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THE NICARAGUA INTEROCEANIC GRAND CANAL IN THE CENTRAL AMERICAN REGIONAL DEVELOPMENT CONTEXT: CONSIDERATIONS FOR THE DEBATE

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"Si la patria es pequeña, uno grande la sueña"
Rubén Darío, 1907

ABSTRACT

In the regional context of Central America, the Nicaragua Interoceanic Grand Canal presupposes a great economic, technological and geopolitical challenge. However, beyond the economic expansion that the project, the merchant traffic, the new docks and surroundings imply, the Nicaraguan ruling class has not tackled the restructuring of the economic policy that will allow better use of the hypothetical GDP increase, especially for the affected communities and the most vulnerable groups of the country. To demonstrate the need for such changes, the article analyses the Nicaraguan Grand Canal Project in the context of the tumultuous political history of Central America and the current geopolitical unrest linked to global merchant traffic, identifying the main regional weaknesses of the Nicaraguan proposal, as well as the fundamental tasks that the country should address to transform the Canal into a regional development focus.

Key words: Nicaragua Interoceanic Grand Canal; Central America; Development.

RESUMEN

El Gran Canal Interoceánico de Nicaragua en el contexto del desarrollo regional centroamericano: consideraciones para su debate

En el contexto regional centroamericano, el Gran Canal Interoceánico de Nicaragua supone un gran reto económico, tecnológico y geopolítico. No obstante, más allá de la expansión económica que signifique tal proyecto y todo lo que ello implica, como los nuevos muelles o el aumento del tráfico mercante, la clase dirigente nicaragüense no ha abordado la reestructuración de la política económica que permita el mejor aprovechamiento del hipotético crecimiento del PIB, especialmente pensando en las comunidades afectadas y los grupos más vulnerables del país. Para demostrar la necesidad de dichos cambios, el artículo analiza el proyecto del Gran Canal de Nicaragua en el contexto de la tumultuosa historia regional de Centro América y las actuales tensiones geopolíticas relacionadas con el tráfico mercante, identificando las principales deficiencias regionales de la propuesta nicaragüense, así como los más importantes retos que debe afrontar el país para transformar el Canal en un foco de desarrollo regional.

Palabras clave: Gran Canal Interoceánico de Nicaragua; Centro América; Desarrollo.

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1. INTRODUCTION

Central America has a history as complex as strategic its geography is. At the present time, its seven countries share not less important challenges in areas such as public safety, regional development, political-administrative probity, health-care coverage, financial stability or the balance between the economic expansion and the conservation of their ecosystems, among others. These are long-standing challenges and are explained by the succession of forms and kinds of governments that, from the colonial past to the republican period, through its troubled independence, have prioritized the strategies aimed at the maintenance of a status quo flattering for the elites as contrasted with more inclusive political approaches. It should be remembered how the Federal Republic of Central America (1824-1839) was rapidly balkanized due, among other reasons, to the interests of the local ruling classes in maintaining their privileges at the end of the colonial period and their struggle for the control of the new republic. The failure of the Central American federation led to the emergence of semi-failed states, with governments unable or uninterested in moving forward decisively towards the eradication of poverty and the strengthening of social cohesion, forgers of democracies continually interrupted by coups and military pronouncements and foreign interventions in pursuit of the control of national resources and the geostrategic position of the region.

Although at the present time the Central American countries enjoy more or less fulfilled democratic regimes[1], the scourge of underdevelopment outlines its entire territory, which passes through productive and externalized systems with maquilas and exports of raw materials and food. In this context, People´s Republic of China has intensified its influence in Latin America, with strong economic interests in the opening of new trade routes (Leum, 2013; Herrera, 2014). In this context, the construction of an interoceanic canal in Nicaragua is a tremendous event, which goes beyond the limits of Nicaraguans. Because of its impact on the global economy and its geopolitical implications, it requires from us to rethink the role of Central America in the global system and assess the need for new roads for regional development.

Behind Nicaragua's Grand Canal, and aside from its commercial aspects and economic impact, lies a strategy of hidden tension and deepens the regional division in Central America by articulating, deteriorating and putting a large part of Nicaragua's territory at the disposal of foreign countries. Based on this assumption, this article aims to outline the historical continuity of underdevelopment throughout Central America, contextualize, and analyze the Interoceanic Grand Canal Project, while paying special attention to environmental issues to provide key information that will enable progress in the debate on regional development, trade and large public works. A final reflection, with the conclusions and results of this work will be presented.

1.1. The Central American Regional space

The central geographical region that connects North and South can be identified with Central America. It has an extension of 521,504 km^2 and it is inhabited by around 45 million people. It is surrounded by the Pacific Ocean and the Atlantic Ocean and it is composed of seven countries: Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica and Panama. From the physiographic point of view, the ancient territory of the Capitanía General de Guatemala is delimited by the isthmus of Tehuantepec north and Panama to the south.

Central America is located on the western edge of the tectonic plate of the Caribbean. This is mainly a mountainous and craggy region which connects the structures of North America and South America. It is located in one of the major volcanic axis of Earth, with about 60 interior volcanoes, the majority of which are inactive, and 31 in the Pacific Ocean coast, many of them currently active. In general, the topography rises rapidly from the Pacific Ocean to the mountain peaks and descends in a smoothly manner toward the Caribbean Sea.

From the northern border of Guatemala to the border line that separates Panama and Colombia, Central America has a length of 2,830 km in the Pacific coast and approximately 2,740 km on the Caribbean coast. The climate of Central America is tropical, being the Atlantic coast rainier than the Pacific one, with average annual temperatures ranging from 15 °C to 25 °C and rainfall can exceed 1,500 mm.

1 Regarding the political instability of the region it shall be recalled the overthrow of Manuel Zelaya in 2009, President elected by the Hondurans that ended deposed and expatriate for 2 years after a coup d'état, involved in parliamentary and military conspiracies and foreign interests still to be completely clarified.

