

## Urban Growth and Its Impact on Natural Environment: A Geospatial Analysis of North Part of the UAE

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**Abstract :** Due to the complex nature of tourism resources of the Northern part of the United Arab Emirates (UAE), the potential of Geographical Information Systems (GIS) and Remote Sensing (RS) in resolving these issues was used. The study was an attempt to use existing GIS data layers to identify sensitive natural environment and archaeological heritage resources that may be threatened by increased urban growth and give some specific recommendations to protect the area. By identifying sensitive natural environment and archaeological heritage resources, public agencies and citizens are in a better position to successfully protect important natural lands and direct growth away from environmentally sensitive areas. The paper concludes that applications of GIS and RS in study of urban growth impact in tourism resources are a strong and effective tool that can aid in tourism planning and decision-making. The study area is one of the fastest growing regions in the country. The increase in population along the region, as well as rapid growth of towns, has increased the threat to natural resources and archeological sites. Satellite remote sensing data have been proven useful in assessing the natural resources and in monitoring the changes. The study used GIS and RS to identify sensitive natural environment and archaeological heritage resources that may be threatened by increased urban growth. The result of GIS analyses shows that the Northern part of the UAE has variety for tourism resources, which can use for future tourism development. Rapid urban development in the form of small towns and different economic activities are showing in different places in the study area. The urban development extended out of old towns and have negative affected of sensitive tourism resources in some areas. Tourism resources for the Northern part of the UAE is a highly complex resources, and thus requires tools that aid in effective decision making to come to terms with the competing economic, social, and environmental demands of sustainable development. The UAE government should prepare a tourism databases and a GIS system, so that planners can be accessed for archaeological heritage information as part of development planning processes. Applications of GIS in urban planning, tourism and recreation planning illustrate that GIS is a strong and effective tool that can aid in tourism planning and decision- making. The power of GIS lies not only in the ability to visualize spatial relationships, but also beyond the space to a holistic view of the world with its many interconnected components and complex relationships. The worst of the damage could have been avoided by recognizing suitable limits and adhering to some simple environmental guidelines and standards will successfully develop tourism in sustainable manner. By identifying sensitive natural environment and archaeological heritage resources of the Northern part of the UAE, public agencies and private citizens are in a better position to successfully protect important natural lands and direct growth away from environmentally sensitive areas.

**Keywords :** GIS, natural environment, UAE, urban growth

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