



## Landscape Function Changes Along Lajane Piosphere

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To identify the functioning of the soil-landscape system and effects of grazing gradient from watering point the relationship between soil properties and landscape function analysis (LFA) indices were investigated. This research was carried out for an arid rangeland in the Lajaneh, Iran. A piosphere is an ecological system of interactions among a watering point, its surrounding vegetation and the grazing animal. In the simplest case of an isolated watering point in one uniform rangeland type, a gradient of utilization pressure develops which is greatest near the watering point and decrease as a function of distance from it. Landscape Function Analysis (LFA) is a monitoring procedure that uses quickly determined field indicators to assess the functional status of rangelands. It comprises three modules, a conceptual framework, a field methodology and an interpretational framework and is intended to generate chronosequences of data. The field methodology uses simple, visual indicators closely related to a range of physical, chemical and biological processes. We classified study area to four different layers (10m, 100m, 1000m and 10000m) far from watering point. We measured three indices of surface condition (the stability, infiltration and nutrient cycling ) in the field. Tukey-Kramer test Showed that the stability, infiltration and nutrient cycling decreased close to watering point ( $P < 0.05$ ). We recommend range managers to consider configuration of water sources, water provision and grazing management to decline piosphere effects.

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