From a historical point of view, Central America declared its independence from Spain, without armed struggles, on September 15, 1821, but whose rapid incorporation to Mexico on January 5, 1822, allowed to foresee the precariousness of their internal autonomy. Again in 1823 it was proclaimed its independence from the First Mexican Empire, shaping the United Provinces of Central America (1823-1824) for their governance. A year later, the constitution of the Federal Republic of Central America grouped the current Costa Rica, El Salvador, Honduras, Nicaragua and Guatemala, the latter of which suffered, for a short period of time, the broke away of the Estado de Los Altos (1838-1840). By then, Panama was part of Gran Colombia (1819-1831) and Belize was still a British colony.

In 1839, after a complex equilibrium in order to maintaining the Federal Republic and after several civil wars, the federation disbanded and the five states became independent republics. During the rest of the nineteenth century there have been several attempts to restore the federation, but without success. Even today, the idea of a United States of Central America endures in the yearning of many intellectuals who see in the union a possible solution to the underdevelopment of the region, although at the moment the integration is unsound and raises important internal and external reluctances. For example, the Central American Integration System, with own Parliament and Treaty of Free Trade, created on December 13, 1991, arouses most interests among Caribbean neighbors, such as the Dominican Republic, adhered in 2013, than among Central American countries such as Panama, which withdrew its credentials from the Parliament in 2009, or Costa Rica, committed ally of the United States, which has not yet ratified many of the treaties that bind that country to such project. With all of this, the political union of Central American states seems to be at least complicated.

Table 1. Regional Indicators of Central America, Spain, United States and China

Countries	Km²	%Km²	Population	%Pop.	HDI	GDPpc	Life Expectancy
Belize	22,966	4.40	334,000	0.75	0,732	9,364	73.9
Honduras	112,492	21.57	8,447,000	18.95	0.763	4,138	79.9
Nicaragua	129,494	24.83	6,028,000	13.52	0.662	4,266	73
Costa Rica	51,100	9.80	4,726,000	10.60	0.628	13,012	72
El Salvador	21,041	4.03	6,108,000	13.70	0.617	7,240	74
Guatemala	108,894	20.88	14,084,000	31.59	0.614	6,866	75
Panama	78,200	15.00	3,652,000	8.19	0.765	16.379	78
Central America	521,504	100.00	44,579,000	100.00	-	-	-
Spain	504,645	96.77	46,507,760	104.33	0,869	30,561	82.1
United States	9,161,966	1,756.85	320,100,000	718.05	0.914	52,308	78.9
China	9,984,670	1,914.61	1,360,738,000	3,052.42	0.719	11,477	75.3

HDI= Human Development Index; GDPpc=Gross Domestic Product Per Capita.

Source: UN, 2015. Prepared by authors.

2. METHODS

The last 100 years of political and economic life in Central America has experienced turbulent episodes of violence and injustice, all of them an obstacle to their social development: dictatorships, civil wars, revolutionary guerrillas, urban gangs, impoverished peasant economies orbiting around large exporting companies, imposition of external interests, experimentation of productive models based on privatization and social neglect, proliferation of the maquilas, etc. These are some of the causes of the shocking figures of population below poverty levels, citizen insecurity and civil healing wounds, for which today's democracies have not yet found a viable solution.

In this context of complex past and difficult present, Nicaragua is moving toward the democratization of their institutions, but led by a political elite and a officialdom sector plenty of cases of corruption[2], that

2 According to the Organization for the International Transparency [TI], Nicaragua is the most corrupt country in Central America, with only 28 points of probity out of 100 of the Corruption Perception Index [CPI]. The study covers 177 countries, with the more transparent, democratic and legally compliant in the first places, and the most corrupt at the end. Of the total list, Nicaragua occupies the 133 position (Corrupcion Perceptions Index [TI], 2014).

do not adequately convey the necessary confidence to leave behind the fears commenced during the war against the Somoza dictatorship and transform the symbols that are still warning signs to the dissidents into patrimonial ones, such as the great cross that crown the crater of the Masaya volcano, a point from which the Somoza family´s henchmen threw the loyalists of La Contra (Balmaceda and Márquez, 2015).

In this sense, perhaps Panama and Costa Rica are the exception. Although Panama was invaded by the United States in 1989, to capture General Manuel Antonio Noriega, accused of crime of drug trafficking, currently it has achieved a certain degree of political stability that allowed to take charge of the sovereignty of the Panama Canal in 1999, without major upheavals. In Costa Rica it was abolished the army and two political parties alternate in power through elections peacefully.

During the 70´s and 80´s of the twentieth century, the concern about the economic development made Economic Commission for Latin America and the Caribbean, United Nations [CEPAL or ECLAC] to develop models in which the Central American territory appeared as a space divided into states of economically unviable dimensions. For example, the model of F. Fajnzylber, F. (1990) on the failed industrialization of Latin America (from the black box to the empty box) stated that the failures could be found in the lack of industrialization and therefore the low development lay at the implementation of a standard model, lacking the economic growth, equity, competitiveness and the fiscal balance.

The efforts aimed to achieve the industrialization, initiated in the 1950s through the import-substitution model, provided limited results due to a questionable planning, inadequate investment and low economic dimension of the Central American countries, as well as to the oligarchic and geopolitical interests at stake. This resulted in questioning of the economic policy advised by experts of the ECLAC in the 80s or the "lost decade" for the development of Latin America, years in which there was also a deep social fracture and major damages within the Central American productive infrastructure due to civil wars, the impact of the mafias and political corruption, among others. Then, the decade of the 90s and this twenty-first century have made Central America a territory favorable to the peripheral industrialization, where the maquilas phenomenon has been plundering the environment in a variety of ways and exploiting a cheap and docile labor. This has helped the countries of Central America to become developing countries, with striking, if not alarming, poverty levels. The population living below the poverty line in Honduras and Guatemala exceeds 50% of the total, and in the less distressing cases, Costa Rica and Panama have a 20 and 26% of its population in this situation respectively.

Despite everything, as of 2000 the Central American region has improved their levels of economic and social development. Poverty rates have registered slight reductions, with the situation in Nicaragua standing out.

