

## **Investigating the Role of Tourism in the Conservation and Sustainable Development of the Environment (with an Emphasis on the Geographic Approach)**

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### **Abstract**

*Tourism is always embracing economy, social and environmental impacts. For this reason, the policy of sustainable development of tourism, The general approach is that governments have paid attention to tourism ecologically in the long run is approved and financially self-sufficient, and from the perspective of social and moral for local communities is beneficial and promising. The aim of this study is to evaluate the effects of wetland ecosystem conservation and environmental sustainability of tourism in rural areas. The purpose of applied research and in terms of data collection is descriptive and analytical. The study population consists of 3 villages khawmirabad rural district, Sarkol Zarivar which in the whole 93 villages of this area, a number of villages were selected. Sample households of the village and randomly classified and 12 villages were selected. Cochran formula used to determine the sample size and questionnaire to 330 randomly selected villages were selected among heads of households. The validity of the test Cronbach's alpha was 0.77 percent. For statistical analysis of data from one sample -t- test, chi-square test and ANOVA test in spss software is used. The results show that tourism in economic and socio-cultural aspects have a positive impact on the wetland ecosystem conservation and sustainable rural environment. But after environmental ecological positive impact not only have negative effects on the environment is stable and wetland ecosystems.*

**Key words:** geographic approach, Conservation, Sustainable Development of the Environment , Tourism

### **Introduction**

In the present era of tourism and tourism economy is becoming one of the fastest growth industries in the world, a tool for the creation of national income and the main pillars of the global economy and also of concepts, forms of development considered (Rattana suwongchai, 1998: 2). Natural tourism activity is a complex with other sectors of society and the economy, in common, have the effects and consequences of different which should be in the process of planning all its aspects considered the take up of negative factors and threat prevention and the effects of economic, social and environmental aspects related to the increase Reinholde, 2000)). Tourism and environment are mutually dependent. Thus, development and management of tourism so that the environment is a key factor in achieving sustainable development is taken into account (World Tourism Organization, 1379, 73. (Tourists need to be part of the natural environment and cultural and human, to the balance between them to maintain (Husain and Altinay, 2005: 274) because the vast majority of recreational activities directly on natural resources in the destination depends (Leich and Dolnicar, 2008: 672). negative environmental impact of tourism, including air pollution, soil pollution, water pollution, traffic congestion problems, poured spraying waste, damage to historical buildings, destruction of natural herbs, destruction of wildlife, etc. These are (Altinay and Husain, 2005: 277).

Wetlands are beautiful sights If the tourism industry to develop properly planned and managed, Can be a creator or drive the development process to achieve sustainable development in their local communities and aquatic ecosystems and wetlands.. Wetlands of inertia relative water have been developed, among many ecosystems production in the world, comparable to rain forests and coral reefs, which includes a variety of species of microorganisms, plants, insects, amphibians, reptiles, birds, fish and mammals (Danielle, 2006: 1).

The regeneration of this natural ecosystems and restoring natural materials and rustic design of the most important research areas and many of the country's executive (Kirby, 2004). The aim of this study was to evaluate the effects of wetland ecosystem conservation and environmental sustainability of tourism in rural areas surrounding the Zarivar is located in the city of Marivan.

### **Theoretical Framework**

#### **Tourism**

Today, tourism development and tourism, socio-cultural and environmental and economic impact on tourist areas creates (zarabi, 2011: 39). Tourism as an important form of human activities has an important impact. The effects in the region where tourism destination with the local environment, economy, culture and society interact is very evident. Also in this context that a large part of the activities of tourism planning is done on the effects of tourism (Mason, 2003: 10). The effects of tourism development, the complex process of change and exchange between tourists and destination host settlements are included (Yoon, 2002: 14).

