

Colombian LaRouche Movement: Vote for Great Projects, Maglev

The following leaflet, "Vote for the Darién Train and the Metro for Bogotá," was put out on Sept. 20 by Maximiliano Londoño as president of the LaRouche Association in Colombia, and by the Colombian chapter of the LaRouche Youth Movement (LYM), to intervene in the Oct. 28 national elections. The leaflet specifically addresses the race for mayor of Bogotá, in which Samuel Moreno is running as the candidate who favors a metropolitan train system for the capital city. The Moreno campaign decided to print 50,000 copies of this leaflet, which are now being circulated in Bogotá by mixed squads of LYM and Moreno campaign organizers. The leaflet was translated from Spanish for EIR.

Only here in "Macondo" would there be discussion over whether there should be a Metro in Bogotá and whether Colombia should have electric trains and magnetic levitation trains, while in the rest of the world, nations are going ahead and simply building these great projects. The government of Japan has announced that it will abandon its bullet trains, which travel at more than 300 km an hour, because that technology is already obsolete, and will replace them with maglev trains that travel at more than 500 km an hour. The Russian government announced in April that Russia will build a tunnel under the Bering Strait, to connect the Eurasian continent with the Americas.

Thus, one would be able to travel in electric trains from Madrid, Spain, or any other European capital, across the entire European continent, follow the nearly 10,000 km of the Trans-Siberian Railroad in Russia, go to Alaska through the Bering Strait Tunnel, cross Canada, the United States, Mexico and Central America, to arrive at the Darién Train (with which the misnamed Darién Gap would be eliminated) between Colombia and Panama. From there, one could continue on two or three railroad branches (one along the Pacific coast, one along the Atlantic coast, and another down the central region of South America to cross Brazil), to reach the south of the continent in Patagonia, Argentina.

Any traveler, from any nation in the world, could arrive in Bogotá by this World Rail Land-Bridge (that is to say, the current Eurasian Land-Bridge with its extension to the American continent) and could travel within the city on a modern Metro, through which one could connect to every regional, national, and international railroad network. At least 8,000 km of wide-gauge rails in both directions and totally electrified, would traverse Colombia from North to South, and from East to West.

To prevent this great project of world integration from being carried out—at least with regard to Colombia, which is a key link in this global network of development and infrastruc-

ture corridors—the oligarchy has to date succeeded in halting the construction of modern railroads, which thus far has included the Metro for Bogotá, Cali, and Barranquilla. The Anglo-Dutch oligarchy has sponsored the political careers of the enemies of modern railroads, to keep Colombia as a feudal state. It was the international financial pirates, who intend to run the world from Wall Street and the City of London, who invented the so-called Transmilenio system, an elephantine and inefficient bus system, in place of the absolutely essential urban electric trains. The Transmilenio is the largest and most costly fraud to be imposed on Colombians on orders of the International Monetary Fund (IMF) and World Bank, agencies which represent the decaying international financial cartel which is today suffering through its worst crisis.

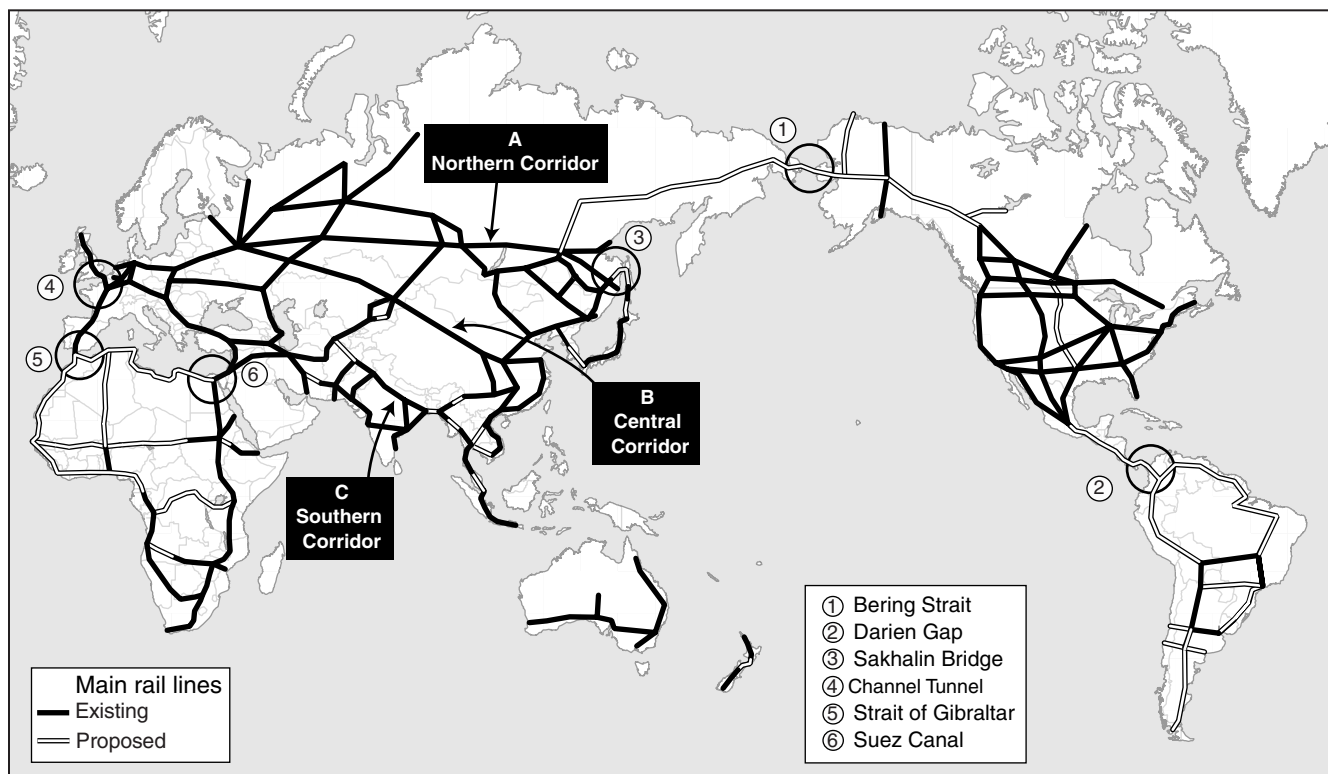
American statesman and economist Lyndon H. LaRouche, Jr. is the architect of the proposal to build a new, just international monetary and financial system, to replace the decrepit and usurious IMF. This New Bretton Woods, or new international financial architecture, will generate enormous volumes of long-term, low-interest credit to finance great infrastructure projects associated with the World Land-Bridge. It was precisely to discuss these questions and the ongoing collapse of the current international financial system, that the movement associated with LaRouche held a conference in Kiedrich, Germany Sept. 15-16, attended by 350 people from 40 nations, entitled, "The Eurasian Land-Bridge Is Becoming a Reality."