> With the peace processes in the early nineties, the arrival of democracy and the establishment of liberal governments that implemented harsh economic and structural reforms, the red numbers in the region began to change. Exports from the region began to grow, the trade deficit has stabilized and the region began to register a positive economic growth" (Salinas, march 26, 2013).

However, the Human Development Index places the Central American countries in a disadvantaged position, where only Panama and Costa Rica show a index that can be considered high (high human development), whereas the rest of countries are in the average level. As a comparative note, Spain has a Human Development Index ranked as very high (very high human development) and its Gross Domestic Product per capita exceeds 1.8 times that of Panama, i.e. the average Spaniard earns $14,182 more than a Panamanian. At the other end, the GDPpc of Honduras is 7.39 times lower than that of Spain, with Spain having a GDP per capita more than 26,000 euros higher than that of Honduras. Finally, the life expectancy at birth, for example, in Spain is almost 10 years higher than that of Nicaragua (Table 2).

But still, there is encouraging news in the field of social welfare, such as the fact that Nicaragua has become the first country in Central America to open a center of breastfeeding within a textile company in a free zone, which is designed to ensure that female workers of the maquilas can breastfeed their babies during their workday. "The breastfeeding center opened this Thursday at the International Hansae free zone, with Korean capital, and is located at the municipality of Niquinohomo, 40 kilometers south of Managua, and employs 3,356 people, of which 58.83 % are women" (ACAN-EFE, february 26, 2015).

Table 2. Comparative table of main development indicators and its differential with the United States

Countries	HDI	DUSA HDI	GDPpc	DUSA GDPpc	Life Exp.	DUSA
Belize	0.732	-0.182	9,364	-42,944	73.90	-5.00
Honduras	0.763	-0.151	4,138	-48,170	79.90	1.00
Nicaragua	0.662	-0.252	4,266	-48,042	73.00	-5.90
Costa Rica	0.628	-0.286	13,012	-39,296	72.00	- 6.90
El Salvador	0.617	-0.297	7,240	-45,068	74.00	-4.90
Guatemala	0.614	-0.300	6,866	-45,442	75.00	-3.90
Panama	0.765	-0.149	16,379	-35,929	78.00	-0.90
Spain	0.869	-0.045	30,561	-21,747	82.10	3.20
United States	0.914	0.000	52,308	0	78.90	0.00
China	0.719	-0.195	11,477	-40,831	75.30	-3.60

HDI=Human Development Index; GDPpc=Gross Domestic Product Per Capita; Life Exp.= Life expectancy; DUSA= Differential with the USA.

Source: United Nations [UN], 2015. Prepared by authors.

In short, Central America is moving slowly toward the development, weighed down by two root causes: the complicated and painful political life, that has destabilized any pretense of a viable project of society of the welfare and perpetuation of the so-called "primary-export model", based on agriculture, tourism and some small-scale industries, to which in the last two decades has been uniting the phenomenon of the maquila, as a precarious form of peripheral industrialization, that includes the perversions of plundering natural resources and exploiting labor, directing all the value added and most of the wealth to the external firm that requests its services.

However, the geographical location of Central America, a large isthmus between the oceans with the greater volume of sea freights, poses an economic niche of income to the region which is potentially superior to those generated by many of its productive subsectors. The clearest example is the Panama Canal, which directly generates more than 1 billion US dollars, representing 2.2% of Panamanian GDP, without taking into account the value of the remainder of services of the logistic and commercial cluster around the passage of vessels (Ministerio de Economia y Finanzas [MEF], 2015). In this context, the great Nicaraguan interoceanic canal, although rival in part to the Panamanian one, is a momentous opportunity for economic and social progress in the region in general and for Nicaragua, in particular, given that, having a guaranteed commercial flow, its translation into development and welfare will depend directly on the Nicaraguan fiscal and economic policy, their skills to take advantage of the project national and international synergies and their ability to convert revenues into better incomes, better services and more territorial cohesion.

2.1. Background of the Interoceanic Canal of Nicaragua

In 1524, Hernán Cortés sent a letter to Emperor of Spain, Charles V, stating that those in control of the passage between the two oceans could be considered the owner of the world (Yon, 2014). The idea of linking the Atlantic with the Pacific through the lands of Central America is not new since this avoided having to circumnavigate the entire South American continent, saving time and money. The construction of a canal dates back to colonial times, where the Spaniards noted that from the mouth of the San Juan River at the Caribbean, one could navigate to Lake Nicaragua, with only a narrow strip of land between the western shore of the lake and the Pacific, a distance that should be saved, however, overland.

In 1525, Ruiz Díaz sailed the San Juan River in Nicaragua and called it "El Desaguadero" (The Drain). In 1539, Alonso Calero explored and navigated on it. He found a route that connects the freshwater lake, Lago Nicaragua, with the Caribbean Sea. This route made trade possible throughout the territories that make up Nicaragua, Costa Rica, Havana, and Cartagena (Wünderich, 2014).

Nicaragua, which then was part of the Capitanía General de Guatemala, was the main route of communication between the Caribbean and the South Seas. The transport system combined, from the Pacific

to the Atlantic, three stages, and it was called Camino Real: the first phase was terrestrial, having its starting point at the Port of El Realejo, on the Pacific coast, where they constructed a large number of the galleons that connected Manila and Acapulco, being a key point for the dispatching of silver to China and gold to Spain. Through the interior one could go from El Realejo to Chinandega and from there to the cities of León and Granada. The second phase was lacustrine, taking advantage of the Cocibolca or Nicaragua lake, the largest freshwater lake in Latin America. The lake path connected Granada with the Port of San Carlos. Finally, the third stage progressed though the San Juan River, from the Port of San Carlos to the Caribbean, following the natural flow of the river. However, the journey became unsafe due to the presence of pirates under British interests and Dutch people who frequented the Coast of Mosquitoes, the mouth of the Escondido River and the bay which in the seventeenth century would become the city of Bluefields, of British sovereignty.

