 «Special Law for the Development of Nicaraguan Infrastructure and Transportation related to the Canal, Free Trade Zone & Associated Infrastructures»

- Grants an exclusive concession in favor of The Investor and its concessionaries for the Development and Operation of every Sub- Project, according to the MCA for a term of fifty (50) years, renewable for other 50 years.
- **HKND assumes all costs and risks of the feasibility**
- **HKND commits to mobilize at least US\$40 billion for the construction.**
- **The Nicaraguan Canal Commission approves the plans of the subprojects and monitors their execution, emits environmental and construction permits through a one stop shop window and is in charge of environmental protection.**

14-06-13	LA GACETA - DIARIO OFICIAL	110
<b>ASAMBLEA NACIONAL</b>		
El Presidente de la República de Nicaragua		
A sus habitantes, Sabed:		
Que,		
<b>LA ASAMBLEA NACIONAL</b>		
<b>CONSIDERANDO</b>		
<b>I</b>		
Que el artículo 98 de la Constitución Política de la República de Nicaragua establece que es la función principal del Estado en la economía desarrollar el país materialmente, así como promover su desarrollo integral, y que el artículo 105 de la Constitución Política de la República de Nicaragua, explícitamente dispone que "Es obligación del Estado promover, facilitar y regular la prestación de los servicios públicos básicos de energía, comunicación, agua, transporte, infraestructura vial, puertos y aeropuertos a la población, y derecho inalienable de la misma el acceso a ellos. Las inversiones privadas y sus modalidades y las concesiones de explotación a sujetos privados en estas áreas, serán reguladas por la ley en cada caso."		
<b>II</b>		
Que la Ley N° 800, "Ley del Régimen Jurídico de El Gran Canal Interoceánico de Nicaragua y de creación de la Autoridad de El Gran Canal Interoceánico de Nicaragua" que fue publicada en La Gaceta, Diario Oficial, No. 128 del 9 de Julio de 2012, en adelante referida como "Ley N°. 800", declara El Gran Canal Interoceánico de Nicaragua de prioridad e interés supremo nacional.		
<b>III</b>		
Que desde la entrada en vigencia de la Ley No. 800, la Autoridad de El Gran Canal Interoceánico de Nicaragua, ha llevado a cabo actividades de promoción y negociación para obtener la inversión de capital necesaria para la ejecución del proyecto de El Gran Canal Interoceánico de Nicaragua y otros proyectos de transporte e infraestructura relacionados.		
<b>IV</b>		
Que con el propósito de fortalecer el trabajo que la Autoridad de El Gran Canal Interoceánico de Nicaragua ha estado desarrollando, se ha considerado la creación de un instrumento jurídico que contribuya y facilite el		
de Nicaragua y proyectos de infraestructura y transporte relacionados.		
<b>PORTANTO</b>		
En uso de sus facultades		
<b>HA ORDENADO</b>		
La siguiente:		
<b>LEY N°. 840</b>		
<b>LEY ESPECIAL PARA EL DESARROLLO DE INFRAESTRUCTURAYTRANSPORTENICARAGUENSE ATINGENTE A EL CANAL, ZONAS DE LIBRE COMERCIO E INFRAESTRUCTURAS ASOCIADAS</b>		
<b>Artículo 1 Objeto de la Ley</b>		
La presente Ley tiene por objeto:		
a) Aprobar y autorizar a firmar posteriormente el Acuerdo Marco de Concesión e Implementación, en adelante referido como "El MCA", a suscribirse entre la Autoridad de El Gran Canal Interoceánico de Nicaragua, el Gobierno, la Comisión del Proyecto de Desarrollo del Canal de Nicaragua, la Empresa Desarrolladora de Grandes Infraestructuras S.A., en adelante "El Inversionista" o "El Concesionario" y HK Nicaragua Canal Development Investment Co., Limited, una compañía de responsabilidad limitada constituida en Hong Kong;		
b) Autorizar al Gobierno el cumplimiento y la ejecución de sus obligaciones de conformidad con los términos de El MCA;		
c) El otorgamiento a El Concesionario de los derechos que confiere El Gobierno en virtud a El MCA; y		
d) La definición y establecimiento de las bases y los fundamentos jurídicos necesarios para garantizar el cumplimiento por parte de todas las Entidades del Gobierno de los términos de la presente Ley, incluyendo la creación de la Comisión del Proyecto de Desarrollo del Canal de Nicaragua y el otorgamiento de las concesiones para cada Sub Proyecto, como se dispone en la presente Ley. Una copia de la carta acuerdo junto con el formato convenido de El MCA se adjunta a la presente Ley como Anexo A y ambos forman parte de esta Ley; los términos en mayúsculas de la presente Ley que no están definidos de otra manera, tendrán el significado establecido en el MCA. Para efectos de esta		

# THE MASTER CONCESSION AGREEMENT AND IMPLEMENTATION FRAMEWORK WITH NICARAGUA HK INVESTMENT DEVELOPMENT COMPANY, LTD. (HKND)

Law 840 grants to HKND Concession to conduct studies, and to promote further concessions for subprojects.

Fiscal and legal incentives to attract investments to the Canal and subprojects.

Commission of the Development of the Grand Canal Project will monitor financial and physical execution of each subproject and will issue all environmental permits and construction permits.



Concession of use for a period of 50 years, renewable for another 50 years.

Nicaragua will start, 1% of shares and shall be increased by 10% its stake in every 10 years. Also receive \$ 100 million in 10 annual payments for the concession.

Each sub project should have its feasibility studies and a plan approved by the Commission of the Grand Canal Project.