Financing the Metro

There are many ways that building a Bogotá Metro could be financed. First, a Financial Reconstruction Corporation (or some great national infrastructure fund) must be established, authorized to issue bonds. This was the model used by [U.S. President Dwight] Eisenhower to finance the construction of the United States' great highway system. In addition to this concept of a Capital Budget, a portion of Colombia's foreign reserves could be channeled into that fund for financing infrastructure (and the Bogotá Metro, in particular). This is precisely the idea behind the Bank of the South: to create a financial instrument, part of whose reserves would be designated for financing great projects, rather than permitting our money to sit in foreign banks, which use the funds but don't lend them to us when we need them.

In the early years of the U.S. Republic, the first Treasury Secretary, Alexander Hamilton, issued money that was used as credit for financing the development of manufactures (industrialization), mechanization of agriculture, and promotion of great infrastructure works. The primary issuance of money

Proposed World Land-Bridge



was backed by the production of machine tools and tangible goods, which counteracted any inflationary tendency.

LaRouche has warned that the U.S. housing crisis and collapse of the dollar are only a manifestation of the explosion of the financial bubble that has been building for the past nearly 40 years, since the United States abandoned the policy of encouraging industry and science that was promoted by President Franklin D. Roosevelt, a policy with which he pulled the United States out of the Great Depression, and saved humanity from the threat of the Nazi dictatorship.

The oligarchy is hysterical over the candidacy of Samuel Moreno Rojas for Mayor of Bogotá, among other reasons, because he is the grandson of Gen. Gustavo Rojas Pinilla (and because he has expressed his support for the proposal to build a modern transport system for the city, around a Metro). The oligarchs in our country, peons of the international financial speculators, get goosebumps when they think about the mere possibility that a person might escape the iron-fisted control of the usurers' cartel that has long run the country, and could win a key governing position in Colombia.

It was President Rojas Pinilla (1953-57) who built a large portion of what little there is of national infrastructure in Colombia, including the El Dorado airport and 18 others. From the very beginning, Rojas had reserved lands for the expansion of a second airport runway, but afterwards, President Alberto Lleras Camargo gave those lands away, and now it will

be necessary to buy them at astronomical prices. In the end, Rojas had paved nearly all of the major highways, and had built a large portion of the aqueducts, sewer systems, and highways across the nation.

Also, in 1956, Rojas created the Colombian Institute of Nuclear Affairs, through which we became pioneers in this field of scientific research. Rojas also contracted the services of David Lilienthal, who, during the Franklin Delano Roosevelt Administration in the U.S., ran the famous state-run Tennessee Valley Authority (TVA). Lilienthal proposed to Rojas that the Cauca and Sinu river basins could serve as the underpinnings of a Colombian TVA system. The TVA built electrical energy plants, dams, canals, aqueducts, hospitals, highways, universities, and more.

To take up the path of development, jobs and peace, vote in favor of the Darién Railroad and the Bogotá Metro. Organize your family, friends, and fellow citizens to give their support to these initiatives that will offer Colombia the possibility of becoming a genuine industrial and agricultural power, to create the jobs necessary so that we don't have to export our own citizens, as is happening now. More than 5 million people have had to leave the country because here, they can't even earn the miserable wages they can earn as slave labor in the U.S. and Europe.

Colombia should join the World Land-Bridge without delay, beginning with the construction of a Darién Train and a Metro for Bogotá.

