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The Effects of Water level Decline on Agriculture of Rural areas around Urumia Lake. Case Study: Northern Marhamatabad County ,Miyandoab Township

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Introduction

One of the most important Environmental hazards that is happening in recent years in Iran is the sudden reduction of water level of Oromiye lake. because of different reasons such as civil Projects, repetitive droughts, an increase in the average temperature in the region, and the resulted inhancement in the evaporation of the lake's water, it has been susceptible to going dry and has strongly influenced the rural area around the lake, especially the southern parts of the lake. The reduction of the lake's water and the transition of salt to Agricultural land in the region can cause an efficiency fall and even a decrease in the agricultural land and at the end can lead to some serious damages such as the decrease of rural money-making in the region and the province, generating employment, and regression in minor, transferable, and agriculture-dependent industries. Therefore it forces the people of the county to immigrate to cities and causes problems in the cities afterwards.

Being adjacent to Oromiye lake, Rural County of northern Marhamatabad has faced salty agricultural fields and a reduction in the agricultural areas in recent years. Concerning the reduction of the water level of Oromiye lake during recent decades, this research is aimed to investigate the effects of this reduction on rural economy of adjacent rural areas and to find a relationship between the reduction of Oromiye lake's water level and the agricultural economy of rural areas under study.

Study Area

Township of Miandoab has been located in the south of Oromiye lake and southeast of Azarbajejan Gharbi province. The area of this township is 2694 square kilometres, its geographical lengths is 46 degrees and 6 minutes of the west and width is 36 degree and 58 minutes to the north of the equator, and exactly in the middle of plains leading to Oromiye lake with the height of 1314 meters from sea level. The governmental parts of this township, according to the statistical results of census in 1385 are County, city, township and rural. Marhamatabad is of the rural County of this township and the district has been divided to northern Marhamatabad and southern Marhamatabad. According to the demographics of Iran's central census bureau, their population in 1385 was 23828. rural County of northern Marhamatabad has been located in the northwest of Miandoab township and includes 8 rural parts.

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Material and Methods

This is an applied research and from methodological point of view is descriptive and analytical. To collect information literature review and field studies (observation, interview and questionnaire) has been used. The location of this study is rural County of northern Marhamatabad of Miandoab Township and the population under study is the farmers of this rural County. According to the demographic data about agriculture in 1382, the profit-making farmers of the year have been 1437 people out of which 264 were selected as our sample volume based on kokran formula. Choosing households at the level of rural areaways on simple random method so that equal opportunity principle would be considered. Based on this same idea and to reach desirable results, a questionnaire has been designed to investigate economic conditions of rural households of the district from 5 points of view and 37 Reagents relating to economic conditions of agriculture. Then to analyse the gathered information, factor analysis and in a method of analysing the main components has been used.

Results and Discussion

Of the most important effects of the lake's water reduction in this County that based on results of factor analysis has been incorporated into the analysis as the first factor and has allocated a considerable amount of variance to itself, is the factor of income and Production practices. This is because of the effects of income on the decrease of providing-ability and unit-purchasing capabilities among farmers, and because of a decrease in opportunity and amount of banking system facilities to develop agriculture and the improvement of managing methods of the fields. Second factor that allocated 14.275 percent of the variance to itself is income, facilities and Production practices. One Of it's most important effects are the decrease of people's trust on facilities system and the loss of eagerness to use facilities in groups among farmers, the reduction of none agricultural opportunities and the decrease of farmers' access to farms. The parameter prioritised as the third one is production method, units and income. Some of the included items of this factor is the increase in the costs of use of agricultural machinery and absence of new Production practices that has leded to a decrease of employment in agriculture. The fourth factor is management and Production practices. in this, advices of Extension Agent on choosing the kind of plants and cultivation has had the most important influence on economic agriculture.

Conclusion

The Decrease of Oromiye lake's water has had different effects on the development of economic agriculture of northern Marhamatabad rural County (the County of the study). Based on the results of factor analysis , these effects are categorised into eight groups (income and Production practices- income, facilities and Production practices- Production practices, units and income- management and Production practices- income, Production practices and units-units and income- Production practices and income- Production practices) and 80.28 percent of variance has Explained the effects of decrease in Oromiye lake's water level on rural economy of the County. the Results of the research shows that Oromiye lake because of famine, decrease of rainfalls and snowfalls, human factors, and overuse of underground Ground Water, has started to be arid in recent years. Droughts' extension and the reduction of the lake's water level are serious dangers against farmers which are the biggest source of income for rural people in northwest of Iran. Hurricanes and strong winds gradually transfer salt to agricultural fields in the region and it causes the reduction of cultivation area, rural income, production in the region, generating employment, Lower the boom of industries, transferable industries and agriculture-

dependent ones, Salinization of agricultural lands, the destruction of pastures, a decrease in underground water, the destruction of fruit trees and grains and finally the seasonal immigration of rural youth.

Key Words: Rural economy, environmental hazards, factor analysis, wetlands.

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