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The range forest ecosystems: Problems for a sustainable development under the anthropic constraints

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RESUME – “Les écosystèmes pastoraux : Problématique de développement durable sous les contraintes anthropiques”. Le problème fondamental de la majorité des masses rurales est la pauvreté. Le manque d'accès aux marchés et aux services externes, dont souffre la masse des petits producteurs et productrices ruraux est une des causes majeurs de l'utilisation insuffisante ou mauvaise des ressources naturelles et du processus d'appauvrissement qui en découle. L'avenir des ressources naturelles dépend dans une large mesure du niveau de vie des populations et de leurs conditions de vie et des possibilités de dégager des sources de revenus. Le programme de développement rural et intégré (PDRI) se base sur l'approche intégrée et durable de l'espace rural dans le but d'apporter une contribution significative à l'éradication durable de la pauvreté et à une utilisation rationnelle des ressources naturelles sur le plan pastoral en particulier.

Mots-clés : Parcours forestiers, population rurale, développement rural, développement intégré.

Problematic

The forest domain of Morocco, including ecosystems of *Stipa tenacissima*, cover an area of about 9 000 000 has. These forests have important roles in environmental conservation and socioeconomic aspects (wood and forage productions, apiculture, medicinal plants, etc. The importance of forests area consists in offering fodder for a numerous livestock (mainly goats and sheep), that are the main component of the farming economy (MCEF, 1994).

The natural resource pereniality depends closely of the living level of the country people and their livelihood conditions.

The problematic of the forest ecosystems in the mountain zone can be summarized in the following points:

1. Livestock is the basis of the economy system of the farmers and constitute the main resource of their survival through the year.
2. The fodder offered by forest ecosystems is usually under the needs of livestock which is being increased due to the needs of a growing human population.
3. The grazing period is not conform with the necessities of sustainable management of natural resources, in order to respect the equilibrium between trees and pasture production.
4. The traditional practices of raising system have been forsaken progressively.
5. The actual context of mountain forest ecosystem lead to an unbalance between vegetation cover and soil structure, that will have a negative consequence on soil erosion.

Constraints for a sustainable forest ecosystem development

The forest ecosystems, with an important ecological variation presents many constraints.

The ecological constraints

These constraints can be summarized as follows:

- The climate is Mediterranean and it is characterized by very irregular rainfall.
- The duration of drought periods is very variable. It is three months in humid areas and 10 months in arid sites.
- The soils are in the most cases poor or little evolved.
- The stern deterioration of soils, particularly at the surface layers, reduced the fertility.
- The plant material is in strong deterioration, that lead generally the forest ecosystem to the matorral stage.

The social and economic constraints

The socio-economic context of the country people permits to extricate the following common features:

- The mountain population live generally in scattered houses, the distances make the facilities inefficient and causes insufficiency of roads, schools and sanitary infrastructures.
- The grazing livestock remains the main source of incomes in the forest areas. The livestock depends largely on the forage produced in the forest rangeland. A very limited additional fodder achieved by the farmers according to their low incomes becomes very important.

The pastoral constraints

These constraints can be enumerated as follows:

- The stocking rate is higher than what allowed by the forest ecosystem production. Over grazing causes considerable reduction of natural productivity and even the disappearance of a numerous plant species. Thus, the shepherds use to cut and ground cedar and oak leaves to assure the minimal feed for their sheep and goats.
- The forest management does not take into account the traditional management unit space used by the farmers (park, territory). Besides the rate of fenced area generally practiced in the mountain region goes beyond the rate allowed by the forest rules (20%). In some case this rate can reach 50% of forest rangeland used by each mountain tribes (Qarro, 2000).

