

EXTENDED ABSTRACT**Strategic Planning of Environmental Protection in Wetland Ecosystems
(Case Study: Ghareh Gheslugh Wetland Watershed)**S. Dashti^{1*}, G. R. Sabzghabaei² and S. Jafari Azar³

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Introduction

The Wetlands are one of the most important ecosystems on Earth that human activities, including urban development and agriculture, road construction, often cause indirect damage and cause significant loss of lagoons and coastal areas. Therefore, we need a sophisticated tool and method to access and understand the conditions of the wetland. Strategic planning is a systematic approach that supports and validates the strategic management process. Strategic planning consists of four basic elements including environmental review, strategy formulation, strategy implementation, and control and evaluation. Strategic planning models are countless, but almost all of them are inspired by the SWOT analytical model. Ghareh Gheslugh wetland the most important and largest satellite wetlands of Lake Urmia Basin and One of the important bird areas, IBA, is in the world. Unfortunately, in recent years due to destructive human activities are faced with many risks. This applied scientific research, with the aim of providing Strategic Plan for development Environmental Protection of Ghareh Gheslugh wetland. Considering the conditions and internal and external factors prevailing in the region and using SWOT analysis was conducted.

Materials and methods

In the first phase of this study, Delphi technique was used to identify and screen the main internal and external criteria (strength, weakness, threat and opportunity), after field visits and library studies, and interviewing local experts and communities. For this purpose, the factors influencing the conservation and management of the environment in Ghareh Gheslugh wetland were identified and analyzed based on Delphi technique and therefore, listing and finalizing internal factors (Strengths and Weaknesses) And external factors (Opportunities and Threats) was achieved. After identification, internal and external factors were scored and evaluated in the form of IFE and external factors evaluation (EFE) scales. The hierarchical analysis process (AHP) and the EXPERT CHOICE software were used to weigh internal and external factors. In the third stage, the implementation phase was adapted to the main internal factors (key strengths and weaknesses) and the main external factors (strategic opportunities and threats were adapted using tools such as Swat matrix and internal and external matrix (IE) matrix, so that strategies Identify in accordance with the mission of the organization and appropriate to those factors. In the fourth stage, in order to make a decision using quantitative Strategic Planning Matrix (QSPM), the various options of the strategy developed in the previous stage were adapted and judged by objective methods and without applying personal opinion. In this table, the impact of other internal and external environmental factors on the proposed strategy was anticipated and the attractiveness score of each strategy was awarded in the range of one (at least attraction) to four (attractiveness or feasibility). At the end of

the sum of charm scores for each strategy in the corresponding column, the total charm score was calculated.

Results and discussion

According to the results of the Delphi technique for Ghareh Gheshlagh wetland, 38 criteria were identified and categorized as 9 factors and 12 weaknesses as internal factors and 6 factors of opportunity and 11 factors of threat as external factors. The results of the team of experts in assessing the internal factors indicate that the ecosystem services and the importance of high ecology in the wetland and the existence of a comprehensive management plan and water allocation program required by the wetland are considered as the most important strengths for the region. The weaknesses in the implementation of the regulations of the priority of the master plan and the absence of wetland ownership document, called the environmental organization, are the most important weaknesses in the region. Analysis of experts from the points of opportunity and threat of the area indicates that wetland zoning in order to develop protection and promotion of the hunted area to the protected area and the presence of local communities around the wetland with the motive of participation in the implementation of conservation and tourism projects is the most important opportunity in the region. Lack of basin attitude to wetland issues including the Ghareh Gheshlagh wetland and uncontrolled exploitation of surface waters (rivers leading to the wetland) are one of the most important threats to the Ghareh Gheshlagh wetland. Based on internal and external factors evaluation matrix, the final score of external factors (EEF) is 1.635 and also, this score on internal factors (IEF) is 1.908 which shows that the region's weaknesses are more dominant over the region's strengths. Finally, based on this matrix, a defensive strategy was chosen for the wetland. 9 defensive strategies, 4 conservative strategies, 2 aggressive strategies and 3 competitive strategies, suggested strategies for the development of environmental protection in Ghareh Gheshlagh wetland according to SWOT matrix. Eventually, 9 defensive strategies became important as inputs of the quantitative Strategic Planning Matrix (QSAPM). Between 9 Suggested defensive Strategies: the second strategy, the "Strategic Planning for environmental monitoring water quality and quantity of wetlands and control pollution and land use changes" With the highest score of 2.764 as the first priority of strategic planning was important to protect the area.

