

## عنوان مقاله:

The effect of flood on soil degradation in Gorganrud River Basin

## محل انتشار:

دومین کنفرانس بین المللی کواترنری (سال: 1400)

تعداد صفحات اصل مقاله: 2

## نویسندگان:

H Mirzaeirad - Dept. of Soil Science, F. Dept. of Watershed Management, University of Agricultural Sciences and Natural Resources, Gorgan, Iran

F Kiani - Dept. of Soil Science, F. Dept. of Watershed Management, University of Agricultural Sciences and Natural Resources, Gorgan, Iran

F Khormali - Dept. of Soil Science, F. Dept. of Watershed Management, University of Agricultural Sciences and Natural Resources, Gorgan, Iran

A Najafinejad - Dept. of Soil Science, F. Dept. of Watershed Management, University of Agricultural Sciences and Natural Resources, Gorgan, Iran

## خلاصه مقاله:

Floods affect soil properties due to the quality and quantity of material transported and its intensity and speed. At the end of 1397, the occurrence of heavy rain, flooding of rivers, caused floods in Golestan province. The flood damaged 317,000 hectares of arable land and 6,339 hectares of garden. The purpose of this study is to investigate the effect of the mentioned flood on the soil quality of arable lands in Gorganrud river basin, Golestan province in north of Iran. For this study, two flood-affected areas were selected (Figure. 1). From each area 20 soil samples were collected in depth of 0-30 cm and compare the results with the control area. Results obtained from the soil testing revealed an increase in Soil-P and Soil-K, Clay, Silt, Carbonates and Electrical Conductivity (EC) with flooding. A significant decrease in Carbon, Nitrogen, Sand and Microbial Respiration (MR) were found for the topsoil of flooded area (Figure 2 and 3). Flood had the most negative reaction in aerobic bacteria. It may have affected on total nitrogen (TN) and total organic carbon (TOC) levels. It is recommended to use a cover crop immediately after soil dries to promote growth of microorganisms that are essential for nutrient cycling.

## کلمات کلیدی:

Flood, Soil Quality, Microbial Respiration, Gorganrud

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