Shortly after the independence of these Spanish colonies, in 1849, Cornelius Vanderbilt opened the route between New York and San Francisco through Nicaragua: "it was the era of the gold rush and thousands of adventurers were preparing to go to populate the rich lands of California without having to cross over the inhospitable interior of the US still without peace" (Carralero, 2015). That same promise of the American West had opened another route via Nicaragua, but this time from European ports such as Southampton, San Nazario or Hamburg. The route was followed by travelers as famous as Mark Twain or William Walker (Carralero, 2015; Bolaños, 2005).

The idea of an interoceanic canal through Nicaragua was never abandoned by the United States and there were proposed several routes, all of them using the Lake Nicaragua. However, the Nicaragua project was postponed in favor of the Panama Canal when the US administration acquired the rights for the works abandoned by the french (Sheldon, 1897). After almost 100 years of works under Spanish administration, then French, and finally North American, the canal was inaugurated on August 15, 1915, costing huge amounts of money and hundreds of human lives, and was supported by the most important developments in civil engineering of its time, it ruined Central America politically with the forced secession of Panama from Colombia in 1903 and the reorganization of the sea routes between the Atlantic and the Pacific, in addition to virtually their entire merchant traffic. A century later, and absorbing the 3% of the entire world trade, the geopolitical importance of the Panama Canal is beyond any doubt.

In any case, the increase in the size of the ships, their need for deeper drafts and the reactivation of international trade with the emergence of new players such as China, collapsed the Panama Canal. Its current viability was only made possible by its recent expansion. In this context, in addition to the political, historic and economic turmoil in Central America, it seems logical to look for alternatives to the Panama Canal. Many of them are represented by the so-called "dry channels" as those projected in Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Colombia, and Nicaragua itself (Robles, 2015). In the collective mind of Nicaraguans, the canal is identified with a national aspiration. Jose Santos Zelaya said that only the canal will make their homeland "worthy of being among the nations" (Wünderich, 2014, p. 27).

3. RESULTS

The sea remains the main commercial transport route of the world, whose economic dividends are under constant pressure by the opening of new sea routes. This is the case, for example, of the Paso del Norte, the interoceanic waterway that connects the Atlantic with the Pacific by the Northern Hemisphere through the Arctic Ocean and, therefore, connecting the ports of Western and Nordic Europe with Russia, Japan, China and Southeast Asia. Global warming has significantly reduced the surface of the polar cap and thawed or reduced the thickness of the ice of the North Sea pathways most of the time, that decades ago were navigable only two months per year. This has intensified the volume of goods transported through the nordic path, competing directly with the economic interests of the Suez Canal, and increasing the warming of the Arctic, which ultimately contributes to accelerate the process of deicing. Another example of the pressure stemming from the economic and geostrategic role of the maritime routes as a means of international communication is the dispute between Chile and Bolivia on their Peace Treaty of 1904, which consolidated the border between the two countries after the War of the Pacific (1879-1884) and affirmed the maritime sovereignty of Chile up to the border with Peru, i.e. relegating Bolivia to its current state of landlocked country. At present, the Bolivian government has launched a legal battle in the International Court of Justice in The Hague claiming Chile to negotiate a sovereign sea outlet in its favor.

The project of the Interoceanic Canal of Nicaragua has been finally undertaken in this same context of interests: the opening of new sea lanes that are suited to the increase of merchant trade, but at the same time that can also withstand the draft of the ever-increasing size of oil tankers, bulk carriers and container ships[3]; to enjoy autonomy with respect to foreign powers, such as the United States, even with significant control over the transit through Panama; and that they can absorb the dense traffic of merchant exports and imports of China in the flush of economic expansion.

The closely related political systems of China and Nicaragua, although asymmetric in their dimensions and economic power, have started the common project of the Grand Canal of Nicaragua. In essence, it is a China´s challenge to the hegemony of the United States (Vallega, 1977; Chouraqui, 1979; Herrera, 2014).

> In this sense, in 2012: "Nicaragua's National Assembly approved a bill to build an interoceanic canal as an alternative to the Panama. Sign of the times, a vast alliance that, including several BRICS, China, Russia and Brazil, but also Japan, South Korea and Venezuela, is ready to finance a work with an astronomical budget of 30 billion dollars. 40 percent of vessels in circulation or in construction are beyond the capacity of the Panama Canal, even with the expansion underway, and the canal of Nicaragua will be the only one capable of allowing for the passing of vessels of 248,000 tons, double the capacity of Panama. The data seem to be conclusive. The Panama Canal, once expanded, will have a depth of 13.8 meters and will allow for ships of up to 120,000 tons and 12 meters draft. Nicaragua will have 22 meters in depth, will allow for vessels of up to 250,000 tons and a draft of 20 meters. Around 80 out of the 280 kilometers of the canal will pass through Lake Nicaragua" (Zibechi, may 5, 2013).

In spite of the opposition of part of the population and the environmentalists sectors, mainly due to its high environmental impact, the promise that the Canal can double or, in the best of the cases, triple the current gross domestic product of the country, without taking into account indirect investments in agribusiness, irrigation canals, inland ports, financial centers, tourism or energy[4] (Bolis, 2012), it has convinced the majority of the Nicaraguan Parliament[5] to give carte blanche to start the works, although little has been regulated on the fiscal and administrative mechanisms that will enable that the increase in GDP will result in a significant improvement of the social welfare of the Nicaraguan population in general and local communities affected in particular.

The interoceanic canal of Nicaragua, a project that has evolved over the centuries (Baley, 1936; Rius, 2014), has a construction budget of more than 50,000 million dollars, which has already been assigned to the group Hong Kong Nicaragua Canal Development Investment Company [HKND], mostly Chinese capital[6]. Its 278 kilometers will triple the length of the Panama Canal. It will have a wingspan some point between 230 and 520 meters -the Panamanian canal has 300 meters at the wider span- and a depth between 26.7 and 30 meters -while the Panamanian will have just 13.7 meters after enlargement-. In terms of logistics, the size of the Canal of Nicaragua will allow for the transit of vessels with a draft and tonnage higher than that of the Panama Canal, even after its extension, endowing it with an unquestionable regional advantage. In fact, for more than 25 years they have been building ships with dimensions higher than that supported by the Panama Canal, diminishing the comparative advantage of the Panamanian route, by which navigate around half of maritime merchant traffic between Asian eastern ports and the U.S. West Coast. In this context, the Canal of Nicaragua will potentially absorb not only part of the Panamanian traffic but the one that, due to the size of the boat, should be directed to the European and North American ports through Cape Horn, the Cape of Good Hope or the Suez Canal.

