

PERCEPTION OF RANGELAND BY HERDERS IN NORTHERN CAMEROON

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ABSTRACT

Range scientists have always had the mistaken idea that herders cannot appraise, characterize or assess the state of their rangeland or range resource. From observations made in northern Cameroon, it appears that herders know the pastoral environment in which they operate probably better than many range scientists. They do not seem to have a good idea on range trends. However, from their pattern of range utilization over time it is possible to have an assessment of the state and trend of rangeland. A wide range of information on the pastoral knowledge of rangeland is needed to develop a sustained range extension program which could be scientifically sustainable and fulfill the perceptions of rangeland and range resources by herdsman.

KEYWORDS

Cameroon, Herders, rangeland perception, range trend analysis

INTRODUCTION

Rangeland, as many others ecosystems, has been a focus in recent years. Its degradations is related to the global environment deterioration. Scientists worldwide have been concerned with desertification of rangeland and related problems. Often however, their findings as well as their warnings have gone unheeded by decision makers, political or otherwise. Official statements and research document have attributed the responsibility of this degradation to herders. As sates by Horowitz (1979), the accusation has achieved the status of a fundamental truth.

The outcome is by no means inevitable. But to avoid it, incentives now leading people to ignore the threat of long-term disaster in favor of short-term survival must be altered. To achieve this outcome, national conservation policies are of little relevance unless they induce changes at the local level where daily pressing needs override rules ostensibly designed to conserve range resources. Prerequisite to this is an indepth understanding of how those dealing with range resources perceive or value it. Analysis takes into consideration the environmental conditions which might lead the herders to the recognition of the developments that agents have sometimes brought, in good faith, but from wrong assumptions, such as a system of production leading to range degradation.

The main focus of this paper is, on the basis of range research carried out in northern Cameroon, to assess how herders perceive and value rangeland and range trends. This information is critical for a sound and adapted long term range extension program.

HERDERS AND RANGELAND

Rangelands constitute the herder's basic means of life. They move in and out the area every day, from one season to another and from one year to another. For a long period of time many have had the mistaken idea that herdsman are not able to appraise or characterize rangeland. In reality herders know and characterize this land better than many range scientists or teams of short term consultants who visit such areas, waste valuable time and leave behind indigestible reports which, while in theory correct, ignore the fundamental realities of the production system of the region.

Herders use seasons (rainy and dry season) and soil characteristics

(Harde, Yolde, Lopere...) to identify and describe the different rangeland types and as a basis of their preference. Sometimes, this might be in contradiction with what modern range management considers as correct. Most often, their choice fits their socio-cultural and technico-cultural conception of the production system. In northern Cameroon for example, "harde" is a degraded land with little vegetation and often a lot of bare spots. While herdsman recognize that "harde" is a degraded area they will like to have it during some seasons of the year. During the rainy season, many areas of rangeland are flooded and often muddy. However on "harde" the rainwater easily flows away. Thus, the pasture remains dry and cattle can stand or rest on it. Furthermore, some high quality annual grass species such as *Dactyloctenium aegyptium* or *Lornia glochidiata* grow on it and can be easily grazed by the livestock. A clear understanding of this basic herders interest for this particular kind of rangeland in the wet season is necessary before any suggestion of an appropriate substitute. Any attempt to change or improve the state of this type of land will never have the full cooperation of the herders if the interest of farmers is not considered.

Range scientists equally often evaluate production of rangeland in terms of dry matter productivity. In reality not only the quantity and quantity of grass are important to the herdsman but other additional benefits of the rangeland are considered. These include : the possibility of good camping ground, water point, and the absence of flies or diseases. Good rangeland in the region have been left unglazed because of lack of water or the presence of animal diseases. Rangelands provide a wide range of products and are best studied in terms of completes natural resource systems. There are many reasons why a rangeland can be valued or not by herders and these reasons might change with season. We still lack adequate information on herders' behaviour for the development of meaningful extension packages for a sound and sustained range management acceptable to herders.

