

BRIEFER

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The Nile Basin: Preventing Water Conflict

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The Nile Basin has been a hotbed of activity over the last year. In addition to the Arab Spring and South Sudan becoming a recognized state, the nations within the Nile Basin are renegotiating a longstanding water-sharing agreement over use of the Nile's waters. All of this action creates an opportunity to develop a climate-resilient water-sharing agreement that could help reduce the probability of future water conflicts.

History

The Nile basin is currently composed of 11 states, including South Sudan, that share the waters of the longest river in the world. Historically, the division of the Nile's waters was controlled by Egypt and Sudan, as a result of a 1959 colonial-era [agreement](#). Through a combination of military and economic strength the two hydro-powers have maintained access to a significant majority of the Nile's flow even though the river passes through all other upstream basin states first. This inequitable sharing of waters, where two downstream states have the advantage over the upstream states, has been contentious for some time.

In May of 2010, five upstream states signed a [Co-operative Framework Agreement](#) to redistribute the waters more equitably across the basin. This March, Burundi was the sixth signatory to the agreement, joining Ethiopia, Uganda, Rwanda, Tanzania, and Kenya to bring the agreement to a so-called "magic number." The agreement entered into force in May 2011, without the participation of Egypt, Sudan or the DRC (though the latter is expected to follow suit).

Creating a water sharing agreement is a tedious process at any point in history. Creating a water sharing agreement in a time of unprecedented climate uncertainty is all the more difficult. There are a few key factors that may play an important role in determining the resiliency of a new agreement and ultimately, the security of the region.

Arab Spring Negotiation Window

Changing political winds in both Egypt and Sudan have created an opportunity to reconsider their water-sharing arrangements with the other basin states. Both Sudan and Egypt have seen renegotiation as a threat to their [access and control](#) of the waters. However, it is unclear at this time whether

their [willingness to compromise](#) access to the waters will be affected by governance shifts associated with a post-Mubarak Egypt and South Sudan's secession.

South Sudan's Allegiance

Will South Sudan align with Sudan and Egypt or with East Africa? The waters of the White Nile pass through what is now South Sudan, making it a crucial resource for the newborn state (as well as providing additional negotiation leverage). However, either option — aligning with the upstream or downstream states — will have to be carefully navigated. Aligning with the upstream states would likely antagonize downstream states Sudan and Egypt, but would open up [options](#) for increased trade, transportation, and electricity network connections with the upstream states. But aligning with the downstream hydro-powers, Sudan and Egypt, might yield other [benefits](#).

New Dams

A [study](#) by Aaron Wolf found that “the likelihood of political tensions is related to the relationship between rates of variability or change within a basin and the institutional capacity to absorb that change.” The building of a dam without the consent of other basin states is one example of an event that could alter the rate of change and challenge institutional capacities within a basin. Ethiopia, where 80% of Nile water originates, is in the process of constructing such a dam that potentially could alter the flow of the Nile waters for many of the downstream states. While Ethiopia is having [difficulty attracting funds](#) from the World Bank and other international lenders, China has agreed to partially finance it. Furthermore, feasibility studies show that Sudan and South Sudan also might have considerable hydro-power potential, allowing them to [diversify their energy](#) options beyond oil.

Global Food Crisis

Another issue likely to influence the course of the water-sharing agreement is food security. Agriculture requires a significant portion of total water demand within the basin and makes up a considerable portion of the economic activity of upstream states. These needs are far from stable. East Africa currently is facing the worst drought in 60 years and Somalis facing potential [famine](#) are fleeing to Kenya and Ethiopia. On top of this, shortages of food production, such as a failure of wheat crops in China, Saudi Arabia and South Korea, has led these countries to lease land abroad, in places such as Ethiopia and Sudan, to produce crops for export ([see article](#) by L.Brown). This will reduce the total amount of water available for other basin needs, and may lead to the export of “[virtual water](#),” or the water embedded in crops from water-rich lands of the Nile to the water-poor countries abroad. This will impact the total water budget for the basin.

Multiplier

Each of the aforementioned factors could play a pivotal role in determining the resiliency of the water-sharing agreement to meet the varying needs of the states within the basin. In addition to meeting the states' current needs, achieving true resiliency will require incorporating room for uncertainty — particularly the uncertain effects of climate change. Historically, water-sharing agreements often have been based on the divvying up of the average annual river flows. Climate change reduces the reliability of this method. Historical flows no longer are acceptable indicators of future flows. Seasonal rain patterns are shifting. Seasons themselves are shifting.

Egypt and Sudan, desert lands accustomed to receiving a steady amount of the Nile's water, must consider how long this security will last. South Sudan, when weighing its allegiance to the upstream or downstream states, will have to consider that the pros and cons of either choice may shift over time because of the impacts of climate change. Similarly, Ethiopia's decision to build a

dam may meet the needs of the country today, but the process will need to acknowledge the uncertainty of future flows and the implications this will have for the other states in the basin. Agriculture production in the region already is being affected by severe drought, a pattern that is likely to become the new norm. Future precipitation trends, irrigation needs, population shifts and growth must also be incorporated into any water-sharing agreement.

These are just a few of the potential factors that could play a role in the resiliency of a Nile Basin water-sharing agreement. Stay tuned and watch this space.

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