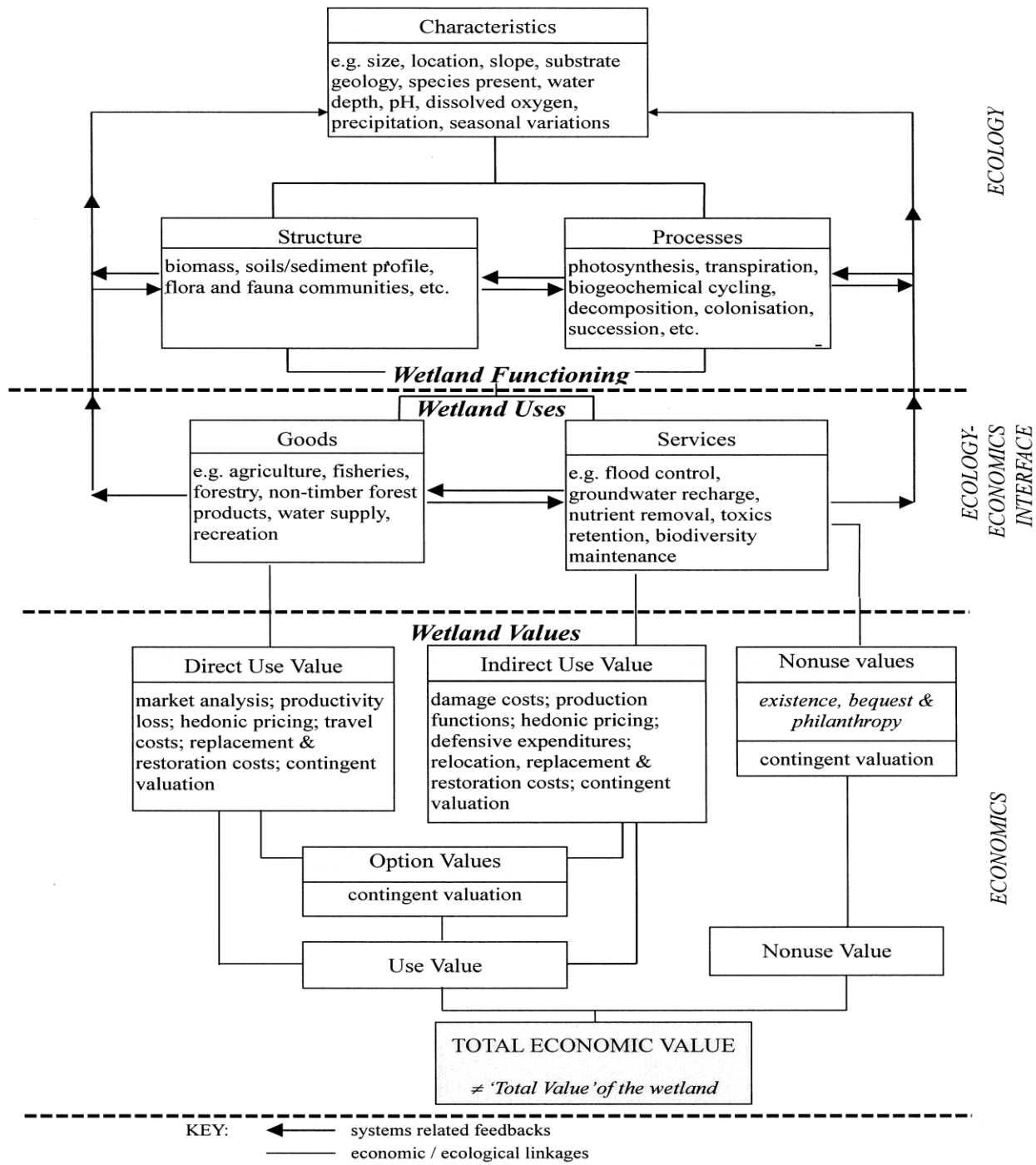
If tourism can improve the quality of life for residents with the support and acceptance of faces, but if the quality of life of residents through development of tourism more than just the fall, residents little support from the industry are not doing (Muzzo, 2013). Tourism as an important form of human activities has an important impact. The effects in the region where tourism destination with the local environment, economy, culture and society interact is very evident. Also in this context that a large part of the activities of tourism planning is done on the effects of tourism (Mason, 2003: 10). The effects of tourism development, the complex process of change and exchange between tourists and destination hosts include Settlements ways (yoon, 2002: 14). The environmental dimension of tourism, one of the favorite areas of geographers is the reason for this lies in the nature of geography with a robust approach in the field of human relations and the environment (Murphy and Mitchell, 1991: 57). Analysis of tourism on the environment and resources, an area in which natural and human geographers study problems related to tourism, are the sharing. However, because of the importance of tourism to the natural environment for activities (Page and Hall, 2002: 1).

#### **Wetland ecosystems**

Lagoon refers to a place where water is the main factor for the environment, plants and animals, so all areas, river, lake, littoral, mangrove forest, Hatcheries, channels, etc. the maximum water depth of more than 3 meters during low tide are not applicable (convection bureau, 2000). The need for environmental protection and utilization of natural resources, including sustainable development is necessity. Park managers, protected areas and wetlands are faced with the many decisions that need with detailed information of the status quo and causes it to adopt appropriate decision. Cover and dynamic monitoring of land use and landscape in protected areas and wetlands to understand how they Nagy effect on nature, the process of reconstruction and rehabilitation and to protect them in the long term is very important. Assessment of resource and ecological condition of these areas, managers need to make decisions helps (Jones, et al., 2009; Wang, et al: 2009).

Wetlands are among the most important ecosystems on Earth. Safe areas for wildlife in these areas are, however, several are threatened. Wetlands through water are biologically the most diverse ecosystems of the Earth. They have spread across the world and plays an important role in the water cycle, control the regional floods, prevent erosion, water treatment and recirculation of nutrients are caused. They also are transitional zones between land and water environments and as resources become attractive and chemicals, biotechnology and genetics have great value (Mitsch and Gosselink, 1993). Negative human activities greatly affect the wetland ecosystem. (Mitsch and Gosselink, 2000; Kent, 2001). Human impacts on wetlands can Including physical changes, such as deposition and changes in water flow can also Including general biological changes such as loss of biodiversity, the introduction of invasive species and changes in the structure of society (Richardson, 1997; Johnston et al., 2001 Freeland and). Wetland habitats are often the first to get the direct impact of physical, biological and chemical activity are common (Holland et al., 1995; Finlayson and Rea, 1999). The major changes by humans to prevent the creation of a healthy habitat for a wide variety of organisms can be. The importance and value of wetlands can be in three parts, including the value of wetlands as wildlife habitat and aquatic plants, the value of wetlands as improving the quality of the environment, socio-economic value of wetlands summarized ( Turner & et al, 2000).