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3 Some of the container ships built in the last few years, as the Mærsk McKinney Møller, assembled in 2014, reach the 400 meters in length and 59 of beam, and may carry more than 18,000 20 feet containers (Maersk, 2015).

4 The project comprises the construction of an oil refinery in the city of Leon, in the northeast of Nicaragua, co-financed by China and Venezuela.

5 65 votes in favor, 25 against and 1 abstention (BBC, June 13, 2013).

6 HKND Group, under the leadership of the Chinese tycoon Wang Jing, signed on 6 September 2012 a memorandum of understanding with the government of Nicaragua to move forward in the final tender of the planning, design, construction, operation and administration project for the Grand Canal, which was granted on October 31, 2012 and ratified by the National Assembly of Nicaragua on June 13, 2013. For its achievement, HKND has outsourced a significant number of works and services to other international companies, among which were the China Railway Construction Corporation for the construction of railway tracks, McKinsey & Company for data analysis or Environmental Resource Management for the evaluation of the socio-environmental impact, among other (HKND, 2015).

Table 3. Infrastructures of grand canals in the world

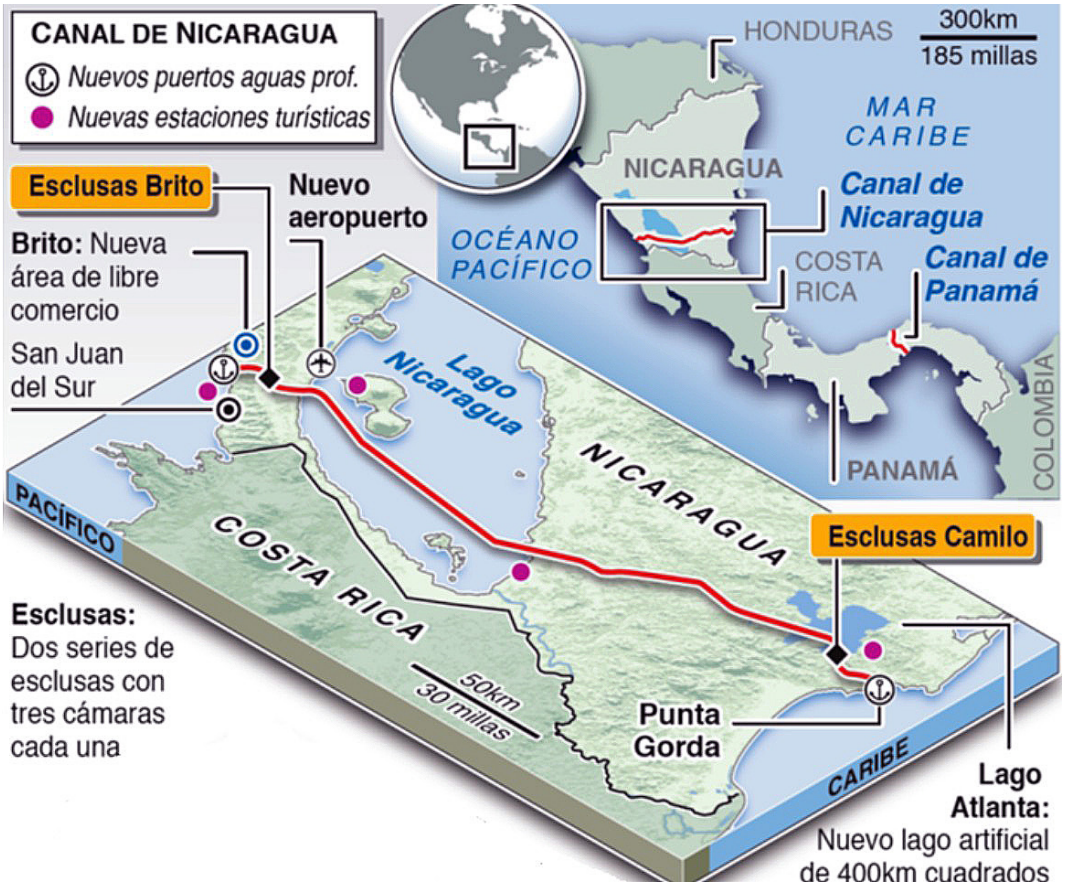
Main variables	Nicaragua Grand Canal	Panama Canal (Expanded)	Suez Canal
Depth (m)	27	13.8	21
Length (km)	286	80	195
Ship draft (m)	20	12.3	19
Capacity (T)	250,000	120,000	200.000
Locks length (m)	466	427	Without locks
Lock width (m)	64	55	300
Construction period	2014-19	1904-14	1859-69

Source: Oil America Inc. 2013; Environmental Resources Management [ERM], 2014b; The Press, 2016. Prepared by Juan A. Márquez.

The Grand Interoceanic Canal will be the greatest asset of Nicaragua. Three times longer than the Panama Canal, it will have a strong economic impact in the areas in which it develops, with complementary projects. It is estimated that will generate 50,000 jobs during its construction phase, 25,000 financial jobs after its construction, 20,000 jobs related with its operations, 30,000 in the creation of a free trade zone, and 38,000 jobs in manufacturing of export goods. HKND (2014) estimated that the Nicaragua Grand Canal will take five percent of world trade and double Nicaragua's GDP creating more than 200,000 jobs.

In addition, its numerous complementary projects, as the huge logistics center of Rivas, could make Nicaragua the most important commercial center of the great Central American isthmus.

Figure 1. Diagram and main characteristics of the Nicaragua Grand Canal.



Source: HKND, 2014.

Indeed, the project contemplates, in addition to the construction of the canal, the creation of ports, free trade areas, airports, roads and tourist infrastructure. In Rivas, just a few miles from the coast of

Lake Nicaragua, it will be built the largest and most modern airport in Central America, which aims to reach the category 4E which allows for large cargo planes and passenger planes such as, for example, the Airbus 380 or the Boeing 777. The approximate capacity of the new airport will be one million people and 22,000 tons of goods, another advantage for the country as transit center. On the other hand, the Canal project will transform the port of Brito, a small fishing village nowadays, at one of the largest deeper water ports of the world, with free-trade area and numerous resorts, taking on a central role in the seaway between the two oceans, considering that the way in which this radical impact on the surrounding communities of small-scale fishermen will cushioned remains outstanding. The Port of Brito will have a crude handling dock, a multifunction dock that will be used as a customs-free zone dock. In addition to that, it will be connected to Rivas International Airport and its free-trade zone.

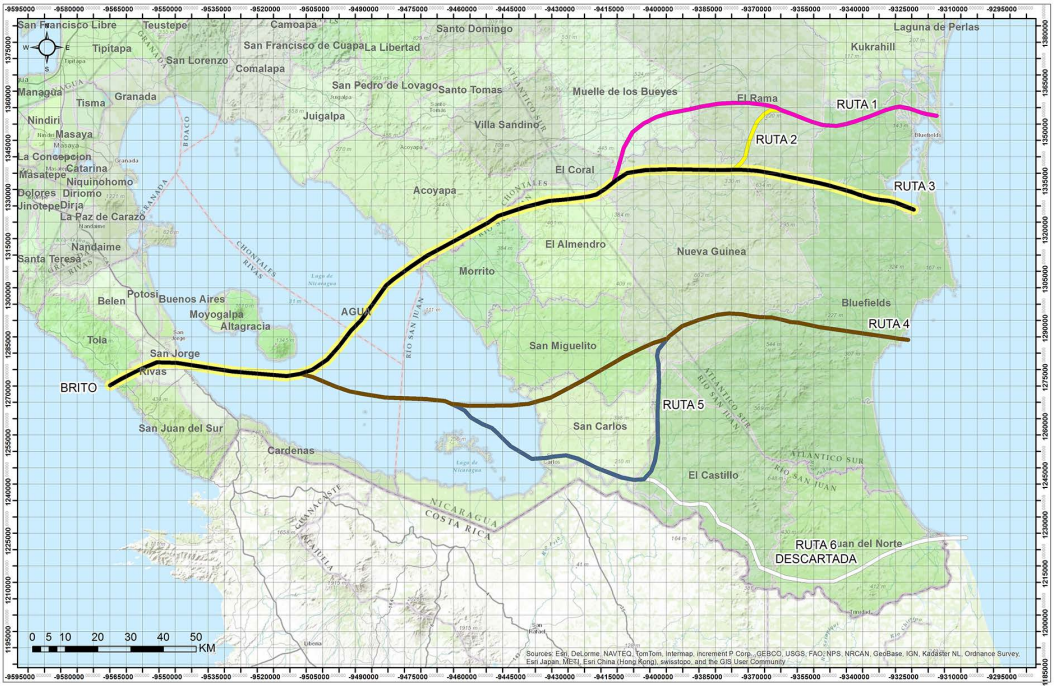
Taking into account the functioning of the project and its traffic volume prediction, in order to connect Brito Port (in the Pacific) to Punta Aguila Port (in the Caribbean), the current road infrastructure linking the subprojects will be strengthened. For example, the road from Brito to Rivas, free-trade areas and touristic infrastructure. At the same time, roads that will withstand greater traffic, like the Managua-Rivas road, will be improved.

On the other hand, the administration of the Grand Canal has proposed the creation of several resorts along the canal: Coast Relaxing Resort (near Rivas), Volcano Sightseeing Resort (in Ometepe), Golf Theme Resort (in San Carlos), and the Natural Park Resort, near Puerto Aguila.

4. DISCUSSION

The environmental issue is one of the main concerns in the construction of a canal (Rubinof, 1968; Meyer and Huete-Pérez, 2014). Therefore, HKND commissioned an environmental impact project for the Grand Canal to Project Description Environmental Resources Management [ERM] (2014b). In this project, their territorial actions are addressed in a comprehensive manner and, considering this is a highly sensitive matter regarding environmental impact, significant efforts have been devoted to choose areas where environmental impact is weaker and where activity may cause resilience to take place. This issue impacted the routing of the canal since the very beginning and led to the consideration of four basic itineraries with two possible variables. What these had in common was their origin from Brito Port but they ended up in different points of the Caribbean Coast: Cayman Rock, Venado Island, Punta Gorda, and San Juan in Nicaragua.

Map 1. Proposed routes for the Nicaragua Canal.



Source: Canal Interoceánico de Nicaragua [CIN], 2013.

Routes 1 and 2 were discarded because Cayman Rock, in Bluefields Bay, has a Ramsar Wetland inhabited by four species of endangered sea turtles whose coasts also offer environmental services associated with coral reefs of great value. Route 3 required the connection of the Brito Port to the South of Venado Island. The abundance of water in their watercourses meant a 3% cost reduction of work compared to Routes 1 and 2, but the previous environmental conditions were also present. Route 6 faced important environmental and geopolitical complications, because the San Juan River has one of the richest ecosystems of Central America and is an international border between two countries. The canal would have crossed the Indio Maiz Biological Reserve and would have impacted the marine turtle nesting area in El Cocal. In addition to that, the San Juan River is geologically and politically sensitive given that it flows becoming an international border between Nicaragua and Costa Rica. Traditionally, Costa Rica, an ally of the United States. Route 5 would had the canal cross the border with Costa Rica, a proposal discarded likewise. This way, on 13 May 2013, the Government of Nicaragua reported to its neighbor, Costa Rica, the abandonment of any proposal involving any use of the San Juan River. Finally, Route 4 was the winner. It linked Brito Port with Punta Gorda, an itinerary already used in colonial times that currently would imply less political and environmental difficulties.

