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Integrating the Nile Basin With Modern Transport

by Hussein Askary and Dean Andromidas, Part IV (Part A1 of A2)
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This is the final part of a series of four articles on the Nile Basin and East Africa, whose purpose is to show the great potential for peace and prosperity in Africa, and also that the shovels are now in the ground, and beginning construction of great projects, for the first time in decades. Parts I-III were published in the Sept. 5, Sept. 12, and Oct. 10 issues of EIR.

Beyond the need for an international emergency response to the horrendous Ebola epidemic in West Africa, what is needed to prevent the re-emergence of such epidemics, famine, wars, and mass-migrations, is a permanent and comprehensive development approach. In East Africa and the Nile Basin, we are seeing a new process come into being, after the long, dark night, with developments in Egypt, Ethiopia, and now, further south to the other nations of the Nile Basin (see Parts I-III).

But this process has to be sustained and backed by international action, before it is killed in the cradle, as the great dreams of African independence and development were killed and drenched in the blood of the African peoples and their best leaders in the 1960s. The civil wars, famines, epidemics, and genocide that followed were the result of the strategic denial of technologies and medicines to Africa by the trans-Atlantic system.

Simultaneously, Africa was bleeding human resources to Europe, and having raw materials exchanged for weapons, and financial resources smuggled by dictators and warlords to British and Swiss banks and financial institutions.

With the emergence of the "new, just world economic system" that Lyndon LaRouche and his international movement have been fighting for, now, through the actions of the BRICS nations (Brazil, Russia, Indian, China, and South Africa), Africa no longer need be shackled to its former colonial masters and their contemporary institutions of slavery, such as the International Monetary Fund (IMF), the World Bank, and such green genocidal organizations as the World Wildlife Fund (WWF).

One Unit of Action

Regional integration has been part of Africa's strategy for economic transformation since the 1960s, and concrete agreements have been adopted, including the Lagos Plan of Action (1980) and the Abuja Treaty (1991). But that transformation has never materialized. That is about to change. The African Union (AU) is the natural entity for physical and political integration. However, the regional structures have to be integrated into the AU vision, based on physical-economic considerations, rather than ideological, religious, ethnic, political, and even monetary ones.

An economic development policy has to enhance the region's capacity to create what LaRouche has termed a rising "physical-economic unit of action." In his "The One Is the Origin of Its Parts" (*EIR*, Jan. 11, 2008), LaRouche stated, "The unit of action is a relative rise, or lowering, of the potential relative population-density of the respective, or combined systems as interacting wholes. The unit of action is essentially 'Vernadskyian,' which is to say, both a cultural and physical increase, or decrease of the potential relative population-density, as per capita and per square kilometer of the relevant national, continental, or global systems as wholes. The relevant mode of action is the quality of the individual human mind which distinguishes the human mind from the beasts, and places mankind categorically as acting, primarily, in terms of the Noösphere, rather than merely the Biosphere."

In East Africa and the Nile Basin, we are seeing a new process come into being among the nations along the mighty Nile River. Here, the Nile runs through the center of Cairo.

Infrastructure in general, and especially transport infrastructure, plays a decisive role. This report will identify the triad of transport infrastructure projects needed, including road, rail, and maritime areas in the greater Nile Basin.

Creating a Powerful North-South Axis

The Nile Basin and the related East African region are part of a potentially powerful north-south axis of development that can serve to link the two most developed countries that lie on opposite ends of the continent: Egypt and South Africa.

This axis can be divided into three sections. The northern region includes Egypt, Sudan, South Sudan, and Ethiopia. While guarding the eastern boundary of the Nile Basin, Ethiopia overlooks the Red Sea, Gulf of Aden, and the Indian Ocean, but direct access to those seas is blocked by Eritrea, Djibouti, and Somalia. Ethiopia hosts the source of the Blue Nile at Lake Tana.

The second part of this axis is East Africa, with Kenya and Tanzania on the Indian Ocean, and Uganda, Democratic Republic of Congo, and Rwanda on the interior. This region forms the so-called Eastern Rift, which hosts the African Great lakes, the largest of which is the misnamed Lake Victoria, the source of the White Nile.

The third section is the western flank of southern Africa, including Zambia, Mozambique, Zimbabwe, and South Africa itself.

The Nile Basin/East Africa region, with an abundance of water, fertile land, minerals, hydrocarbons, untapped potential for hydropower, and large, young populations, is positioned to become a major economic force in the 21st Century. At the moment, however, its resources need to be reorganized, standardized, and unified, to get the maximum benefit from each of the individual resources.