Make What Is Reasonable Possible: Darién Train and Bering Straits Tunnel

by Maximiliano Londoño

Mr. Londoño is the president of the Lyndon LaRouche Association of Colombia

On the occasion of the 85th birthday of U.S. economist and statesman Lyndon H. LaRouche, important world figures from the various fields of statesmanship, science, and the arts, wrote messages or participated directly in an international conference held in Kiedrich, Germany on Sept. 15-16, entitled “The Eurasian Landbridge Becomes a Reality.” Dr. Héctor A. Múnera, prominent scientific researcher and former director of the Colombian Institute of Nuclear Affairs, sent a document to the event entitled “Two Great Engineering Projects for the Social and Economic Development of the Atrato Region of Colombia,” in which he advocates the completion of the Pan-American Highway, a mere 100 kilometers, across the border zone between Colombia and Panama.

Múnera presented a synopsis of various proposals for building interoceanic canals that would connect the Atlantic to the Pacific, among which the most prominent is Route 25, that is, the Atrato-Truandó Canal. Múnera recalls that in the 1980s, the Inter-Oceanic Canal Study Commission carefully considered the use of nuclear explosions for building canals between the two oceans. In a later article, Múnera detailed the potential application of peaceful nuclear energy in the developing nations.

In the context of a dialogue among friends from various cultural and ideological currents, which LaRouche is promoting on an international level, I offer the following observations:

1. Highways do not replace railroads. On the contrary, the mode of rail transport is a support to both highway and water transport. As the physicist and mathematician Bernhard Riemann demonstrated, and as has been elaborated by physical economist LaRouche, the only true source of an increase in real productivity of a process, is to regularly incorporate new universal physical principles. And the most advanced railroad mode today is the magnetic levitation, or maglev, train. Germany and Japan are in the lead in developing viable maglev designs, although China is currently the only nation that has built an operational maglev track, using German technology.

It is ironic that two Americans, James Powell and Gordon Danby, obtained the first patent in 1966 in the field of superconducting magnetic levitation. Nonetheless, the United States has still not built a maglev system. It is a shame that the U.S., which was the pioneer with Lincoln’s Transcontinental Railroad, currently has barely 10% of its train system electrified. U.S. backwardness is only comparable to that of Great

Britain, while the rest of Europe is moving toward the use of completely electric locomotives which can go from 300-350 kilometers per hour. The first-generation maglev trains can travel at 500 km/hour, although Powell and Danby, in particular, are working on a second generation, not just for passenger transport, but also for cargo containers. With magnetic levitation technology, it will be possible to put satellites in orbit or to launch space voyages at a fraction of the cost of missiles currently propelled by liquid or solid fuel. And so, in the Darién, a train should be built, preferably maglev, or perhaps a hybrid, that is, with electric tracks, but which could simultaneously operate with maglev trains. (See James Powell and Gordon Danby, “Maglev: Transport Mode for the 21st Century,” *EIR*, Sept. 21, 2007).

2. Let us make what is reasonable, possible, and not adapt to absurd fashions and ideologies, like environmentalism, which in the specific case of the Pan-American Highway, has been the argument for holding onto the so-called Darién Gap; that is, on the pretext of not disturbing the flora and fauna of the region and respecting indigenous cultures there, construction of the final 100 kilometers of the highway has been blocked, thereby preventing travel by highway from Vancouver, Canada to Patagonia, Argentina. In other words, the routes both of the Pan-American Highway and the Darién Train should be chosen in accordance with what is most appropriate for the project, and not from the standpoint of propitiating the environmentalists, who in fact want neither project carried out. Of course, feasibility studies should be carried out to adequately resolve legitimate issues of the environmental and social impact that these infrastructure projects could have, but the projects should be implemented.

As LaRouche has insisted, if the United States provides competent leadership, the rest of the world will respond favorably. And one indication of this was seen when, in 1880, the pro-Lincoln Illinois Sen. David Davis proposed the first congressional bill for the study and ultimate construction of the Intercontinental Railroad. By 1889, the Intercontinental Railroad Commission was in operation, and groups of U.S. engineers, in association with their counterparts from other nations, began the relevant field studies. However, at the Fifth Inter-American Conference in 1923, there was a dramatic setback to this perspective, and the Pan-American Railroad was abandoned; it was decided instead to promote the Pan-American Highway. In May 1971, acting under the authority of a law previously approved by the U.S. Congress, separate

agreements were struck between the governments of the United States and Panama, and the United States and Colombia, according to which the U.S. committed to financing two-thirds of the total cost of the construction of the remaining span of the Pan-American Highway, in the Darién zone. Although that U.S. law remains in effect, in October 1975, the Federal District Court for the District of Columbia prohibited allocation of funds for the construction of the Pan-American Highway in the Darién, as part of the legal case brought by the Sierra Club and other ecologist groups which questioned the environmental impact studies that had endorsed the decision to begin construction of the Darién highway.

