

New Perspectives for Pastoral Development

The poor perception of rangeland environments and pastoralism and the limited support for pastoral development and range resource management in the Himalayas and on the Tibetan Plateau need to be counterbalanced by new perspectives that are emerging regarding range ecosystem dynamics and pastoral development possibilities.

Greater Appreciation for Pastoral Production Systems

There is growing consensus among those involved with pastoralists that indigenous systems of livestock production in rangeland areas are generally efficient, well adapted to the environment, and have evolved as rational responses for using range resources available to herders (Coppock et al. 1986, Coughenour 1991, de Haan 1990, Ellis and Swift 1988). This is evident from reports of those working in the Himalayas and Tibet as well (Brower 1991, Cincotta et al. 1991, Goldstein et al. 1990, McVeigh 1994, Rai and Thapa 1993, Robinson 1992). Ellis and Swift (1988) argue that pastoral ecosystems would be better supported by development policies that build on and facilitate traditional pastoral strategies rather than constrain them. There is also increasing realisation that range management concepts developed in North America and Australia are not necessarily relevant to the contexts in which traditional pastoralism is practised (Perrier 1990). This expanded appreciation of pastoral systems is encouraging and provides hope that pastoralists' needs and desires will receive more attention in the future.

New Concepts in Explaining Ecosystemic Processes

Fresh research in the arid and semi-arid rangelands of Africa (Coughenour 1991, Ellis and Swift 1988, Ellis et al. 1991), where climatic variability is high and ecosystemic behaviour very dynamic, concludes that most arid and semi-arid range ecosystems function as non-equilibrium systems. In these systems, range productivity is more a function of climate than of livestock stocking rate and the effect of livestock on the vegetation is sporadic rather than continuous.

The applicability of traditional approaches to range management in arid ecosystems, based largely on the concepts of equilibrium dynamics and plant succession, is being challenged, and this suggests that alternative management practices need to be designed. The concept of relatively stable multiple vegetation states with thresholds or transitions between these vegetation states is emerging as a new framework for rangeland monitoring and management (Laycock 1991, Westoby et al. 1989). The concept, which differs markedly from the Clementsian Paradigm of plant succession, offers promise for improved descriptions and measurements of range conditions.

Doubts about the Carrying Capacity Concept and Support for 'Opportunism' as a Management Strategy

There are increasing questions about the relevance of the carrying capacity concept for planning stocking densities in pastoral systems, because it is difficult to accurately estimate carrying capacity in the highly dynamic ecosystems where pastoralism takes place (Bartels et al. 1991, Ellis et al. 1991). The difficulty of applying carrying capacity concepts means the notion of 'opportunism' is gaining favour as a management approach for livestock production in pastoral systems. Instead of considering 'average estimated carrying capacity', an opportunistic approach bases the annual grazing strategy on that year's forage production, thus allowing herders to better adjust herd numbers to the spatial variability of forage, establish a better distribution of livestock to forage availability, and enable increased production (Bartels et al. 1991). Opportunism in this context basically means being prepared to respond rapidly to grazing opportunities and is a strategy that works in situations requiring high herd mobility and rapid destocking or restocking as forage conditions change (Ellis et al. 1991).

Considering the notion of opportunism, the optimal strategy for pastoralists in highly dynamic environments may be to exploit range resources during 'good times' and to capitalise on outside resources during 'bad times' as the need arises. Ellis et al. (1991) note that, if this is the case, then the most important development intervention for pastoralists may be that of reducing isolationism and consolidating links between the pastoral ecosystem and external resources. This means ensuring the movement of goods and livestock through trade or marketing systems and external economies which can consume and distribute products to and from pastoral areas as they become available. By assisting in the movement of livestock and products to markets, herders' incomes and access to goods increase and their dependence upon the local environment for subsistence correspondingly decreases. Opportunistic range management is not

new to pastoralists residing in arid and semi-arid areas. Official endorsement of opportunism does not, therefore, require substantive changes in existing livestock production systems (Behnke and Kerven 1994).