Fig. 1. Connections among wetland functions, uses and values.



Source: (Turner, K.T ,2000).

**Table 1- National studies in the field of research**

| <b>the writer Or writers</b>       | <b>the subject</b>  | <b>Results</b>   |
|------------------------------------|---|--|
| Hassan Ismail-Zadeh et al. (2015). | sustainable tourism in wetlands ecosystem.<br>(Case study: lagoon city cash)  | results show that a total of 33 variables measuring institutional economics, social, cultural and ecological environmental study sustainable tourism in wetland ecosystems, 3 variables from the perspective of the people and every 33 variables, from the perspective of the authorities about have been confirmed. However, the analysis of two views converge (consistency) in the 3-variable divergence (anisotropy) has been observed in five variables.   |
| Danehkar et al (2012)              | designed to nature- based tourism in the wetland using Spatial Multi Criteria Evaluation (SMCE)   | According to the results of the implementation of a hierarchical approach in prioritizing the main criteria tourism, landscape criteria with the highest weighting coefficient allocated to the first priority. With regard to border the lagoon on the development of aquatic plants in the end zone three weights recreation including ecotourism, nature based tourism without physical development and physical development of nature-based tourism in the chaghakhur wetland identification and location.   |
| Saman Gulali Zadeh (2013)          | The effect of different methods of natural ecosystems tourism on the parameters of environmental education  | Participation in the Environmental Education considerable increase knowledge and considerable changes in their attitudes and behavior. The results show that the difference between the two groups of the tips mentioned in this study, the influence of environmental education there.  |
| Narges Vazin (2014)                | Develop a model for strategic planning of wetland ecotourism towards wetland ecosystem health and sustainable development of rural communities, the range wetlands Miyankaleh | The results show the capacity of ecotourism wetlands was high in the studied area, the capacity of ecotourism based on the Likert scale in most parameters determined optimal level of numerical control (number 3) is evaluated and alpha level of 0.05 . Was significant.  |
| Sajad Astani (2013)                | Zoning and Wetlands International Tourism Climate Assessment Shadegan using geographic information system and single model  | Results indicate that the Tourism Climate Index in April in the northern part of the lagoon Yahoo Messenger has good conditions in the central and southern part have an excellent rating. The total wetland area in March compared to the other months of the year the situation is more favorable.   |
| Hosein Negaresh (2013)             | The feasibility of developing tourism Poldokhtar wetlands based on SWOT analysis  | The results showed that in the study area, 21 internal strength And external opportunities as regional advantages and weaknesses internal and external threats as bottlenecks 22 feasibility of developing tourism in the region. It was concluded from the analysis results The threshold of the high vulnerability of wetlands for tourism And requires review and appropriate politics and the capabilities and capabilities it.  |
| Mohsen Ranjbar et al (2011)        | Anzali Lagoon role in sustainable tourism development and sustainable planning  | City Bandar Anzali most points demographic adjacent wetland is a wetland with an approximate length of 33 km and a width of 18 km from the north to the city of Bandar Anzali and the Caspian Sea, east to the village of Hasan River, from West to villages shoots ration of the Ali Abad Kaporchal and from the south Handekhale villages and Nokhaleh ends. Proximity to the major cities of Rasht, Anzali, Someye sara roads, as well as a lot of it in terms of tourism has become one of the country's major hubs. Every year a large number of tourists nationwide during the holiday season, especially in spring and summer travel to the area. |

Source: Findings, 2017.

**Table 1- international studies in the field of research**

| the writer<br>Or writers   | the subject   | Results  |
|----------------------------|---|--|
| Hailun,<br>Wu &<br>Dong    | Lake Wetland Management System Case Study wetland ecotourism compatibility with Jin Yan             | Wetland ecotourism sustainable development must rely on the support of local community residents and community involvement of local communities is an important part of the wetland ecotourism management. It must be said that in addition to evaluating the ecological natural phenomenon, the conditions of local communities in all aspects, including capacity development of eco-tourism, financial strength, attitude and understanding of local communities, can contribute a prerequisite for the successful implementation of ecotourism is. |
| SONG et al..               | The effects on tourism and sustainable development of regional wetland Ning Guy                     | As a unique wetland ecosystem and enjoyment of rich biodiversity, functioning and values of environmental, economic and social lot. Cultural specificity / cultural heritage and biodiversity of wetland ecosystems has added value. Wetlands having unique natural and cultural landscape, are appropriate for ecotourism development.  |
| Dong                       | Check the status of the development of tourism and protection of wetland resources in Dongting lake | In summary, managing wetland tourism can realize economic development, tourism, and yet can support wetland ecological conservation.   |
| Lili &<br>PAN              | A preliminary study on tourist behavior in a pond   | The kinds of wetland ecosystem services, tourism and science education is very important functions, and wetland ecotourism and tourism training both new exploitation of wetland resources are applicable.   |
| <sup>1</sup> Liu &<br>Zili | Case study analyzes the effects of ecotourism on Sustainable Development Lagoon Jin Yan             | Lagoon wetland ecotourism is based on natural resources. In fact, ecotourism wetlands, including wetland ecological culture, which is ethical and responsible ecotourism characteristics of wetlands, wetland protection into account and sustainable development of wetlands protection.  |
| Wang                       | Study the development of tourism and wetland ecosystems   | Because of its wetlands rich in biodiversity and cultural diversity, value and function of environmental education tourism is responsible travel to natural environments that protect the environment and the economy helps Aboriginal people. Especially in sensitive and protected areas to reduce the negative environmental effects caused by the operation will be balanced environment.  |