In 1996, after international bidding, Colombia's National Institute of Roads (INVIAS) contracted new environmental studies, this time with a consortium made up of Ecology and Environment, Inc. and Hidromecánicas Ltda. And despite the fact that the National Congress of Engineering of Colombia, held Aug. 14-16, 2004, determined that this project should be given priority, to this date there has been no construction on the Darién Highway, either on the Colombian side or the Panamanian side. It must be noted that President Alvaro Uribe has insisted, to no avail, that the successive Presidents of Panama, Mireya Moscoso and more recently Martín Torrijos, promote the construction of the final span of the highway. But, on the Panamanian side, there has been no political will to carry out the project. In truth, both in Colombia and in Panama, the ministries of the environment have vetoed the highway's construction.

In sum, as LaRouche and his associates have documented, environmentalism is fascism, created by the British Crown to return humanity to the Dark Ages. And this must be stated clearly.

Engineering Projects For Development of Colombia's Atrato Region

by Héctor A. Múnera

Dr. Múnera teaches at the Department of Physics, National University of Colombia, Bogotá, Colombia. He presented the paper excerpted here to a Festschrift honoring Lyndon LaRouche on his 85th birthday, Sept. 8, 2007. The full title is "Two Large Engineering Projects for the Social and Economic Development of the Atrato Region in Colombia."

Dedication

During the second half of the 20th Century, Lyndon LaRouche has been an outspoken advocate for the economic development of Third World countries, whose progress may be

hampered by extreme concerns about protection of the environment. As pointed out by him, extreme environmentalism may condemn some regions of the world, like my country, Colombia, to stay in their current state of lesser economic development, while the more advanced countries reap the benefits of development previously attained at a lower cost, when the environment was not given the paramount importance of nowadays. This is clearly inequitable.

Also of great interest to us is a related theme of LaRouche's: the transfer of technological knowledge. A tool towards this end may be the peaceful use of nuclear technology. The latter idea was already envisioned by another statesman, the former U.S. President Eisenhower, with his program of Atoms for Peace in the early 1960s. But the development of nuclear-powered electricity was almost completely stopped by the environmentalist movement in the United States in the mid-1970s. On a global scale, today we are close to a rebirth of nuclear power using inherently safe, modular, small nuclear plants that could also be used in developing countries. The LaRouchian movement has also advocated the massive use of nuclear power as a means to build infrastructure, as in the Eurasian Land-Bridge.

It is a privilege and a pleasure to join the *Festschrift* honoring the very original thinker Lyndon LaRouche on his 85th birthday. This short note is related to the completion of the Pan-American Highway, a project that is a natural complement to the Eurasian Land-Bridge. In a separate, forthcoming note we will advance some ideas for the revival of nuclear technology in Colombia.

Introduction

By the mid-21st Century, will it be possible to go easily by land from the Cape of Finisterre in Portugal to Ushuaia in Argentina? Three key elements are missing today: the Eurasian land-bridge, the tunnel across the Bering Strait, and the Inter-American Land-Bridge. The first two aspects have received ample consideration within the LaRouchian movement, so that this note concentrates on the third element, from the broader context of social and economic development of the isolated Atrato River region in Colombia.

A forthcoming note will address the various roles of nuclear technology for peaceful use in a developing country: (i) a means for transfer of technological knowledge; (ii) a technological tool in medicine, agriculture, engineering, environment; and (iii) a builder of infrastructure for social and economic development, such as electricity, water, and process heat. For the time being, the present note mentions some past proposals for the use of nuclear explosives for the excavation of an inter-oceanic canal in the Atrato region.

The Atrato River is about 700 km long, flows from south to north through a dense rainforest, and has a large mean discharge of some 4000 m³/s into the Gulf of Urabá in the north-western corner of South America, close to the international boundary between Colombia and Panama. In some stretches,

the river serves as a border between the Colombian Departments of Chocó and Antioquia. The Atrato region, one of the rainiest on Earth, is covered by a jungle with an extremely high biological diversity. The population is sparse, mostly Afro-Colombian (over 90%), with some indigenous groups like the Noanamaes, Katíos-Emberas, and Kunas (the latter were forced to move to Panama by tribal fighting). Due to its strategic geographical position, three groups of large engineering projects have been considered for this region: a land-bridge to connect Central and South America; a waterway between the Atlantic and Pacific oceans; and large hydro-electrical power plants taking advantage of the permanent very high water discharges of both the Atrato and San Juan rivers. In some proposals, the hydropower projects could be part of an inter-oceanic canal project. Since the mid-1970s, these hydro projects have been incorporated into the inventory of potential electrical sources in Colombia, and no further mention of them will be made here.

The 21st-Century Balboa Land-Route

In the year 1500, during Columbus's fourth trip, the Spaniard Rodrigo de Bastidas arrived at the Gulf of Urabá. San Sebastián de Urabá was the first Spanish settlement in South America, founded in 1509 on the eastern shore of the Gulf of Urabá by Alonso de Ojeda; it did not survive, due to pressure from local indigenous people. A year later, Santa María La Antigua del Darién was founded on the western side of the same Gulf, and it served as a base for the initial exploration of the adjacent territories, which today are part of Panama and Colombia. It is an irony of history that the region of the Atrato River, the first part of South America explored by Europeans 500 years ago, remains as one of the less developed areas in Colombia at the beginning of the 21st Century.

