



Multi Aspect Investigation of Nitrate pollution in the Kamfiroz Plain of Fars province, Iran

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Kamfiroz plain is located 80 Km in the northwest of Shiraz. Rice is planted in the agricultural fields in this plain and farmers use Nitrogen fertilizers to enhance their production. The use of which can cause Nitrate pollution in the groundwater of the area. Kor River passes through the Kamfiroz plain and enters the Dorodzan dam lake. From this respect the investigation of nitrate pollution in the ground water and surface water and providing vulnerability map for implementing managerial programs is necessary. In this research, in a period from April 2008 to February 2009 samples were taken from the ground water, surface water, Dorodzan lake, rain water and the surface soil of agricultural fields of Kamfiroz plain and their Nitrate concentration were measured in the lab. The maximum Nitrate concentration measured in the ground water was 34 mg/l and in surface water was 19 mg/l. concentration of Nitrate in the soil indicates considerable reduction from surface to the 50 cm depth of the soil. The average Nitrate measured in the lake of Dorodzan Dam showed 1.34 mg/l. The nitrate measured in the first rain fall water was 13.1 mg/l which indicates acid rain in the Kamfiroz plain at least in the beginning of the rain season.