

Seed Banks for Tree Cover and Forest Restoration in Kenya

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The massive forest degradation caused by anthropogenic activities and exacerbated by climate change has signaled the need for forest habitat restoration efforts. The most appropriate way of restoring these forests is through tree planting where the need for seeds is paramount. Traditionally, seeds for restoration activities have mainly been sourced through collections from the wild, which is unsustainable. In order to ensure responsible restoration practice, Foresters and restoration practitioners continued to explore other options of economical, ethical and sustainable sourcing of seeds. Seed banks can leverage on technical and infrastructural capacity to play a greater and more direct role in supporting biodiversity and ecosystem conservation and restoration, particularly through the supply of quality ecologically and genetically suitable seeds. This paper reviews the use of seed banks in enhancing tree cover and forest restoration in Kenya. This review focuses on status of seed banks in Kenya, seed collecting, field-based seed bulking, handling and storage, seed quality control as well as experience and capacity in facilitating germplasm exchange. Five key roles of seed banks in Kenyan forestry sector include preserving genetic diversity, biodiversity conservation, protect species from extinction, plant breeding programmes and ecological restoration. Technical and physical capacity for ecosystem restoration seed supply available in seed banks in Kenya included availability of germplasm, seed processing, storage, quality assurance and control and germplasm exchange. In Kenya, seed banks have established close working relationships with various experts in making it easy to find information on species phenology, distribution patterns, optimum collecting time and sites with appropriate restoration seeds. Most restoration projects in Kenya give little consideration to seed quality control and assurance. There is a need to explore how the resources amassed through the largely successful ex situ conservation initiatives and efforts can be used to support in situ conservation and restoration activities.

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