Vasco Nuñez de Balboa departed from Santa María with an expedition that crossed the Panama Isthmus and reached the Pacific Ocean in 1513. With the help of indigenous guides, Balboa went by boat to Carreto Bay, or thereabouts, navigated in a *piragua* (a dugout canoe) upstream on one of the many rivers discharging into the Caribbean, then crossed by foot the rather low Serranía del Darién, descended following the course of a river draining into the Chucunaque River, and navigated by *piragua* downstream on the Chucunaque until reaching the Gulf of San Miguel on the Pacific Ocean. . . .

The idea of a railroad running from Alaska to Patagonia goes back at least to the first Conference of American States in 1899. Some consideration was given to this proposal as witnessed by the map proposed in 1904 by Charles M. Pepper, United States and Pan-American Railway Commissioner.¹ Instead, in 1923, during the fifth Conference of American States, a decision was made to build a Pan-American Highway, which today is almost complete, except for the Darien Gap, which is about 90 km in a straight line between Yaviza in Panama and El 40 (also called Lomas Aisladas), near Chigorodó in Colombia. When, and if, the Darien Gap is closed, the 26,000 km

backbone of the Pan-American Highway will be complete.

The current project to close the Darién Gap is a road that divides in half the Darien National Park in Panama, which was declared a World Heritage Site in 1981 and a Biosphere Reserve in 1982. The Pan-American highway will parallel the Tuira River, up to Palo de Letras, where it will cross the Serranía del Darién, which in this zone is the border between Panama and Colombia. The road descends into the Katíos National Park in Colombia, which was inscribed on the list of World Heritage Sites in 1994.² The length of the project in Colombia is 41 km from Palo de Letras to Cacarica on the Atrato River (30 km), and then to El 40 (11 km). In the lowlands there are many swamps associated with the Atrato River.

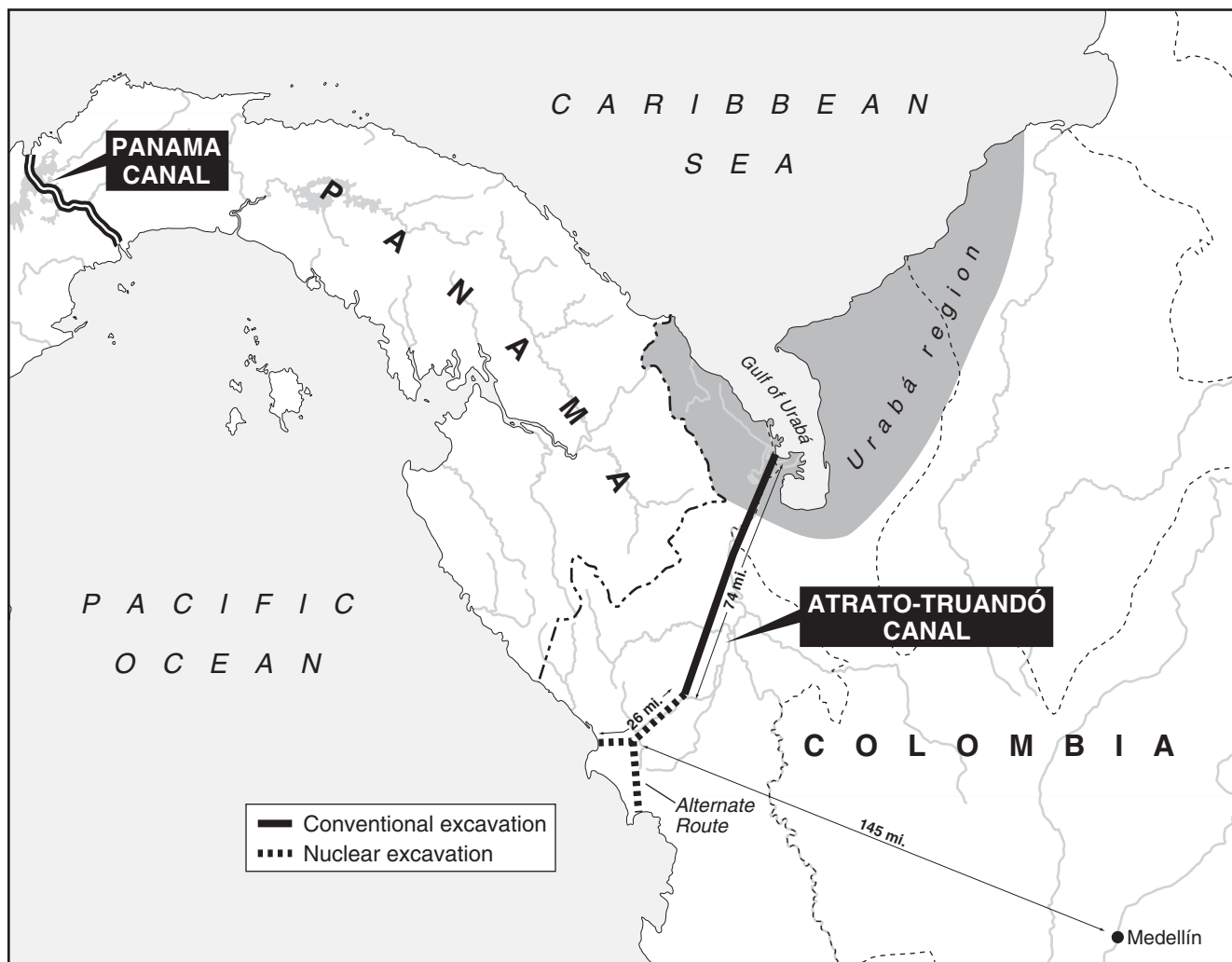
Both in Panama and in Colombia, there are groups in favor and against the construction of the missing portion of the Pan-American highway. Proponents stress political integration and economic and commercial benefits, while opponents stress negative impacts—deforestation, perturbation of habitats—on the two national parks, which harbor a large genetic and biological wealth, and negative cultural effects on the indigenous inhabitants in the national parks, mainly Emberas. An additional negative aspect is the possible migration from south to north of undesirable guests, such as guerrilla groups, drug traffickers, and hoof-and-mouth disease, which still afflicts cattle in some Colombian regions.

