



Climate Finance: The Case of Nicaragua

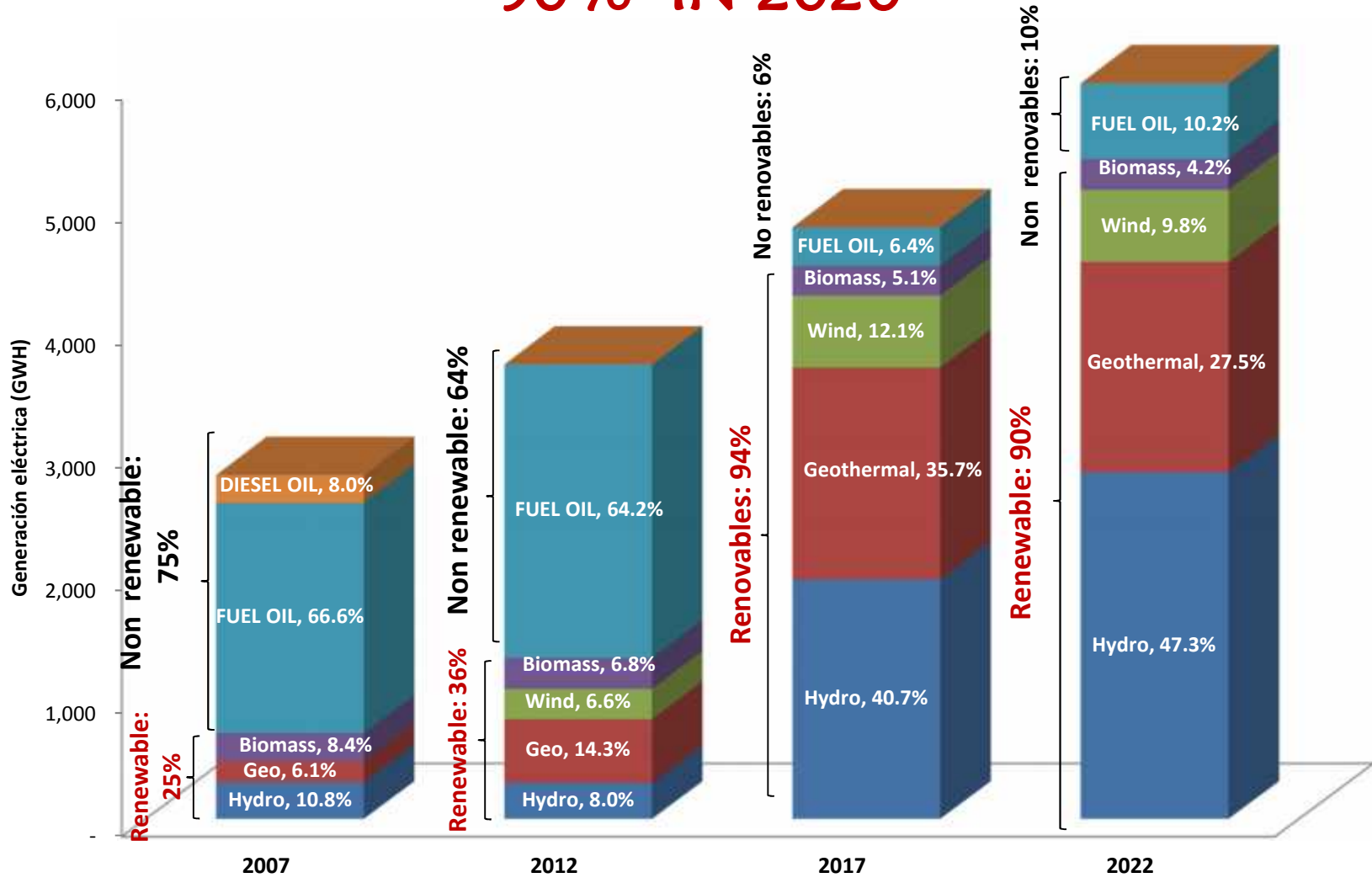
Dr. Paul Oquist

Nicaragua

Member of the Standing Committee of Climate Finance
for Latin America and the Caribbean

Manila, Philippines, 16 July, 2013

EXPANSION AND CONVERSION OF THE ENERGY MATRIX: 25% RENEWABLE IN 2007 TO 90% IN 2020



NICARAGUA'S ENERGY PROJECTS

GEOTHERMAL

San Jacinto-Tizate (72MW)
 Casita-San Cristóbal
 (35MW)
(107MW; US\$ 585.59 mill)



**SOLAR PANELS
 MICRO AND SMALL
 HYDROELECTRIC
 PROJECTS FOR
 ISOLATED AREAS**

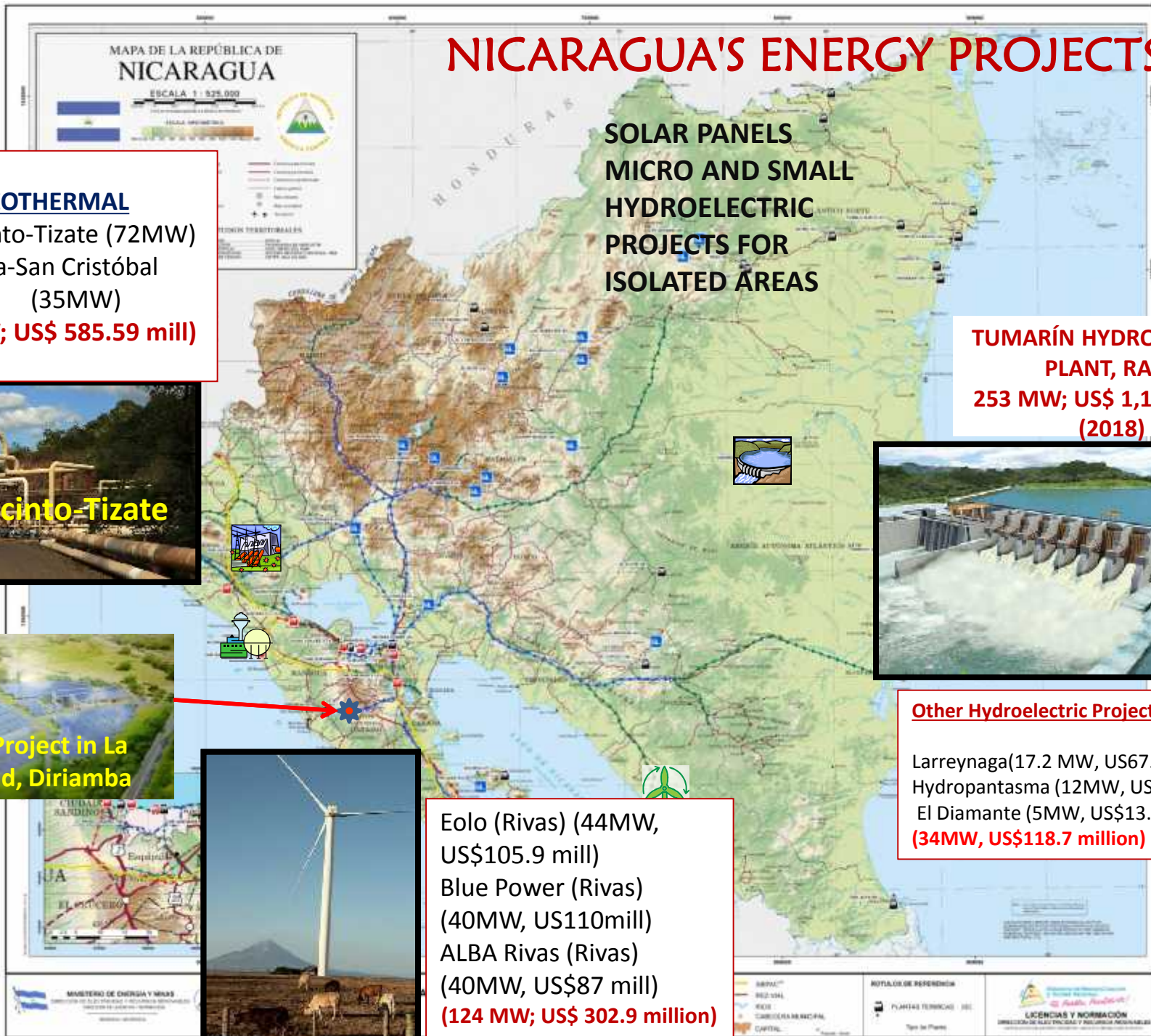
**TUMARÍN HYDROELECTRIC
 PLANT, RAAS
 253 MW; US\$ 1,100 Billion
 (2018)**



Other Hydroelectric Projects:

Larreynaga(17.2 MW, US\$67.9 mill)
 Hydropantasma (12MW, US\$37.4 mill)
 El Diamante (5MW, US\$13.4 mill)
(34MW, US\$118.7 million)

Eolo (Rivas) (44MW,
 US\$105.9 mill)
 Blue Power (Rivas)
 (40MW, US\$110mill)
 ALBA Rivas (Rivas)
 (40MW, US\$87 mill)
(124 MW; US\$ 302.9 million)