# FEASIBILITY STUDIES

2nd largest governmental construction company of China



The 5th environmental and social consultant



World's most prestigious consulting firm



5th most prestigious law firm in the USA



Washington-based public relations



Communications with the financial media (Bloomberg, Financial Times, among others)

MEC Mining. Australia. Open pit mining and civil engineering



Civil Engineering, based in Belgium; Specialized in locks and canals



- Group of Xuzhou Construction Machinery (XCMG)
- No. 7 construction machinery industry of China



- Shipping company
- China Ocean Shipping (Group) Company (COSCO);
- World leader in shipping



- International Marine Shipping Container of China (CIMC);
- The world's largest manufacturer of shipping containers



- China National Corporation of Building Materials (CNBM)
- Major industry group of building materials of China

## INVESTORS:



.. Other investors when feasibility studies are concluded

# From *Financial Times*: “Public face of \$40bn project to boost China-Latin America links”

The screenshot shows the Financial Times website interface. At the top, it says 'FINANCIAL TIMES' and 'Welcome'. There are navigation links for 'Subscribe', 'Your account', 'Site tour', and 'Sign out'. Below that is a search bar with the text 'Search articles, quotes and multimedia' and a 'Search' button. The main navigation menu includes 'Home', 'World', 'Companies', 'Markets', 'Global Economy', 'Lex', 'Comment', 'Management', and 'Life & Arts'. A secondary menu lists regions: 'Africa', 'Asia-Pacific', 'Europe', 'Latin America & Caribbean', 'Middle East & North Africa', 'UK', 'US & Canada', and 'The World Blog'. The article title is 'Public face of \$40bn project to boost China-Latin America links', dated July 1, 2013, 12:29 pm. The author is 'By Kathrin Hille in Beijing and John Paul Rathbone in London'. The main image shows Wang Jing speaking at a press conference. A video player is embedded on the right, showing a man holding a flag. Below the video are three smaller video thumbnails with titles: 'Army ousts Egypt's Islamist president', 'Beijing tries to contain ethnic unrest', and 'Malaysia PM rejects election claims'. At the bottom right, there is an advertisement for Bank of China with the text 'RMB: New Choice Bank of China, Your Premier Bank of RMB Services.'

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July 1, 2013 12:29 pm

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### Public face of \$40bn project to boost China-Latin America links

By Kathrin Hille in Beijing and John Paul Rathbone in London

Wang Jing denies any association with the Chinese government

It is one of the largest proposed infrastructure projects in the world. The feasibility study alone is set to cost \$900m. And when complete, the Nicaragua Canal, should lower transport costs for shipping oil from Latin America to China.

The \$40bn project certainly does not lack for ambition. Neither, it seems, does Wang Jing, the public face of the newly-registered Hong Kong company, HKND Group, which this month won approval from Nicaragua's Congress to build and operate the 50-year concession to link the country's Atlantic and Pacific coasts.

The approval came despite environmentalist opposition

VIDEOS

Army ousts Egypt's Islamist president

FT WORLD

00:00 02:34

Army ousts Egypt's Islamist president

Beijing tries to contain ethnic unrest

Malaysia PM rejects election claims

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"It is one of the largest infrastructure projects in the world. **The feasibility study alone is set to cost \$900 million.** And when complete, the Nicaragua Canal should lower transport costs for shipping oil from Latin America to China. "

"Right now, 4,000 people, including staff McKinsey, British environmental consultancy ERC the law firm from USA, Kirkland, and research institutes belonging to the CRC, are working on the feasibility study. Mr. Wang said that HKND could cover with its own funds, the operating cost even before the start of construction, scheduled for late 2014 "



"Ninety percent of world trade is by sea. Shipping is cheaper and more convenient than transport by rail."

"It doesn't matter where industries are located because this canal is connecting East and West. It's definitely commercially viable; otherwise we wouldn't be investing in it."

"We are in talks with local people, even opponents of the plan. We want to produce a thorough report but that takes time."

**"I thought this country really needed this canal. Nicaragua is a beautiful country with a long history and rich culture, but many people there live in poverty."**

**If the canal can be built successfully, it will transform the economy and people's lives."**

Wang Jing for BBC News  
March 18th, 2015





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## Maersk Line apoya el Canal de Nicaragua

CONTAINER: The world's largest container carrier Maersk Line believes it makes good sense to construct an alternative to the Panama Canal that can handle the biggest container ships, the carrier tells ShippingWatch.

BY TOMAS KRISTIANSEN  
Published 04.06.14 at 13:40

Maersk Line now steps onto the field with support for the Nicaragua Canal, a project that has till now been surrounded by distrust from the

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Nicaragua Canal

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EU clears the P3 alliance

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- Wall Street Journal: China to approve P3 in June (05.06)
- Increasing activity in US container ports (05.06)
- Hering Shipping negotiating debt with bank (05.06)

*“Building a Nicaragua Canal seems to make sense. The Canal is projected to have room for the biggest ships, while also saving 800 kilometers on a journey from New York to Los Angeles. We generally support infrastructure improvements. It brings opportunities for transport, and therefore trade. When we built container ships 20 years ago were scaled according to the Panama Canal, but, ships today are larger than 4,500 TEU that could fit into the larger ships then. Even after the Panama Canal expansion, larger ships can not fit there, ”Keith Svendsen, Head of Operations at Maersk Line daily.*



## ORGANIZACIÓN DE LAS NACIONES UNIDAS PARA EL DESARROLLO INDUSTRIAL

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[www.unido.org](http://www.unido.org)

[unido@unido.org](mailto:unido@unido.org)

**DIRECTOR GENERAL**

Viena, 1 de diciembre de 2014

Excelentísimo Señor:

Tengo el honor de referirme a su comunicación del día 12 de noviembre de 2014 solicitando, en nombre del Presidente de la República de Nicaragua, Excelentísimo Señor Daniel Ortega Saavedra, el apoyo técnico a la Comisión Nacional Interinstitucional del Gran Canal en las áreas de medio ambiente sostenible, eficiencia de recursos, calidad y certificación de producto, creación de empleo y monitoreo y evaluación de proyectos. La ONUDI estaría otorgando asesoría técnica a este gran proyecto nacional en el marco de su mandato de promover el Desarrollo Industrial Sostenible e Inclusivo (ISID).

