



## **The potential for SLM, facing human constraints, the case of the semi-arid agro-pastoral lands in the Atlantic plateaus, Morocco**

A. Laouina, M. Chaker, M. Aderghal, N. Machouri, and J. Alkarkouri

UNESCO-GN Chair, Faculty of Human sciences, Univ. Mohamed V, Rabat, Morocco (laouina.abdellah@gmail.com)

The agro-pastoral activity through its evolution, in the Atlantic plateaus of Morocco, led to unsuitable forms of resources use, which carried damage in the balance of water and the stability of land. It was thus necessary to start a revision of these practices and to set up improved forms of land use.

The research made in the framework of the DESIRE project concerns the Sehoul commune, which presents a high rate of poverty and illiteracy, in spite of its location near Rabat, the capital of the country. Farming has as main objective to feed the livestock. The rain-based cereal cultivations, which still occupy more than 80% of the agricultural surface, reveals the stagnation of the techniques adopted and of the local knowledge.

In collaboration with various stakeholders, technicians and farmers, the assessment with the WOCAT approach permitted to identify the main factors of constraints, responsible of the current spreading of land degradation mechanisms (forest clearing, shrubs cutting on the pastoral slopes, soil erosion, constitution of rills in the recently ploughed fields, incision of gullies and channels, mass movements on the banks of the deepest channels). These constraints derive from social evolution of the population during the last 60 years and mainly the rapid transformation of the rural structure of families to a new kind of farmers, more interested by what they can earn during their frequent movements to the city than by their own traditional agriculture. Due to the penetration of urban investment, direct overgrazing and indirect effect related to mismanagement of land for fodder production, operate massive damages to the vegetation cover and to the soil. It is why the SLM behavior, approaches and techniques have a very low rate of chance for success, without a deep change in term of land ownership, law constraints, agrarian structures, relations between the city and its vicinity, etc.

Scenarios were built, based on various rates of land management inside the fragile environments, vulnerable to degradation by runoff and erosion. These scenarios try to integrate the concept of SLM into the current system of livestock to make this system, progressively evolve towards intensification, more income and less land degradation. The proposed changes are not easy to apply. At first, at the level of the farms, we must consider the private character of property, the dispersion of the plots and the various state and forms of degradation. At the level of the whole territory, many agro-sylvo-pastoral combinations are possible. But, in what measure is this vision practicable? Can we recommend a specialization of certain lands in grazing and others in farming, without rethinking the restructuring of the fragmented plots? This calls agreements between farmers and new landowners, coming from the city. The choice for planting gullied plots with *triplex* demonstrated, during 2 years of monitoring, its effective potential for land rehabilitation, fodder supply of the cattle and for evolution towards a new semi-intensive breeding. But, how to encourage the farmers to invest in this effort of planting? What would become the role of the domanial forest, which would be in this perspective, less used for grazing and devoted for new activities?