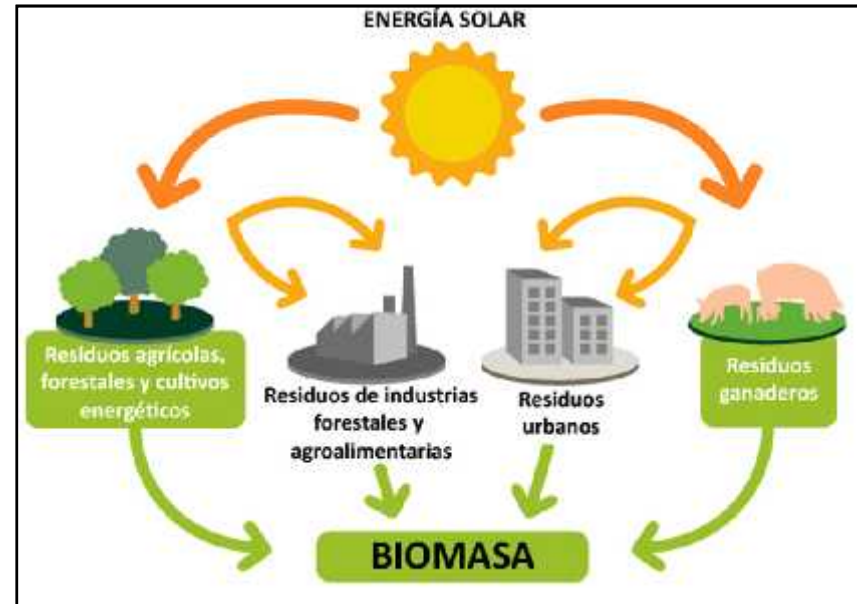


BIOMASS

- **Projects based on agribusiness plants residues :**

- Sugarcane
- Oil palm (oil)
- urban waste

	Present contribution	Net generation in 2012
Ingenio Nicaragua Sugar Estate	30 MW	77.3 MW
Ingenio San Antonio	30 MW	48.5 MW







- **CASUR –Benjamín Zeledón Sugarmill (2015): 24MW; US\$24.8 millones**
- **Montelimar Sugarmill (2016): 30MW; US\$27.8 millones**

2012-2016: 54MW* y US\$52.6 Millones

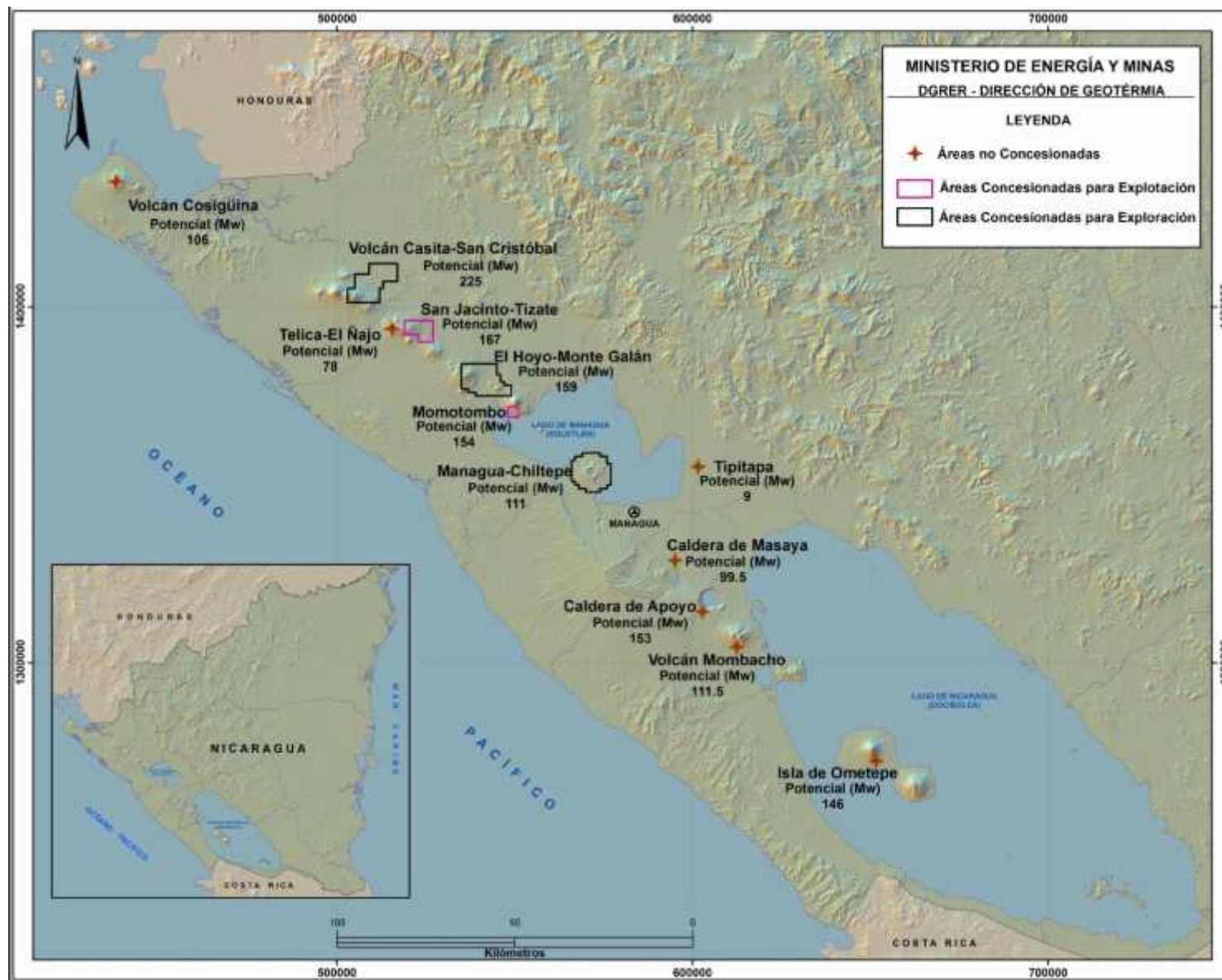
*on season

INVESTMENT OPPORTUNITIES IN HYDROPOWER

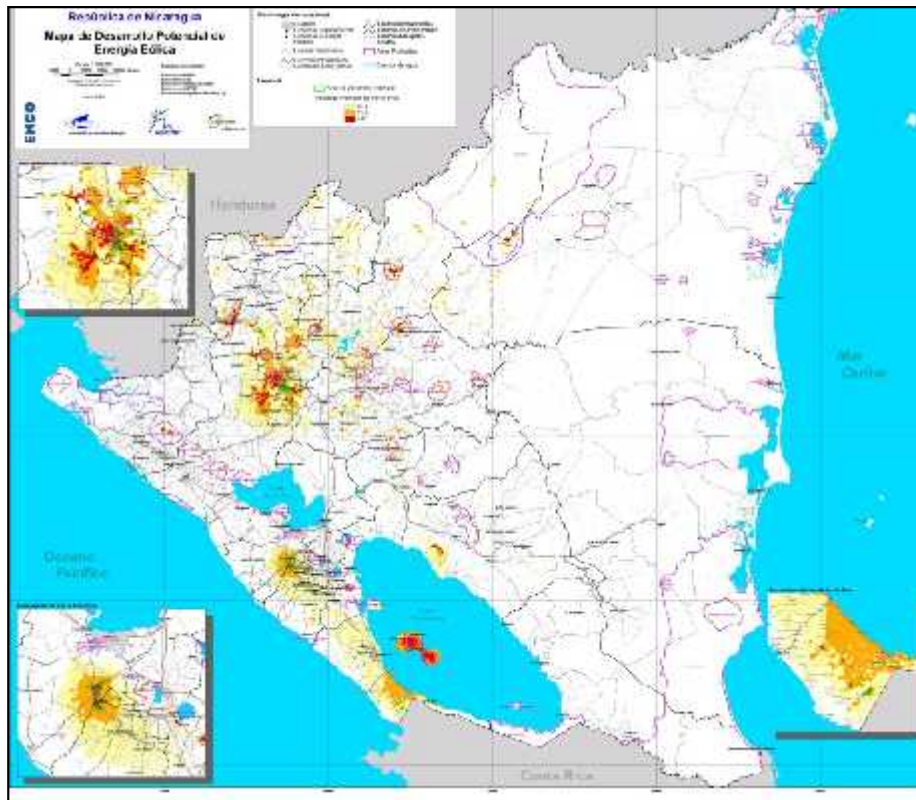


-  Centrales en Operación
 - Santa Bárbara
 - Centroamérica
 - Las Cañas
 - El Sardinal
 - El Wawule
 - Siempre Vivas
 - Salto Grande
-  Proyectos en Construcción
 - Pantasma
 - Larreinaga
 - Tumarín
-  Proyectos con Licencia
 - Salto Y-Y
 - Piedra Puntuda
 - El Diamante
-  Proyectos Candidatos
 - Boboké
 - Copalar Bajo
 - Consuelo
 - Pajaritos
 - La Estrella
 - Valentín
 - Piedra Fina
 - Brito
 - Corriente Lira