Agradeciéndole la confianza en nuestra Organización, es un placer para mí confirmarle el apoyo de la ONUDI a este proyecto. En las próximas semanas la Oficina para América Latina en cooperación con la Oficina Regional de la ONUDI en México y nuestra representante en Nicaragua, Señor Juan Fernando Ramírez, estarán trabajando para la preparación de una propuesta de proyecto de cooperación 2015-2020 para ser sometido en forma conjunta a la consideración de posibles países donantes para su financiamiento.

Aprovecho la oportunidad para reiterar a Vuestra Excelencia las seguridades de mi más distinguida consideración.

LI Yong

**ONUDI is going to provide technical advice to the Commission of the Grand Canal, in environmental issues, resource efficiency, quality and certification, employment generation and monitoring and evaluation of projects**

# CEMEX CONSTRUCTS A NEW PLANT

## Construction of a new cement grinding plant in Nicaragua

- ✓ Announced in Monterrey on May 5, 2014
- ✓ cost of US \$ 55 million.

- *First pahse:*
  - *First half of 2015*
  - *US \$ 30 million in the installation of a cement factory in Ciudad Sandino*
  - *Production capacity of 220,000 tons.*
- *Second phase*
  - *End of 2017*
  - *The installation includes a second grinding mill*
  - *Capacity of 220,000 tons.*



**Positioning for Central American development pole of the century in Nicaragua.**

A wide river flows through a lush green forest. The sky is blue with scattered white clouds. The text "WHAT ARE THE CHALLENGES AND OPPORTUNITIES FOR NICARAGUA?" is overlaid in white, bold, uppercase letters across the lower portion of the image.

**WHAT ARE THE CHALLENGES AND  
OPPORTUNITIES FOR NICARAGUA?**

# CANAL AREA CHALLENGE

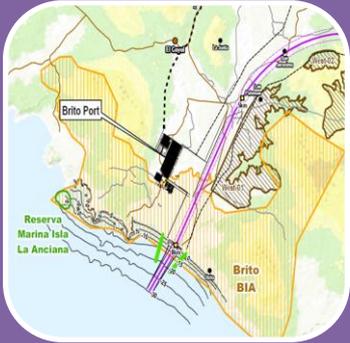
All construction projects have an environmental and social cost.

The route has been chosen, engineering choices have been made and the necessary adjustments that minimize environmental and social impact have been decided.

Mitigation and compensation measures, improving the environment to cause a net positive environmental impact

**THE GOAL IS A POSITIVE NET ENVIRONMENTAL IMPACT, WHETHER IN THE AREA OF CANAL OR AT THE NATIONAL LEVEL. WITH THE RESOURCES FOR MASSIVE REFORESTATION, WHICH CAN INCREASE THE RESILIENCE OF THE ECOSYSTEMS.**

# Commitment to increasing the ecosystems resilience



A road linking the port with Tola.

A rock wall will be designed to allow a good mix of fresh and salt water for the mangroves.



Most of the Río Brito and healthy mangroves NOT be affected.

Brilo's Mangroves, southward of Canal, remain intact.



West Entrance into Lake (avoid populated areas).

Canal alignment and Airport location will change to avoid impacting Rivas.



Small-scale dredging of the lake by suction (hydraulic).

**THERE WILL BE NO BLASTING IN THE LAKE**

The sand and hard materials will be arranged at along the south side of Route Canal.



# Commitment to increasing the ecosystems resilience



The alignment has been changed to the output from the Lake to the east of the Canal, in order to avoid environmentally sensitive areas.



Protection of Indio Maíz. The Canal acts as a barrier to the intrusions of people in the area.



The impact on palm forest in the Caribbean will be minimized.

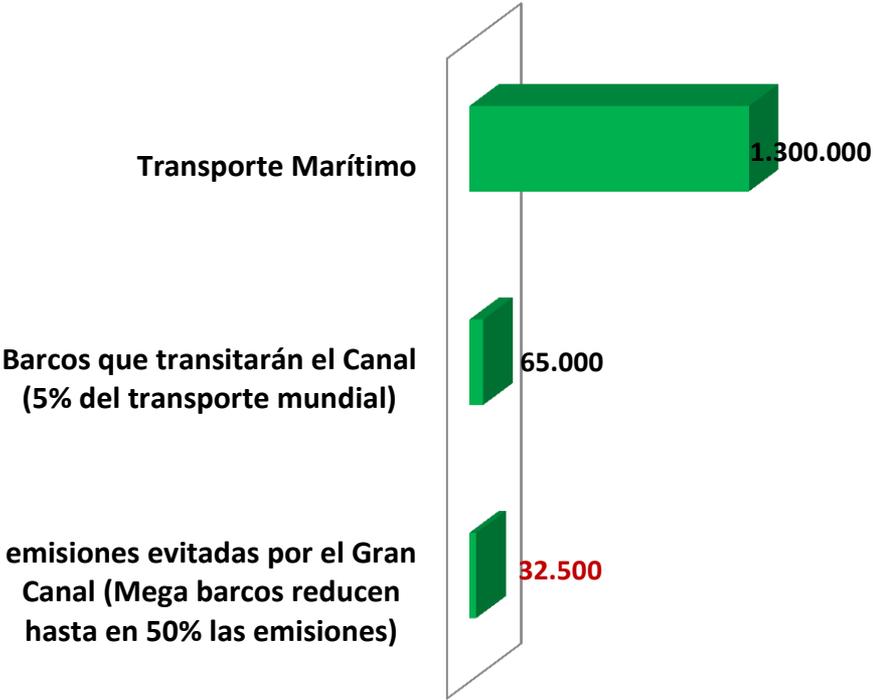


Puerto Águila will be filled with dredged to minimize the impact on Indigenous Peoples. Canal Route avoids the impact on Booby Cay.

