

Lake Urmia's Last Drop

Reviving Hope for an Iranian Lake

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The recent set of understandings reached between Baku and Tehran on reducing tensions and stabilizing this important bilateral relationship is surely a welcome development, particularly in light of more recent events in neighboring geopolitical theaters, including the Middle East. Nevertheless, various matters of bilateral concern remain open, which could have negative impacts on the sustainability of the aforementioned initiative. Among these is the thread of issues revolving around Urmia Lake, the largest wetland in Iran.

This Iranian body of water continues to be in severe environmental crisis—a crisis deeply intertwined with political, economic, and demographic dynamics. The alarming decline of the lake is more than just an ecological concern; it has far-reaching social and political implications, potentially affecting the local population living on or near its shores, which includes ethnic-Azerbaijanis.

Ecological Struggle

Between 1995 and 2014, the water level of Lake Urmia plummeted from 1277 to 1270 meters, causing a drastic increase in salinity from 240 to 450 g/lit. A study in 2020 indicated that elevating water levels to a minimum of 1274 meters above sea level could significantly reduce salinity levels and breathe life back into the surrounding ecosystem. This finding spurred the Iranian government to initiate the Urmia Lake Restoration Program (ULRP) in October 2023 and establish a National Committee to oversee its execution.

Conceptually, this process can be broken down into three distinct phases. Tehran's three-phase approach can be summarized as follows: focus on immediate measures to stabilize

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and rejuvenate the Lake's condition (2014-2016); implement further comprehensive strategies for sustainable water management and environmental restoration (2017-2022); and continue efforts to consolidate the progress and finalize the restoration process (2023-2024). Each will be examined in turn.

The First Phase

The first phase of Iran's ULRP aimed to stabilize the level of Urmia Lake by implementing mitigation projects in the lake basin. One of the significant threats to degradation is agricultural exploitation by the local community. There are approximately 80,000 wells in the river basin, with half of them being used illegally. Therefore, the ULRP attempted to take firm measurements to control groundwater abstraction and irrigation channels.

To achieve this target, throughout the first phase of ULRP, the Iranian National Committee implemented 88 projects to address the higher efficiency of water irrigation, prevent illegal irrigation, reduce wasted water usage in the agricultural sector, and so on. As a result, 40 percent of water use in agricultural use has decreased, which is equal to 45 percent saving in terms of renewable water resources. This achievement endorsed the sustainability of revitalizing the Urmia Lake basin during the first phase of the program.

The Second Phase

This was followed by the second phase of ULRP, which was called the *restoration period*, and it sought to implement all possible solutions for Urmia Lake's water supply, aiming to enhance its water level to 1271 meters between 2017 and 2022 (the timeframe of the second phase).

During the restoration period, the program focuses mostly on mitigating the impact of climate change. In fact, it has a central role in the degradation process, so ULRP aimed to control specific impacts of climate change, such as dust control in 2017. In fact, the arrival of more dust (and sand) to the region dramatically increased the desertification of the Lake by the contribution of global warming and strong wind around the lake basin.

To prevent the expansion of dust, planting halophytes such as *Salicornia* in semi-saline areas, the preservation of animal husbandry, and the imposition of grazing control measures were implemented. Subsequently, by 2019, there was a marginal increase in water levels, recorded at 1271 meters, as documented by the FAO. This upward trajectory in water levels underscored the program's positive impact in its endeavor to revive the Urmia Lake ecosystem.

Undeniably, the ULRP program brought certain benefits to the Iranian government, local municipalities, and endemic livelihood such as the increase water level of the

Lake and the control over the illegal irrigation canals. However, there is still much road to travel.

A significant example is the apparent miscoordination between crucial ministries, specifically the Ministry of Agriculture and the Ministry of Energy of Iran. This miscoordination led to a blame game over the delays in achieving program outcomes. A notable instance was the Ministry of Energy's failure to fulfil its commitment to demolish more than 40,000 illegal wells. Simultaneously, the Ministry of Agriculture did not take measures to halt the expansion of dams.

Regrettably, this inter-ministerial discord escalated tensions and resulted in inconsistencies during the execution of plans throughout the first and second phases. Consequently, the expansion of agricultural land witnessed a significant shift from 480,000 hectares in 2012 to 530,000 hectares by 2017—a development that contradicted the primary objective of the ULRP.

The Third Phase

The third phase of ULRP aims to achieve the *sustainable management* of the Lake's current condition by reaching 1274 meters of water level by 2024. The main issue that prevents the proper implementation of ULRP is lack of sufficient financial resources. Addressing the funding gap for the Urmia Lake Restoration Program became a pressing matter. This prompted President Hassan Rouhani to seek financial assistance from international actors, a move fraught with challenges in part due to the various sanctions and export restrictions regimes mandated by the UN Security Council and augmented by additional Western measures. Still, Japan stepped in as a foreign contributor, committing a substantial \$3 billion to expedite the Urmia Lake restoration efforts.

Unfortunately, this partnership was cut short (for reasons related to the aforementioned sanctions regimes), leading to its termination. In response to this situation, approximately 100 Iranian parliamentarians took swift action by sending a letter to the highest authority in Iran, the Supreme Leader. The purpose of the letter was to seek permission for utilizing Iran's National Development Fund to support the Urmia Lake Restoration Program. Nonetheless, the parliament speaker of Iran, Ali Larijani, in what some characterize as an "unlawful" move, refused to acknowledge the petition submitted by the MPs. Meanwhile, the Rouhani Administration appears to persist in issuing optimistic statements and commitments, which manage to appease local residents. However, the government has yet to implement practical but potentially difficult measures, such as restricting the flow of water from the Jaghatu Chay river to Tabriz, allocating the lake's water share for agricultural needs, or even altering cultivation methods in the region.

Conclusion

While the Urmia Lake Restoration Program (ULRP) aims to restore the dying Urmia Lake and has brought about some environmental and social benefits, it has not been without adverse consequences for the local population. Urmia Lake holds immense cultural, economic, and social significance for those who inhabit its shores. The decline of the Lake's water levels and increasing salinity has disrupted their traditional lifestyle, which remains heavily reliant on agriculture and fisheries connected to the lake.

As a result, there have been instances of displacement and resettlement due to the measures taken to restore the lake. Communities residing close to the lake have had to relocate, disrupting their established social fabric and ties to the region. Additional remedial efforts will thus be needed in the time ahead.