Source: Findings, 2017.

### Methodology

The purpose of this study and in terms of data collection is descriptive and analytical. Data collection in the theoretical part of the documentary and in the field of survey based on interviews and questionnaires were used. The aim of this study was to evaluate the effects of wetland ecosystem conservation and environmental sustainability of tourism in rural areas. The study population consists of villages 3 khawmirabad rural district, Sarkol and zarivar which of the 93 villages of this area, a number of villages were selected. Sample households of the village and randomly classified and 12 villages were selected. In field studies, to collect the required data, to prepare a questionnaire and were interviewed between the villages concerned, the most important part of field studies. In field studies, to collect the required data, to prepare a questionnaire and were interviewed between the villages concerned, the most important part of field studies. For this purpose, a questionnaire was designed which included household questionnaire. The questionnaire consisted of closed questions is the question. In designing questions, the Likert scale was used. The validity of the test Cronbach's alpha was 0.77 percent. For statistical analysis of data from one sample t test, chi-square test and ANOVA test in spss software is used.

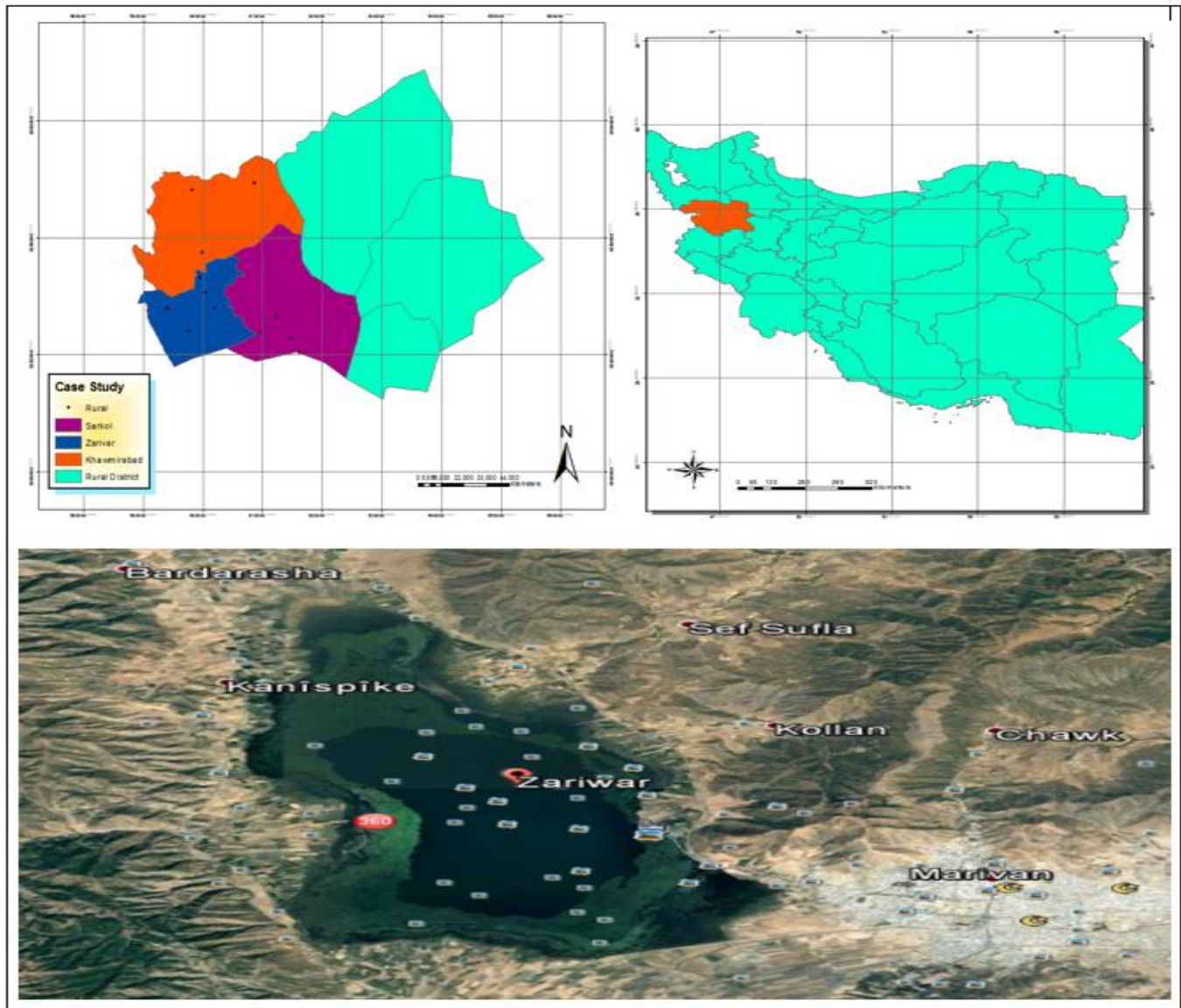
**Table 2- Sample villages and distributed questionnaires among them**