Table 4. Proposed and analyzed routes for the construction of the Nicaragua Grand Canal

Routes	Starting from Pacific	Starting from Caribbean
1&2	Brito Port	Cayman Rock, Bluefields Bay in the North
3	Brito Port	Venado Island, Bluefields Bay in the South
4	Brito Port	Punta Gorda towards the Tule River
5	Brito Port	Punta Gorda towards the San Juan River
6	Brito Port	San Juan in the North by the San Juan River

Source: ERM, 2014b and HKND, 2014.

In any case, the fact that Route 4 is raised as the best economic, social and environmental option, does not override certain problems and issues related to the future of the environment and the inhabitant communities. The management of watercourses, the creation of an artificial lake, planned deforestation, the intensive use of space for the opening of the 500 meters of width of the Canal and the construction of ports, airports, and industrial areas which will necessarily affect the ecological and socio-economic dynamics of the area.

Indeed, Route 4 affects more than 250 linear kilometers and crosses sensitive areas. The canal routing starts in the Caribbean, at the mouth of the Punta Gorda River all the way to the North of the Tule River, in San Miguelito, to get 105 km in the Lake Nicaragua, reaching the Cangrejal in Rivas and from there to the mouth of the river Brito. Additionally, with the construction of the Canal, near Atlanta, an artificial lake of 395 km^2 will be created. It will be similar to the Gatun Lake of Panama, whose water level will be maintained at the same level as the Lake of Nicaragua.

Environmentalists insist that the construction of the Canal will entail an ecological catastrophe that will affect the basin of Nicaragua Lake as well as the coastal ecosystems and wetlands of the tropical forest. Several species will be in danger, as is the case of the American crocodile, the largest of Central America, whose breeding grounds will be impacted by the works of the Canal.

Table 5. Natural areas at risk of possible negative impact by the construction of the Canal Route 4

Name	Classification	Canal Location
Cerro Silva	Natural Reserve	Comes into proximity to the South of it
Punta Gorda	Natural Reserve	It crosses it
Indio Maíz	Biological Reserve	It goes through the South of it
San Miguelito	Wetland System	South of it
Solentiname Archipielago	National Monument	It goes through the center
The Gatuzos	Wildlife Refuge	North of it
Omtepe Island	Biosphere Reserve	Comes closer from the South

Source: ERM, 2014a and HKND, 2014. Prepared by Juan A. Márquez.

The nature of the project makes it inevitable to cross protected environmental areas, some of which already suffered decades of agricultural impact by indigenous and local communities, some of them being displaced. In this sense, HKNC made reference to a 6,500 km^2 loss of tropical forest between 1983 and 2014 (ERM, 2014b) in its 2014 study.

The entry to the Caribbean is near the Cerro Silva Natural Reserve, home of jaguars, possums, sloths, tapirs or poison-dart frog, among others. The project crosses 15 kilometers of indigenous lands between Punta del Aguila and Monkey Point, where in addition to obviously subvert the local life style, it affects the life cycles of sea turtles and coastal dolphins or Guyana´s dolphins, as well as threatening the ecological balance between freshwaters and saline waters. Cerro Silva must be taken into consideration as it is already suffering from the transformation of its grazing areas in the forest, the erosion of its slopes, whose lands settle in their riverbeds and logging and hunting as a result of the scarce environmental awareness of a population with difficult socio-economic conditions. Further west, the Canal will go through the San Miguelito Ramsar Wetland from the South, an area that has already been impacted by agriculture and invasive plant species.

Map 2. Final Route of the Nicaragua Canal

Source: Dava GIS, 2015; HKND, 2015. Prepared by authors.

However, the greater environmental risk is in the Nicaragua Great Lake. At the very least, commercial ship traffic will increase the water turbidity, disrupting the wildlife of the lake. Not taking into account the unpredictable but hardly inevitable spills and discharges of liquids and solid products linked to the merchants, like mechanical oils and oil derivatives, or the invasion of non-native species carried or dragged by the ships, which will especially affect the wildlife deep in the lake. These problems will be added to those already present in the lake that currently supports an important anthropic pressure and hardly maintains fragile ecosystems such as the Solentiname Archipelago or those of the Ometepe Island, a biosphere reserve.

In a report, the consulting firm ERM stresses the need to implement strategies to mitigate the future impacts of deforestation, consumption of water from Lake Nicaragua and the saline intrusion promoted by the system of locks. It makes special emphasis on the need to improve management of basins, avoi-

ding intrusion into the Indio Maiz Reserve, protect the Ramsar Wetland of San Miguelito and obviously it needs to improve the living conditions of local populations[7]. For example, the conditioning of areas for cultivation using the materials removed from the excavations in the benefit of the affected communities. This does not prevent the serious sociocultural risk for the communities involved, especially, if they end up being displaced (Campos, 2013).

All of the above has led to 18 protest marches against the Interoceanic Canal. Rivas, New Guinea and the Tule River have been the main stages of such citizen protests rejecting the works (Vílchez, 2015).

5. CONCLUSIONS

History shows that only a great economical and technological power can assume the construction of an interoceanic canal. In the particular case of the Canal of Nicaragua, it is estimated that the construction will last at least ten years. Funding will be borne by a consortium that brings together Brazilian, Chinese, Russian, South Korean and Japanese capital, which will provide 49 percent of what is necessary for the work, while Nicaragua will take over the remaining 51 percent. While it is true that the different stages of construction and, eventually, start-up of the Canal will generate thousands of jobs and likely will significantly increase the country's GDP, challenges are enormous. Among many other:

1) Only the cost of labor required for the new Canal quadruples the current Nicaraguan GDP, so that the country's ability to negotiate future disadvantages with the consortium that is responsible for the work is very low.
2) Much of the population and ecological groups see the canal as a threat to the biodiversity of the country and the geosismica stability of the region, which would significantly upset its strengths as a tourist attraction.
3) It is call into question that Lake Nicaragua can assume the works of the Canal and the subsequent merchant traffic whilst still being the great reserve of fresh water in Central America it is today.
4) The international pressure that will mean the revitalized geostrategic centrality of Nicaragua could destabilize the national policy, since the region is an area of vital interest to Washington and the Panama Canal revealed how such a significant communication and trade routs bring together interests in their control, interfering directly in the political life of hosting countries.
5) Nowadays there are several projects as an alternative to the Nicaraguan projects, which could reduce the importance on an international level as well as the competitiveness of the new canal, such as for example: the Colombian route, a possible railway line connecting the Pacific, on the north coast of Colombia, with the Atlantic, in the Gulf of Urabá, between Colombia and Panama; and the Ecuadorian route, a path with stretches of highways, rail and inland waterway between the Pacific Port of Manta (Ecuador) and the Atlantic Port of Belem (Brazil) through Manaus (Brazil), i.e. connecting the Pacific with the Caribbean through the Amazon.

