Sustainable Urban & Regional Development Studies Quarterly

Volume 6, Volume 6, Issue 4 - Serial Number 22, Winter 2025 **Online ISSN: 2783-0764**
Journal Hompage https://www.srds.ir/
https://www.srds.ir/article_218563.html?lang=en

Assessing Iran's Hydropolitical Tensions in Border Watersheds on National Security

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Received Date: 23 December 2024 **Accepted Date:** 23 March 2025

Abstract

Background and Objective: Changes in the volume and quality of water resources in the Middle East cause political and military tensions. This research seeks to evaluate the role of water scarcity on Iran's geopolitical tensions with its neighbors.

Methodology: The study method in this research is applied, descriptive-analytical. The research data are the result of library and field studies with a survey of 21 experts familiar with hydrology and political science. The evaluation of the research questionnaires is done with the help of TOPSIS management methods and hierarchical analysis, as well as the scenario writing method in Expert Choice, Excel, and Scenario Wizard software

Results and findings: The research results indicate that based on the TOPSIS method, the Hirmand basin has the smallest distance to the ideal solution with a value of 0.91, indicating that this basin is the most tense basin at present and will probably be in similar conditions in the future. Also, the future of Turkish dam projects has a 67% probability of being credible, leading to a war between the countries involved in the Gap project, which will have security consequences for Turkish Kurdistan, Iraq, Syria and Iran, and a future full of violence is imagined for it. In the aspect of internal management, in addition to climate change, internal factors such as economic issues (capital and technology), incorrect management and policies have contributed to the effects of water resource shortages in the country.

Keywords: Water tension, hydropolitics, geopolitics, dam construction, Hirmand, Gap project.

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Cite this article: Heidari Far, M. R. and dolatiari, K. (2026). Assessing Iran's Hydropolitical Tensions in Border Watersheds on National Security. Journal of Sustainable Urban & Regional Development Studies (JSURDS), 6(4), 98-113.

Extended Abstract

Introduction

Environmental crises can cause serious social and security challenges at the interior scale of countries, including provinces, states, ethnic groups, and even smaller units such as villages. They are also crisis-provoking within the framework of state-to-state relations; hence, natural resources and capital are an important part of ecological balance and sustainable development in relation to security and political issues. Meanwhile, water scarcity is a factor threatening the environment and underpinning political and military crises. Strategically, the current century will most likely be called the water century. Currently, 219 river basins are disputed worldwide. Hydropolitics examines and studies the effects of decisions related to water use on the formation of political relations between states with each other or between states and people, and perhaps within a country. Water scarcity or allowing water to cross international borders has widespread effects on the political relations of states with their own people and the relations of countries with each other. Water resources play an important role in world geopolitics and are a means of competition between countries located in the watersheds of these rivers. In the future, water shortages will cause tension and conflict between these countries. At the August 1995 Stockholm meeting, Ismail Sirajuddin, Vice President of the World Bank for Environmental Sustainable Development, stated that future wars will not be over oil but over water.

Methodology

Scientific research needs a method to achieve the intended goals. This research is no exception to the aforementioned rule. This research is among the applied research because its results can be used directly to solve the difficulty problems. The nature of the research is designed as a descriptive and analytical one. The descriptive part is tried to analyze the theoretical foundations of the research and the analytical part is intended to explain the research objectives with the help of logical arguments. The research data contain information obtained through the study of written and digital sources, namely library information by the method of taking notes with reference to the source, and another group of data is the result of field information in the terms of evaluation through the development of a questionnaire.

Results and Findings

Iran has 5 major transboundary basins, the largest of which is the Arvand River watershed. These basins have different climatic characteristics and discharge rates. Some of the rivers flowing in this basin originate within Iran and others in neighboring countries. According to the Falcon Mark Index, countries with per capita renewable water resources of less than 1,700 cubic meters per year are in a state of water stress, and countries with per capita renewable water resources of less than 1,000 cubic meters per year are in a range of water shortage (crisis). According to this index, two countries, Iran and Pakistan, are in a condition of water stress, and the rest of Iran's land neighbors are in a good situation in terms of water resources.
According to the results, the Helmand basin, with a value of 0.91, has the smallest distance to the ideal solution, which shows that the basin is the most stressed basin at present and will probably be in similar conditions in the future. Iran and Afghanistan share three watersheds i.e Qom, Petargan-Khaf, and Hamoon-Heirmand, and the Harirood and Heirmand rivers are the two main shared rivers between the two countries. Iran and Afghanistan have had diplomatic challeges over shared water resources for decades. During the Taliban Government, dam water was completely closed to Iran, but with the coming to power of Hamed Karzai and the new government, through annual agreements, 820 million Cubic