As a compromise, there have been suggestions, such as in the Bio-Pacific study, for an alternative way to close the Darien Gap, without crossing the two national parks. It is based on a new road to the Bay of Carreto on the Caribbean coast of Panama, followed by a ferry connection to Turbo on the east coast of the Gulf of Urabá. As expected for a ferry connection, this alternative will limit and slow down the road traffic along the Pan-American Highway.

In the opinion of the present writer, the concerns of the environmental groups for the protection of the two National Parks are legitimate, but it is also clear that a ferry connection is not the most efficient way to complete the Pan-American Highway. Instead of the ferry connection, it is possible to build a land-bridge without entering the Darien and the Katíos National Parks. This novel alternative is called here the Balboa Route-2007.

The Balboa Route-2007 may branch from the existing Pan-American Highway, say at the little town of Palmira in Panama, and go northwest across the Panamanian central plain to reach the Caribbean coast. In this stretch, the road bridges the Chucunaque River near the mouth of Mortí River, follows the Mortí River canyon upstream until a summit pass on the Serranía del Darién, and descends to the coastal plain (alternatively, the Serranía may be crossed by tunnel). On the Caribbean side, the road is in Kuna-Yala Province, and runs southeast, parallel to the Caribbean coast. After passing Carreto Bay, the road reaches the Panama-Colombia border in the vicinity of Tiburón Cape, which is the only zone of the international border outside the Darien National Park. The road will turn south in Colombia

FIGURE 1

EIR's Proposed Route for the Atrato-Truandó Canal (1996)

along the western shore of the Gulf of Urabá, until reaching the Atrato swamps at Unguía. The proposed route turns east, bridges the Atrato River, and joins an existing road leading to Carepa in the vicinity of Caño Carepita.

The Balboa Route-2007 is longer than the current proposal to close the Darien Gap, but it has two significant advantages: It is outside ecologically preserved areas, both in Panama and Colombia; and it brings needed infrastructure to regions currently undergoing economic development. In Panama, the road may open to tourism this section of the Caribbean coast, which today is mostly populated by the Kunas, so that there will be a need to negotiate with the government of Kuna-Yala Province. In Colombia, the proposed route will serve the towns of Zapzurro and Capurganá, which presently are open to ecological tourism, but cannot be reached by land. There exist already stretches of dirt roads between Acandí and Triganá, and between Tanela and Unguía in the Department of

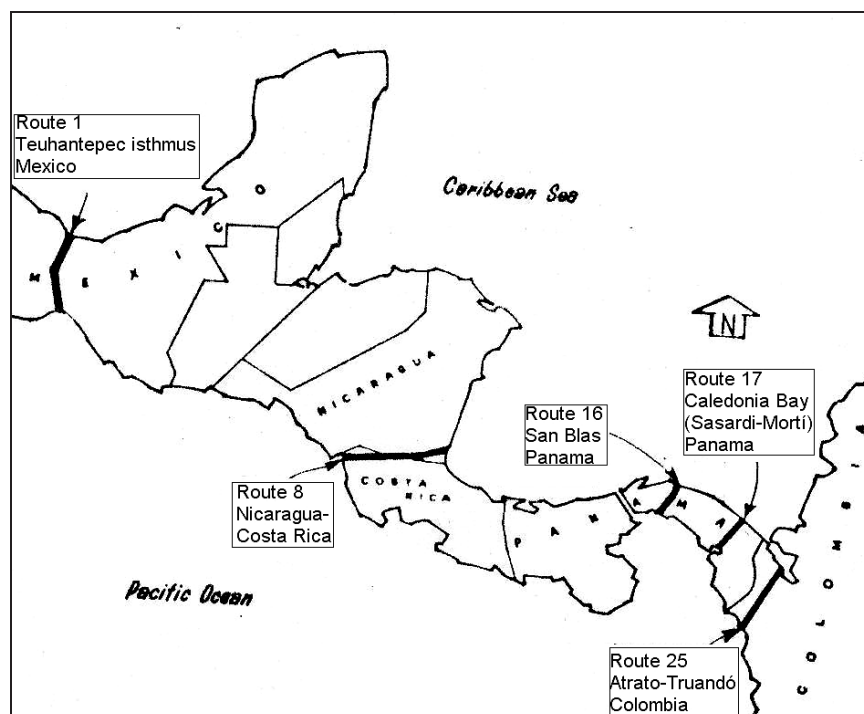
Chocó, and from Caño Carepita to Carepa in a banana-producing region of the Department of Antioquia. The proposed route will complete and improve these roads.