GEOHERMAL POTENTIAL ESTIMATED AT 1,500 TO 2,000 MW



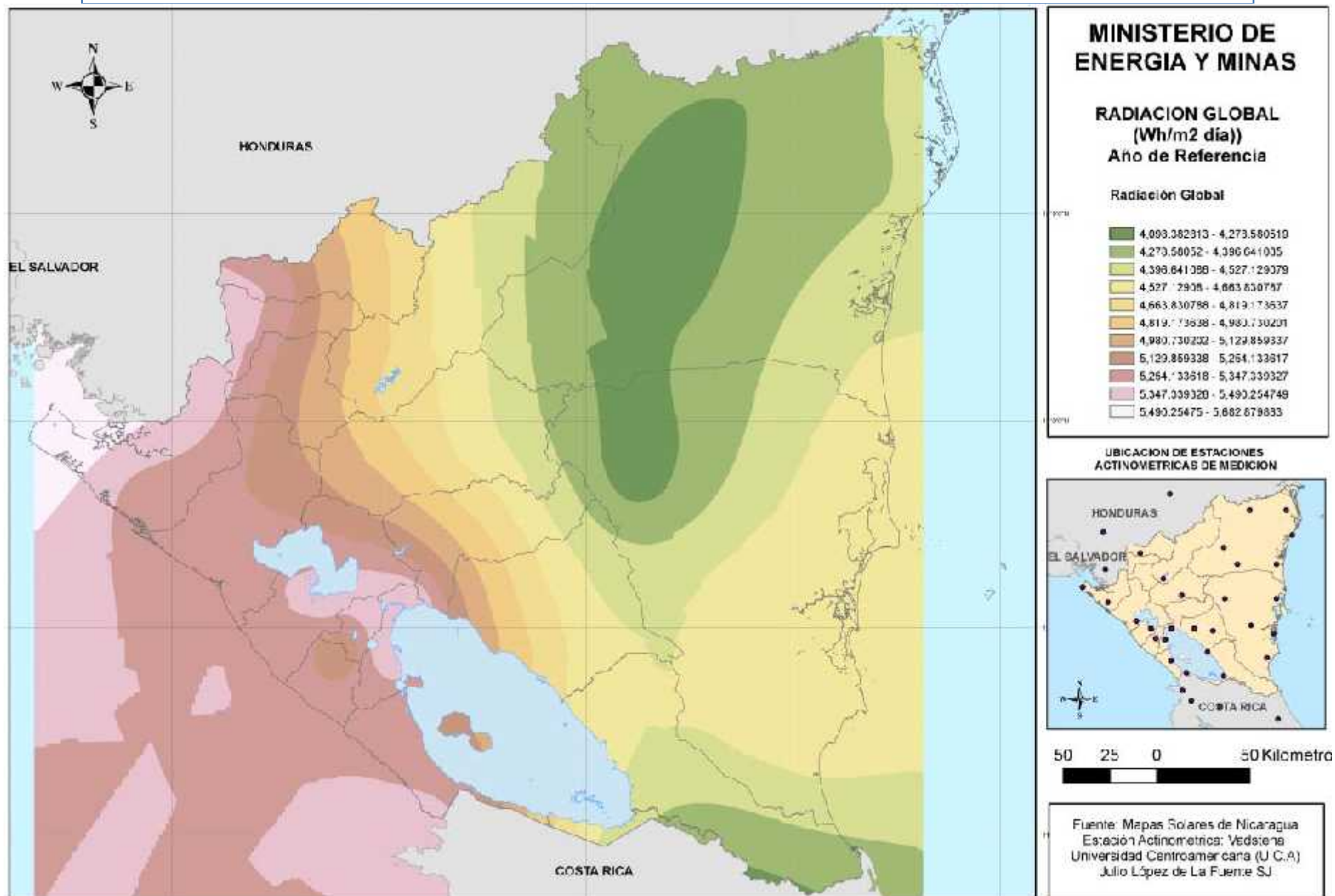
WIND POTENTIAL IN NICARAGUA



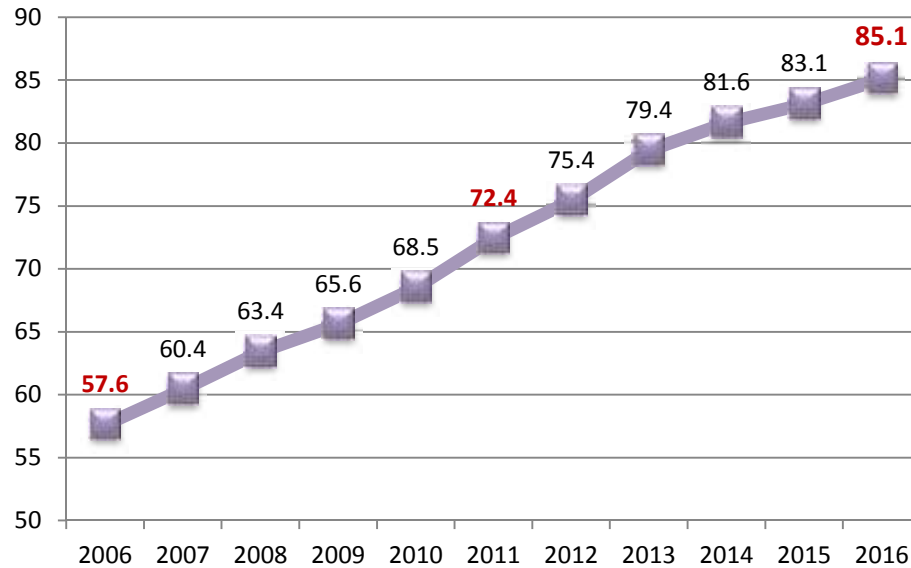
INVESTMENT OPPORTUNITIES IN WIND PROJECTS



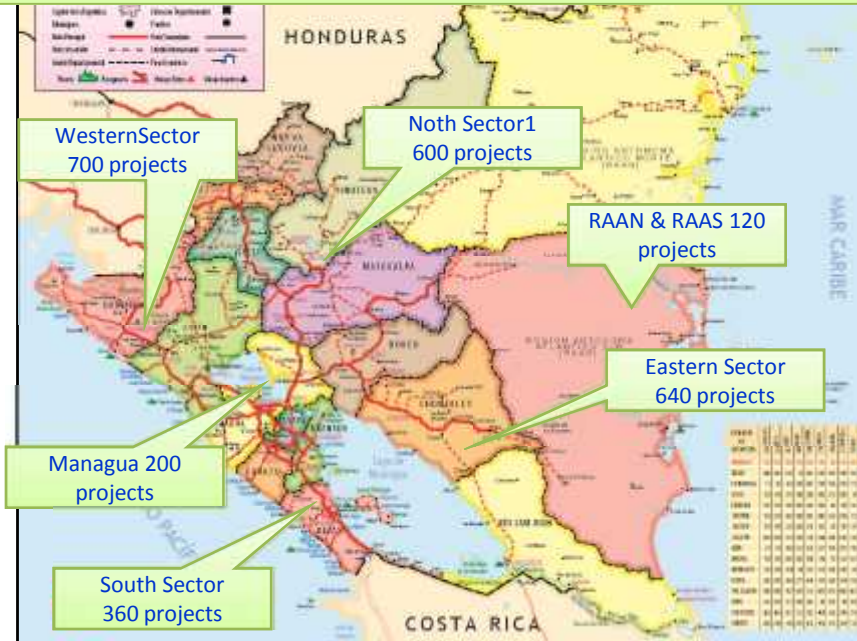
MAP OF SOLAR RADIATION IN NICARAGUA



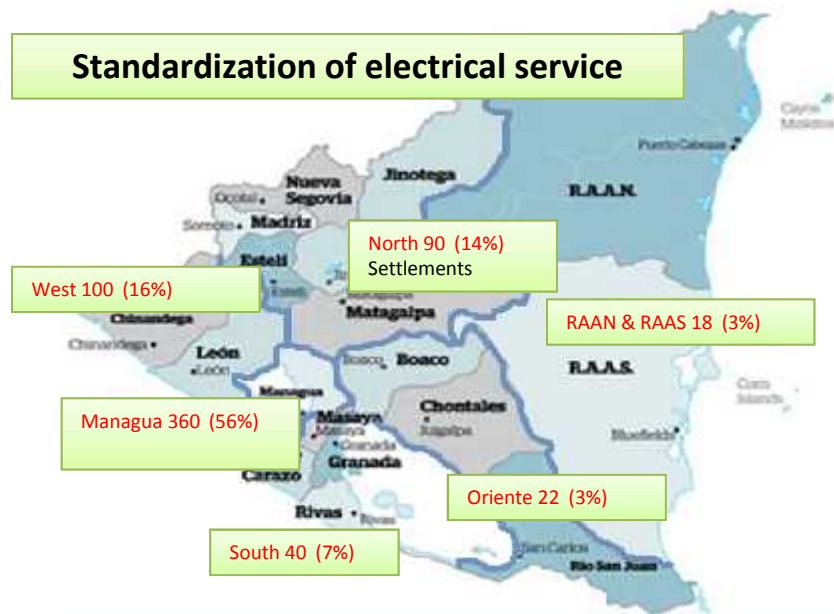
Increase in the coverage of electricity service in Nicaragua (%)



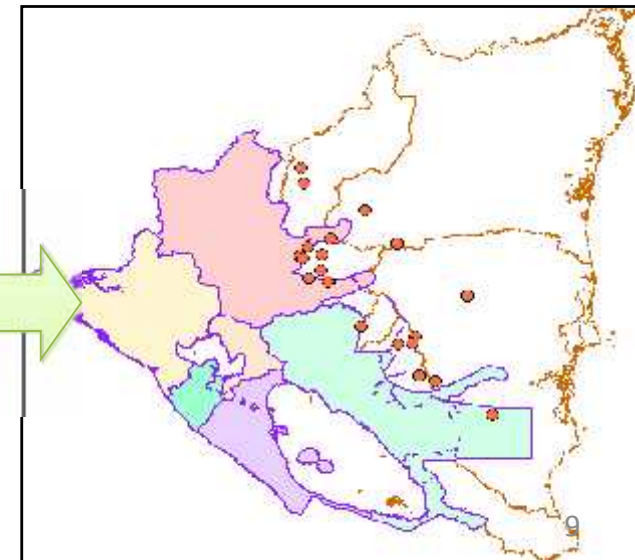
Rural Electrification by Extension of Networks



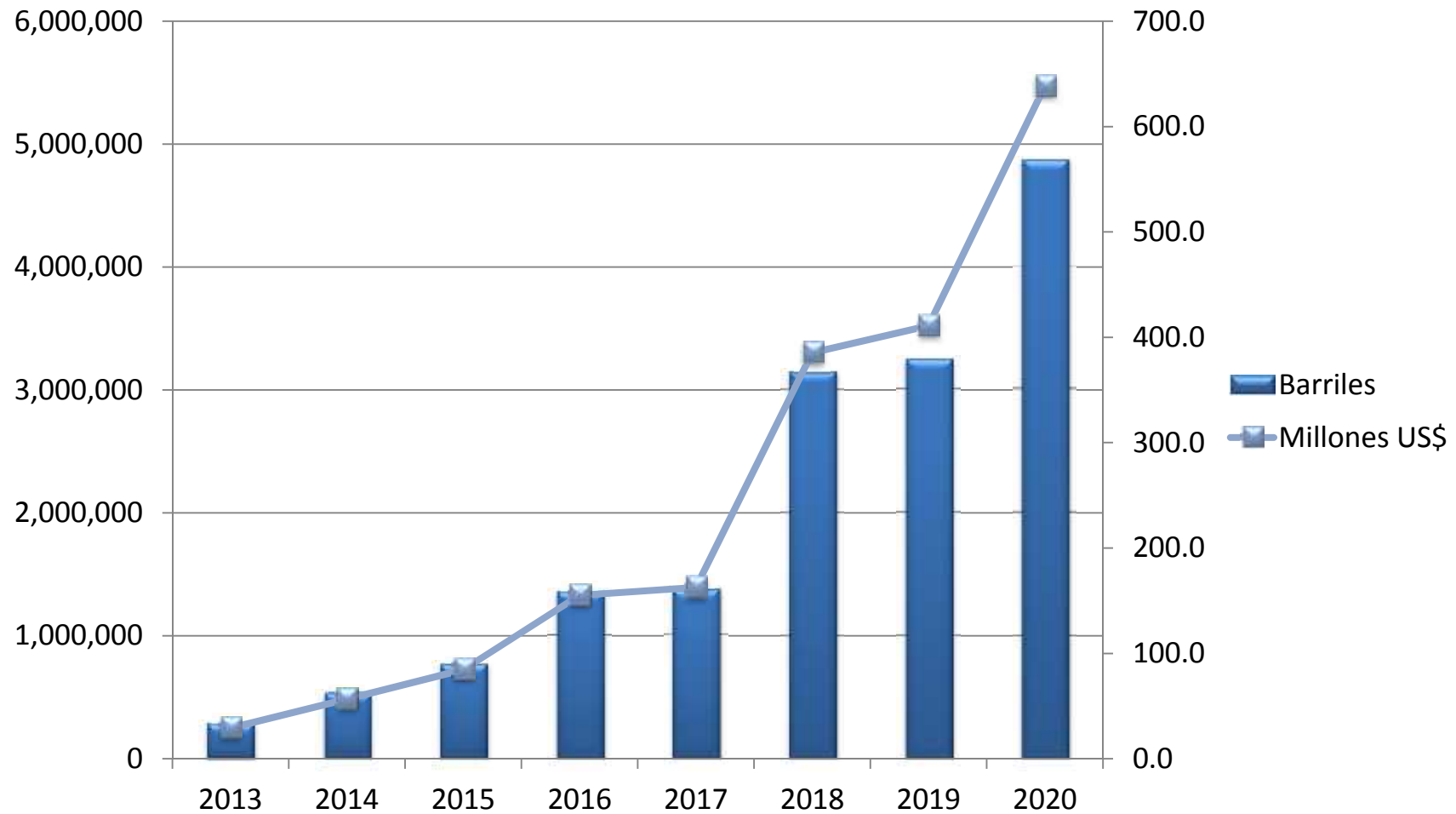
Standardization of electrical service



Sites in studies for Small Hydroelectric Plants (SHP)



SAVING BY REDUCING OIL IMPORTS FOR ENTRY OF RENEWABLE ENERGY PROJECTS 2013-2020



OVERALL CLIMATESCOPE SCORES

Ranking and Scores by Country

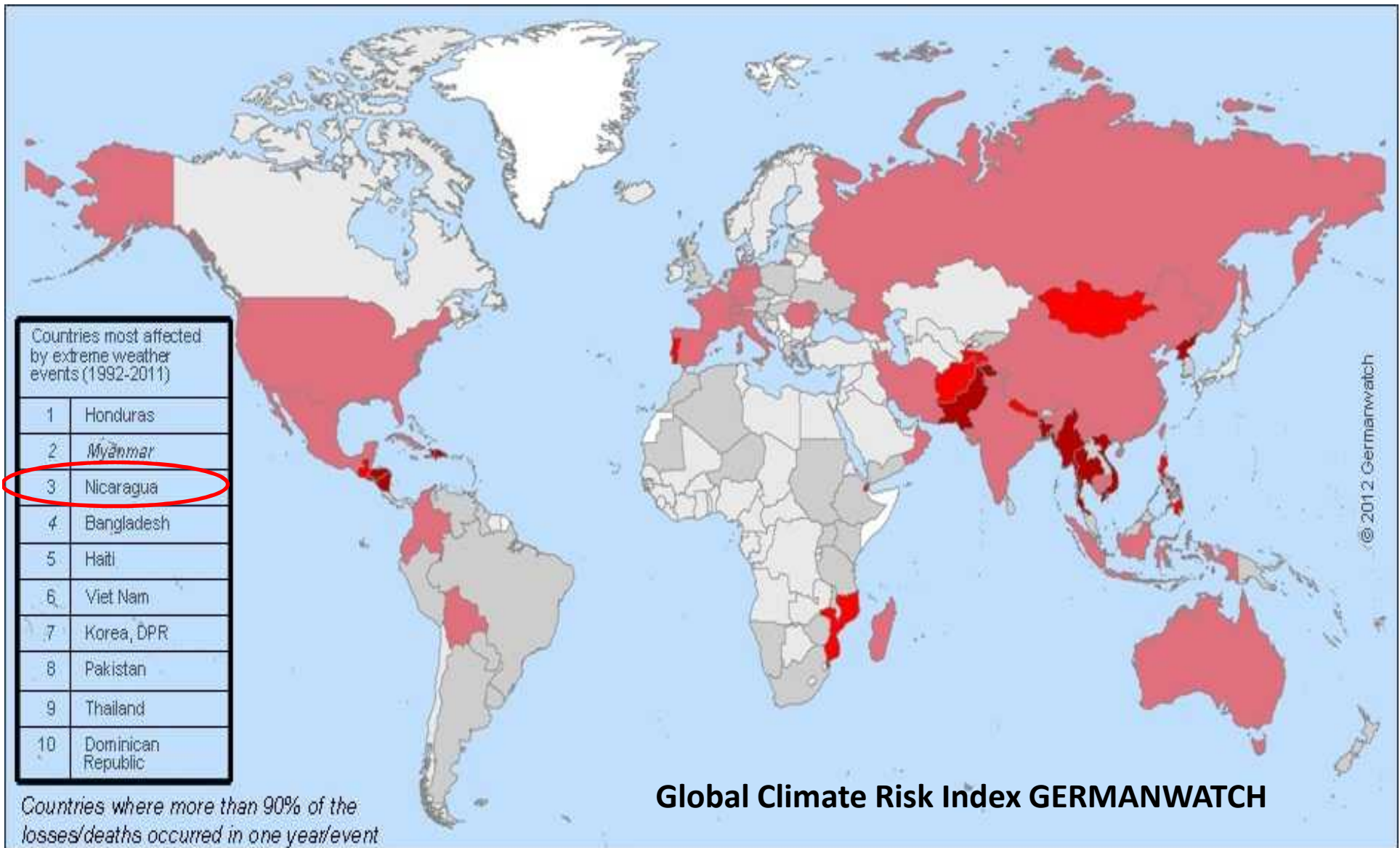
- Brasil presenta la puntuación más alta con 2.64.
- Nicaragua ocupa el segundo lugar con una puntuación total 2.13, en gran medida debido a que encabezó la lista en términos de inversiones en energía limpia y disponibilidad de microcréditos verdes.
- Panamá fue tercero con una marca de 1,97, gracias a un importante esfuerzo en la gestión de las emisiones de gases de efecto invernadero y por tener un marco facilitador acogedor.



Colors show range for overall score

0.0-1.00 1.01-2.00 2.01-3.00 3.01-4.00 4.01-5.00

Multilateral Investment Fund: *Climatescope 2012*
Report by Bloomberg New Energy Finance



Climate Risk Index: Ranking 1992 – 2011



CLIMATE VARIABILITY AND LOSSES

NIÑA-NIÑO ALTERNATION

- 2005: Niña. Damages and losses.
- 2006: Niño. Losses by drought
- 2007: Niño Transition. Drought in the first crop, rainfall deficit in June and July.
- 2007: Niña. Losses due to excessive moisture.
- 2008: Niña. Rainfall excess and floods.
- 2009: Niño. Losses and damages in second crop.
- 2010: Niña. Losses due to rainfall excess.
- 2011: Tropical Depression12E

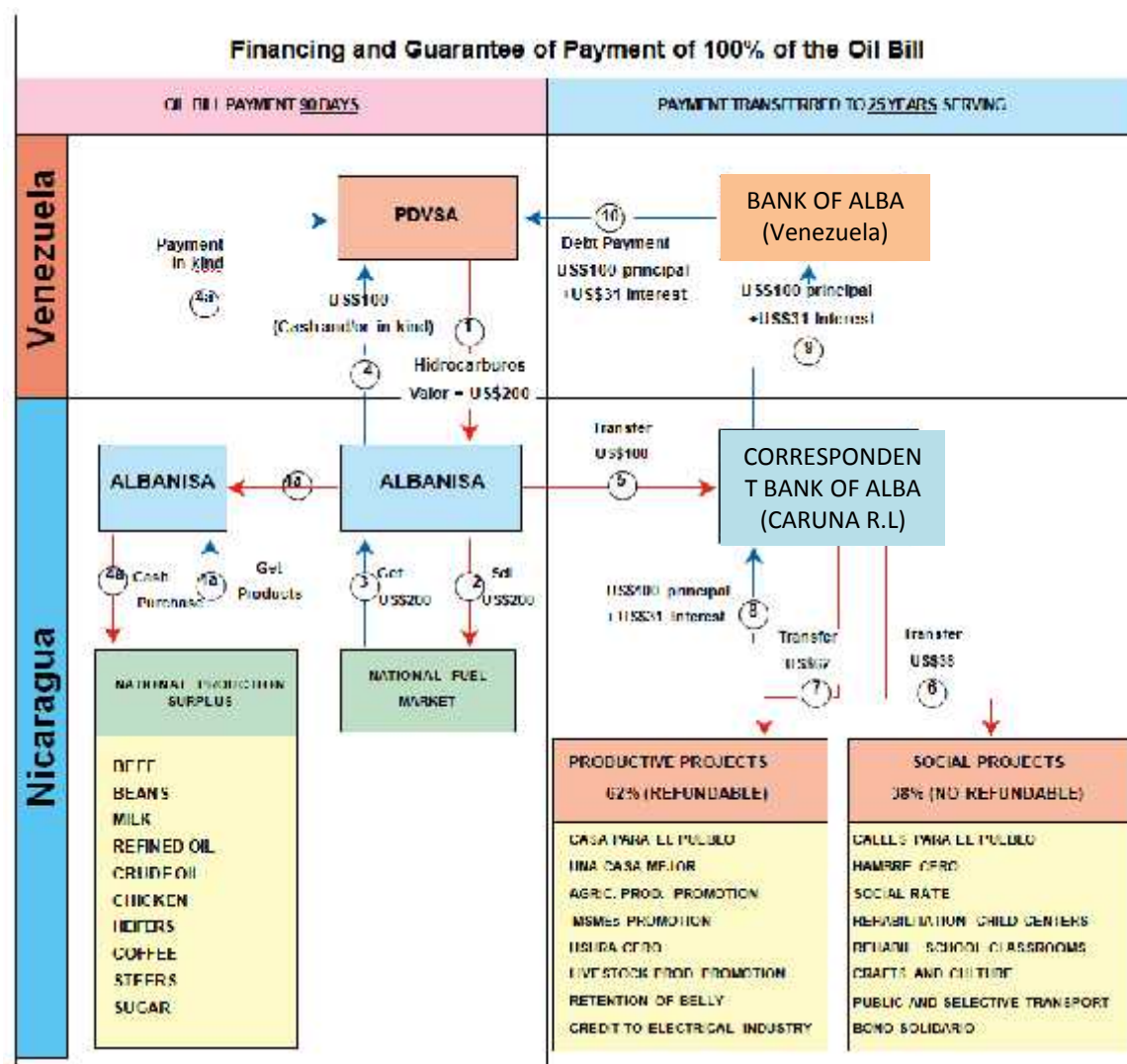
Agricultural losses 2005-2010

- 392,000 ha. Planted areas lost
- 9% of the total area planted
- **US\$ 206.3 million**, equivalent to 2.68% of GDP

ECLAC on Tropical Depression12-E (October 2011)

- 148,530 people affected, including 16 deaths
- US\$ 445.4 million, equivalent to 6% of GDP, in damages
- Nicaragua requires US\$ 1,963.1 million for rehabilitation, reconstruction and adaptation

PETROCARIBE MECHANISM



✓ Nicaragua has a guaranteed supply 100% of its oil needs, with 25 years deferred payment with two-year grace period and 2% interest than half of the oil bill.

✓ With half deferred funds invested 62% in socio-productive projects that stimulate the economy and allow the returns to amortize payments in the form and time.

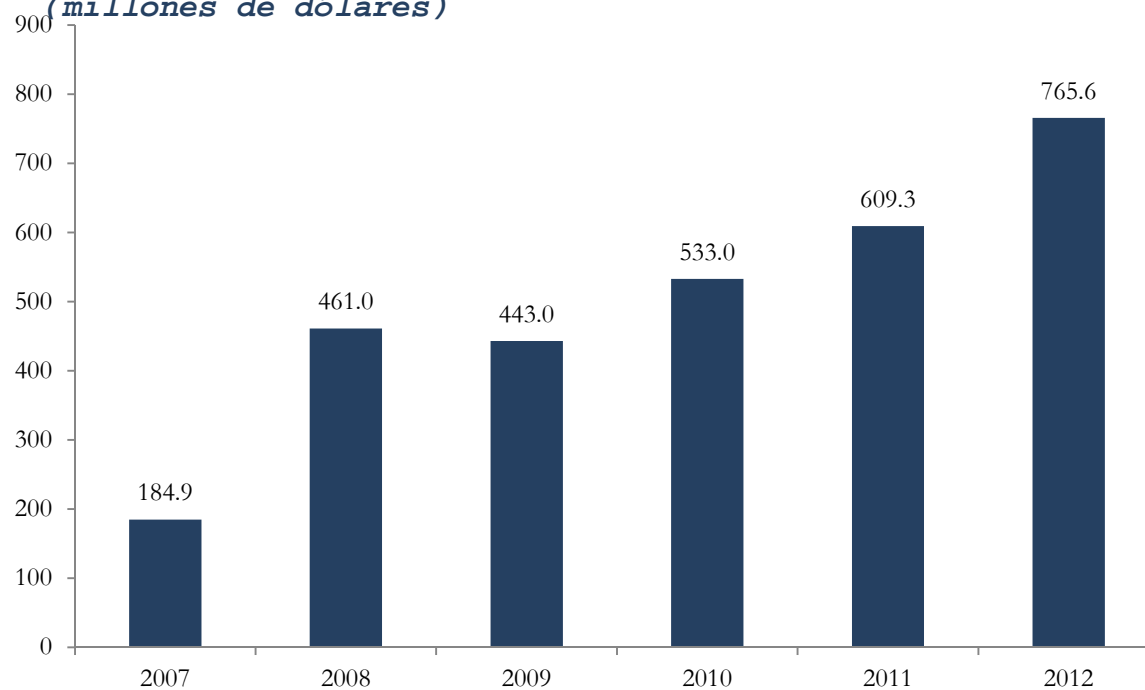
✓ The other 38% is used to fund social projects not returnable, fully or partially.

Cooperación Venezolana a Nicaragua

Cooperación Venezolana en el marco del ALBA-TCP (millones de dólares)

	2007	2008	2009	2010	2011	2012
Anual	184.9	461.0	443.0	533.0	609.3	765.6
Acumulado	184.9	645.9	1,088.9	1,621.9	2,231.2	2,996.8