The principles of a sustainable development

The fundamental hypothesis of the IDP is a continual improvement of livelihood conditions of the country people leading to poverty eradication in the mountain zone. The IDP will allow a simultaneous improvement of the natural resources and poverty alleviation. This will be realized through the following aspects:

a) *It is necessary to a more intensive utilization of natural resources* with their long-term conservation to consider the opposite objectives of adequate use of the natural resources and to enhance incomes and livelihood of the local population.

b) *The auto - consistence is as fundamental aspect for the IDP.* It is in fact the own efforts of the local population groups concerned by the poverty alleviation. It is by promoting the production system and not by supplying of social insurance that the IDP will try to improve livelihood of the population.

c) Considering the important biodiversity of the mountain ecosystem and the human capacities, the IDP must adopt *a multi - sectorial approach.*

To reach the objective of a sustainable development of the natural resources is necessary to respect the following principles:

- a) The objectives must be oriented on needs of the population of the forest zones that constituting the "target group".
- b) The target groups must have own initiative and the auto - responsibility toward any actions have to be implemented in forest area. This in the goal to assure a socio - organizational viability.
- c) The concerned population must have a real luck to reach services, markets and necessary production means. The institutional viability is assured when the access to these services maintains himself without the project assistance.
- d) The benefits of production activities and services must be economically viable.
- e) The system of resource utilization must be auto - maintained, that is to get an ecological viability.

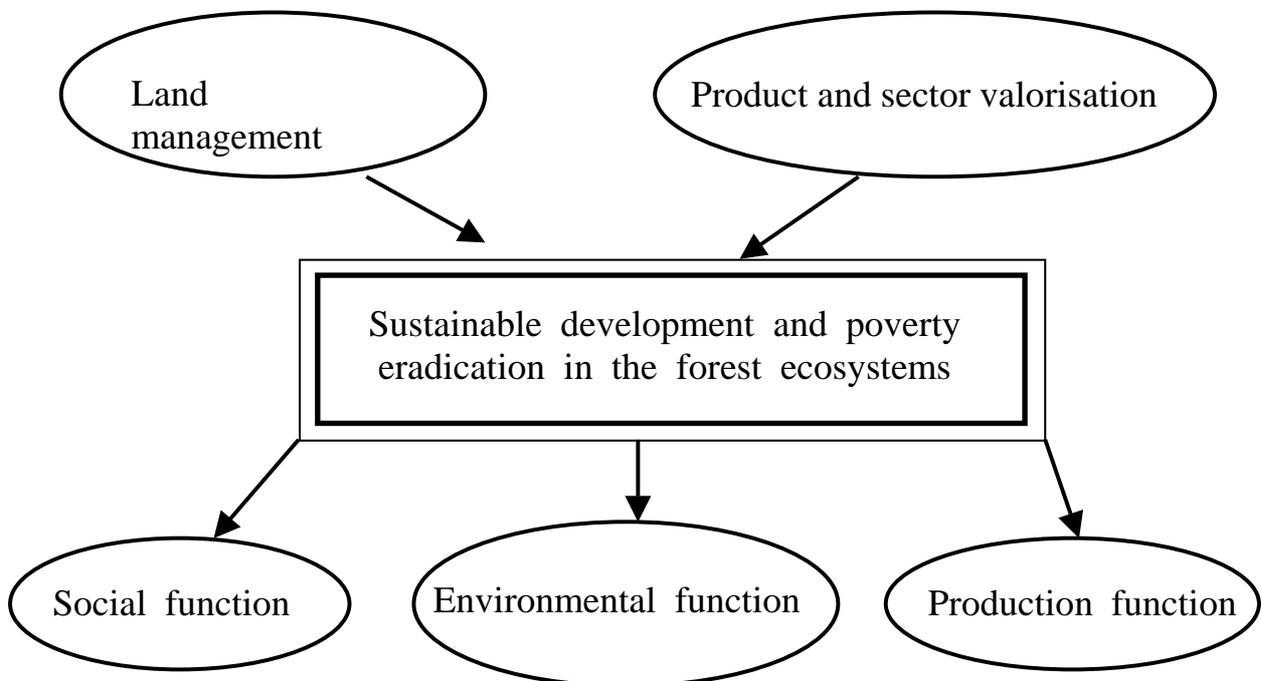


Fig. 1. Extensive system use and sustainable development.

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