The proposed Balboa Route-2007 will finally complete a project envisioned more than a century ago. An operating Pan-American Highway from Alaska to Patagonia would be the natural companion to a Eurasian Land-Bridge.

The Atlantic-Pacific Interconnection via the Atrato River

In the 1880s, Colombia entered into a contract with France for the construction of a sea-level canal across Panama, which at that time was a Department of Colombia. Ferdinand de Lesseps, who already had built the Suez Canal, was in charge of the project. Unfortunately, malaria and yellow fever led to failure. After Panama separated from Colombia, the present canal with locks was built by the United States, between 1904

FIGURE 2
Five Routes for Inter-Oceanic Canals



These routes are geologically viable for excavation with nuclear explosives.
Source: E. Graves, "A New Canal," Nuclear News (February 1965).

and 1914. The width of the Panama Canal cannot accommodate today's large oil tankers and other modern vessels; additionally the canal is overcrowded. As a partial solution, Panama on Sept. 3, 2007 started construction of a US\$5,000 million expansion of the canal, which will be ready in 2014. This expansion will allow larger ships to cross, but will not solve the problem of overcrowding.

The possibility of building a canal across Nicaragua has been known since the mid-16th Century; different routes, some with locks, other at sea-level, have been considered. Today, at the beginning of the 21st Century, there is still interest, as an alternative for solving the overcrowding in Panama. Routes using the Atrato River are another alternative, as discussed next [see **Figure 1**].

There is a long tradition from the Spanish chronicles that were collected by Baron Alexander von Humboldt in the early 1800s, hinting at the existence in the Atrato River region of a route to pass from the Pacific Ocean to the Caribbean Sea. The Raspadura, a short, small canal of some 8 km in length, has apparently existed at least since 1788, joining the small Quito River, tributary of the Atrato, to another small river flowing into the Pacific Ocean. As an anecdote, it is mentioned in passing that there are suggestions that Chinese explorers could have used this route in pre-Columbian times.³ Recent DNA studies have evidenced a high affinity between Chinese and

Japanese people and some indigenous groups settled in the Atrato region since pre-Columbian times. This evidence lends some credibility to these folk traditions.

After Humboldt's writings, for 50 years there was no serious consideration of the possibility of building a canal to communicate between the Atlantic and Pacific oceans using the Atrato River. In 1852, Mr. F. Kelley of New York funded an expedition to survey the Atrato River from its mouths in the Gulf of Urabá to the mouth of Quito River, near Quibdó,⁴ the current capital of the Department of Chocó. The Atrato River is wide, and may be easily navigated as far as Quibdó, which is at an altitude of 40 meters above sea level, and about 400 km upstream from the Gulf of Urabá, which means that the river has a very small slope of 1 meter in 10 km.

By the mid-20th Century, as part of the U.S. Plowshare project, the possibility of using nuclear explosives to build a waterway between the Atlantic and Pacific oceans was analyzed in considerable detail by the Atlantic Pacific Inter-Oceanic Canal Study Commission.⁵ **Figure 2**

shows five routes that were identified by the former U.S. Atomic Energy Commission (USAEC) as being suitable for the use of nuclear explosives.^{6,7} From the point of view of isolation and sparse population, routes 17 and 25 in Panama and Colombia, respectively, were identified as the most promising routes for using nuclear explosives. The Sasardi-Mortí River Route 16 is relevant in the context of the present writing, because it is part of the Balboa Route-2007 proposed in the previous section. The fact that nuclear explosives are viable, means that the geology in the area of the Mortí River may be appropriate to build a tunnel to cross the Serranía del Darien.

The study released in 1970 by the Atlantic Pacific Inter-Oceanic Canal Study Commission,⁵ also considered Route 23N as potentially suitable for nuclear excavation. The route connects the Gulfs of San Miguel in Panama and Urabá in Colombia, involving the Tuira River in Panama and the Atrato River in Colombia. The study also included an all-conventional Route 23C, and a combined route using conventional and nuclear explosives. In the early 1980s, some attention was given, both in Colombia and Panama, to the possibility of building such a project as a joint endeavor involving both countries. Interest eventually faded away. Since the general route is similar to the current project to close the Darien Gap with the Pan-American Highway, this project would be unacceptable today, on the same grounds as the projected road to

close the Darien Gap (recall previous section), even if built using conventional explosives only.... An exclusion zone would be required if the whole canal were excavated using nuclear explosives only (Route 23C). In an exclusion zone, all population would have to be evacuated for several years, a condition that may not be politically acceptable today.