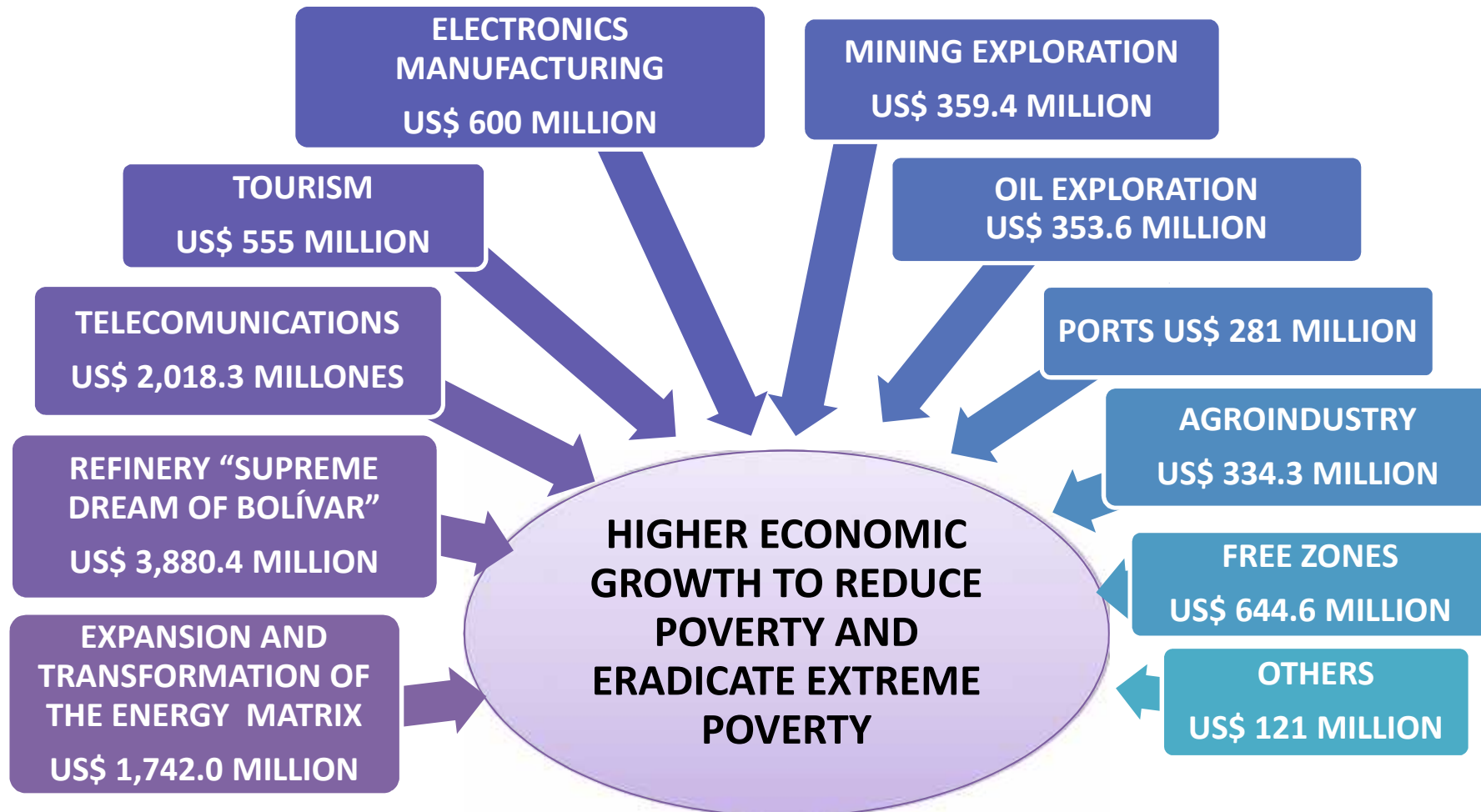
Cooperación Venezolana en el marco del ALBA-TCP (millones de dólares)



Fuente: BCN

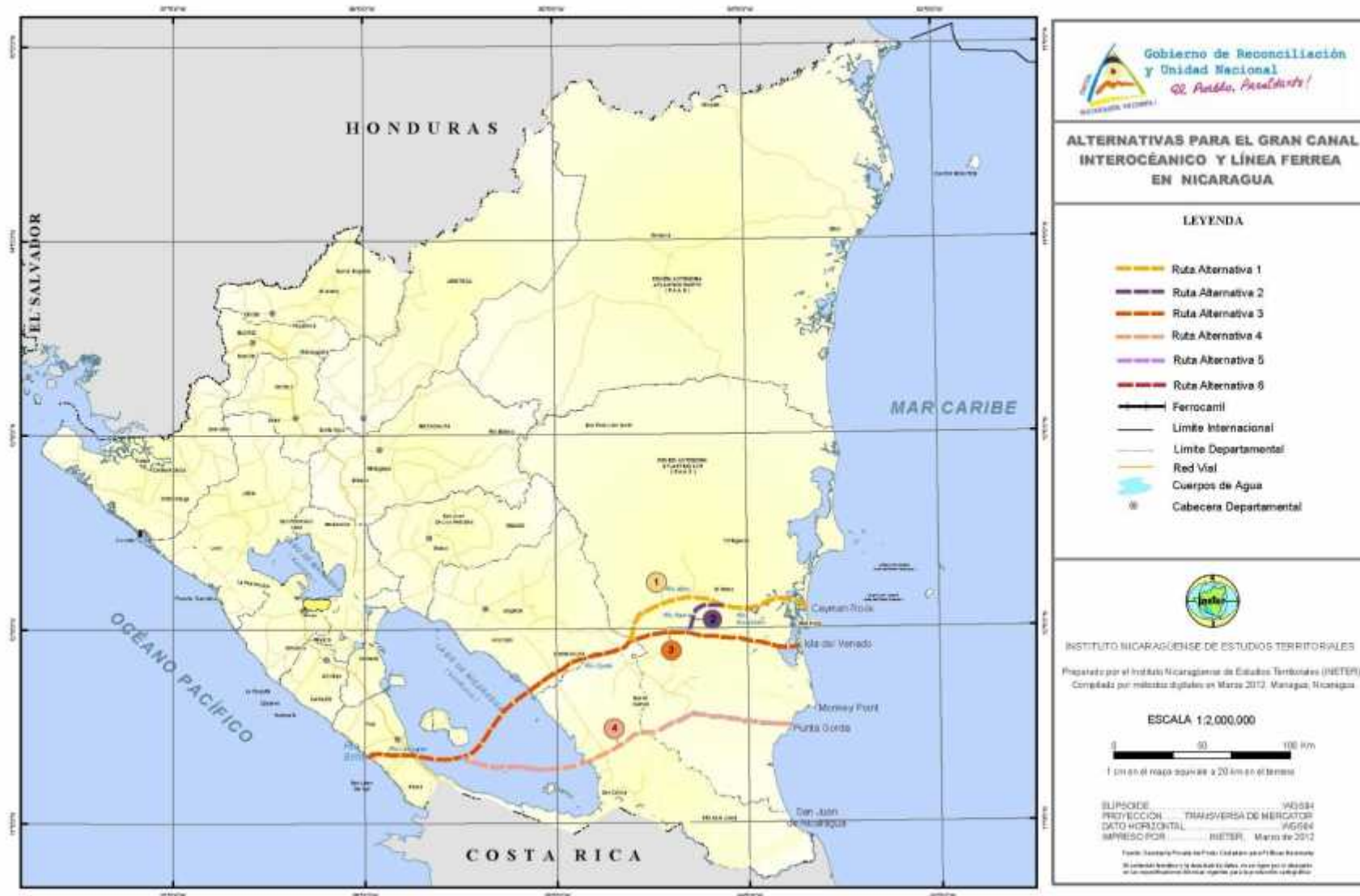
INVESTMENT PORTAFOLIO

US\$ 10.9 BILLION IN 2012-2016



THE GRAND INTEROCEANIC CANAL OF NICARAGUA US\$ 40 BILLION:
Wet and Dry Canal, Airport, Railway, Free Zones in the Caribbean and Pacific, and Pipeline

INVESTMENT PORTAFOLIO



Waterway, Canal, Airports, Railway, Free Zones in the Caribbean and Pacific, and Freeports

SUPERCARGUEROS DOMINARÁN EL COMERCIO MARÍTIMO MUNDIAL

Se proyecta que los buques post-Panamax representarán el 30% del total de buques 2030; y 62% de la capacidad total de TEUs de la flota de portacontenedores en ese momento.

[US Army Corps of Engineers, 2012](#)



BUQUES DE CONTENEDORES DEL TIPO MAERSK TRIPLE E

- 400 metros de largo , 59 metros de ancho y 73 metros de altura
- Calado demasiado profundo para canal de Panamá y otros puertos en América.

La principal limitación de Panamá para una ampliación mayor es la falta de agua.

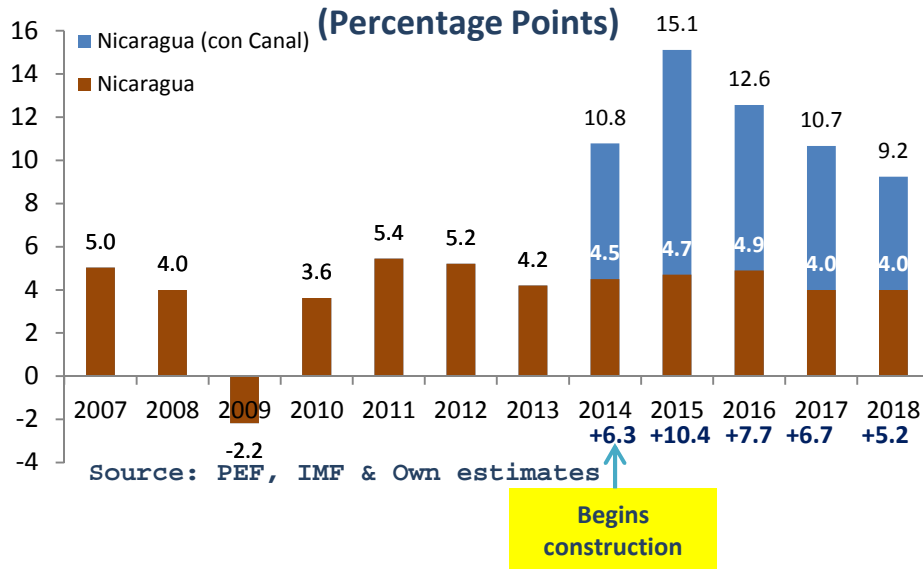
Ambas vías, Panamá y Nicaragua serían complementarias.



