Food and Agriculture Organization of the United Nations

Integrated Programme for Sustainable Water Resources Management in the

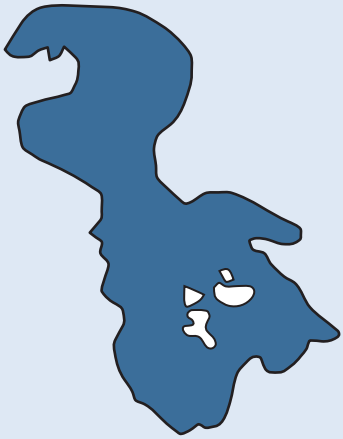
Urmia Lake Basin

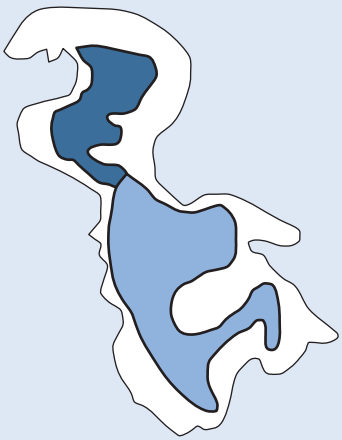
Year 2000

Average of water level:
1 276 metres (above sea level)

Area:
4 738 KM^2

Volume:
18.5 BM^3





Year 2014

Average of water level:
1 270 metres (above sea level)

Area:
1 980 KM^2

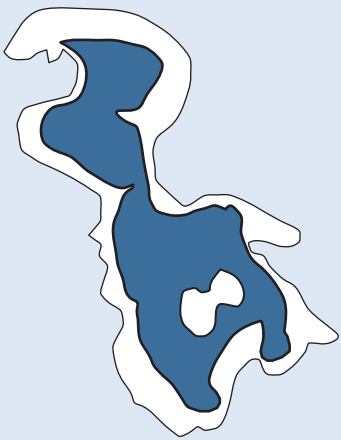
Volume:
1.4 BM^3

Year 2019

Average of water level:
1 272 metres (above sea level)

Area:
2 830 KM^2

Volume:
3.4 BM^3



› Urmia Lake restoration

A national and international effort

The revival of the lake is a national priority, strongly advocated by the Iranian government who, in 2013, formed a cross-sectoral, high-level committee, the Urmia Lake Restoration National Committee (ULRNC) to define and implement interventions for restoring the ecological conditions of the lake.

Under the guidance of the technical and operational arm of ULRNC – the Urmia Lake Restoration Program (ULRP) – several studies, projects and interventions are undertaken in the Urmia Lake Basin.

› FAO and Urmia Lake restoration

Mobilizing global experiences to support national efforts for restoring Urmia Lake

As part of mobilizing the global efforts to restore the lake, FAO and ULRP developed the project "Integrated Programme for Sustainable Water Resources Management in the Urmia Lake Basin" funded by the Government of Japan. The overall objective of the project is to increase efforts to halt and reverse the desiccation process of the lake by reaching a target of 40 percent reduction in agriculture water consumption in the basin.

› Components of the project

From wise water management to socioeconomic and livelihood preservation

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The project identifies a set of practical interventions to restore Urmia Lake through systematic field survey and assessments, acquisition of powerful monitoring and diagnostic tools and advanced monitoring methods and strengthening local capacities.

As the restoration process requires radical changes in the present economic activities in the lake basin, it is necessary to accompany the process with viable improvements in farming practices to enhance income and expanding income-generating activities beyond the farm, while simultaneously accounting for, social acceptability and coherence in governance.

As such, the project has the following five components to address the biological, environmental and socioeconomic dimensions of the process.

1 Water accounting

Employing state of the art technology to monitor water consumption

Applying state of the art technology, this component focuses on using remote sensing and other tools to accurately monitor water consumption for different land use categories with the aim of:

A) Monitoring water use in identified pilot areas.

B) Assessing real water saving from project interventions to increase the flow in streams.

C) Connecting field/pilot level water accounts to those of the sub-basin and basin to understand the potential gains of upscaling pilot activities in terms of lake inflow.

D) Supporting local stakeholders to improve and adjust water accounting approaches as needed.

2 Drought management

Implementing an integrated drought management system

The aim of this component is to put in place an integrated drought management system based on risk/vulnerability assessment and preparedness response for the basin.

With respect to the Urmia Lake restoration, this component will mainly address the two recognized gaps:

A) combined drought index (CDI); and

B) vulnerability and impact assessment to put in place a mechanism for systematic drought mitigation and adaptation at the basin level.

3 Socioeconomic and livelihoods

Improving the added value of current agricultural output

The objective to reduce water use in agriculture by 40 percent is likely to have significant livelihood implications for farmers, rural households and communities within the Urmia Lake basin. This means changes to current farming practices (cropping and irrigation), improving the added value of current agricultural output as well as finding alternative income sources outside agriculture to ensure a complete value chain approach.

This also requires better markets and appropriate policies and governance structures to steer the transformation towards the desired objectives.

This component squarely focuses on generating information on the above aspects applying tools such as farm household survey, policy analysis, focus group discussions, market surveys and direct engagement with farmers.

4 Watershed management

Promoting inter-organizational coordination and exercising multidimensional approach

Preserving the lake functionality and ensuring steady and sustainable water inflow into the lake require a watershed management perspective. The project objective is to identify specific interventions within the watershed space that would contribute either to reduce water inflow diversion or increase water inflows into the lake. Given the complexity of the measures to consider, the project took a modest pilot level approach and focused on one sub-basin to assess the realistic possible interventions to undertake. To do so a multi-faceted assessment was undertaken at a pilot sub-basin level examining both the hydrological, agronomic, land use and other socioeconomic factors to identify possible interventions that would remove any impediments to normal or higher water inflows into the lake. This requires a closer coordination across ministries, including agriculture, water, forestry and other land using systems (like wetlands and protected lands) to ensure maximum synergies and efficiencies of outcomes.

5 Capacity development

Strengthening key institutions, ministerial professionals and local communities

The capacity development component of the project will contribute to the strengthening key institutions, ministerial professionals and local communities to advance their capacity in all aspects of the project implementation.

These include, for example, water accounting, water productivity, drought management, watershed management, and sustainable alternative income-generation.

The final outcome of this step is to ensure the sustainability of results once the project is concluded and put in place a self-propelling ability to continue the developmental process that the project has initiated.

› Timeline

The key aspects of the aforementioned components will be implemented in three phases

1) Rapid assessment phase to evaluate different components individually and develop data and information needs along distinct disciplinary lines.

2) Scenario development and pilot level interventions phase that facilitate the integration of inputs from different components–integration of different layers of data, information and analyses and application of multi-stakeholder participatory approaches, to design and implement site-specific interventions.

3) Impact assessment at the pilot site level, applying selected set of indicators to assess the impact of the pilot interventions, including the changes in water use and other critical livelihood parametres in collaboration with key stakeholders. The pilot interventions will also be evaluated for replication, upscaling and application at the basin level.

Mobilizing global experiences to support national efforts for restoring Urmia Lake

Integrated Programme for Sustainable Water Resources Management in the Urmia Lake Basin: a project of Urmia Lake Restoration Program in partnership with FAO and funded by the Government of Japan.

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Integrated Programme for Sustainable Water Resources Management in the Urmia Lake Basin

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