Compounding Egypt's Woes: Facing the Inevitable Challenge of Sharing the Waters of the Nile

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Ancient Greece’s chronicler (historian) Herodotus (460 B.C.) coined the famous expression "Masr Hibatu El-Nil," "Egypt is the Gift of the Nile River." Egypt, ever since the dawn of History, enjoyed the incontestable right, De Facto and De Jure, of determining the allocation of the 80+ Billion Cubic Meters (“BCM”) of the annual flow of the waters of the Nile. With Sudan in the South (a shared Anglo-Egyptian Condominium until Sudan’s independence on the 1st of January 1st, 1956), Egypt enjoyed near virtual monopoly on both the allocation and the utilization of the Nile’s waters.

This reality is about to change and with it the woes of Egypt could seriously multiply in the decades to come to threaten all aspects of Egyptian life, economically and the Egyptians’ standard of living.

The Nile River Basin

The Nile River Basin is comprised of ten African nations (termed “Riparian” nations) that while all 8 are the contributors of its waters, only Egypt, and to a lesser extent, Sudan are the near sole virtual users of these waters. Egypt’s contribution to the Nile water is insignificant with an average annual rainfall below 20 mm. Sudan, to some extent, mainly the Southern part of this largest African country, contribute to the Nile waters with varying rain falls ranging from low of 400 to a high of 1200 mm per year.

The waters of the Nile originate from the heavy rain falls measuring to steady 1200 to 2000 millimeters (mm) per annum from the Equatorial Lake Plateau in the farthest Southwestern corner of the Nile River Basin (mostly from the highlands of Burundi and to lesser extent from tributaries from Zaire, Rwanda, Kenya, Tanzania and Uganda) to form as it passes through Lake Victoria and into Southern Sudan the White Nile. Near Khartoum, the Capital of Sudan, the White Nile joins with the Blue Nile which flows from the Ethiopian highlands, near Lake Tana. The Blue Nile waters originate
from the tributaries of the rainfalls of the Ethiopian Highlands in Eastern Africa, that average 1,000 mm per annum. The rainfalls of the Ethiopian Highlands are confined to a four months raining season and do fluctuate - unlike the steady waters of the Equatorial Lake Plateau - from year to year by no less than 25%.

Over 53% of the Nile’s waters come from the Blue Nile. The White Nile and the Blue Nile flow together to meet in North of Khartoum with the Atbara River, whose waters also originate in the Ethiopian highlands. The Ethiopian highlands contribute more than 75% of the total waters of the Nile River Basin.

The Nile River is the longest river in the world that stretches from the sources of the White Nile in the Equatorial Lake Plateau to the Mediterranean’s estuary north of the Egyptian Delta, a distant of more than 6,800 kilometers. The Nile River Basin covers a total area of more than 3.3 million km², more than 10% of the African Continent.

There is an increasing demand for water, in general, and the Nile water in particular, in all the riparian nations for consumption as populations of these countries explode (from current approximately 390 million, the total populations of the Riparian countries are expected reach 590 million in 15 years come 2025). The increase for the demand of the Nile water is also caused by these countries industrialization; expanded irrigations schemes and the generation of hydroelectric power utilizing natural falls to construct dams and water reservoirs on the long route of the flow of the River Nile.

**Existing Treaties for the Allocation & Utilization of the Nile’s Waters**

There are no existing treaties between the independent sovereign riparian countries of the Nile River Basin for the equitable allocation and utilization of the Nile water on an acceptable legitimate and rational basis to the benefit of all the countries falling within the Nile River Basin.

The two existing treaties governing the allocation and utilization of the waters of the Nile exclusively concern the downstream countries of Egypt and Sudan to the exclusion of the 8 upstream African riparian states, the

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sources of the waters of the Nile River Basin. The main treaty, the “Nile Waters Agreement” was drawn on 7 May, 1929 by the Colonialist British power ruling over 9 of the Riparian states at the time, to favor Egypt and to much lesser extent the then Anglo-Egyptian Condominium of Sudan.

The Nile Waters Agreement signed between British Colonialized Egypt and the Anglo-Egyptian Condominium of Sudan stipulated among its provisions that:

- Egypt and Sudan, the downstream countries, have claim to the entire flow of the Nile waters. Egypt was allocated 48 BCM of the 84 BCM of the total annual total water resources of the Nile; with Sudan getting allocate 4 BMC per year. However, during the dry season (January 20 to July 15), the Nile waters would be reserved for Egypt alone.

