عنوان مقاله:

Monitoring Soil Salinity Changes in The West Part of Urmia Lake Basin Using Remotely Sensed Data

محل انتشار:

کنفرانس بین المللی پیامدهای جغرافیایی و اثرات زیست محیطی شرایط دریاچه ارومیه (سال: 1395)

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خلاصه مقاله:

The salinity of Urmia Lake, the second largest hypersaline lake in the world has risen remarkably during recent years and as a result, the most of the lake have been converted to the unusable lands. Drought, climate change and increase in agricultural use by more than 80,000 wells and many dams on feeding rivers have been identified as the most important factors for shrinking Urmia Lake. This in turn has increased the salinity of the lake's water and led to salinization and desertification in the vicinity of the lake. Drying of Urmia Lake and dust emitted from the dried bottom have the potential to have adverse effects to the local and regional climate change of the area. Hotter temperature, less precipitation, water shortage as a result of the complete drying Urmia Lake may even cause diseases and migration of local people, which is similar to what happened to Aral Sea. (Zarghami, 2011; Abrishamchi et al. 2012; Ghobadi et al. 2012; AghaKouchak et al. 2014). Soil salinization in the Urmia Lake basin is probably one of the most important impacts of drying of the Urmia Lake. Soil salinization has many adverse effects including prevention of plant grow and increase in desertification. Namely, agricultural activities are impossible in regions where high salinity occurs (Bahtt et al. 2008). Hamzehpour et al. (2014) analyzed spatial varition of top soil salinity using ground water SAR and sampling data on a gird of 500 m in an area of 5000 ha close to Urmia Lake during autumn of 2009 and spring of 2010. Their results indicated inverse correlation between top soil salinity and distance from the lake. Sima and Tajrishy. (2014) used spatial interpolation methods to analyze the spatial heterogeneity and temporal changes of the physiochemical parameters of Urmia Lake between October of 2009 and July of 2010. They characterized the main dominant anions and cations in Urmia Lake. Moreover, their results indicated seasonal changes of water quality. By considering the lack of sampling data and limitations of field survey studies in Urmia Lake Basin, in this study we have utilized remote sensing technology to identify soil salinity changes between 2010 and 2016. Soil Salinity Index and Maximum likelihood classification methods are used to quantify the acceleration of salinization in the Urmia Lake .Basin (ULB) during recent years

کلمات کلیدی: