

# POTENTIALITIES AND CHALLENGES ON CONSERVATION AND MANAGEMENT OF LIVESTOCK BIODIVERSITY IN NEPAL

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Though Nepal comprises only 0.09% of land globally, it comprises a disproportionately rich diversity of flora and fauna at genetic, species and ecosystem level. These species are found in the dense tropical forest of the Terai (South), in the deciduous and coniferous forests of the subtropical and temperate regions (Middle and High-hills), and in the sub-alpine and alpine pastures and snow covered Himalayas peaks (North).

Agriculture is the mainstay of more than 67% people of Nepal. Livestock is the integral part of Nepalese farming system which contributes about 35% to agricultural gross domestic production. Cattle and buffalo are the most important livestock species that contribute more than 75% to the livestock sector. There is a great diversity among the breeds of cattle and buffalo. A study was carried out in 2007 to assess the farmers' preferences on different livestock breeds of Nepal. It has been found that because of better adaptability of the livestock species across the different agro-climatic zones, forage digestion ability, existence in low plane of nutritional regimes, cold tolerance, relatively smaller body size, indigenous breeds of cattle and buffalo were preferred by most of the farmers of Nepal. However, the concept of conservation of indigenous animal genetic resources is fairly new to Nepalese planners and policy makers. Conservation measures of Yak, *Lulu* and *Achchhami* indigenous cattle (dwarf and efficient milk producers) have recently started in Nepal.

Livestock in Nepal have been developed over hundreds of years through selection and thus have born various traits of economic and environmental importance. However, to meet the needs of growing population, exotic breeds have been used in crossbreeding that results on gradual decline in genetic variability. Hence, livestock production system may become unpredictable with environmental changes, adverse nutritional conditions, disease and parasites. Though there is high potentiality of indigenous livestock for the sustainable production, many important livestock species are in the verge of extinct. So, there is a need to facilitate effective management of livestock bio-diversity, and sustainable use of indigenous genetic resources and endangered breeds of livestock in Nepal.

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