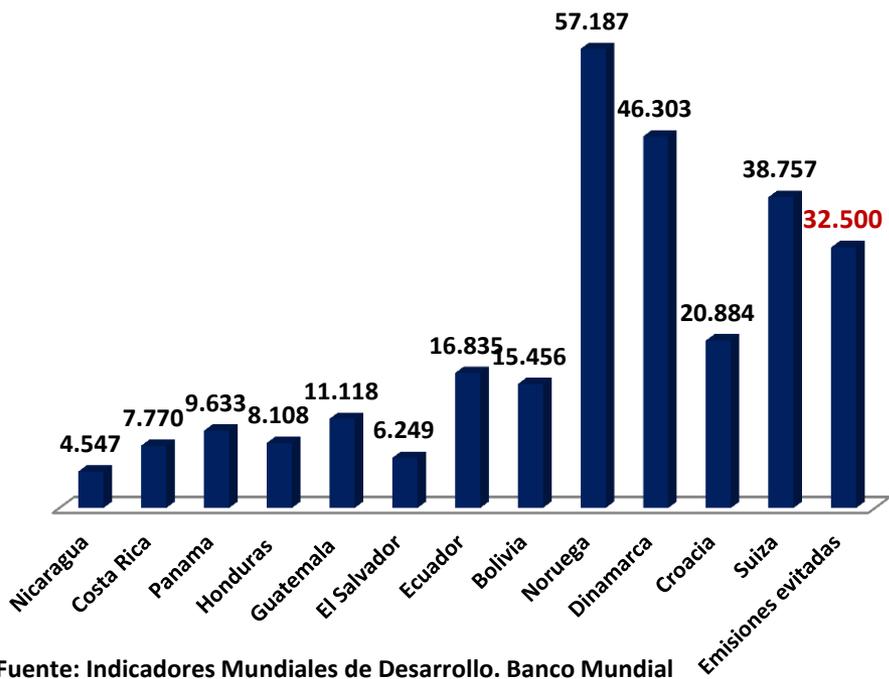


# Globally, the construction of the Grand Canal will reduce 32.5 million tons in annual CO2 emissions made by maritime trade worldwide

CO2 emissions (thousand metric tons)



Comparison of CO2 emissions in some countries and the emissions avoided by the transit of Mega Boats through the Canal (thousands of metric tons)



Fuente: Indicadores Mundiales de Desarrollo. Banco Mundial

The avoided emissions are greater than the emissions of the countries of Central America and comparable with those produced by countries like Switzerland

# NET POSITIVE ENVIRONMENTAL IMPACT:

## On the site of the Canal



Prevent further penetration into Reserves Indian Corn and Punta Gorda

Provide compensation and funding to improve RAMSAR site of San Miguelito.

**Reverse deforestation trends**

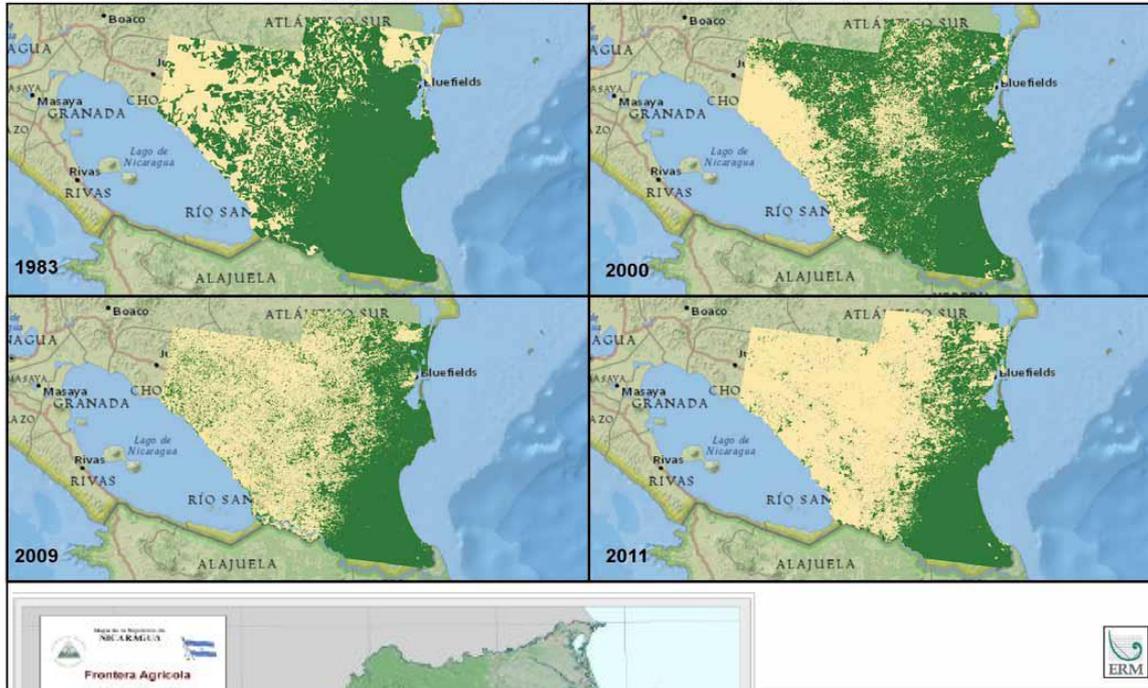
Rehabilitation of degraded areas in Indio Maiz Reservations and Punta Gorda and improve watershed management

Provide alternatives and better living conditions



# THE CHALLENGE OF AN ONGOING DEFORESTATION

Historic Forest Cover and Degradation 1983, 2000, 2009, and 2011



- 25% of the total land area is forested.
- **Current rate of deforestation is 70 thousand hectares annually.**
- The estimated reforestation of **20 thousand hectares per year.**