HERDSMEN AND RANGE TREND

Long term range trend perception is not easy to derive from discussion with herdsman. Major changes often take place slowly. Thus, people living in an area have the impression that nothing is happening. Herders, however, are able to make a distinction between dry and wet season pasture, qualify climatic conditions (precipitation was better this year than last year) or compare the situation of the pasture in successive years. This is based on their capacity to make a rapid assessment of the environmental condition between period or to deduce the productivity of rangeland from an estimate of the production (milk, beef) of their herd.

Indirect indication of range degradation or a specific environmental stress on pasture precluding the availability of range resource for livestock can be derived from the observed change in time of the usual range utilization scheme. It can also be observed through the search and use of forage substitutes such as crop residues or agro-industrial by-products.

Dry season stress brings herders to move from the wet season pasture to dry season pasture in search of better feed resources. This stress (drought, anthropic factor) can equally occur on a large scale within or between ecosystems or can be perceived in the long run leading

herders to a large scale movement. It is an indication of the inability of the herders to feed their livestock in the usual way (suggesting that something creating scarcity has happened). Thus, from the herders' general pattern of movement over time it is possible to have a fairly good idea of range evolution and trend in a region.

Herders' qualification of rangeland is in agreement with observed data. One of the major changes observed by pastoralists in the various areas of northern Cameroon is the disappearance of perennial grass species. In the "Yaere" (a wetland grazed during the dry season) which started to deteriorate as a result of an upstream dam construction, herders recognized that when it was in good condition it was dominated by perennial species such as *Echinochloa pyramidalis*, *Hyparrhenia rufa*, *Oryza longistaminata*, *Echinochloa stagnina*. The quantity of these grass species has diminished tremendously and vast areas are now covered by annuals such as *Sorghum rundinaceum*, *Echinochloa colona*, *Echinochloa obtusifolium*, *Corchorus* sp. *Acacia seyal* is moving into the "Yaere", especially in areas which used to be flooded but as a result of the dam construction do not receive water any longer.

In general transhumant herders attribute the disappearance of best perennial grasses to harsh climatic conditions (droughts) or anthropic factors (dam, fire, overgrazing by nomadic herders). It is striking, however, to observe that they never question their own personal practices. There seems to be some truth, however, in their argument. According to many transhumant pastoralists, nomadic Mbororo cattle get into many wetland pastures during the rainy season where their cattle do not go. The areas are then grazed during the rainy season by the Mbororo cattle and in the dry season by the local cattle. This high pressure weakens the major forage species and lead in the long run to their disappearance. Herders' perception and appreciation of range trends seem to be more animal oriented and this is basically in conformity with its pressing daily needs.

CONCLUSION

Rangeland deterioration in northern Cameroon has been linked in several ways to livestock. Yet vegetation in most, if not all ecosystems, has evolved with grazing. It can have a positive effect on the primary production of rangeland since the resilience of unstable ecosystems is kept by grazing. The disruption of the way some ecosystems in the region operate (dam construction) and the introduction of modern medicines and medical services into a pastoral system have helped to keep larger numbers of livestock and humans alive without a concomitant improvement of the productivity of the basic resource on a sustained basis (Pamo and Pieper, 1987). This has led to an increased pressure on rangeland which is further aggravated by an extension of cropping areas into lands formally used by pastoralists. Herders who deal with these environments on a daily basis perceive and describe them on a practically oriented basis. A collection of a wide range of information on herders perception of rangeland and an analysis and integration in the appropriate framework might provide a better understanding of the kind of extension program which might be developed and implemented for a sustained management by herders.

REFERENCES

Pamo Tedonkeng, E. and R.D. Pieper. 1987. Analysis of historical range use South of Lake Chad Cameroon. *J. of Rangeland* **9(6)** : 243-246.

Horowitz, M.M. 1979. The sociology of pastoralism and african livestock projects. A.I.D. program evaluation discussion paper NO 6 USAID 102 p.