LONG-TERM MONITORING OF VEGETATION COMPOSITION IN ARID STEPPE OF ALGERIA

[1]HALIMA SLIMANI, [2] AHMED AÏDOUD

Laboratory of Plant Ecology and Environment, Faculty of Biology Sciences, University of Sciences and Technology Houari Boumediene (USTHB), B.P. 32, El Alia, 16111 Bab Ezzouar, Algeria
E-mail : [1]slimani_h@yahoo.fr,[2]ahmed.aidoud@gmail.com

Abstract - In Algeria, as in other arid zones of the north of Africa, the steppic rangelands suffered rapid degradation during the last four decades. Because of high variability of climate and ecosystem functioning, assessment of such degradation, just as ecosystem management or restoration, is difficult as a result of difficulties to distinguish the long term. One of the main problems of degradation of arid steppe rangelands in the southern Mediterranean is the loss of plant diversity. During the four last decades, these rangelands faced two main driving forces: climate through more or less lasting and recurrent droughts and overgrazing by sheep. The land use history and long-term ecosystem monitoring are known to be the best way to understand ecological changes. In the present work, the reference system was an arid steppe with alfa grass (Stipa tenacissima L.) as the dominant plant which was considered to be the "keystone" species toward the whole ecosystem structure and functioning. Forty years of monitoring have led to assess changes on vegetation composition in vegetation caused by sheep overgrazing under interannual long run climate variability.

Keywords - Arid land - Biodiversity - monitoring - Overgrazing - Stipa tenacissima- species richness.