For example, using a "multi-modular transport system" would increase and optimize the productivity of all these societies, as wasted time, energy, and human resources will be eliminated. A multi-modular transport system is a combination of two or more transport means—

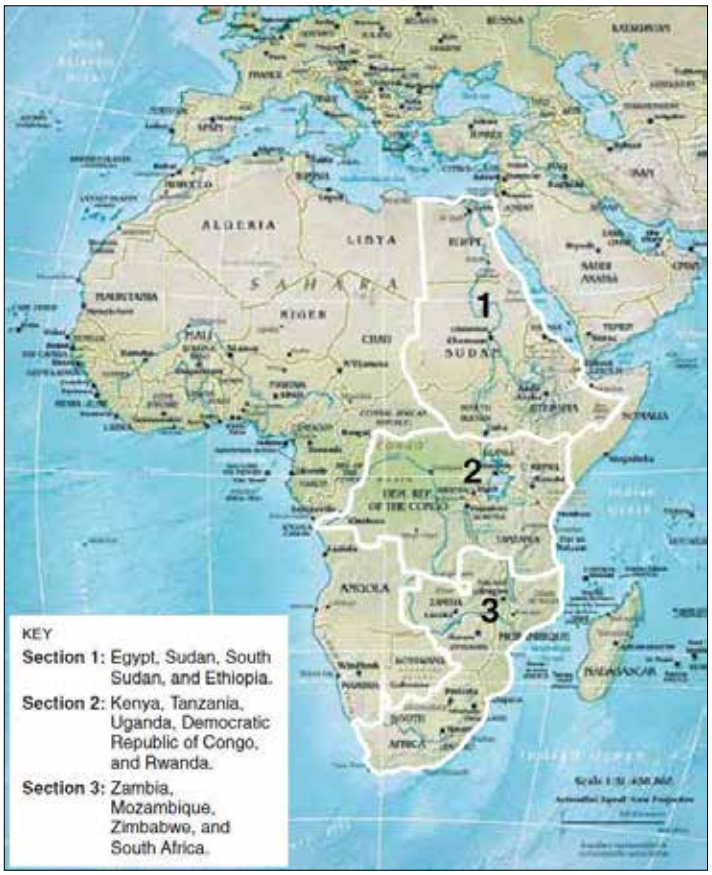


FIGURE 1. The North-South Axis of Development: Egypt-South Africa.

land, rail, sea, and air—creating an integrated transport chain in which the advantages of each of these are utilized.

Transshipment terminals are characteristic of this system, giving it speed and efficiency, as the cargo, for example, a container (not bulk cargo, such as oil, wood, and grains), is loaded from a ship, onto a train or a truck, in the least time, and with the least effort. Containers can be tracked from a distance by the receiver and sender through digitalized electronic systems. This requires standardized sizes for the containers, lifts, and rail gauges, to allow trains to pass through different terminals and countries, etc. Containers carrying foodstuffs can be refrigerated, along with storage and handling terminals, a crucial factor in the transport of agricultural products in this part of the world, where many products are spoiled on the way to the markets.

None of this is available now in the Nile Basin, except to a limited extent in Egypt, where international transshipment is handled. Egypt has a special position, as it will form a land-bridge with Eurasia, as part of the Maritime Silk Road through the Suez Canal, and a maritime connection with Europe on the Mediterranean. Egypt is also connected by land to Asia through the Sinai Peninsula.

Colonial Legacy

The existing transport systems in the region were designed in the colonial era to link countries' mineral and agricultural wealth with overseas markets, rather than interlinking these countries. Railways that were used by the British and other colonialists to loot the region have different gauges, not only between the countries, but even within the same nation in some cases. But even these limited railways have been largely abandoned for lack of maintenance and investment.

In Kenya, only half of the original 2,730 km of railways are operational. Railways are the most cost-effective mode of transport for moving bulk cargo for long distances over land, and are well suited to container traffic between ports and cities. The ten countries of the Nile Region combined have a total railway network of 23,059 km, compared with India at 115,000 km and China at 103,000 km of railway

FIGURE 2.
The 10 Nations of the Nile Basin Initiative.

track, as of 2013. Burundi and Rwanda have no railroads at all.

Most railway systems in the region are inefficient, have long transit times, and operate far below their capacity. The narrow 1.067-m gauge is the most widely used, except in Egypt, where the standard 1.435-m gauge has been used. The railways are generally single track with limited axle load and low speed. None of the national rail systems are designed to cross borders.

As a consequence of all of these obstacles, shortcomings, and the colonial legacy, political integration among the nations of Africa has been prevented.