**It is necessary to contain the advance of the agricultural frontier**

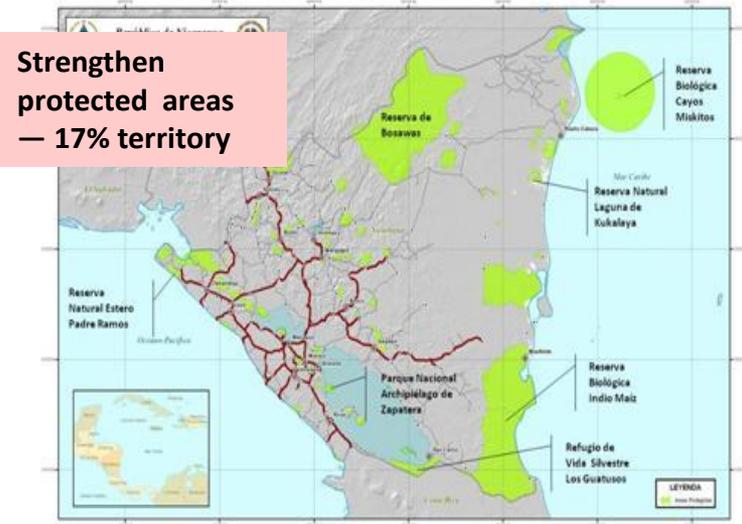
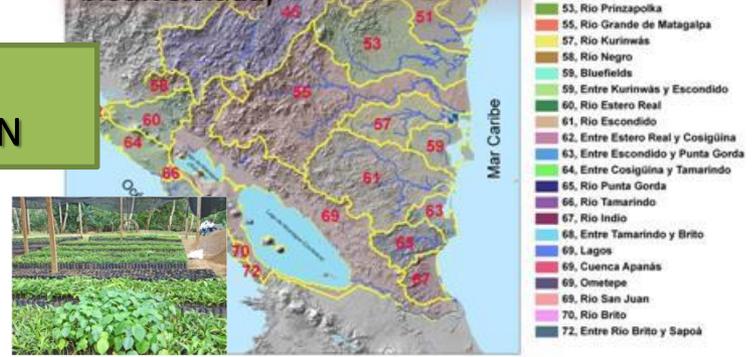
**THE ROUTE OF GRAND INTEROCEANIC CANAL, RUNS THROUGH AREAS WITH DEGRADED SOILS BY THE AGRICULTURE FRONTIER**

# NET POSITIVE ENVIRONMENTAL IMPACT: NATIONAL LEVEL

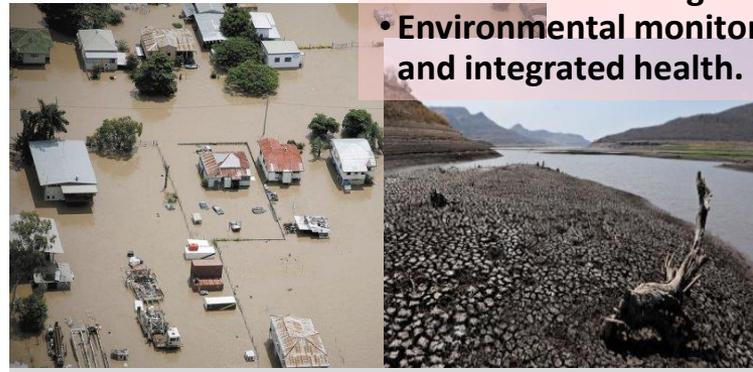


Integrated watershed management (massive reforestation, reinjection of water, biodiversity protection)

MASSIVE REFORESTATION



- Protection of local populations from flood or drought.
- Environmental monitoring, climate and integrated health.



ECLAC estimate that in 2011 Nicaragua had adaptation needs over US\$ 1,900 Millions



The Canal is a water project whose viability depends on water and this on massive reforestation and watershed management.



**WHAT ARE THE EMPLOYEMENT  
AND BUSINESS OPPONTUNITIES?**

# OPPORTUNITIES

- Opportunities for young Nicaraguans and Central Americans for professional, technical, and skilled formal sector employment in new fields, including:
  - Example 1: Maritime industry
  - Example 2: Regional and world multimodal logistical center