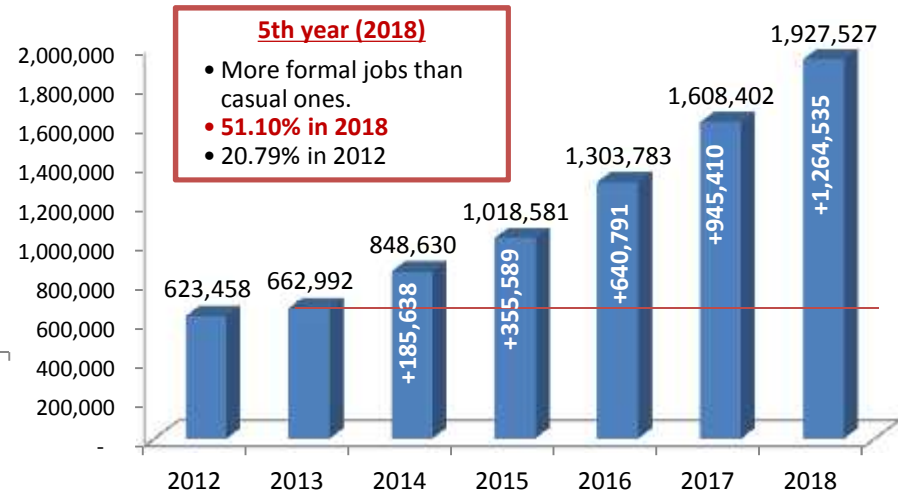
DISEÑO DE BUQUE MAERSK TRIPLE E

INTEROCEANIC GRAND CANAL OF NICARAGUA: MAIN ECONOMIC IMPACTS EXPECTED IN NICARAGUA

Nicaragua's Economic Growth with and without Canal



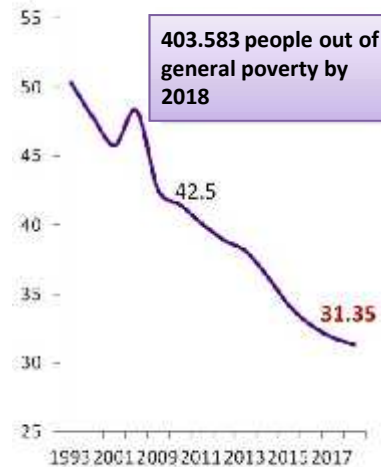
FORMAL EMPLOYMENT IN NICARAGUA 2012-2018



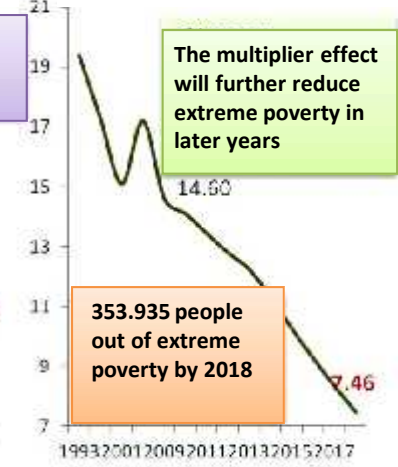
The increase in revenue, would be a source of funding to fight poverty.



General Poverty in Nicaragua (Percentage points)



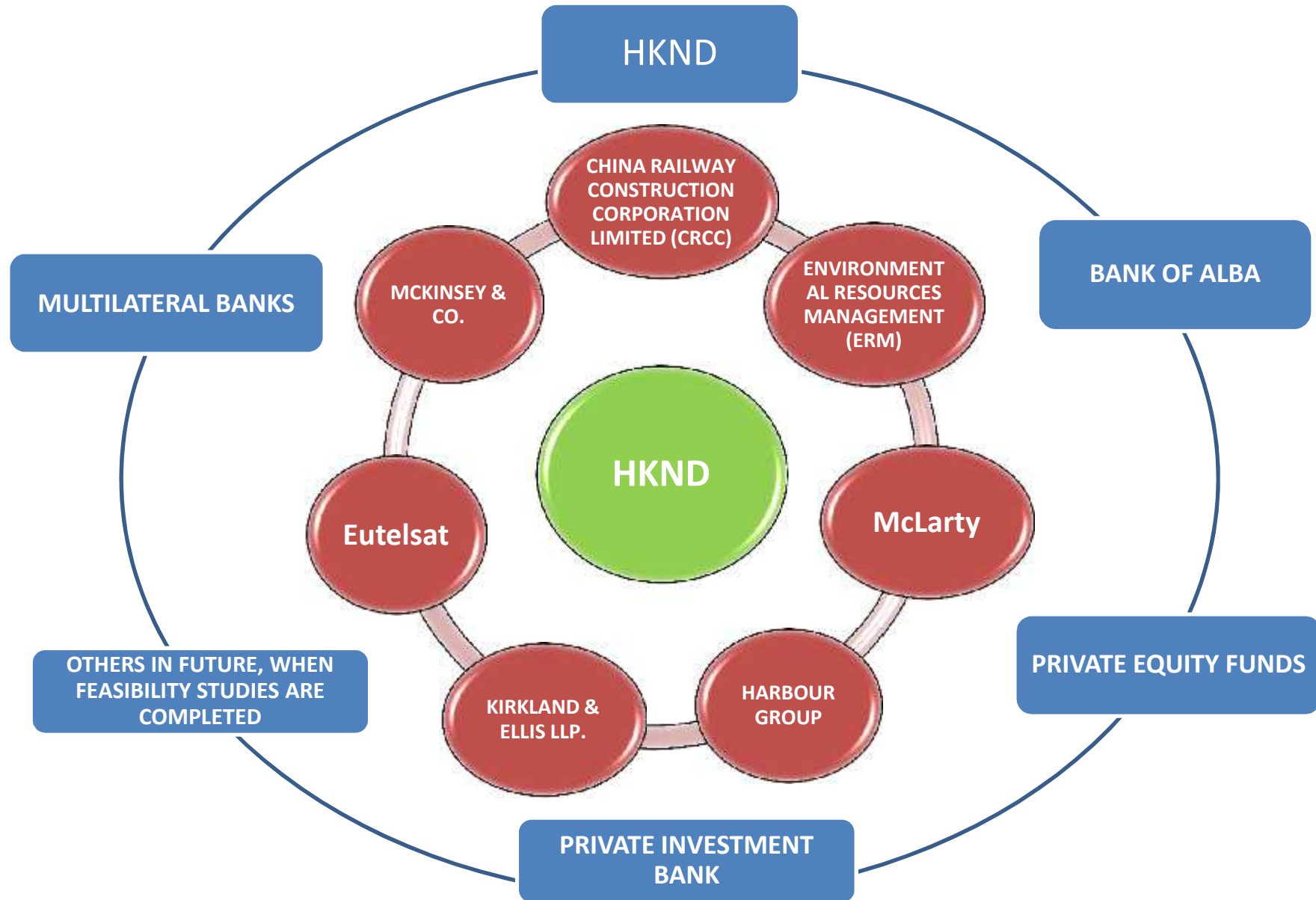
Extreme Poverty in Nicaragua (Percentage points)



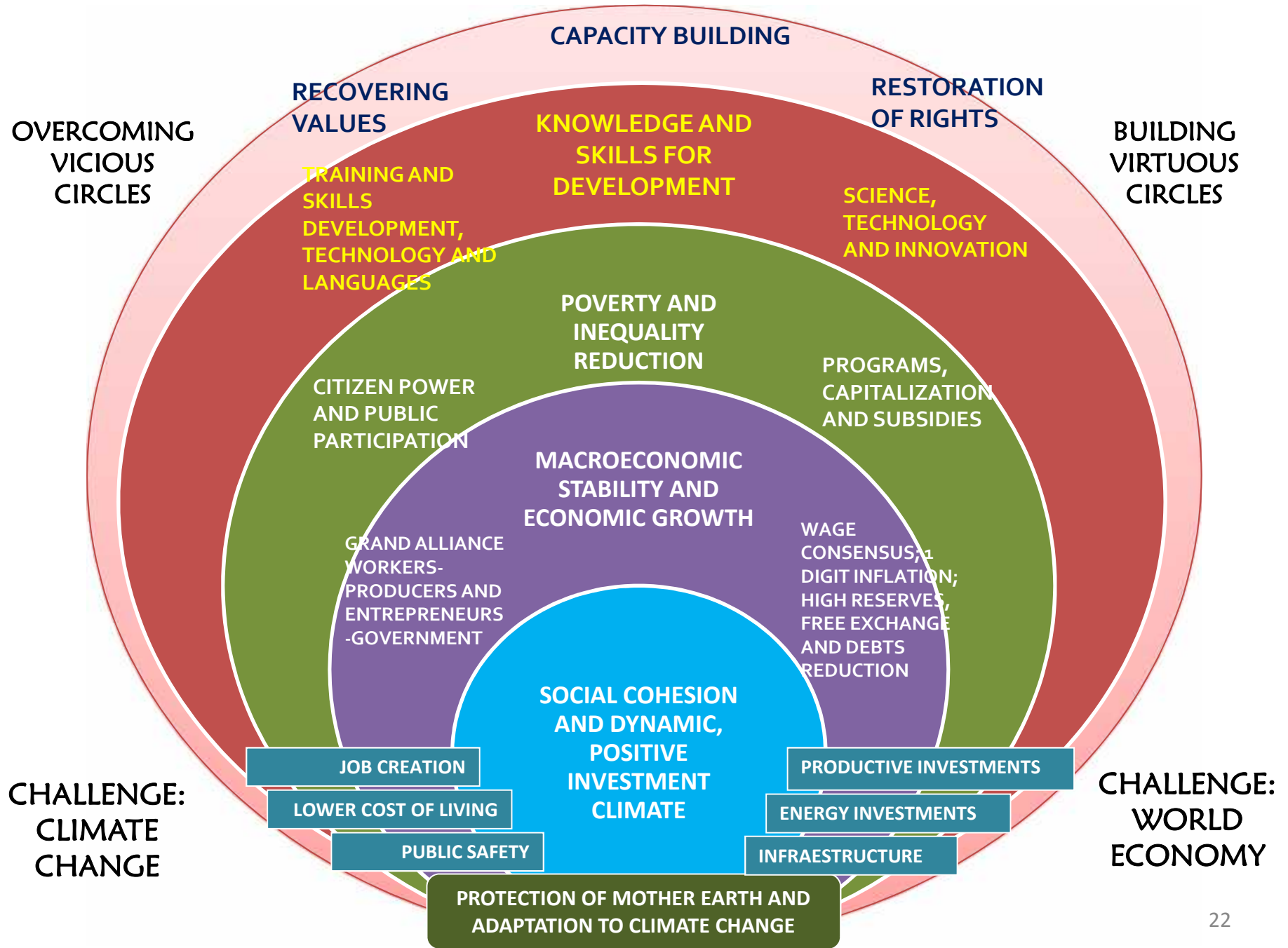
Fuente: INIDE (1993-2009) & Estimaciones Propias

We are working with **ECLAC** to estimate the effects of the Grand Interoceanic Canal on all sectors of the Nicaraguan economy, on Central America and South America.

