

# Strategies for livelihood resilience in the face of Lake Urmia's drying process: a case study from northwestern Iran

Behzad Doosti Sabzi, Ali Maleki

## Background

Iran is vulnerable to a variety of environmental hazards as a result of its natural features and location in the world's arid belt. These include drought, earthquake, and flood. Lake Urmia's drying process is one of the most recent environmental changes which can be attributed to a variety of human and natural factors, including increasing water consumption, expanding the agricultural sector, shifting cultivation patterns toward more water-intensive crops, and a lack of effective protection for environmental and ecological resources, climate fluctuations, and runoffs in the lake's catchment area. This condition has exacerbated social and economic imbalances in the surrounding areas, necessitating the development of resilient livelihood strategies in order to adapt to the unstable conditions created (SDG13).

## Hypothesis

1. In addition to the social and economic effects of the drying process of Lake Urmia, the range of economic activities, inter-settlement relations, as well as the content and implementation of development-development policies and programs have been effective in the instability of the livelihoods of the settlements in the region.

2. Creating innovative businesses based on regional advantages, developing the value chain of products that require less water in the region and using the capacities of the region to develop responsible tourism can be selected as livelihood strategies.

Of course, a hidden assumption of this research is that the local people align with livelihood strategies and abandon their destructive economic activities of the past (here it means growing crops that need a lot of water).

## Results

The findings indicate that in order to revitalize Lake Urmia and manage the social and economic consequences for surrounding communities, livelihood strategies should be tailored toward diversifying household livelihoods and increasing regional competitiveness through entrepreneurial opportunities discovered within. The proposed strategies should be based on participatory development policies and programs that involve all stakeholders and address the needs of indigenous people. Of course, it should be mentioned that according to the findings, the physical assets of the region are not in a good condition (access to service and educational centers, inadequate quality of communication roads, insufficient access to modern agricultural tools and machinery, and other related matters) and to implement any A policy in the region is first necessary to strengthen the physical capital of the region.

## Future Work

It seems that the role of factors such as social innovations and indigenous knowledge in adapting to climate changes (especially those related to water scarcity) should be investigated in future research. The investigations of this research have shown that government planning (top-down planning) cannot have a positive result in improving sustainable livelihoods for different regions of a country.

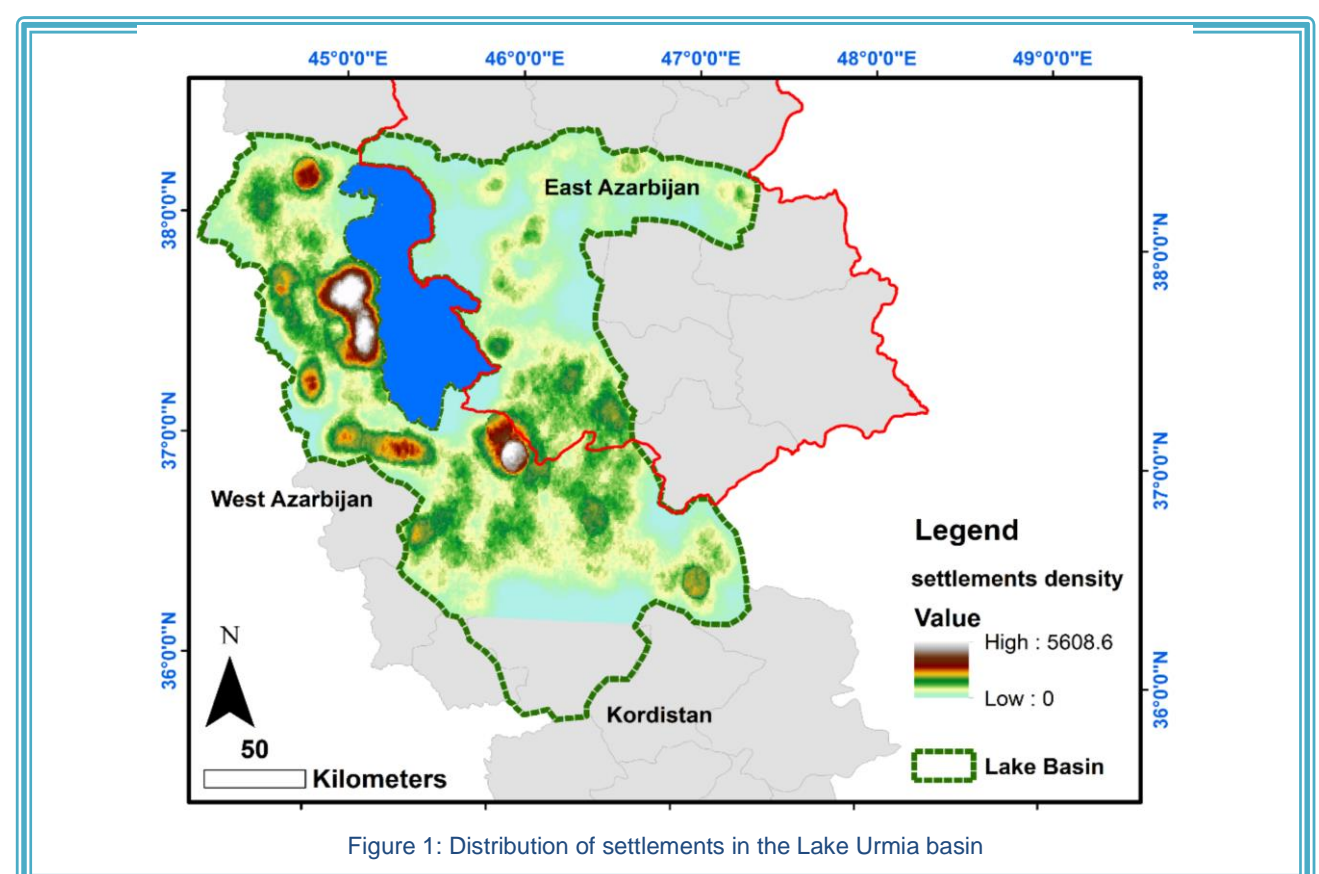
## Research Question

The questions of this research were as follows:

1. What are the social and economic effects of the drying process of Lake Urmia on human settlements in the region?
2. What is the status of livelihood capitals in the study area to adapt to water shortage conditions?
3. What are the livelihood strategies to be resilient to the current situation? And what principles are they emphasizing?

## Methodology

Field research and semi-structured interviews were used to collect data for this mixed-methods study. The study's sample population included experts, public managers, and residents of the urban and rural settlements in northwestern Iran who have suffered the economic and social consequences



## Bibliography

- Krantz, L. (2001). The sustainable livelihood approach to poverty reduction. *SIDA. Division for Policy and Socio-Economic Analysis*, 44, 1-38.
- Morse, S., & McNamara, N. (2013). *Sustainable livelihood approach: A critique of theory and practice*. Springer Science & Business Media.
- Sun, R., Mi, J., Cao, S., & Gong, X. (2019). Classifying livelihood strategies adopting the activity choice approach in rural China. *Sustainability*, 11(11), 3019.
- Yamin, F., Rahman, A., & Huq, S. (2005). Vulnerability, adaptation and climate disasters: a conceptual overview.