

Water development strategy as a driven force for local communities sustained rangeland management in sub-saharan Africa

By

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Abstract

Water is the major food component for the maintenance of animals. Although Africa is endowed with diverse agricultural environments, survival of animals in sahelian and sub-Saharan Africa is threatened by the lack of water. Animals need water as an essential nutrient, a component of the body, and for conductive or evaporative cooling. Water needs are met mainly through drinking free water and to a lesser extent by utilising water that forms part of the feed. However during the long dry season surface water resources dwindle and the water content of available forage decreases, thereby increasing the animal's demand for water. Consequently animals have to walk for long distances to obtain adequate feed and water. Moreover additional walking raises feed and water demand, as increased muscular activity requires additional feed and generates extra heat that has to be dissipated. Water can be used to direct and regulate rangeland management in this open access environment, to maintain range resources and improve its quality. Water development, which takes into consideration usable forage, despite some intra or inters annual variability, plays an important role and its spatial distribution will affects grazing intensity of forage resources. Sound water development and management strategy integrating local communities in the decision making will set up a firm basis for sustained range management in free and open access environment of sub-Saharan Africa where lack of financial input, social and cultural habits and above all the environmental condition do not permits large scheme fencing as in others parts of the world.

Keywords: water development; water requirement; domestic ruminant; sustained rangeland management; sub-Saharan Africa;

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