Landlocked

The fact that most nations in the Nile Basin are landlocked has hampered their economic development and integration with other regions. On top of genocidal economic and military policies, the economies of especially the Upper Nile region have been hamstrung by the fact that most of the transport within and among these nations is carried by truck, on poorly built and maintained roads. This has made transport among them the most costly in the world.

The challenges are more severe for the six Nile Basin nations that are landlocked riparian countries—Rwanda, Burundi, Uganda, DR Congo, South Sudan, and Ethiopia. For example, the cost of the transportation of a container of fertilizer from Singapore to Alexandria harbor (Egypt) is US$4,000, Mombasa harbor (Kenya) US$5,000, Kampala (Uganda) US$8,400, Kigali (Rwanda) US$10,400, and Bujumbura (Burundi) US$10,600.[1]

Even trade and transfer of goods and machinery among the neighboring nations suffer enormously due to the absence of both standardized and non-standardized transport networks. The absence of cheaper and more effective rail and river transport links between North and South, and East and West, has undermined the economic integration of the Nile Basin.

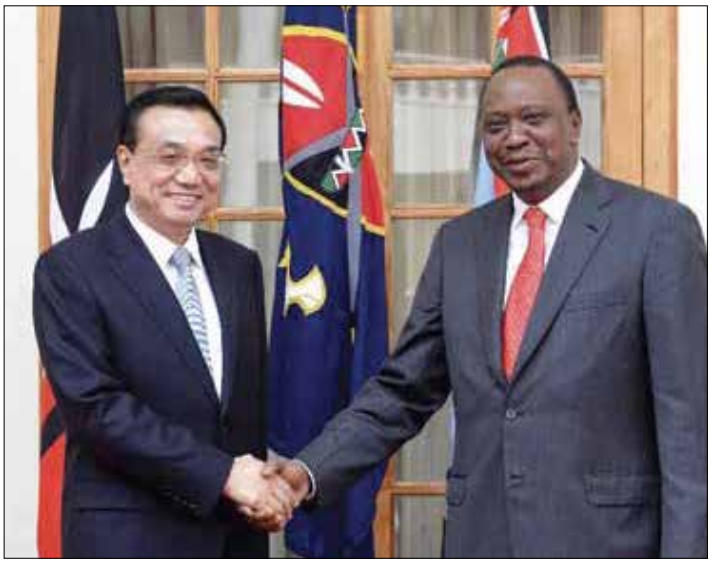
For example, while more than two-thirds of Egypt's Nile Basin exports go to Sudan and South Sudan, less than 1% goes to the eight upstream nations! As for Sudan's exports, only 2.2% go to these countries. Likewise, imports from the Nile Basin nations to Egypt comprise only 0.6% of its total imports, Sudan 12%, and Ethiopia 3%.

China's Plan for Economic Corridors

China has plans to deal with this problem.

In May 2014, while on a tour to several African nations, Chinese Premier Li Keqiang projected an optimistic vision of Chinese-aided industrial and infrastructural growth for the African continent. The tour started in Ethiopia, ended in Kenya, and included Nigeria, China's third-biggest trading partner in Africa, and Angola, its biggest. Contrary to frustrated and nervous reporting in Western media, Li was not on a shopping spree for raw materials. Rather, he advocated an increase in Chinese industrial investment in Africa, and Chinese-aided infrastructure construction, policies which will raise standards of living, and propel Africa onto a new economic platform.

Speaking at the Africa Union headquarters in Addis Ababa, Ethiopia, on May 5, Li emphasized that one of China's goals is to fulfill the dream of connecting all African capitals by high-speed rail, so as to boost pan-



Chinese Prime Minister Li Keqiang and Kenyan President Uhuru Kenyatta signed a series of deals in May, during Li's visit to Nairobi. Li projected an optimistic vision of Chinese-backed industrial and infrastructural growth for the continent.

African communication and development. Li emphasized that China has developed world-class technologies in this area.

This is the first time that a leading nation has advocated a plan to begin the process of the rapid industrial and infrastructural development of Africa, since LaRouche initiated a study in 1979 calling for the rapid development of infrastructure, including a continent-wide rail network, ambitious water projects, nuclear power, and industrialization.

In fact, China has already taken the lead in building transport infrastructure through the Nile Basin.