| <b>Rural district</b> | <b>The name of the village</b> | <b>The number of households</b> | <b>Total population</b> | <b>The number of questionnaires</b> |
|-----------------------|--------------------------------|---------------------------------|-------------------------|-------------------------------------|
| <b>Zarivar</b>        | Kani kabod                     | 41                              | 181                     | 7                                   |
|                       | siyanav                        | 196                             | 845                     | 33                                  |
|                       | Kani Sanan                     | 171                             | 660                     | 28                                  |
|                       | Dara tefey                     | 244                             | 924                     | 41                                  |
|                       | ney                            | 656                             | 2560                    | 55                                  |
| <b>khawmirabad</b>    | Savjey                         | 280                             | 1152                    | 44                                  |
|                       | Anjiran                        | 111                             | 455                     | 22                                  |
|                       | Yangijeh                       | 90                              | 362                     | 17                                  |
| <b>Sarkol</b>         | Balek                          | 139                             | 529                     | 24                                  |
|                       | Darziyan                       | 112                             | 451                     | 21                                  |
|                       | Sharani                        | 113                             | 472                     | 23                                  |
|                       | marg                           | 89                              | 365                     | 15                                  |
| <b>Total</b>          | 12                             | 41                              | 8956                    | 330                                 |

Source: Findings, 2017.

### **Research Area**

Lagoon flows 3 km West Marivan in Kurdistan province and the tourist attractions of the province. Sweet pond water is boiling and is funded from a number of source floor. In winter the lake freezes completely. The wetlands in longitude '8 ° 46 latitude '32 ° 35 and the height of 1285 meters above sea level is located. During Zarivar Lake about 5 km and a width of about 1. 6 km. The extent of wetlands because of changes in the volume of water in different seasons changing and the maximum depth of 5.5 meters. The lagoon's largest and most beautiful fresh water lake west of Iran and one of the most unique freshwater lake in the world and all circumstances considered a wetland of international development. Approximate size pond water is about 30 million cubic meters. Wetland about 22, 5 km and the average rainfall is 786 mm per year. Relative humidity equal to 4/58 percent and average annual evaporation of 1900 mm has been reported (Environmental Protection Agency, 1393). Villages of 200 meters to 3 kilometers lagoon flows have been chosen. The main activity is agriculture and horticulture villages and in some cases to activity in border markets are. Despite the economic situation and tourist lake in the villages around the wetlands have been affected.

**Figure 2- Location of the study area**

### Descriptive findings

Check the individual characteristics of the respondents indicate that all respondents were male, 15.1% of respondents aged 25-15 years in terms of age, 33.5% of respondents aged 35-25 years, 30.3% of respondents age 45-35 years, 16.1% of respondents aged 55-45 years and 5.0% in those aged over 55 years have been. In terms of education, 1.8 percent illiterate, 20.6% of subjects at the elementary level, 28.9 percent of people in the middle, 27.1 percent of high school and 21.6 percent of those in upper secondary level have been. Nearly 80 percent of people have their home at his residence. Job status among respondents, 37.2% of agricultural jobs, 20.2% of public service jobs (shops, taxi driver between rural-urban), 5.5% of government employees, 14.2% of self-employed workers and 22.5% of other work.

**Table 3- the individual characteristics of respondents in rural areas, border areas**

| <b>Individual characteristics of respondents</b> |                                |                       |                |
|--|--------------------------------|-----------------------|----------------|
| <b>index</b>                                     | <b>Classification</b>          | <b>frequenc<br/>y</b> | <b>percent</b> |
| <b>Age</b>                                       | 15 - 25                        | 1338                  | 100            |
|  | 25-35                          | 0                     | 0              |
|  | 35-45                          | 33                    | 15.1           |
|  | 45-55                          | 73                    | 33.5           |
|  | 55 >                           | 66                    | 30.3           |
| <b>Level<br/>of<br/>Educat<br/>ion</b>           | illiterate                     | 35                    | 16.1           |
|  | Primary                        | 11                    | 5.0            |
|  | Guidance                       | 4                     | 1.8            |
|  | High school                    | 45                    | 20.6           |
|  | High school graduate or higher | 63                    | 28.9           |
| <b>main<br/>job</b>                              | Farmer                         | 59                    | 27.1           |
|  | Public services                | 47                    | 21.6           |
|  | government's employee          | 173                   | 79.4           |
|  | Working                        | 20                    | 9.2            |
|  | Dehyaran                       | 25                    | 11.5           |
|  | Other                          | 81                    | 37.2           |
| <b>Job<br/>Satisfa<br/>ction</b>                 | too much                       | 44                    | 20.2           |
|  | alot                           | 12                    | 5.5            |
|  | So much for                    | 31                    | 14.2           |
|  | little                         | 49                    | 22.5           |
|  | very little                    | 1338                  | 100            |

Source: Findings, 2017.

