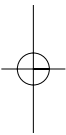
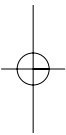


**MISSION NOT YET ACCOMPLISHED:
MANAGING WATER RESOURCES
IN THE NILE RIVER BASIN**

Ashok Swain



River runoff is widely accepted as one of the most important sources of available fresh water for human consumption. Worldwide, there are 263 major river systems that cross national boundaries and are responsible for 85 percent of the earth's runoff.¹ When two or more countries are dependent on the same river system, upstream withdrawal, pollution or management can lead not only to upstream-downstream conflict but also to cooperation. In recent years, policymaking and research communities have been engaged in exploring various means to transform conflict into riparian cooperation in these international river basins. The following analysis explores this notion through a closer look at the Nile River, which has long been considered the longest international river in the world. Many analysts have considered that the Nile River has a high potential to induce interstate conflict.² At least for the greater part of the 20th century, the Nile River has been the source of political tension among three of its major riparian countries—Egypt, Sudan and Ethiopia. In the face of potential armed conflict and regional instability, the Nile basin countries, in cooperation with the international community, have recently begun working for basin-wide cooperative solutions. The main aim of this paper is to suggest policy measures that riparian countries, as well as the international community, might be in a position to adopt, which could further reduce tension over scarce water resources and facilitating effective and lasting cooperation in the Nile basin. It is crucial not only for the region, but also for global peace and development, to achieve success in bringing the countries together in the basin for efficient benefit sharing of resources of this important river.



THE NILE RIVER BASIN

It is essential to first comprehend the economic and political role of the Nile River and its role in the development of the entire region. The White Nile and Blue Nile are two of its main tributaries. From Lake Victoria in east central Africa, the

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White Nile flows generally north through Uganda and into Sudan where it meets the Blue Nile at Khartoum, which rises in the Ethiopian highlands. From the confluence of the White and Blue Nile, the river flows northwards into Egypt and on to the Mediterranean Sea. The Nile River is 5,584 kilometers long if measured from its key source, Lake Victoria. However, if measured from its farthest source, the Ruvyironza River in Burundi, to the sea, the river is 6,671 kilometers long.

The White Nile, fed by melting snow from the Ruwenzori (or Rain Giver) Mountains and various equatorial lakes, provides a small but continual flow of water to the river. However, the Blue Nile, which is the foremost tributary, descends from the Ethiopian highlands and is affected by high seasonal fluctuations. The Ethiopian highlands provide 86 percent of the Nile flow, the Blue Nile contributes 59 percent, the Baro-Akobo (Sobat) 14 percent and the Tekezze (Atbara) 13 percent.³ On the other hand, the contribution from the Equatorial Lakes to the Nile River is only 14 percent.⁴ The flow variations of the Ethiopian tributaries differ between the wet and dry seasons. During the rainy season, the water coming from Ethiopia constitutes up to 90 percent of the Nile flow. The annual runoff of the Nile River reaching Egypt also varies considerably as per the intensity of the rainfall during the wet season.

In terms of land borders, the Nile River is shared by ten countries in the north-eastern part of Africa: Rwanda, Burundi, Zaire, Tanzania, Kenya, Uganda, Eritrea, Ethiopia, Sudan and Egypt. The total population of Nile basin countries is 300 million people, and over half of this population is dependent on the Nile. These Nile basin countries, particularly Ethiopia, Sudan and Egypt, are experiencing massive population growth. If the present growth trends continue, it is estimated that the population of these three countries alone will swell to 340 million by 2050. Due to the growing population, the per capita water availability in the basin is, in turn, decreasing at equally rapid rates.

Although the Nile River is an extremely long water system and serves a high population among ten countries, its average annual discharge is modest in comparison to the other major river systems in Africa. While the average annual runoff of the Congo River is 1,250 billion cubic meters, the Volta River 390 billion cubic meters, the Zambezi River 230 billion cubic meters and the Niger River 180 billion cubic meters, the average annual runoff of the Nile River, whose catchment area is 2,850 square kilometers covering 10 percent of the African continent, is only 84 billion cubic meters.⁵

The Nile basin countries are amongst some of the poorest in the world. With the exception of Egypt and Kenya, the remaining eight basin countries are classified among the least-developed countries in the world by the United Nations. Nearly 100 million people within these basin countries live on less than a dollar a day. Besides widespread poverty and inequality, the region also faces humanitarian crises,