

Environmental impact assessment of quarries and crushers in Al-Abiad village, Southern Al-Batina Governorate, Sultanate of Oman

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Abstract. In order to cope with the rapid development in the Sultanate of Oman, many companies have invested in sand and gravel mining and quarries which abundantly exist in the mountainous areas, the banks and streams of wadis. In spite of the economic benefit of gravel mining, there are environmental impacts which should be controlled in order to preserve the environment resources and human welfare. The objective of this study is to use GIS and Remote Sensing as spatial decision support to monitor and evaluate environmental impacts of quarries and crushers activities in Al Abiad village, southern Al-Batina Governorate. In this study six quarries and crushers in Al Abiad village were investigated. The assessment includes; specifying the sites, the sand and gravel mining stages, the environmental impacts, land-uses, the distance between the crushers and urban sites. The study indicates that all crushers are active and have their own quarries. However, they do not follow the environmental regulations and standards according to the Sultanate of Oman environmental laws. It is also noticed that there is a lack of coordination between concerned government authorities, especially in relation to the issuing of environmental permits. The study recommends that quarries and crushers should comply with the technical specifications, environmental standards and regulations. The study recommends establishing a full integrated GIS and RS technologies to monitor the quarries and crushers activities and link any future permits for these types of activities to have more geo-informatics support.

Keyword : (RS, GIS, Quarries, Crushers & Al-Abiad)