**Table 5: dimensions and indicators measured in this study**

| <b>Dimension</b>             | <b>Criteria</b>   |
|------------------------------|---|
| Ecological_<br>environmental | Diversity of flora and fauna, water resources management, management of wastewater agriculture, organic farming, water pollution lake, nature conservation and biodiversity, the pollution of the environment, increase public participation in protecting ecosystems, use of building materials suitable for harvesting allowed water from the wetland and watershed wetlands, lack of wastewater management alternatives, the harm to the animals wetlands) wildlife (land use changes as a result of tourism activities, shortage of farm and garden organ in the villages of the region, consuming large amounts of fertilizer and pesticides Chemicals in food production. |
| Economic                     | Transport facilities, access to weekly markets, poor access to employment opportunities in the area, lack of eco-cottage industries in rural areas, rural women's employment, increase the purchasing power of the local community.   |
| Sociocultural                | Recognition of the environment, the awareness of people about the connection between the village and the region, people's belief in wetland conservation as cultural heritage, lack of opportunities for public participation in decision-making and programs for the protection of wetlands, Development Education environmental learning, sense of cooperation in tourism development and maintenance of wetland ecosystems.  |

Source: Findings, 2017.



Table 6: Evaluation of the effects of wetland ecosystem conservation and environmental sustainability of tourism in rural areas of the respondents

| Dimension                       | Variables  | too much | much  | Somewhat | little | very little | Average | Chi-square | Sig  |
|---------------------------------|--|----------|-------|----------|--------|-------------|---------|------------|------|
| <b>Ecological environmental</b> | Diversity of flora and fauna                                   | 18.70    | 14.00 | 12.50    | 24.00  | 30.80       | 2.32    | 36.555     | .000 |
|                                 | water resource management                                      | 15.30    | 19.30 | 18.10    | 24.30  | 23.10       | 2.21    | 8.735      | .000 |
|                                 | Agricultural waste management                                  | 21.80    | 14.00 | 16.50    | 23.70  | 24.00       | 2.10    | 12.941     | .000 |
|                                 | Organic farming  | 31.80    | 15.90 | 23.40    | 5.60   | 23.40       | 3.51    | 61.850     | .000 |
|                                 | Reducing water pollution in the lake                           | 15.30    | 6.50  | 26.50    | 20.60  | 31.20       | 2.56    | 59.421     | .000 |
|                                 | Conservation of Nature and Biodiversity                        | 20.20    | 11.80 | 16.50    | 25.90  | 25.50       | 2.85    | 23.097     | .000 |
|                                 | Reduce the pollution of the environment                        | 12.10    | 4.00  | 18.70    | 27.70  | 37.40       | 2.73    | 109.078    | .000 |
|                                 | Increase women's participation in the protection of ecosystems | 20.60    | 29.90 | 17.80    | 19.60  | 12.10       | 3.27    | 26.523     | .000 |
|                                 | The use of appropriate building materials                      | 10.30    | 19.90 | 24.90    | 28.70  | 16.20       | 2.32    | 33.408     | .000 |
|                                 | Allowed to withdraw water from the pond                        | 39.60    | 32.40 | 11.80    | 6.20   | 10.00       | 3.82    | 143.377    | .000 |
|                                 | Alternative Wastewater Management System                       | 16.20    | 16.80 | 19.60    | 22.40  | 24.90       | 2.60    | 8.798      | .000 |
|                                 | The damage to wetland animals                                  | 4.70     | 9.00  | 28.30    | 35.50  | 22.40       | 2.99    | 107.769    | .000 |
|                                 | Land use change as a result of tourism activities              | 17.10    | 22.70 | 12.50    | 23.10  | 23.70       | 3.12    | 16.274     | .000 |
|                                 | Organic farms and gardens in rural area                        | 20.20    | 7.80  | 26.20    | 20.20  | 25.50       | 3.70    | 34.997     | .008 |
|                                 | Fertilizer and chemical pesticides in agriculture              | 19.60    | 26.50 | 22.40    | 17.40  | 14.00       | 3.86    | 14.498     | .006 |
| <b>Economic</b>                 | Transport facilities   | 24.00    | 34.00 | 20.90    | 16.20  | 5.00        | 3.44    | 72.442     | .001 |
|                                 | Weekly market access   | 23.10    | 30.20 | 18.40    | 18.10  | 10.30       | 3.48    | 104.218    | .000 |
|                                 | Access to employment opportunities in the area                 | 19.30    | 5.60  | 13.40    | 29.00  | 32.70       | 2.50    | 153.938    | .000 |
|                                 | Eco cottage industries in villages                             | 16.20    | 17.40 | 15.30    | 25.90  | 25.20       | 2.50    | 182.598    | .000 |
|                                 | Employment for rural women                                     | 17.3     | 23.5  | 20.0     | 29.4   | 9.8         | 3.82    | 27.098     | .000 |
|                                 | Increase the purchasing power of the local community           | 12.2     | 12.2  |          |        |             |         |            |      |
|                                 | Recognizing the environmental area                             | 11.8     | 38.4  | 33.3     | 3.25   | 113.843     | .000    |            |      |
|                                 | Awareness of the linkage between the village and the region    | 20.90    | 25.20 | 22.10    | 18.40  | 13.40       | 3.86    | 12.660     | .000 |
|                                 |  |          |       |          |        |             |         |            |      |