The most significant development during Li's tour was the agreement reached in Kenya on May 11, 2014 between the Chinese delegation and the leaders of the East African Community (EAC), to build a $3.8 billion rail link between Kenya's Indian Ocean port of Mombasa, and Nairobi, the first stage of a line that will eventually link Uganda, Rwanda, Burundi, and South Sudan. Under the terms of the agreement, the Exim Bank of China will provide 90% of the cost to replace the crumbling British colonial-era line with a 609.3-km standard-gauge railway. Kenya is to provide the remaining 10%. Construction began in late October, and is expected to take three-and-a-half years to complete, with China Communications Construction Co. as the lead contractor.[2]

The new Mombasa-Nairobi (Kenya) lines will cut passenger travel time from the current 12 hours to around 4. Freight-train times would be cut from the current 36 hours, to just 8, which means, also, the slashing of cargo transport costs by 60%.

Once the Mombasa-Nairobi line is completed, construction would begin on linking East Africa's largest economy with Kampala, Kigali, Bujumbura, and Juba.

The signing ceremony was attended by Li and Kenya's President Uhuru Kenyatta, Uganda's President Yoweri Museveni, Rwanda's President Paul Kagame, South Sudan's President Salva Kiir, and high-level representatives of Burundi and Tanzania. "This project demonstrates that there is equal cooperation and mutual benefit between China and the East African countries, and the railway is a very important part of transport infrastructure development," Premier Li said. Kenyatta hailed the booming relationship with China, calling it one "based on mutual trust," and saying Kenya "has found an honorable partner in China." Museveni took a shot at Western powers saying, "We are happy to see that China is concentrating on the real issues of development. They don't give lectures on how to run local governments."

This agreement is just one of a series that China has signed to realize development corridors that can propel the economies of East Africa into the 21st Century: the Lamu Port Southern Sudan-Ethiopia Transport (LAPSSET) Corridor; the Northern Corridor (referenced above); and the Central Corridor. They are part of the East African Railways Master Plan, a proposal for rejuvenating existing railways serving Tanzania, Kenya, and Uganda, and extending them initially to Rwanda and Burundi, and eventually, to South Sudan, Ethiopia, and beyond, to connect to North and West Africa through DR Congo, Sudan, and Egypt.

A 2018 Deadline

The final report of the Master Plan, which was commissioned by the EAC, was issued in 2009 by the Ottawa-based CPCS Transcom. However, it has lain dormant, like many other projects in Africa, that have been denied support and financing from the West. The cost of the projects, up to US$40 billion or more, will be shouldered by China and other BRICS nations such as India, which has also shown interest in backing development in East Africa. The deadline set for completing all these projects is 2018! What this means is that East Africa will become one of the largest workshops in the world in the coming years, with new industries, economic zones, and trade centers shooting off the main projects.

China will be building standard gauge railways simultaneously in several countries. In 2013, the state-owned China Harbor Engineering Company (CHEC) signed a US$8 billion contract with the Ugandan government for upgrading and expanding its railway network to standard gauge railway (SGR—distance between the inside edges of the rails, 1,435 mm), from Malaba on the border with Kenya, to Kampala (east-west line), and from Malaba to Gulu, with expansion to Nimule on the border with Sudan (southeast-north). From there, the network is to expand to Juba in South Sudan.

This project is part of the Northern Corridor of the EAC. As part of the contract, the CHEC will work closely with the Ugandan Army's Engineering Brigade, and will also construct a polytechnic school in Uganda for continuous training of army officers in technical and engineering skills.

The CHEC has announced that the government of South Sudan has also selected the company to build new and upgrade existing railway lines.

Ethiopia too has been engaging Chinese companies to build its own standard-gauge railway networks. Within 3-5 years, Ethiopia is planning to have one of the most advanced rail networks in Africa.

FIGURE 3. New East African Railway.

In 2011, the state-owned Ethiopian Railways Company (ERC) signed two agreements with Chinese companies to build a 4,744-km rail network, which will link 50 urban centers, in all the states of Ethiopia, and to towns bordering Sudan, Kenya, and Djibouti. This plan is part of the Ethiopian government's five-year Growth and Transformation Plan (GTP).

In December 2011, ERC sealed a contract with China Civil Engineering Construction (CCECC) to build the 339-km Mieso-Dire Dawa-Dewele railway line, which is part of the Addis Ababa-Dire Dawa-Djibouti railway project. The actual track-laying started in May 2014, and the project is expected to be completed in 2015. The electrified railway will be 740 km long, and will provide both passenger and cargo transport from Ethiopia's capital to the Tadjoura Port in neighboring Djibouti.

It is estimated that the Addis Ababa-Djibouti railway will reduce travel time by half, to less than 10 hours. with a designated speed of 120 km/hour.