In general, we can say that in this study, like Jafari et al. (2014) and Rezaei and Shobiri (2014) to identify the strengths and weaknesses, opportunities and threats of Delphi technique, and to develop and The strategy analysis of the SWOT and QSPM matrices was used. Also, the results of studies by Rehanian et al (2013), Rehmat et al (2014) and Ganjali (2014) are in line with the present study. In this study, as with other studies, for all four defensive, invasive, conservative Effective and competitive strategies have been developed and developed (Salari and Arjmandi, 2010; Hashemi, 2010).

Conclusion

this study was conducted with the aim of analyzing the environmental management of the hunting area and Ghareh Gheshlagh wetland in order to provide the best conservation strategies based on internal factors (strengths and weaknesses) and external factors (opportunities and threats) based on Swat Strategic Planning. . In the meantime, considering the experiences and abilities of individuals and organizations involved in decision making and providing strategies for the development of the region was considered. In general, improving environmental quality is one of the most important components of sustainable development, and human factor is one of the most influential factors in changing biological conditions. One of the important principles for achieving sustainable development is the special attention to the natural environment. According to the results Between 9 Suggested defensive Strategy: the second strategy, the "Strategic Planning for environmental monitoring water quality and quantity of wetlands and control pollution and land use changes" With the highest score of 2.764 as the first priority of strategic planning was important to protect the area. Therefore, Area management must first plan for the development of a conservation approach in the region, based on the establishment of an environmental strategic plan.

References

- 1- Ganjali, S., 2014. Environmental and strategic assessment of ecotourism potential in Anzali Wetland using SWOT analysis. *Caspian Journal of Environmental Sciences*, 12(1), pp.155-165.
- 2- Hashemi, N. 2010. The role of eco-tourism in sustainable rural development, *Quarterly Journal of Village and Development*, 3, pp.188-173. (In Persian).
- 3- Jafari, Sh. Sakieh, Y. Dezhkam, S. Alavian petrudi, S, Yaghubzadeh, M. and A. Danekar. 2014. Developing management strategies for Miankaleh wetland conservation using SWOT analysis. *Wetlands Eco biology*, 5 (16), pp. 18-5. (In Persian).
- 4- Rehmat, K., Najma, N., Mrak, I., Tika, K. and Mehtab, A., 2014. Assessment of tourism potentials and future prospects in the Karakoram range of Pakistan using Delphi panel SWOT analysis. *Journal of Biodiversity and Environmental Sciences (JBES)*, 5(3), pp.133-143.
- 5- Reihanian, A., Mahmood, N.Z.B., Kahrom, E. and Hin, T.W., 2012. Sustainable tourism development strategy by SWOT analysis: Boujagh National Park, Iran. *Tourism Management Perspectives*, 4, pp.223-228.
- 6- Rezaei, M. and S.M. Shobeiri. 2014. An Analysis of the Role of Strategic Planning in Sustainable Education with Emphasis on Environmental Dimensions. *Environmental Science and Technology*, 16 (1), pp. 483-471. (In Persian).
- 7- Salari, A. and Arjmandi, R. 2010. Assessment of Environmental Strategic Factors for the Development of the Nature Surveys Using SWOT (Case Study of Kavir National Park). *Science and Technology Environment*, 12 (3), pp. 136-127. (In Persian).