

Challenges of Climate Change Adaptation: case study Urmia Lake

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The climate change effects which are discussed as a phantasm subject in past two decades, has very vast results on the human life as even implication of adaptation programs are facing with serious challenges. Assessment of Climatic parameters in Urmia lake basin in Iran shows that rainfall data were not stationary in recent 15 years and these data have a decreasing trend. Based on this trend in rainfall, average rainfall decreased 20% in this period whereas temperature and evaporation data have an increasing trend. These changes in climatic parameters decreased water level of Urmia Lake. This decrease of water level is more than 6 meters and today this lake is approaching dryness very fast. Evaluations show that with drying this lake billions tons of salt will spread in lands of this basin and more than elimination of Herbs and creatures, the health of more than 5 billion people will directly be on risk.

Different studies have done in this basin about the causes of water level downfall in Urmia Lake. Based on the results of these studies there are many activities which are proposed to adapt with this situation. Some of these activities are long-term, some are mid-term and some of them are short-term activities. It should be noted that many of these activities are defined via meetings with participation of stakeholders. Although the results show that in most sever drought in recent 15 years, the share of climatic factors which caused this problem is about 70 percent. However, after passing the sever drought period, the human role for continuing of this situation became greater. Therefore the results of defined activities should be more effective. But there are many challenges for implication of defined activities which are discussed in this paper.