|                      |   |       |       |       |       |       |      |         |      |
|----------------------|---|-------|-------|-------|-------|-------|------|---------|------|
| <b>Sociocultural</b> | People believed to protect the wetlands as cultural heritage                      | 14.30 | 14.03 | 24.60 | 26.80 | 19.90 | 2.83 | 21.134  | .000 |
|                      | Public participation in decision-making and wetland conservation programs         | 29.30 | 37.40 | 13.70 | 11.20 | 8.40  | 3.68 | 102.629 | .000 |
|                      | Development of environmental education and learning                               | 13.10 | 19.60 | 17.80 | 28.70 | 20.90 | 2.25 | 20.667  | .000 |
|                      | Sense of cooperation in tourism development and maintenance of wetland ecosystems | 20.0  | 34.5  | 22.7  | 13.3  | 9.4   | 3.58 | 47.765  | .000 |

Source: Findings, 2017.

In this study in the context of assessing the impact of tourism in maintaining wetland ecosystem and environmental sustainability in rural areas, 27 indicators defined and each of these indicators in SPSS studied and analyzed, which results in Table (6) it has been shown. In this table the consent of respondents to each indicator, average and chi-square is studied. In the field of ecological and environmental dimensions, 15 indicators (diversity of flora and fauna, water resources management, agricultural waste management, organic farming, water pollution lake, nature conservation and biodiversity, the pollution of the environment, increase women's participation in the protection of ecosystems use of construction materials good, picked allow water from the wetland and watershed wetlands, lack of wastewater management alternatives, the harm to the animals wetlands) wildlife (land use changes as a result of tourism activities) used according the optimal numerical test (3), the average on most parameters to measure the low post Favorable than assessed value and alpha level of 0.00 was significant.

One of the main factors in more evaluations performed on the development of tourism in local communities has been emphasized, the economic effects of tourism. Tourism in recent years as a very important economic factor is of great concern. As well as all the places where the tourism industry will need to develop appropriate tourism professionals and executive management. The economic dimension in the study 6 index (transport facilities, access to weekly markets, poor access to employment opportunities in the area, lack of rural industries compatible with the environment in rural areas, employment of rural women, increase the purchasing power of the local community) used according to the mean square of each indicator, tourism had a positive effect on the economic situation of the rural areas of wetland ecosystems. programs for wetland protection, development of environmental education and learning, sense of cooperation in tourism development and maintenance of wetland ecosystems) have been used. According to the index mentioned that the social dimension of cultural tourism in rural areas of wetland ecosystems flows have a positive impact.

**Table 7. The test results T wetland ecosystem conservation and sustainable environment impact of tourism in rural areas**

| Index                             | Mean Difference | Standard deviation | Index T | Sig    | Confidence Interval of the 95% Difference |        |
|-----------------------------------|-----------------|--------------------|---------|--------|---|--------|
|                                   |                 |                    |         |        | upper                                     | Low    |
| <b>Ecological _ environmental</b> | 2.1169          | 1.209              | 0.007   | 46306  | -.3000                                    | -.1139 |
| <b>Economic</b>                   | 3.8131          | 4.374              | .000    | .89774 | 0.0106                                    | 0.0444 |
| <b>Sociocultural</b>              | 3.2764          | 1.479-             | 0.003   | 31268  | 0.0326                                    | 0.0046 |

Source: Findings, 2017.

In one sample T-test number 3 as desirable numerical or theoretical middle test is intended. If the lower and upper limits are positive Posts will be larger than the observed value And when both are negative numerical average calculated from the theoretical middle or utility of the test and show less favorable conditions is not. The analysis shows that the level of tourism in economic and socio-cultural aspects have a positive impact on the wetland ecosystem conservation and sustainable environment in rural areas. But after environmental ecological positive impact not only have negative effects on the environment is stable and wetland ecosystems.

**Table 8. The analysis of the impact of wetland ecosystem conservation and environmental sustainability of tourism in rural areas**

| Index                              |                | Sum of Squares | df  | Mean Square | F      | Sig.        |
|------------------------------------|----------------|----------------|-----|-------------|--------|-------------|
| <b>Ecologica l _ environmental</b> | Between Groups | 27.814         | 22  | 23.907      | 24.367 | <b>.000</b> |
|                                    | Within Groups  | 260.461        | 357 | .730        |        |             |
|                                    | Total          | 268.275        | 359 |             |        |             |
| <b>Economic</b>                    | Between Groups | 15.517         | 2   |             | 10.318 | <b>.000</b> |
|                                    | Within Groups  | 244.865        | 357 | 7.759       |        |             |
|                                    | Total          | 260.383        | 359 | .686        |        |             |
| <b>Sociocultural</b>               | Between Groups | .826           | 2   |             | 653.   | <b>.000</b> |
|                                    | Within Groups  | 277.507        | 357 | .6543       |        |             |
|                                    | Total          | 278.333        | 359 | .777        |        |             |

Source: Findings, 2017.

