

Abstract**Assessment of Barley and Native Rangeland Ecosystem in
the Southern Part of Marab Suweid**

By

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Jordan lies within the arid climatological zone. Rangelands defined as areas receiving less than 200 mm annual rainfall cover 90% of Jordan's area. Desert rangelands are found within Jordan's Badia and comprises the largest biogeographical region, that is the Saharo-Arabian region. Rangelands are one of the productive lands under environmental pressure due to the increasing demand of meat. Marab Suweid is one of the desert rangelands found in the Northern Eastern Badia of Jordan facing a deteriorating trend, mainly, due to cereal cultivation and overgrazing.

Rangelands deterioration has brought the attention to rangeland management to assure the sustainability of the rangeland products. Rangeland management implies assessing the quality and value of ecological resources. Environmental assessment implies information gathering, natural resources surveys and statistical tests. Hence, soil and plant surveys were conducted at Marab Suweid during the year 1996/1997. The soil survey revealed no problems concerning pH, EC, available phosphorous and potassium. The main constraint to vegetation development is water availability. The vegetation surveys revealed deterioration in the biodiversity of the plant community in addition to the deterioration of rangeland condition and productivity of the plant ecosystem. For the purpose of management three alternative scenarios were proposed for the land uses at Marab Suweid. The scenarios were: cultivating half of the Marab with cereals and protecting the rest from cultivation and grazing, cultivating the whole Marab with cereals and treating the Marab as a rangeland reserve. The habitat assessment approach was carried out with the environmental impact assessment type to conduct a matrix for each scenario aiming to assess potential problems and economic feasibility of the scenarios based on the ranking procedure.

The matrices revealed the success of scenario three over the two other scenarios. A management plan was proposed for Suweid to be a rangeland reserve.