Djibouti has become Ethiopia's main outlet to international markets since it lost access to the Eritrean Port of Assab on the Red Sea, following the Eritrean-Ethiopian War that started in 1998. However, the building of the railway is not simply a trade route, but part of the development plan of the Ethiopian hinterland.

India has contributed to the Ethiopia-Djibouti project by providing a US$300 million credit line, in June 2013, through its Export-Import Bank.

In June 2012, Ethiopian Railways and China Communication Construction Company (CCCC) had also signed a $1.5 billion agreement to build a 268.2-km railway line in the northern part of Ethiopia. The line will run from Mekelle-Woldya to Hara Gebeya. This project links the north of the country to the Addis Ababa-Djibouti line.[3]

Road System

Road transport now accounts for 80% of the goods and 90% of the passenger traffic in the Nile Basin. The commodities transported by road are mainly agricultural products and locally manufactured goods. Haulage is mostly by trailer trucks and road tankers (fuel trucks).

The Nile region has about 650,000 km of roads, resulting in a road density of 7 km for every 100 km^2. This is low when compared with other developing regions, such as Ibero-America (12 km per 100 km^2), and Asia (18 km per 100 km^2). What's more dramatic is the ratio of paved to unpaved roads: South Sudan has only 7,000 km of roads, but only 1% is paved; Rwanda 12,000 km with only 8% paved; Uganda, 81,000 km with 4% paved; Kenya, 160,000 km and 7% paved. Egypt has the highest ratio of paved roads with 65,000 km and 73% paved. For the region, only 86,600 km (14%) are paved.

The growing volume of cargo on generally inadequate road networks has resulted in increased traffic congestion and rapid deterioration of the already poor roads. The level of maintenance of existing roads is poor, resulting in many sections that are unusable during the wet season. South Sudan, which experiences extensive seasonal flooding each year, has the highest proportion of seasonally inaccessible roads. Road accidents in the region are generally high. Other problems affecting the road subsector, are trucks exceeding axle-load limits, resulting in premature road failure, and delays on transit corridors, mainly at seaports, weigh-bridges, border-crossing points, and inland terminal points, all of which increase transport costs.

FIGURE 4. Trans-African Highway Cairo-Cape Town.

The cost of road transport of bulk cargo is 3-4 times, and even higher, for longer than 1,000-km distance, compared to inland water or rail transport for medium and longer distances. Moreover, it has only limited potential to achieve economies of scale, and thus hinders industrialization and commercialization of agriculture.

Regional and Continental Corridors

With the new positive developments reported above, this situation can be altered for all time. There are a number of significant plans for development corridors being worked on, proposed, or studied in the Nile Basin.

The most important vision of the AU has been to integrate the continent in north-south and east-west directions, though the Trans-African Highway system (TAH). The concept of the TAH, conceived in the 1970s, is a system of nine main transport corridors, whose objectives are:

providing the best possible direct routes between the capitals of the continent;

contributing to the political, economic, and social integration and cohesion of Africa; and (

ensuring availability of road transport facilities among important areas of production and consumption in the continent.

The Nile region is traversed by four of the nine TAH routes: the Cairo-Cape Town, Lagos-Mombasa, Dakar-N'Djamena-Djibouti, and Cairo-Dakar routes. These routes are important for linking the Nile riparian states. However, roads are not efficient for medium- and long-distance transport, and have to be replaced or accompanied by railways.

The implemented, planned, and designed corridors of this region are:

1. North-South: Egypt's: North-South Development Corridor

The Development Corridor proposed by Dr. Farouk El-Baz, an Egyptian-American space scientist who is now a scientific and economic advisor to Egypt President Abdulfattah Al-Sisi, can be considered the launching pad for the Cairo-Cape Town Corridor. It is modestly described as a "national" development project aimed at releasing the pressure from the densely populated Nile Valley, by building a multi-faceted transport network in the western desert of Egypt, parallel to the Nile Valley, but it also has regional and continental implications. It is called the New Valley, and includes:

- a superhighway to be built using the highest international standards, 1,200 km in length, from west of Alexandria, to the southern border of Egypt;
- 12 east-west branches, with a total length of approximately 800 km, to connect the highway to high-density population centers along the way;
- a railroad for fast transport parallel to the superhighway,
- a water pipeline from the Toshka Canal to supply freshwater; and
- An electricity line to supply energy during the early phases of development.

To be continued...

Footnotes:

1. Source: Maersk 2011/Nile Basin Initiative.
2. Construction has been delayed by NGOs, and a court order to halt the work, until compensation for villages in the way of the track has been issued.
3. For more details, see the ERC website: www.erc.gov.et