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Ubangi-Chari Hydro Tunnel,  
Trans-African Railway,  
Central African Pipeline

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Northeastern Africa

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Northeastern Africa

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Central Africa

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**Think Big -- An Ubangi-Chari Hydro Tunnel to Refill Lake Chad, Irrigate the Sahara, Induce North African Climate Change, and Power and Fund the Trans-African Rail Net**

*Snapshot: A sequenced series of megaprojects could help Africa achieve some part of its immense human, resource and trade potential.*

The Ubangi River in the Central African Republic floods yearly with large-scale damage downstream on the Congo River. The Congo Basin is itself knee-deep in rain. In sharp contrast, to the North, Lake Chad and the Chari River in Chad have been overexploited, and climate change is drying out its basin. Lake Chad has all but disappeared at near six percent of its 1960 surface area. The Bar al Gazal, its outlet to the North into the Sahara, has not flowed in decades -- yet the gardener to the Sultan of Mao remembers that his grandfather (the office is

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hereditary) killed hippos and Nile Crocodiles in the gardens and fished Nile Perch ("capitaine") of 30 kilos from the "river." The species is common to both the Chad and Nile basins and paleo-geology tell us that the Nile was once connected to the Chad basin.

If we cannot reflood the Chadian Sahara from the Nile, could we dam the Ubangi River before it flows South into the Congo, tunnel through the height of land between the CAR and Chad, divert the 80% excess flow (the Congo river drowns hippos in flood!) to hydro-electric turbines in the tunnels, replenish the Chari, Lake Chad, and then the Sahara Desert via the Bar al Gazal?

Reflooding Lake Chad could be the first step toward reclaiming the region from its desertification. The semi-desertic Sahel climate belt is moving toward merging with the Sahara. Stopping the loss of tree canopy would reinforce the retention of rainfall and groundwater in a cyclical fashion and in the medium term change the climate of the region. The Chari originates in the CAR as the Bamingui and Gribingui rivers to the west of Ndele in northern Central African Republic. The Chari runs 500 miles to Chad's capital of N'Djamena where it is joined by the Logone River and flows to Lake Chad in a wide delta. Fishing boats now rot in deserted villages, miles from the present shoreline – Lake Chad, once the sixth largest body of fresh water – is gone.

The hydro project and irrigation / reforestation projects could be financed by the oil of the Doba Basin via a Sudan-CAR-Chad-Cameroon oilduct. EXXON is already building the link from Chad to the sea.

The resulting region of prosperity could in turn finance a Dakar-Addis-Nairobi railroad to open and link West, Central and East Africa. Some oil could be refined locally, saving imports. The rail lines would make shipping finished products reasonable. The Doba Basin oil via pipelines powered and funded by the hydrotunnel would in turn fuel railroad diesel engines.

A Nairobi-Brazzaville / Kinshasa - Pointe Noire rail link could then connect East Africa to the Congo and thus to the Atlantic for rail-barge-ship container traffic.

The synergies of the West-North-East-Central rail net would create markets of great potential. Products from the most basic up through manufactured goods

benefiting from more reasonable electricity, fuel and transport prices would be cheaper to half the Continent almost from the driving of the last spike.

Brazzaville, the downstream terminus for shipping on the great Zaire-Ubangi waterway, and the nation's Atlantic Ocean port of [Pointe-Noire](#), [reties the end of the loop with its water route up the Ubangi to the CAR where the hydro-power-oil-rail synergy originates](#). The Ubangi is navigable for over 300 miles from its junction with the Zaire to Bangui, capital of the Central African Republic.

Next, a rail line from Nairobi (perhaps with interior and coastal legs) would reach down to Johannesburg and Capetown, completing the major linkages Africa has never enjoyed. Population and resource centers would determine the future road and rail spurs off the backbone rail net.

No doubt, some have dreamed these dreams before. Each is staggering -- too big to consider on national budgets, yet together they loom more plausible. The linked projects could become self-financing were governments to pool their sovereignty effectively. That whole is too big to consider except in carefully executed stages. Just the effort to induce major climate change from reforestation of the Lake Chad Basin and reflooding of the lake would take decades but is certainly no more ambitious than Terraforming Mars -- with more immediate payback. It is just dawning on us that Florida's hurricanes originate on Saharan dust storms and that massive East Coast algae blooms and fish kills may as well. We are told Africa is fragmented, its resources and people unharnessable, its primitive trade doomed to pass in dribbles over the beach. Libya was once the breadbasket of the Roman Empire. The Sahara was once one terminus of the Silk Road that ran all the way to Kublai Khan's China. Nothing is graven in stone.

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