- Egypt reserves the right to monitor the Nile flow in the upstream other African Riparian countries.

- Egypt assumed the right to undertake Nile River related projects without the consent of upper Riparian states.

- Egypt assumed the right to veto any construction projects that would affect her interests adversely.

Egypt was still under British colonial rule in 1929. Sudan, Ethiopia and the other African Riparian states were also not sovereign independent countries at the time. Britain played the role of both the judge and prosecutor in engineering the treaty in the name of Britain’s colonial territories in order to favor Egypt over the remaining Nile River Basin countries. Thus, the Agreement was intended to securing the Nile water for Egypt by limiting the rights of the other riparian countries.

The Nile Waters Agreement became the basis for the next bilateral agreement drawn between now Independent sovereign countries of Egypt and Sudan. The agreement introduced some modifications to the earlier “Nile Waters Agreement” with regard to the allocation and utilization of the Nile River’s waters. The new agreement was called the ”Agreement for the
“Full Utilization of the Nile Waters” and opened the door for Egypt to develop the Aswan Dam (the “High Dam”) and for Egypt and Sudan to acquire full rights to the Nile River’s water resources. The Agreement was signed in 1959 between Egypt and Sudan without the participation, consultation or the consent of the other 8 African riparian states. Ethiopia, the source of more than 75% of the Nile River’s water was also excluded and was not consulted on the agreement. In short, all the Nile’s water flow is divided between the two most downstream countries of the 10 African countries lying on the 6,800 kilometers stretch of the Nile River Basin.

According to the “Agreement for the Full Utilization of the Nile Waters,” Egypt and Sudan agreed, among others, to the following:

- The quantity of the average annual Nile flow was determined at 84 billion cubic meters (“BCM”).
- The agreement allowed the entire annual average annual flow of the Nile to be shared among Egypt and Sudan at 55.5 BCM and 18.5 BCM, respectively.
- The agreement granted Egypt the right to construct the Aswan Dam that can store the entire annual Nile River flow of a year.
- The agreement granted Sudan the right to construct the Rosaries Dam on the Blue Nile and to develop other irrigation and hydroelectric power generation until Sudan fully utilizes its Nile share.

On May 1999, and under the initiative and sponsorship of the World Bank, the Nile Basin Initiative (“NBI”) was established as a cooperative framework between all riparians (excluding Eritrea) for the sustainable development and management of the Nile. The NBI did not touch on the delicate question long established by the 1929 “Nile Waters Agreement” with regard to the allocation and utilization among the riparian state of the waters of the Nile River.
Egypt as the Gift of the Nile River

Egypt is in the most vulnerable place with regard to the stability of water supplies to meet Egypt’s increasing demands for water from the Nile River Basin. Waters from the Nile cover more than 97% of Egypt’s water resources as the Nile stretches all across the country from South to North. The Nile also contributes more than 77% of the Sudan’s water. One can say that the water sources of Egypt lie entirely beyond the political borders of the country and that nearly three quarters of Sudan’s water resources originate outside the country’s borders.

Nearly 96% of Egypt is desert land and the greatest majority of the Egyptian population clusters around the narrow band of the Nile River Basin. What really seems to exasperate an already challenging water supply situation is Egypt’s need for additional 2 billion cubic meters of the Nile River’s waters every year to meet the needs of the country’s burgeoning population and the country’s major irrigation systems to supply major agricultural development projects that not all are necessarily very well conceived.

Egypt with a minimal rainfall not exceeding 20 mm per year is completely dependent on irrigation from the Nile waters for its agricultural projects. Egypt and Sudan are the only two countries of the riparians that utilize the Nile River waters extensively in irrigation. Agricultural land under irrigation in Egypt reaches in excess of 6.0 million hectares (Hectare 1 = Approx. 8,000 m²), while land under perennial irrigation in Sudan reaches close to 3.0 million hectares.

Upstream Riparian Countries Demanding Equitable Share

Water resources are a principal asset for development in the Nile River Basin. The fast demographic growth in the riparian states is accelerating demand for agricultural production and hydropower in the region.