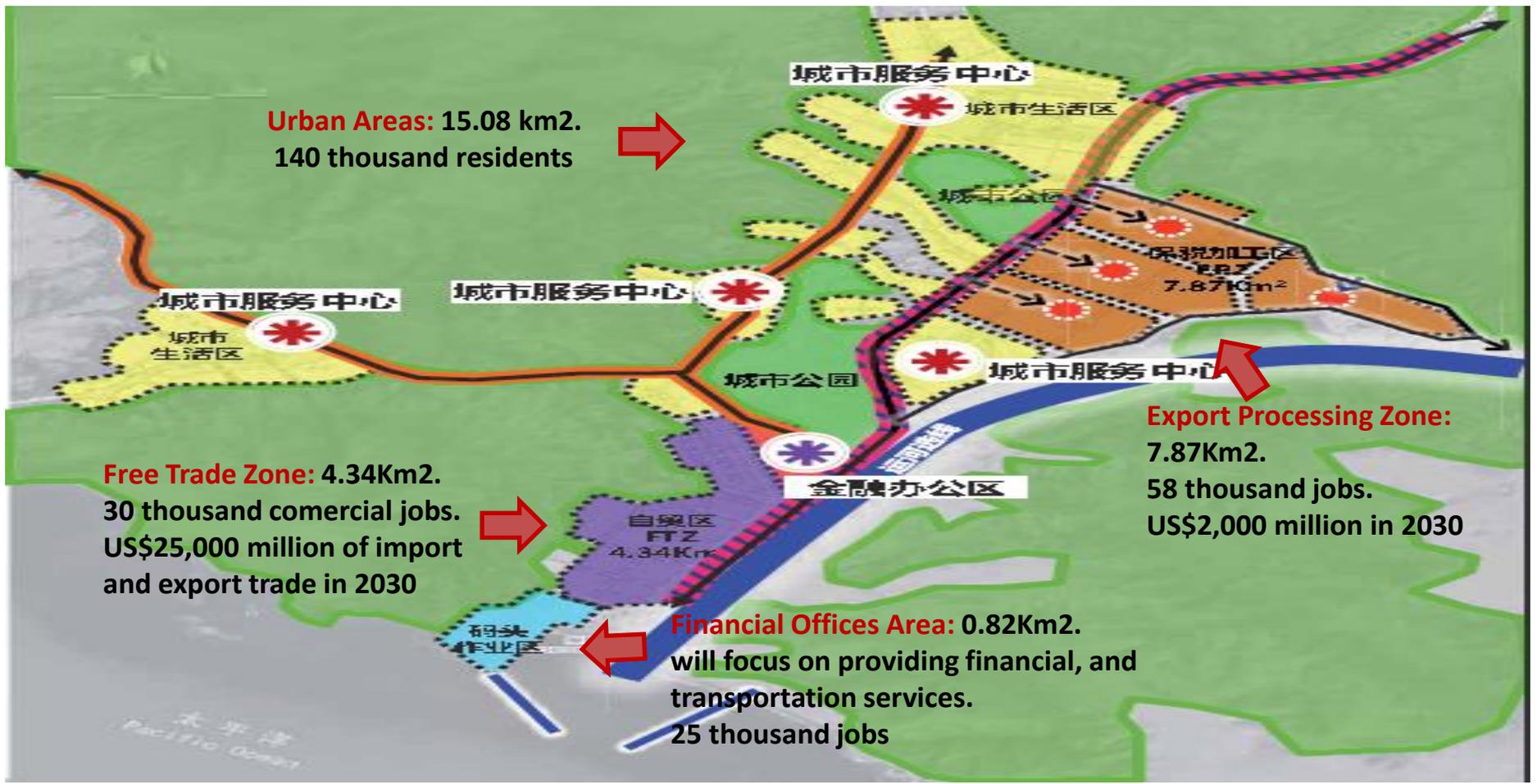




## A Free Trade Zone on the Pacific coast (Rivas)

Location: 20 km from the Pan American Highway and Rivas in the east, 120km from Managua in the north , 8km from the tourist complex planned in the south, and 17km from San Juan del Sur, and 16 km from the new airport near Rivas.

**4 functional areas: 29.2Km<sup>2</sup>, 113 thousand jobs**

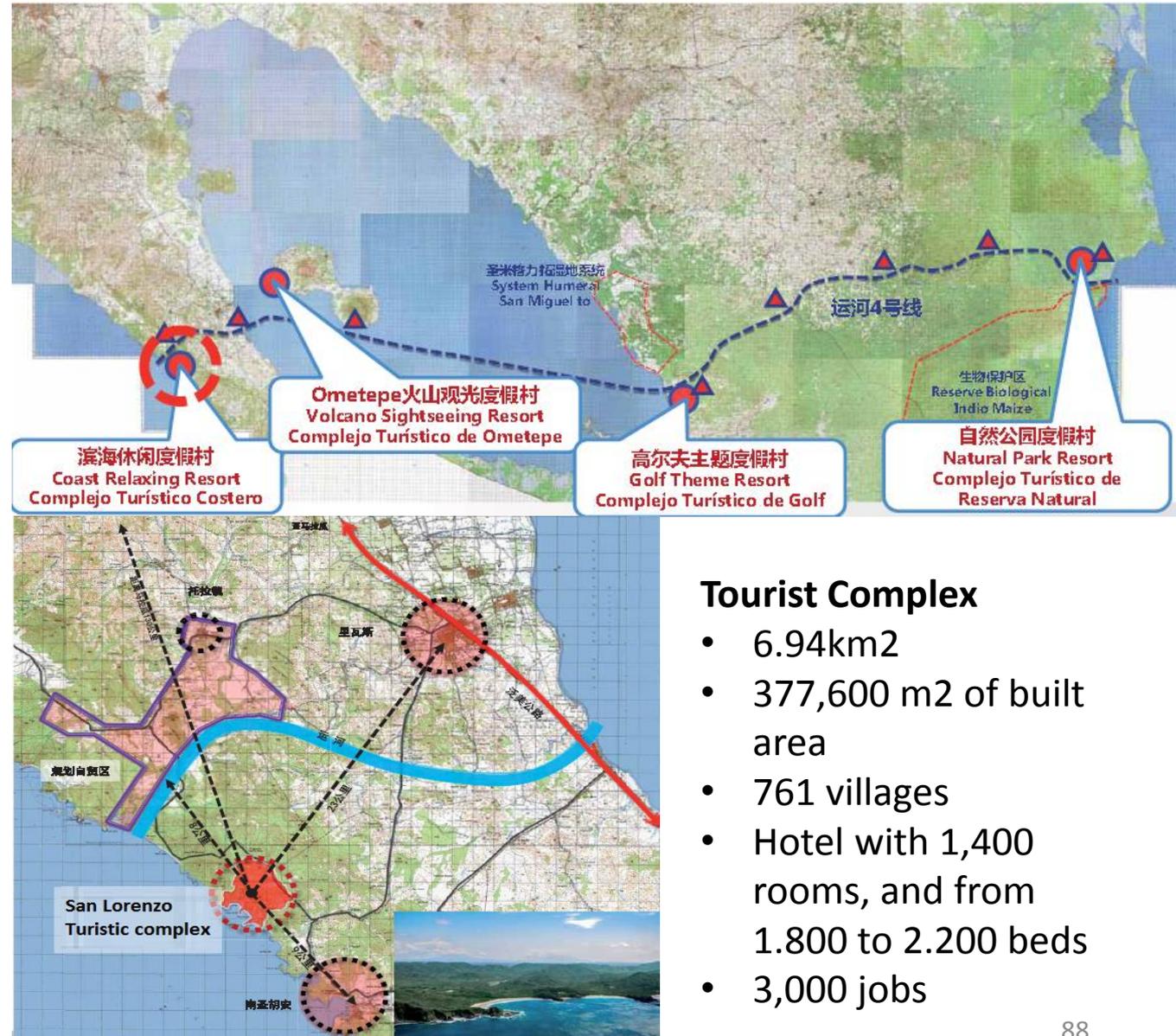




## Touristic Complexes

The complex will be:

