

# BRIEFER

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## Building a New Libya in a New Climate: Water as a Key to Cooperation

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*Libya Hurra.* Free Libya. This was one of the main rallying cries for the Libyan opposition last year, which with NATO assistance toppled the brutal 40-year reign of Muammar Gaddafi. But four and a half months after Gaddafi's downfall, Libya under the leadership of the interim National Transitional Council (NTC) is facing the problem of reconciling the many different "free Libyas" envisioned by different publics, and addressing allegations of some "not-so-free" practices.

The eastern region of Cyrenaica, with its capital at Benghazi (the heart of the anti-Gaddafi movement) has [declared itself a semi-autonomous region](#), prompting [major protests](#) in both Benghazi and Tripoli. Despite [recent successes](#) by the central government, armed militias still roam the country, and the capacity of the government in Tripoli to keep them in check has been [questioned](#). Indeed, the city of Misrata has been described as a virtual "[armed city-state](#)" in opposition to the central government. Furthermore, reports of human rights abuses committed against suspected Gaddafi sympathizers, including [black African migrants](#) from sub-Saharan Africa, abound.

But while the Libyan government currently seeks in earnest to address these conflicts, it may be less overtly political issues, such as climate change and water resource management, that hold the key to building unity.

### Signs of forward-thinking, yet dangers of neglect

The enormous hurdles to Libya's national unity, which are not entirely unexpected after the collapse of a regime in power for four decades, have not kept the nation's government from at least attempting to address issues that exist outside the traditional framework of post-conflict reconstruction, such as climate change. For example, last December, the interim Libyan government sent representatives to the UN climate conference in Durban, South Africa to promote a project called "[The Libyan Climate Change Initiative](#)" (though it received mixed reviews).

But despite this seemingly proactive approach, there remains a danger that some critical natural resource challenges Libya faces, ones that are very relevant to post-conflict reconstruction, will fall by the wayside during this period of instability and uncertainty. In this context, one critically important question is: How will a new Libyan government manage the country's water resources, and will the effects of climate change be incorporated into how it does so?

### The question of water and cooperation

As we detailed [previously](#), certain resource issues, particularly that of water availability, must be ad-

dressed soon if Libya is to sit on a stable foundation. Incidentally, questions of water management can often help facilitate cooperation between conflicting factions, thus helping in the process of national reconciliation.

One such area of potential cooperation involves correcting the unsustainable excesses of the Gaddafi regime. Libya's transitional leaders will likely agree to focus on righting Gaddafi's many wrongs, and it will be important to note that Gaddafi's iron hand extended far beyond his chilling disregard for human rights, and into the realm of natural resource management. The regime implemented massive, yet ultimately unsustainable projects to extract the country's finite resources – water in particular.

For example, Gaddafi's oil-financed [Great Man-Made River Project](#), identified as one of the largest water engineering projects in the world, continues to function. But in Libya, a country identified as [93% arid](#), it is unclear how long this can be sustained. Libya's primary source of water is a [finite cache of "fossilized" groundwater](#), the remnants of a more verdant Pleistocene past. Present day demand for groundwater, [primarily for use in irrigating crops](#), has severely stressed this supply, and [coastal aquifers](#) have been progressively [invaded by seawater](#). According to the IAEA's "[Nubian Aquifer Project](#)" over-extraction by Libya from the Kufra sub-basin, which Libya shares with Egypt, Chad and Sudan, has also led to "reduced water levels and the drying up of desert lakes linked to oases."

In this context, any new Libyan government or constitutional assembly will, for the sake of its legitimacy and viability, need to address the fundamental issues of delivering a sustainable supply of water to its growing population, and managing the complex problems associated with sharing such a supply with other nations. This is a question that if answered well, can help bring the country together.

### **Projections for climate change and drought**

Enter climate change, which also presents a threat to Libya's water availability. While decreasing water availability is not the only predicted impact, it is a major one. According to a recent [report by](#)

[Joshua Busby et al](#), climate change projections for Libya are set to yield some bitter fruit (or lack thereof). The report notes that from the present day to the middle of this century, some of the wettest and most populated areas of Libya along the Mediterranean coast are likely to experience increases in drought days from a current 101 days, to a whopping 224 ([see Figure 18 on page 25](#)). Doubling anything negative is a problem, but doubling drought days is a serious problem – particularly if one is heavily reliant on non-renewable groundwater.

These findings have also been confirmed by a major [NOAA](#) study in the *Journal of Climate* from last October, that found climate change already responsible for prolonged drought in Libya's [most populous areas](#) on the coast – observations consistent with future projections from climate models.

While Libya is by no means the country most vulnerable to climate change in North Africa (see the [Sahel and the Horn of Africa](#)), climate change-induced impacts on drought patterns in Libya, and much of the Mediterranean littoral, are projected to be some of the most [dramatic](#). Also, given uncertainties about the stability of a new government, Libya will need to prepare for the possibility of greater vulnerability in the future. Such a dire threat to Libya's water security should serve to instigate cooperation between Libya's currently conflicting voices.

### **Regional implications**

Libya's vulnerabilities may also extend well beyond its borders. For example, Libya already extracts an extensive amount of groundwater from the Nubian aquifer. If climate change-induced drought reduces water availability and the Libyan government responds by drawing more water from the Nubian aquifer, this [could cause tension](#) with bordering countries Egypt, Chad and Sudan, all of whom share the aquifer's waters. Given the current political and economic instability of all four governments sharing the aquifer, this is a potential security issue that cannot be ignored. Agreement on avoiding this potential for regional conflict could be another unifying objective for Libya's competing factions.

## **A unified and resilient Libya**

The dawn of a new Libya presents a unique opportunity to create a political tradition of good governance in the country – one that is transparent, respects human rights, holds free and fair elections, and enacts economic policies that work for all Libyans. It is also an opportunity for Libyans to transition not just to a post-Gadaffi era, but to a new era of resilience – one that uses its finite resources wisely, and adapts itself to a changing climate. The potentially destabilizing impacts of this unprecedented shift in the global climate, particularly for countries and regions in transition that

share essential natural resources, should not be underestimated. Climate change may not be high on the agenda in Libya today, but it should not remain off the table for too long. Particularly as doing something about it, and the challenges it presents to important issues like water availability, can potentially help Libya in its search for unity.

*NOTE: This is an update to a previous briefer from October 2011*

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