

Soldoz wetland

Soldoz wetland, with the geographical specifications of 37° 02' north latitude and 45° 35' 30" east longitude, is located on the south coast of Lake Urmia in the suburb of Naquadeh town. This wetland has an area of 375 hectares, with an average altitude of 1277m.

This wetland has been developed in a totally flat coastal region that was originally a part of the coastal saline plains of Lake Urmia. Of course, it is sloped on the west side towards the foothill, and its height varies from 1280 to 1285.

The main wetland has been created between two low-deep valleys on the coast of Lake Urmia. There is a low-rise extrusion on the north-east of the wetland, and the earthen dam of Soldoz has been connected to its slope. On the west side, the earthen dam leans over the slopes of the western heights.

The geology maps of the wetland area show that this region has been formed by limestone. The extrusion in the northeast of the wetland has Qom formation consisting of condensed limestone. This formation shapes the bottom stone of the plain alluvium and wetland region.

Climate

Soldoz wetland has a cold steppe climate, long winters, and moderate and relatively hot summers. Concerning the conducted studies, the region enjoys a cold semi-arid climate.

The maximum precipitation belongs to the spring and winter seasons, and there is totally no or very low rainfall in the summer. Based on the surveys conducted in the region and Naqadeh and Mahabad stations, the average annual rainfall is 412mm, and the average maximum temperature in the hottest month of the year is 32.1°C. Moreover, the average minimum temperature in the coldest month of the year is -7.9°C. August is the dry month, and the number of freezing days is 83.6. The rate of the average 10-year rainfall has been reported at 97.7 mm in spring, 4.8 mm in summer, 139.9 mm in autumn, and 169.8mm in winter.

The basin and water-supply resources of the wetland

Soldoz wetland is located at the tale of the Gadar-Chai river's basins, and the main part of the drainage-channel outlet of the Hasanlu Reservoir Dam supplies its water. Its area is 230Km². The surface aqueous sources are as bellow:

Hasanlu Dam Drainage: At present, the drainage of Hasanlu Dam collects the extra water of the Hasanlu Reservoir Dam as well as some part of surface runoffs from the basin and offloads to Soldoz wetland. No documented and long-term measurement on the flow rate of the drainage has

been conducted in the recent several years. In the last measurement, a maximum flow rate of $1.7\text{m}^3/\text{s}$ has run from this drainage and reached Soldoz wetland.

Land use and geology

The geology maps of the wetland show that this region has been formed by limestone on the south and west sides. The northeast extrusion of the wetland is shaped by Qom formation consisting of condensed limestone. This stone formation shapes the bottom of the plain alluvium and wetland region. The region soils have usually a soft texture and are formed by highly heavy SiCl at the surface and Sil in the underlying layers. The soils of the wetland regions are very salty and damp. With the movement toward foothill, the soil quality ameliorates and has vegetation suitable for non-salty soil types. Every sample of the soil salts is generally of sodium chloride type. The lands of the wetland region are very salty and practically unusable, except for very specific purposes. The wetland is also used for bird-hunting and reed-harvesting. The regions around the wetland are often covered by halophytes and used for sheep-pasturing in very few cases.

Management program

Based on the modern management theories in the environmental arena, the wetlands' management is no longer limited to merely protecting their physical scope and conserving the existing conditions. Rather, the management of the entire ecosystem, such as the protecting regions, preserving the ecosystem functions, paying attention to social issues, sharing resources, making a balance among conservation, sustainable and wisely exploitation, and unconcentrated management, is considered. Contrary to the conventional approaches that believe in the negligence of social problems, the modern approach seeks to highlight the presence and roles of people, especially local communities. Accordingly, in the framework of the comprehensive management program, environment conservation is not the responsibility of an independent organization; rather, it is a set of operations accomplished during a participatory process by the centrality of an administrator organization and the cooperation of other organizations and governmental and nongovernmental institutions. With these interpretations, the most important pillars of the comprehensive management program of Soldoz wetland, i.e., the long-run perspective delineating the expected condition of the wetland in the future and the general goal identifying the trajectory and policy of the perspective attainment, were compiled by the conference of all beneficiaries in the form of 4 participatory workshops.