- Superior Field Service lodging during project implementation
- Tourism destination for Nicaraguans
- 1st world level themed coastal resort in Nicaragua



### Tourist Complex

- 6.94km<sup>2</sup>
- 377,600 m<sup>2</sup> of built area
- 761 villages
- Hotel with 1,400 rooms, and from 1.800 to 2.200 beds
- 3,000 jobs

**Power plants, steel and cement, etc.**

**Sub projects needed to ensure the supply of materials and energy during implementation and operation of the project**

**It is currently undergoing the feasibility studies**

# Requirement of building materials

<b>MATERIAL</b>	<b>AÑO 1</b>	<b>AÑO 2</b>	<b>AÑO 3</b>	<b>AÑO 4</b>	<b>AÑO 5</b>	<b>AÑO 6</b>	<b>TOTAL</b>
<b>Cement (10,000 ton)</b>	<b>4.3</b>	<b>25.5</b>	<b>178.2</b>	<b>174.4</b>	<b>112.3</b>	<b>1.2</b>	<b>495.9</b>
<b>Explosives (10,000 ton)</b>	<b>4.2</b>	<b>25.5</b>	<b>35.8</b>	<b>36.2</b>	<b>34.0</b>	<b>2.5</b>	<b>138.2</b>
<b>Steal and corrugated (10,000 ton)</b>	<b>10.4</b>	<b>6.4</b>	<b>22.2</b>	<b>27.0</b>	<b>27.6</b>	<b>1.9</b>	<b>95.5</b>
<b>Coal Ash</b>	<b>0.2</b>	<b>1.5</b>	<b>30.7</b>	<b>30.2</b>	<b>18.0</b>	<b>0.1</b>	<b>80.8</b>
<b>Lubricants</b>	<b>10.4</b>	<b>6.4</b>	<b>22.2</b>	<b>27.0</b>	<b>27.6</b>	<b>1.9</b>	<b>95.4</b>

# GREATER OPPORTUNITIES FOR INTEGRATION

- Construction of a Multimodal Logistics Centre for Regional and Global Trade
- Reduction of time and costs of distribution (compared to Miami and Colon Free Zone)

## Increased trade flows of Central America



## Great need for skilled and unskilled labor



- Professionals
- Skilled and unskilled workers
- Middle and senior technicians
- Specialists

- Improvement and modernization of ports
- Reduction of costs of maritime transport for TM (20-30%) due to EEE ships