Egypt, and to a lesser extent Sudan appear caught unprepared by the insistent demand of the 8 upstream African riparian countries of the Nile River Basin for a more faire allocation and distribution of the Nile River’s waters between all 10 riparian countries. The Egyptian authorities, true to a
condescending myopic style seem totally oblivious to changing realities and the logical demand of the upstream riparian nations for a legitimate equitable share of the waters originating in those countries’ territories. Thus far, the more than nearly 250 million populations of the 8 African upstream riparian African nations are vetoed, on their legitimate right of utilization of waters originating within their own territories, by a single country in the Nile River Basin: Egypt.

Before the recalcitrant Egyptian government’s position, the 8 upstream riparian countries are throwing the towel on continuing dialogue with Egypt and Sudan and have decided to go their way drawing a separate agreement of their own.

Ethiopia and six other upstream countries plan on their own without the participation of Egypt and Sudan to sign a new accord that will redistribute the rights to water for the Nile waters. Ethiopia will sign the new “Nile Cooperative Framework Agreement” with Uganda, Tanzania, the Democratic Republic of Congo (“former “Zaire”), Burundi, Kenya and Rwanda by May 14, 2010. The new agreement would replace the 1929 colonial-era treaty between Egypt and Britain, which gave Egypt veto power over projects in the upstream riparian nations of the Nile River Basin. Ethiopia and the other 6 countries argue that the agreements of 1929 and 1959 were imposed on the African countries by the British colonizers who were occupying most of the concerned countries during the signing of those agreements.

**Ethiopia Leading the Pack**

**Ethiopia** is a very large country in East Africa that with an area of 1,140,300 km² is nearly 10% larger than Egypt; and with a total population of close to 80 million is comparable if not slightly bigger than Egypt. Ethiopia is the source of more than 75% of the total Nile water flow. The Ethiopian Highlands give rise to some of the major tributaries of the Nile – the Abbay (Blue) Nile, the Tekeze (Atbara) River, and the Baro-Akobo (Sobat) River.

While rainfall in the Nile Basin portion of the country is relatively high, it is
highly seasonal and confined to only a four month period, while the remainder of the year is dry. Ethiopia’s total dependence on rain fall alone, and despite a very fertile land, has caused dramatic variations in the agricultural production and food supply that resulted in the 1980s, in combination with civil unrests, in a series of famines resulting in some estimates to the death of nearly one million people. The areas in Ethiopia under perennial irrigation is a minimal less than 300,000 hectares, or only 5% of the irrigated areas in downstream Egypt, a country of comparable population, and is less than 10% of downstream Sudan, a country of half the population of Ethiopia.

As Ethiopia appears to have a more stable political situation and enjoying a favorable position vis-à-vis the Western powers, foremost the U.S., the country appears poised to leverage its privileged relations with ambitious development plans, especially, most obviously, in the agricultural field. With less than 300,000 hectares of land are under perennial irrigation, the country appears intent in the following years to realizing the country’s potential of agricultural cultivation with systems of perennial irrigation. That potential stands at more than 2,000,000 hectares, which still represents less than one third of the land under perennial irrigation in downstream Egypt, a country of comparable population; and less than the 3,000,000 hectares in neighboring Sudan, a country that is less than half the Ethiopian population.

With 13,000 Cubic Meters of water on the average are required annually for the irrigation of one hectare of agricultural land, Ethiopia’s plans to engage fervently in irrigated agriculturally development of close to 2,000,000 hectares of land in the coming years, to stave off potential severe food shortage during the drought seasons, would translate in new upstream Nile water consumption originating in the Ethiopian territories of potentially more than 20 billion cubic meters per year. Such a significant utilization of the Nile water upstream would result in important reduction in the Nile water flow to the downstream countries of Sudan and Egypt as both countries increasingly rely on irrigated agriculture to meet the needs of burgeoning populations of their own.

Ethiopia would need, in order to implement its ambitious irrigated
agricultural development plans and the generation of needed hydroelectricity, to construct dams, reservoirs and artificial lakes. All such projects would significantly reduce the flow downstream of the Nile waters originating from the Ethiopian Highlands.