meters of water entered Sistan from Heirmand; but over time, the process of respecting Iran's water rights disappeared. Due to the construction of several dams upstream of the Harirood and Heirmand rivers and the disregard for the rights of the countries downstream of these shared rivers, the then President Ashraf Ghani faced a serious water crisis in the eastern regions of Iran, including Khorasan and Sistan. During the Taliban's resurgence in power, Iran's water rights were still not attended. Several dams have been built on the Helmand River, which constitutes 40 percent of Afghanistan's surface water, to prevent water from entering Iran; the most important of these dams is the Kamal Khan Dam. This dam has the capacity to store 52 million cubic meters of water; Afghan officials declared that they would give water in exchange for oil. This problem has become a central issue in bilateral relations between Iran and Afghanistan. In 2015, the foreign ministers of the two countries had verbal chanting over the issue of shared border water, which did not lead to any results. Unlike Iran and Turkmenistan, which have reached agreements regarding their shared water resources; Afghanistan also has hard and relationship with Iran in the Harirood basin. A 2014 study by the United Nations Environment Program indicated that the annual water flows into Iran has decreased by 71 percent since the opening of the Salma Dam. Given the last drought in the Harirood River in 2000, which seriously affected the supply of drinking water to the city of Mashhad and agricultural water to Khorasan Razavi Province, the exploitation of the Salma Dam has become a security threat to Iran.

The Tigris and Euphrates can be attended two vital arteries for the development and continuity of life in Turkey, Syria, Iraq, and southwestern Iran. The Euphrates is the largest river in West Asia - 2,900 kilometers long. It originates from the confluence of the Kara and Murat rivers in the mountains of Armenia, and after reaching maturity and development in Turkish Kurdistan; it enters Syrian Kurdistan, undergoes the final stages of development, and enters Iraq. The length of this river in Iraq is 1,160 kilometers, and 90% of its water comes from the Turkish Euphrates River and 10% from Syria. In 1936, a plan called the Southeastern Anatolia Project was formed and was seriously pursued since 1980, during which several dams were built on the Tigris and Euphrates rivers in Turkish Kurdistan. This plan includes 14 dams on the Euphrates and 8 dams on the Tigris, totaling 19 hydroelectric power plants. One of the largest of these dams is the Ataturk Dam, which has a reservoir volume of 30 billion cubic meters and is the largest dam in the Middle East and the ninth largest dam in the world, and has the ability to hold all the water of the Euphrates in its reservoirs. This dam is one of the main factors in the drying of agricultural land in Iraq, which has caused the Mesopotamian Plain to lose its moisture and become a source of fine dust. With the loading of the Islu Dam, 670 thousand hectares of land in Iraq have also dried up and its subsequent crises are irreparable. For this purpose, the future research method (Peter Schwartz model) was used, in which three predictions for the future of the water crisis were considered:

1- The outbreak of war between the countries involved in the Gap project

2- Maintaining the current trend by not completing and drawing water from the half-built dams

3- Payment and compliance with the countries' water rights by Turkey

For this purpose, the effective factors in the Gap project were identified.

And using the scenario writing method, it was examined and evaluated by experts in the Wizard scenario. The final results showed that based on the analytical logic of the Scenario Wizard software, the plausible scenario, that is, the strong scenario, three scenarios were generally reviewed for the conditions of the Gap project.

1- Payment of the water rights of the downstream countries by Turkey (m1).

2- Maintaining the current situation, i.e. the current erosion conditions (m2).

3- Loading all dams of the Gap project and drying up the plains of Iraq and part of Syria and even Iran (m3).

Conclusion

Iran, as a country in the arid and semi-arid region of the world that shares a watershed with its neighbors, will now and certainly in the future enfront with numerous hydropolitical problems that could have irreparable effects on the country's social, economic, and border security. The most important and main tensions in the field of hydropolitics for Iran will be in the Helmand River basin. This shows that this basin will be the most tense basin at present and will likely be in similar conditions in the future. Iran and Afghanistan share three watersheds: Qom, Petargan-Khaf, and Hamoon-Heirmand, and the Harirood and Helmand rivers are considered the two main common rivers between the two countries.

Also, the completion of the Gap project by Turkey is likely to follow the probable and credible condition of "loading all the dams of the Gap project and drying up the plains of Iraq and part of Syria and even Iran", and the condition of its ellements has been reported to be in a critical state; Therefore, it will most likely lead to a war between the countries involved in the Gap project. This project has great consequences for Turkish Kurdistan, Iraq, Syria and Iran.

The important point is that although Afghanistan has many problems with Iran in the field of water, the threats of Afghanistan's military security to Iran are very small, given Afghanistan's low military power, weak central government, stagnant economy and lack of international support. However, regarding Turkey's water threats to its neighbors and its consequences for Iran, this issue is extremely important. Because Turkey is in a favorable economic position, it is also a NATO member in terms of military and has a much higher hand in terms of water resources, and in addition to Iran, Iraq and Syria have also been affected by the consequences of Turkey's water policies. As a result, water equations with Turkey are taking place in a different way, which needs much greater vigilance. Another point is that Turkey's policies contain a large part of the Kurdish regions, which are considered a geopolitical lever in all four countries: Iran, Turkey, Syria, and Iraq, and therefore require certain geopolitical caution and weight in managing the country.

Declarations

•**Funding**: There is no funding support for this study.

•**Authors' Contributions**: All authors contributed equally to the conceptualization and writing of the article. The authors approved the manuscript's content and agreed on all aspects of the work.

•**Conflict of Interest:** The authors declare no conflict of interest.

•**Acknowledgments**: The authors extend their gratitude to all scientific consultants who provided invaluable insights during this research.

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