## Busiest Central American Ports

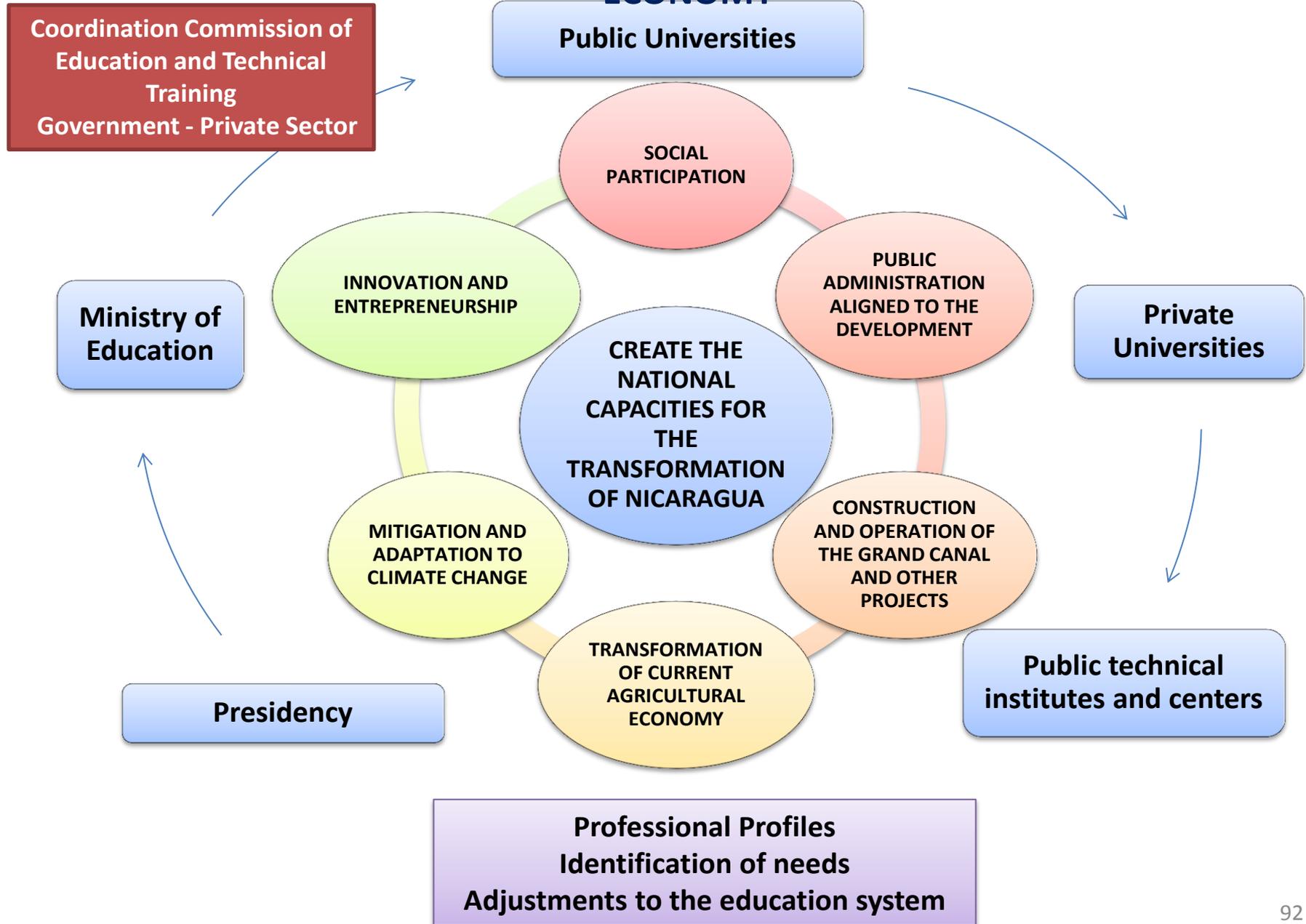


## Great boost to the construction

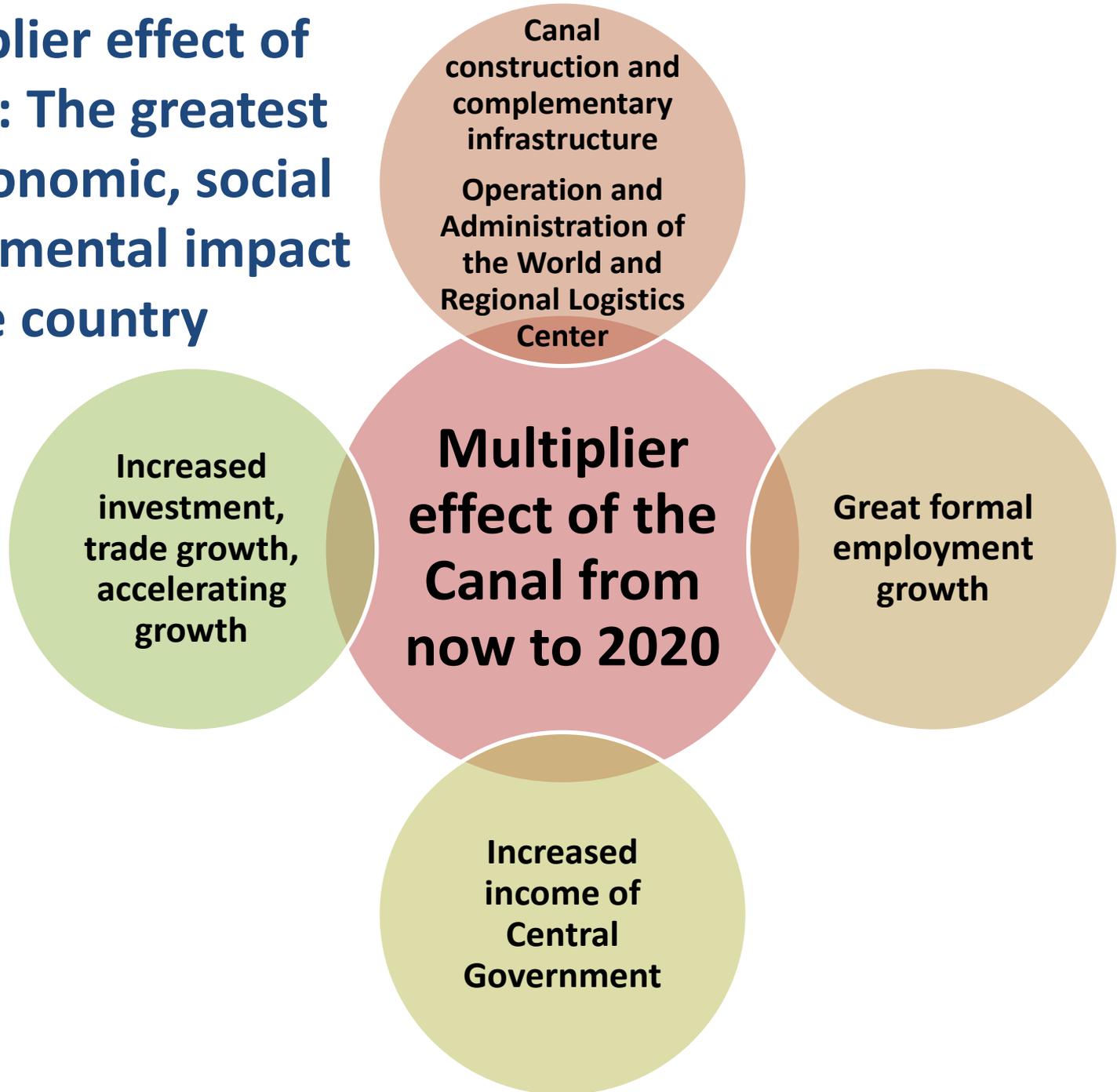
- Opportunities for companies in construction and construction equipment and materials
- Opportunities for land and sea transport companies

**GREAT MULTIPLIER EFFECT IN CENTRAL AMERICA**

# THE CHALLENGE OF TECHNICAL EDUCATION AND TRAINING FOR THE NEW ECONOMY



# The multiplier effect of the project: The greatest positive economic, social and environmental impact on the country



# The Grand Canal: historic opportunity for Nicaragua

The Grand Canal will generate the resources to build the desired development to achieve a prosperous and fairer Nicaragua

**Increasing resilience of ecosystems**

- Climate change adaptation
- massive reforestation
- Recovery of soil and water sources
- Habitat and biodiversity restoration

- Combining economic Independence with political independence already achieved by the FSLN

**Construction of economic independence**

- Formal Employment
- Growth of resources for social programs

**Overcoming of Extreme Poverty**

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- **Executive Secretary of the Commission of the Grand Interoceanic Canal of Nicaragua**
- **Minister, Private Secretary for National Policies of the Presidency of the Republic**



**THANK YOU**