The new situation, undoubtedly, will result in major political tensions between Ethiopia and the two downstream countries of Sudan and Egypt. However, Ethiopia, a Christian dominated country, is enjoying a fast growing economy, and Ethiopia is the top coffee and honey-producing country in Africa, and home to the largest livestock population in Africa. Besides, with a relatively strong military, Ethiopia appears well poised to play the proxy role of policing the strategically sensitive Horn of Africa. Ethiopia already importantly figures high as a future regional powerhouse in the geopolitical strategies of the U.S. and Israel to check the rising power of Muslim fundamentalists in the rivalry for the control of the strategic Horn of Africa and the strait of Bab El-Mandib.

The Egyptian officials and their controlled media have the inherent tendencies to simplify and reduce to polemics the current dispute over the sharing of the Nile water with the upstream African nations. Israeli incitement and meddling are often invoked, which are not totally untrue, to gloss over a genuinely serious issue.

Israel intends, as it historically enjoys strong ties and close cooperation with Ethiopia, to play a major role in Ethiopia’s irrigation, agricultural and hydroelectric development projects in the coming years. Also, Israel plans to strengthen its military and general economic ties with Ethiopia for Israel’s own Middle Eastern strategic and geopolitical designs especially with regard to the control of Horn of Africa and the strategic strait of Bab-El-Mandib.

The abrasive Israeli foreign minister Avigdor Lieberman, who once threatened to destroy the Aswan (High) Dam, appears to lead the incitement campaign. Last year, Liberman headed a delegation representing 10 Israeli corporations during a tour of carefully targeted five African countries, foremost Ethiopia. Israel plans to get fully engaged in Ethiopia’s irrigation, agricultural and hydroelectric developments, including construction of Dams and huge water reservoirs for that purpose by providing technical know-how
and assistance, along with planning and helping in the securing of foreign aid and funding from mostly Western sources.

In this regard Israel would deploy its citizenry of Ethiopian origin, the Jewish Israeli Flasha, that are generally well trained second-generation of Jewish Ethiopians flown en masse to Israel in the mid-1980s through the collaboration of the Saudi arms dealer Adnan El-Khashokgi and the then Sudanese President, Ja’far El-Numairy – in a scheme reminiscent of the Jewish Yemenites Flying Carpet in the early years of the foundation of Israel. The Israel Flasha will play a major role to facilitate future effective communication, cooperation and collaboration to the building of mutually beneficial closer alliance between Israel and Ethiopia, as the later is a country they closely related to culturally, linguistically and ethnically.

As bordering predominately Christian Southern Sudan appear likely to either formally separate from Sudan or enjoy much wider autonomy from the weak central Khartoum government in the years to come, a closer alliance, rather an axis cutting through Angola, Southern Sudan and Ethiopia, could likely be forming. As this axis has historically enjoyed close relations with the U.S. and Israel, Israel is likely to play into the existing local contradictions, especially between Norther and Southern Sudan, to heighten local tensions and aim ultimately at the severance of fertile and rain soaked Southern Sudan from the rest of the country.

**Southern Sudan**, with the most rainfall of the country measuring 800 to 1200 mm per year, is where the Albert Nile entering from Uganda becomes Bahr el Jebel. It flows in the Sudd region, the great wetlands which are a maze of channels, lakes and swamps in Southern Sudan, and which also receive water from Bahr el Gazal River, originating in South-West Sudan.

The South of Sudan controls the flow to the more arid Northern Sudan of the Nile River waters originating from the *Equatorial Lake Plateau* that enters Sudan in the Sudd region. Less than half of the Nile waters entering the Sudd region flow out of it into the White Nile, 400 Kilometers to the North. The rest disappears through evaporation. In order to bypass the Sudd region and to direct downstream a proportion of the water considered lost by spill and evaporation in the swamps, the construction of the *Jonglei Canal* had been planned. This water could then have become available for irrigation
and other uses downstream in arid Northern Sudan and Egypt. Construction of the Canal began in 1978 for a planned total length of 360 Kilometers, but work had stopped in November 1983 after 240 km because of the civil war in Sudan.

**Uganda**, located in the southern portion of the Nile River Basin, serves as an important bridge country of the flow of the White Nile River’s waters as it is downstream to the Democratic Republic of Congo, Burundi, Rwanda, Tanzania and Kenya and upstream to Sudan and Egypt.

