

## Review of the satellite data potential for wetland zoning (Case study: Hamoun wildlife refuge)

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### Abstract

Wetlands are one of the most important ecosystems on the Earth that are a source of water supply and valuable habitat for plant and animals. This subject shows the necessity of these areas management. Hamoun wild life refuge is the biggest fresh water lake in Iran, which is viable for protection of wildlife, especially migratory birds, which has passed periods of drought between 1998 and 2008. In this study, in order to ecological zoning of Hamoun wildlife refuge, bird's dependency to each part of the area studied by field studies. Land cover map was prepared using LANDSAT satellite TM data 2008. Land cover map was prepared in 5 classes. Wildlife use from any part of the study area and biological value investigated by field studies and attention to land cover effect on each other. Each cover class was ranked by attention to layers ecological importance. The map of Hamoun wild life refuge ecological importance was produced in 7 classes using several GIS techniques. First class has highest habitat value and final class has lowest protection value. The results showed that in the time of study, bar land which was 7th, habitat suitability class, was vastest class and then water body which was 3th habitat suitability class, had second area.

**Keywords:** Hamoun wildlife refuge, Remote sensing, Land cover, Water bird, Geographic Information System, Habitat suitability.