In addition to the proposals including nuclear excavation, since the beginning of the 20th Century, several alternatives for an all-Colombian sea-level canal have been advanced, using various rivers discharging into the Atrato River from the west.... In all cases, the water divide is low and close to the coast of the Pacific Ocean, so that construction of a canal by conventional means is quite possible. There are several potential sites for deep harbors, such as Cupica Bay. This subject is still alive in several engineering quarters.⁸

Given the growing demand for use of the Panama Canal, it seems that a reconsideration of a sea-level canal in the Atrato region may not be out of the question. Anticipating criticisms, it may be worthwhile to recall one of LaRouche's themes: to be valid as a decision-making tool, cost-benefit analysis must necessarily include long-term social benefits. This issue was clearly summarized in a past editorial of the *21st Century* journal:⁹ "Essential infrastructure—whether nuclear energy, or national rail systems—should not be measured with an annual cost-benefit yardstick that ignores both the future—and the past."

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Danish Campaign for Maglev Picks Up Speed

by Michelle Rasmussen

The Schiller Institute in Denmark has escalated its campaign for Denmark to be the first nation in Europe to build a magnetic levitation (maglev) network, with a three-pronged intervention into the current optimistic infrastructure debate. The momentum toward a new domestic bridge project now seems to be unstoppable, after the completion of the internal Great Belt bridge and the Öresund bridge to Sweden, and the agreement to build a Fehmarn Belt connection to Germany (see map). The only question is, will it be with or without a maglev track.

That must be the conclusion after a conference on "A Connected Denmark: Vision for Establishing a Fixed Kattegat Connection," in Copenhagen on Oct. 3, sponsored by regional politicians from Denmark's Jutland mainland and the city of Copenhagen. The meeting was called to discuss building a new connection across the Kattegat Sea between Denmark's two largest cities, Copenhagen and Århus, which the Schiller Institute has also promoted during the past year. The Institute's proposal to make the new connection the first phase of a national maglev system, was discussed at the conference from the floor by Institute representatives, and from the podium by one of the speakers. Press coverage of the conference in Denmark's largest newspaper, and the website of the Danish Engineers, led with the maglev proposal (although claiming that it lacks support).

The Schiller Institute also brought "maglev trains" to the Danish Parliament, during the yearly open house on Oct. 12, visiting the various parties' hospitality suites wearing "maglev hats." Several MPs enthusiastically reported on their having ridden on the maglev in Shanghai, the only commercially operating maglev in the world.

Institute activists spoke with 17 parliamentarians from five parties, including three party leaders, and with two government ministers, including the new transportation minister. The organizers counterposed the optimism of their maglev plans and Lyndon LaRouche's solutions, with the graveness of the ongoing international financial collapse. The Institute will testify before the Parliament's Political and Economic Committee on Oct. 25.

In addition, Tom Gillesberg, the chairman of the Schiller Institute in Denmark, and three Institute activists have announced independent campaigns for Parliament, under the slogan, "After the financial crash: Maglev across the Kattegat." Tom Gillesberg will run in Copenhagen, Feride Istogu Gillesberg in the Copenhagen suburbs, Janus Kramer Møller



in Århus, and Hans Schultz in Aalborg. There is enthusiasm at the prospect of going maglev especially in Århus and Aalborg, which promises to create great interest in the election campaigns there.

The Kattegat Conference

The conference, held in the Danish Engineers' building, was attended by 180 participants, including members of the Parliament's Traffic Committee, mayors, engineering companies, business representatives, and interested citizens. It was opened by the Mayor of Århus, Nicolai Wammen (Social Democrat), who stated that a new Kattegat bridge could be ready by 2020, and called for the government to begin the initial studies for the project as soon as possible.

Traffic economist Uffe Jacobsen, who has been instrumental in arguing for a new Kattegat connection, referred to a 1972 study which figured that such a project would have already been completed by 1990, and that it would count for around 50% of the traffic between the Jutland mainland and the island upon which Copenhagen is located.

In the discussion period, after a presentation by Alex Landex from Denmark's Technical University about including a high-speed, non-maglev, rail line across the Kattegat bridge, which would result in a one-hour travel time between Copenhagen and Århus, Schiller Institute chairman Tom Gillesberg brought up the advantages of maglev, and asked the speaker if

he had considered this technology. The speaker responded that he had, but since it was important for the railroad lines to continue on to other Danish cities, a maglev line would be impractical. (The Institute has proposed a national network to solve that problem.)

Speaker Poul Arne Jensen, a representative of Danish industry from one of the Jutland regions, excitedly spoke about his trip on the Shanghai maglev, and added: "As we heard here, the further vision is that if we had maglev, we could do it in 25 minutes. That is a fantastic vision, to think that that is possible."

Gillesberg added that the most important investment a nation can make is in infrastructure for the future, suggesting maglev again. The participants at the conference agreed to form a committee to continue the work on the project to unite the entire country.

The online edition of *Jyllands-Posten*, Denmark's largest newspaper, headlined its conference coverage, "Århus-Copenhagen in 25 Minutes." The article begins, "A trip on a maglev from Aarhus to Copenhagen could be made in 25 minutes. That was one of the more curious suggestions at the conference, which no politician spoke warmly about." But if the enthusiastic response of Danish MPs to the Schiller Institute's intervention at the Parliament was any indication, the debate on maglev here is far from over.

For more on the Kattegat conference and the Schiller Institute's maglev campaign, see www.magnetto.dk.



Schiller Institute organizers, with "maglev" hats, sing their maglev canons at the Danish Parliament on Oct. 12.