

[Home](#) > [Journal](#) > [Earth & Environmental Sciences](#) > [JGIS](#)
[Indexing](#) | [View Papers](#) | [Aims & Scope](#) | [Editorial Board](#) | [Guideline](#) | [Article Processing Charges](#)
[JGIS](#) > Vol.5 No.1, February 2013



## The Site of Biological and Ecological Interest (SBEI) of Ain Asmama: 20 Years Later, What Are Changes?

PDF (Size: 2658KB) PP. 40-53 DOI: 10.4236/jgis.2013.51005

### Author(s)

Labbaci Adnane, Kabbachi Belkacem

### ABSTRACT

Concerning this big SBEI (West of Morocco), its bioecological qualities especially its very specific and original flora has attracted naturalists for a long time. This region seems to be relatively preserved still despite the erosion and anthropogenic advanced threats. The most effective method to evaluate the degree of environmental' s change caused by anthropogenic activity and climatic conditions is the multi-date study of land cover. For this, the purpose of this work is to analyze the land cover' s changes evolution in this SBEI from remote sensing technics. Concerning that, we did a triachronical approach on data from 1988 to 2000 and from 2000 to 2010 (LANDSAT imagery). The land cover' s maps that we got were produced from a supervised classification. The analysis of time series of LANDSAT images has shown that, during the period 1988-2000, the forests area decreased to the benefit of cultural practices (period before the creation of the SBEI), while the shrub strata distribution area has clearly increased during the period 2000-2010.

### KEYWORDS

SBEI; Ain Asmama; LANDSAT; Supervised Classification; Land Cover; Morocco

### Cite this paper

L. Adnane and K. Belkacem, "The Site of Biological and Ecological Interest (SBEI) of Ain Asmama: 20 Years Later, What Are Changes?," *Journal of Geographic Information System*, Vol. 5 No. 1, 2013, pp. 40-53. doi: 10.4236/jgis.2013.51005.

### References

- [1] E. F. Lambin, et al., " The Causes of Land-Use and Land-Cover Change: Moving beyond the Myths," *Global Environmental Change*, Vol. 11, No. 4, 2001, pp. 261-269. doi:10.1016/S0959-3780(01)00007-3
- [2] European Commission, " The MEDALUS Project: Mediterranean Desertification and Land Use. Manual on Key Indicators of Desertification and Mapping Environmentally Sensitive Areas to Desertification (EUR 18882)," European Commission, Brussels, 1999.
- [3] B. Jaafar, " Study Phytoecological Morphobotanique and an Enclave of Dry Moroccan Western High Atlas (Argana Corridor)," Ph.D. thesis, University Cadi Ayyad, Marrakech, 1994.
- [4] R. R. Chowdhury, " Landscape Change in the Calakmul Biosphere Reserve, Mexico: Modeling the Driving Forces of Smalholder Deforestation in Land Parcels," *Applied Geography*, Vol. 26, No. 2, 2006, pp. 129-152. doi:10.1016/j.apgeog.2005.11.004
- [5] R. H. Fraser, A. Abuelgasim and R. Latifovic " A Method for Detecting Large-Scale Forest Cover Change Using Coarse Spatial Resolution Imagery," *Remote Sensing of Environment*, Vol. 95, No. 4, 2005, pp. 414-427. doi:10.1016/j.rse.2004.12.014
- [6] M. N. Siddiqui, Z. Jamil and J. Afsar, " Monitoring Changes in Riverine Forests of Sindh Pakistan Using Remote Sensing and GIS Techniques," *Advances in Space Research*, Vol. 33, No. 3, 2004, pp. 333-337. doi:10.1016/S0273-1177(03)00469-1
- [7] A. A.Masoud and K. Koike, " Arid Land Salinization Detected by Remotely-Sensed Landcover

[JGIS Subscription](#)
[Most popular papers in JGIS](#)
[About JGIS News](#)
[Frequently Asked Questions](#)
[Recommend to Peers](#)
[Recommend to Library](#)
[Contact Us](#)

Downloads:	135,206
------------	---------

Visits:	287,708
---------	---------

[Sponsors, Associates, and Links >>](#)

Changes: A Case Study in the Siwa region, NW Egypt," *Journal of Arid Environments*, Vol. 66, No. 1, 2006, pp. 151-167.

- [8] H. Nagendra, S. Pareeth and R. Ghate, " People within Parks-Forest Villages, Land-Cover Change and Landscape Fragmentation in the Tadoba Andhari Tiger Reserve, India," *Applied Geography*, Vol. 26, No. 2, 2006, pp. 96-112. doi:10.1016/j.apgeog.2005.11.002
- [9] M. R. Murray, S. A. Zisman, P. A. Furley, D. M. Munro, J. Gibson, J. Ratter, S. Bridgewater, C. D. Minty and C. J. Place, " The Mangroves of Belize: Part 1. Distribution, Composition and Classification," *Forest Ecology and Management*, Vol. 174, No. 1-3, 2003, pp. 265-279.
- [10] G. Ackermann, F. Alexander, J. Andrieu, C. Mering and Olivier, " Payasages Dynamics and Prospects for Sustainable Development on the Small Coast and in the Delta of the Sine-Saloum (Senegal)," *VertigO*, Vol. 7, No. 2, 2007, Article ID: 16.
- [11] N. Moreau, " Identification and Mapping of Mangrove Forest' s Evolution in the Saloum Islands during the Last Three Decades (1972-2001)," *Photo-Interpretation*, 2004, pp. 23-55.
- [12] U. Thampanya, J. E. Vermaat, S. Sinsakul and N. Panapitukkul, " Coastal Erosion and Mangrove Progradation of Southern Thailand," *Estuarine, Coastal and Shelf Science*, Vol. 68, No. 1-2, 2006, pp. 75-85.
- [13] M. Badraoui and S. Aziki, " Analysis of the National Action Program Anti-Desertification in Morocco," Réseau des Associations de la Réserve de Biosphère Arganer, Rabat, 2003.
- [14] M. Badraoui, R. Bouabid and M. Rouchdi, " Development of a Program Anti-Desertification in Souss Basin by Analysis of Satellite Images. Phase I Study Contracted between the Ministry of Physical Planning, Water and Environment Society and ADI, Rabat," Development of the Database and Deriving Map of Susceptibility to Desertification, Rabat, 2003.