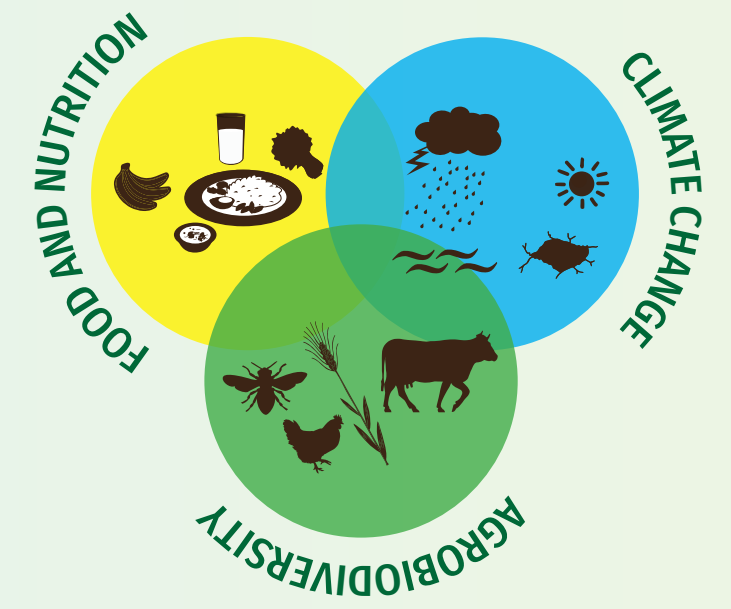


# Interlinkages of Agrobiodiversity, Livelihood and Climate Resilience for Achieving Sustainable Food and Nutrition Security



Managing components of agro-biodiversity in the farming system contributes to secure food and nutritional needs. Rich functional biodiversity in agro-ecosystem helps to minimize the risk of crop production failure, cope with adverse climatic conditions as well as climate-induced risks. Sensible management of agro-biodiversity can perform a key role in coping with the changing climate ultimately contributing to sustainable food and nutritional security.



In Nepal, more than 90% of farmers are smallholder farmers predominantly following a livestock integrated or mixed farming system to fulfill their daily dietary needs. Traditionally, Nepalese smallholder farmers are sustaining their farming system in diverse geo-climatic conditions by managing locally available agro-biodiversity.

**1** Crop species and varietal diversity in a farming system for diverse food production. In Nepal's livestock integrated mixed farming system, 1506 crop and forage species have been reported amongst 484 cultivated crop species.

**2** Mixed farming systems can produce nutrient balanced healthy diets. More than 60% Nepalese population primarily depend on their own production to fulfill daily food and dietary needs.

**3** Locally processed grains, dairy products, dried vegetables and fruits help to minimize food waste, nutrient fortification and stock for the lean season.

**4** Locally managed seed systems guided by traditional knowledge helps to maintain diversity in the farming system. In Nepal, 78% of seed demand is fulfilled by the informal seed system including all and minor crops.

**5** Consumption of wild edible plant species/semi-domesticated crops can complement food and nutritional needs. In Nepal, 670 wild edible plants, 224 crop wild relatives, 35 semi-domesticated crops are found and being utilized indigenously.

**6** Farmers maintain specific crops species and varieties like maize, millets, amaranths, legumes and tuber crops suitable for the dry agriculture system in up-land non-irrigated areas.

**7** Farmers maintain specific crops and varieties like rice, wheat and vegetables suitable for wet agriculture in low-land irrigated areas.

**8** There are 35 (13 native species) agriculture, animals and poultry species reported in the Nepalese farming system. Livestock farming complements the crop farming system to produce diverse foods and plays a vital role in the biomass recycling process.

**9** Locally manageable water efficient technologies like wastewater collection, rain water harvesting, drip irrigation systems can help to cope with water scarcity induced by changing climate.

**10** In the mixed farming system, relay cropping, multi-cropping and intercropping helps to minimize disease pest infestation and enhance soil nutrient management.

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