To explain whether the environmental factors of ecological, economic, social and cultural tourism in the wetland ecosystem conservation and environmental sustainability in rural areas there is a significant difference or not, the one-way analysis of variance was used. According to the results table (8) and the significance level (0.000) can be said to amount F for the impact of tourism on wetland ecosystem conservation and environmental sustainability in rural areas has been significant. In other words, this value indicates that at least there is a significant difference between the two, to check the claim of pairwise comparisons (Tukey) was used in the table (8) refer to it.

**Table 8- ANOVA multiple comparisons test**

| exam type    | Index                       | Rural         | Mean Difference (I-J) | Std. Error | .Sig | Confidence 95% Interval |             |
|--------------|-----------------------------|---------------|-----------------------|------------|------|-------------------------|-------------|
|              |                             |               |                       |            |      | Upper Bound             | Lower Bound |
| <b>Tukey</b> | Ecologica l _ environmental | Economic      | .32389                | .10066     | .000 | -.0770                  | -.5508      |
|              |                             |               | .00526                | .12733     | .000 | .2941                   | -.3052      |
|              |                             | Sociocultural | -.32389               | .10066     | .001 | .5508                   | .0770       |
|              |                             |               | .33833                | .13505     | .001 | .6262                   | -.0095      |
|              | Economic                    | Near          | -.11944               | .09760     | .000 | .3492                   | -.1103      |
|              |                             |               | .58611                | .12346     | .000 | .8767                   | .2955       |
|              |                             | Middle        | .11944                | .09760     | .001 | .1103                   | -.3492      |
|              |                             |               | .46667                | .13095     | .000 | .7749                   | .1585       |
|              | Sociocultural               | Near          | -.10236               | .10391     | .000 | .1390                   | -.3501      |
|              |                             |               | -.06389               | .13143     | .001 | .2454                   | -.3732      |
|              |                             | Middle        | .10236                | .10391     | .001 | .3501                   | -.1390      |
|              |                             |               | .04267                | .13940     | .001 | .3698                   | -.2864      |

Source: Findings, 2017.

Meanwhile, the Kruskal-Wallis test results also show that The alpha level of 0.001 significant wetland ecosystem conservation and environmental impact of tourism in rural areas is sustainable. As the ratings show that an average rural flows to the highest allocated, That may be because it flows near the villages of the district wetland ecosystem in the region. Which impacts (positive and negative) tourism on the ecosystem in the villages.

**Table 8-effect relationship between the villages wetland ecosystem conservation and environmental sustainability of tourism in rural areas Kruskal-Wallis test**

|  | <b>Rural district</b> | <b>Count</b> | <b>Average ratings</b> |
|--|-----------------------|--------------|------------------------|
| <b>Impact of tourism in wetland ecosystem conservation and sustainable environment</b> | Khaw and Mirabad      | 83           | 163.46                 |
|  | Zarivar               | 96           | 199.36                 |
|  | Srkl                  | 151          | 154.17                 |
|  | Total                 | 330          |                        |
|  | Df                    | 2            |                        |
|  | Sig                   | 0.001        |                        |

Source: Findings, 2017.

## Results

Development of tourism in an area with tourist arrivals continue to change the landscape of human and natural, socio-cultural changes, economic and environmental ecology. Tourism to provide recreation areas for tourists and create jobs and income for residents of local communities without damaging the environment, local communities and natural ecosystems. One of the tourist areas, are wetland ecosystems that due to the wide range of ecological attractions and unique natural and cultural landscape is highly regarded. The results show that tourism in economic and socio-cultural aspects have a positive impact on the wetland ecosystem conservation and sustainable rural environment. But after environmental ecological positive impact not only have negative effects on the environment is stable and wetland ecosystems. The findings of the Kruskal-Wallis test shows that tourism in villages near the wetland ecosystem zarivar (Yangijeh, dara tefey, Siyanav, kani kabod, Kani Sanan and ney) are the most affected by the economic dimension of the rural areas studied have had. Also in the field of the environment (pollution of the lake water, lack of protection of nature and biodiversity, environment pollution, harm to animals, etc.) as well as the most negative impact on the region.

## Suggestions

1. brnamh planning and proper management to prevent water pollution and protect the environment and surrounding wetland ecosystem around the lake
2. Encourage people to protect nature and the ecosystem around the lagoon and also avoid harming wildlife wetland ecosystems
3. Provision of infrastructure and services needed by tourists and locals
4. Proper management of water resources and water are allowed harvesting of wetland for tourists and locals
5. Alternative wastewater management systems for rural areas, especially rural areas around the wetland ecosystem.
6. Avoid the use of fertilizers and chemical pesticides in agriculture and horticulture
7. Learning and teaching people to understand the environment and the protection of wetlands as cultural heritage.

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