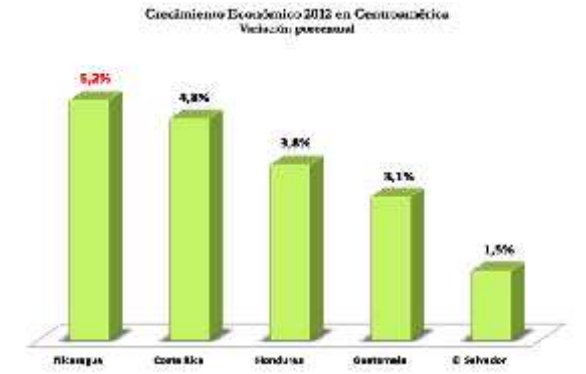
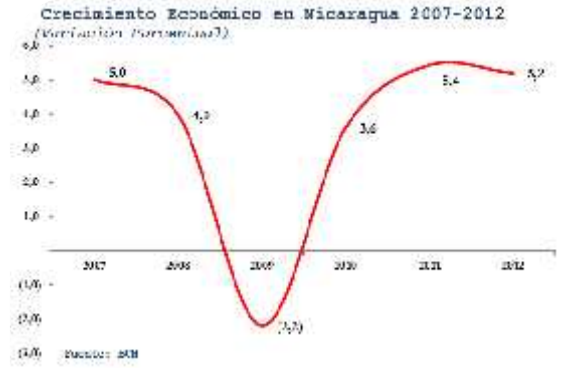
COMPANIES CONTRACTED BY HKND



MODEL BASED ON CHRISTIAN VALUES, SOCIALIST IDEALS AND SOLIDARITY PRACTICES



Good recovery in 2010 and economic growth in 2011 and 2012



Economic growth above 5% in 2011 and 2012

Nicaragua leading economic growth in Central America



1 digit inflation



High export growth: +19% in 2012/2011 Exports doubled between 2012 and 2006

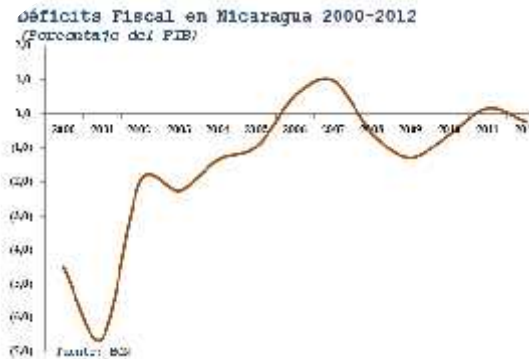


Investment record: More than 3 times that in 2006

Fiscal stability Increased work



High International Reserves: 2.4 times the monetary base, allows free exchange and currency stability



Sustainable fiscal deficit



Constant reduction of national debt



More work: 48.2% more than in 2006



Formal employment growth: 52.8% more people registered than in 2006



Fewer unemployment

SURVEY OF COST OF LIVING IN WORLD: MANAGUA, NICARAGUA (POSITION 213) THE CITIES WITH THE SECOND LOWEST COST OF LIVING

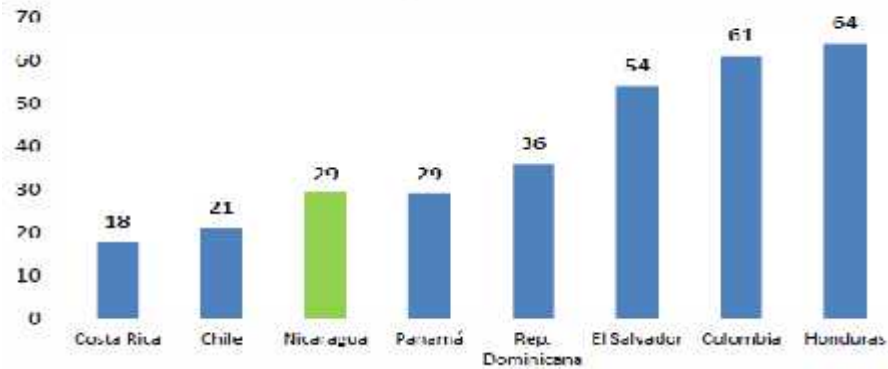
**Posición Mundial
entre 214 ciudades**

2011	2010	CIUDAD	PAÍS
10	21	Sao Paulo	Brasil
12	29	Rio de Janeiro	Brasil
33	70	Brasilia	Brasil
51	100	Caracas	Venezuela
53	45	La Habana	Cuba
63	66	Bogotá	Colombia
75	123	Santiago	Chile
127	129	Montevideo	Uruguay
138	135	Lima	Perú
146	129	San Juan	Puerto Rico
148	166	Ciudad de México	México
159	161	Buenos Aires	Argentina
165	183	San José	Costa Rica
168	169	Ciudad de Guatemala	Guatemala
183	193	Monterrey	México
196	194	Quito	Ecuador
199	201	San Salvador	El Salvador
204	204	Asunción	Paraguay
208	204	Tegucigalpa	Honduras
212	211	La Paz	Bolivia
213	212	Managua	Nicaragua

EUENTE: MERCER

THE BEST PUBLIC SAFETY IN CENTRAL AMERICA

Índice de Seguridad 2012

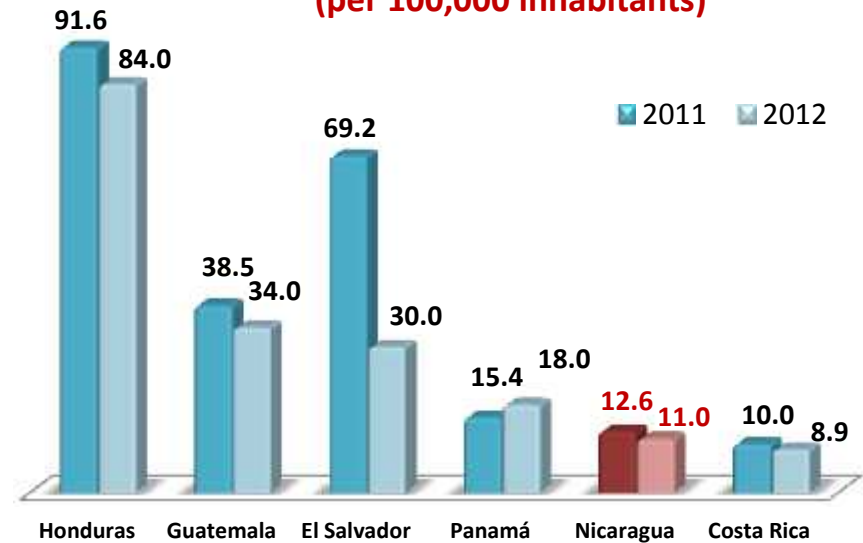


Nicaragua is the second safest country in Central America and the third in Latin America (Indicators: armed conflict, organized crime, kidnapping, etc.)

Fuente: Economist Intelligence Unit (EIU), 2012 Security Risk Report

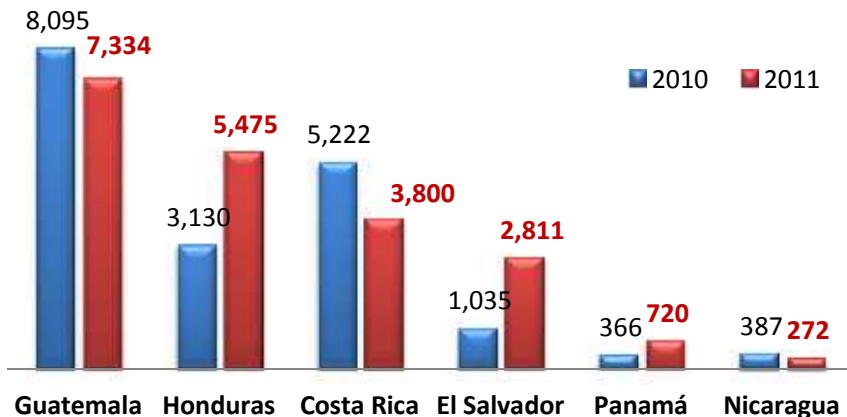
8.8 (Global Rates-WHO)
26 (Latin American Rates – UNDP)

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



Fuentes: UNODC; OEA; Policía Nacional

Vehicular theft in Central America



In 2012, vehicular theft in Nicaragua continues to low at 218 vehicles (30% less than in 2011)



THANK YOU