Alternatives to Panama, via Nicaragua, Colombia or Ecuador-Brasil have something in common: the presence of China. The Asian country has large reserves of capital, an important set of technology companies and civil engineering of high competitiveness, and a global presence of a growing influence through trade, credit for external debt and the promotion of big infrastructure, among other mechanisms of international expansion. The magazine MAP of the European Laboratory of Political Anticipation gives an account of the Chinese strategy comparing it with that of the United States:

> While the strategy of chess, the typically western game of conquest, encourages direct confrontation, its eastern equivalent, the game of go, requires rodeo skills to drown the adversary. That is the strategy China is applying globally, and in particular in Latin America, first investing massively, then collecting diplomatic support, and finally geostrategic support (Zibechi, may 5, 2013).

In any case, the change in the source of capital for large infrastructures warns of the profound change in the correlations of economic and political forces in today´s world. And the merchant routes are a basic

7 The project traverses indigenous lands of the Rama people in the Caribbean, and the Nahua people in Rivas. In this regard, we should remember that Nicaragua ratified in 2010 the Convention 169 on Indigenous and Tribal Peoples of the International Labor Organization, 1989, by which the Central American country undertook to strengthen the identities, languages, religions and the worldviews of its indigenous peoples and to recognize and promote their own vital aspirations through the respect, among others, of their natural resources.

vector in this battle, because their commercial and political outcomes strongly upset geostrategic coordinates. We have numerous historical cases that demonstrate this, from the Silk Route to the Route to the Indies, going through the Manila Galleon. This will coordinate the necessary forces to open new routes even if other alternatives already exist: "Trade in the multipolar world cannot develop going around the south, or the North Pole" (*Actualidad*, august 15, 2014).

For centuries Central America is in the middle of this field of forces, which is a constant challenge: opportunity and threat at the same time. Today, the Central American countries have few natural resources of high commercial value, such as gas, oil or large tracts of fertile land to put into production. They have a very important natural and landscape heritage but whose politicians have been unable to transform it into a source of prosperity for the people through alternative models to neoliberal development. And in addition to that, the scarce Central American unity, the poverty, marginalization, violence, corruption, drug trafficking and the impunity, which discourages the Central American society, faced with not only these difficulties but with the need to observe the huge inequality between the opulent minority and the impoverished majority. In this context, the canal is for some a deepening in the harvests of national wealth and for others a hope of development unmatched by previous projects.

The maquilas and the Canal are epiphenomenon of a duality that compels us to reflect on the desirability of a new Central American State able to overcome the borders of the current countries and that exceed current, with a vision for the future, the logic of development currently implemented nowadays in almost-failed countries. It is not an easy task nor even to imagine, but it would help to face important regional burdens with higher capacity:

1) The path to democracy, the purported false identity of homelands and elitist interests of the ruling class, whether in pro-socialist or pro-capitalist states.
2) The unsuccessful attempts of union of the Central American countries under various formulas, the last of them the Central American Integration System [SICA], with political observatories that emanate from divergent proposals (Gasteazoro, 2013), without the effective capacity to allow neighboring countries such as Nicaragua and Costa Rica cooperate effectively. It should be recalled in this sense, that in the project of the Nicaraguan canal, the San Juan River is going to be underused, so that the new route will not have to be shared.
3) The strong dependence and external interests in key sectors of the economy such as mining, the maquila industry or in the export agriculture.
4) The poor economic and territorial dimension that makes the Central American countries prey of multinational companies and of the superpowers strategies thanks to sinecures negotiated on an unequal footing.

In this sense, globalization can be an opportunity to start the journey toward a unification of States, whose dimensions do not seem to be the appropriate to raise strategic actions for regional development. In reality, the Central American states are, from an economic point of view and considering their complexity, areas of smaller dimension than many Spanish autonomous communities and, lacking support from other territories and the solidarity that facilitate larger states, are at the mercy of undesirable forces and are perpetuated as states unable to provide a better life for their populations.

The Grand Canal will probably bring up more advantages than disadvantages for Nicaragua, but there will be a before and after. Just as happened with the Panama Canal, the social, political and economic contradictions in the population will not disappear. Since historical times, the control of the seas, canals and ports of entries that connect them have been coveted by the dominant powers (Chouraqui, 1979) since the maritime geography and its strategies are key to dominate world trade (Vallega, 1977).

The construction of the Grand Canal puts the Nicaraguan sovereignty at risk, if there is still sovereignty beyond capital, which is transferred to an employer from a foreign power. In this regard, Acevedo (2013) argues that the canal is not integrated into the national economy and that the income derived from the geographic advantages of the Nicaraguan Route will be in the hands of monopolist Wang Jing and not the State.

A project of such an importance should be an opportunity for Central America and not an element of regional dispersion. The current crisis could facilitate regional dialog, because, as Oppenheimer stated in 2013, "the economic slowdown in China can point to the end of the populist cycle based on the increase of raw materials experienced by Latin America in the last decade" and open the doors to the participation

of other countries in the project of the Grand Canal. In fact, some from the media (*La Prensa*, august 1, 2016) assert that the channel of Nicaragua has secured funding of companies from Europe, Asia and America. However, this information will be withheld for now in order to not reveal any strategies.

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