Due to the variability of the rainfall and availability of water therefore despite otherwise its abundant availability, Uganda, Tanzania and Kenya are contemplating agricultural development projects through utilization of perennial irrigation. Ironically, due to the variability of rainfalls, and despite generally abundant water resources, these countries have suffered huge shortage of agricultural production and experienced series of famines in the past. Uganda’s irrigation potential stands at approximately 200,000 hectares, quite a modest plan for a country with abundance of rain fall and surface water, however, is ravaged by recurring shortage of agricultural production and famines due to the variability of the rain fall.

**Tanzania & Kenya** are planning to develop more than 500,000 hectares of agricultural land through perennial irrigation. The current irrigated areas are quite negligible. The plan is to draw water for that purpose from the abundance of adjacent Lake Victoria from where the Victoria Nile originates. Such a development is bound to lessen the water available downstream, although not at the relatively more significant levels of the anticipated projects in the case of Ethiopia.

*From the above it becomes fairly obvious the legitimacy of the claims of the upstream Nile River Basin’s riparian states for a more equitable, fairer sharing of the Nile waters to meet their essential agricultural production and food needs as their populations are expected to continue to increase at a high birth rate. That, considering the almost constant average flow of the Nile River’s waters at approximately 84 Billion Cubic Meters per year, will come at the expense of the downstream countries, Egypt and Sudan, and dramatically affect these two countries future economic development and these two countries future standard of living.*

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Political Tensions & Future Security Challenges

As can be judged by the current stalemate in the negotiations between the downstream nations and the upstream nations of the Nile River Basin, no apparent consensus is expected to be reached on an acceptable fair sharing of the Nile Basin waters. The Upstream countries’ declared plans to reach a separate agreement among themselves and to go it alone without the participation of the downstream countries of Egypt and Sudan, bode ill for the future international relations between Egypt in particular and Ethiopia. Prone to polemics in the conduct of its diplomacy and foreign policies, the Egyptian authorities are expected to engage in a long lasting feud with Ethiopia that is open to all kind of manifestations that would only heighten tensions.

Egypt and Sudan do not have many practical options to facing up the upstream riparian nations’ legitimate demands for an increased share of the Nile River’s waters. Simultaneously, Egypt, haughtily and irrationally will politicize and dramatize an otherwise practical issue requiring rational and politically responsible approach. This would only worsen an already deteriorating Egyptian-African relations, and in particular, Egyptian-Ethiopian relations.

Egypt’s relations with Israel, by corollary, would be expected to worsen, especially as Israel gets more deeply involved with Ethiopia and a number of upstream riparian nations through technical assistance and financial support for the developments’ schemes affecting the downstream Nile River’s flow in these countries.

The new emerging realities of an expected new different regime of the sharing of the Nile River flow between the upstream and downstream riparian countries would eventually translate into shifting regional security alliances. Under such potential developments it wouldn’t be all that totally inconceivable that some kind of a potential regional Iranian-Egyptian-Sudanese security alliance could emerge in the future to counter Israel’s growing involvement and designs to have control over the strategic Horn of Africa.

Egypt, as prone to a condescending attitude in the conduct of its African
diplomatic relations, as demonstrated thus far in the ongoing discussions over the sharing of the Nile waters, would justifiably perceive the lessening of its current share of the Nile water, at a time of the country’s increasing demands, as a very serious national security matter. As Israel would be implicated in partially causing the change through Israel’s expected open technical and economic cooperation, overtly and tacitly, with Ethiopia and potentially Southern-Sudan and Uganda, Egypt could likely in reaction to that pursue a policy of easing the restrictions it currently imposes on the neighboring Gaza strip in order to affect the security situation on Israel’s southern flank.

Egypt’s problems of potential decrease of its share of the Nile water at a time of increased demands adds to Egypt’s woes and further highlights the serious deficiency in the forward planning and the efficient utilization of the nation’s natural resources. As Egypt is out of options to causing a change of course of events as they relate to the inevitable rightful sharing of the African upstream riparian nations of the Nile waters, Egypt needs to ponder more creative peaceful alternative policies such as conservation and more efficient utilization of increasingly scarce natural resource, the country’s allotted share of the Nile water. However, having said that, the Egyptian authorities, true to a well embedded political culture and a political discourse, will most likely elect to instead revert to diplomacy of polemics and heightened political and security tensions.