

Documentation and Information

The standardisation of genebank information for the SADC Plant Genetic Resources Network has been made possible through the development of the SPGRC Documentation and Information System (SDIS) at SPGRC which has been installed in all the NPGRCs. The network has adopted international standards of plant genetic resources conservation and documents its information in a standard format on SDIS. The system was developed as a source of information to assist the SPGRC together with its network of NPGRCs in planning and operating the network's genebank activities.



Dissemination and Increased Usage of Conserved Materials

Increased usage of the available information through training of regional experts on data analysis, interpretation and increased use of materials for breeding, conservation, re-introduction, multiplication, is eminent in order to justify the collections and their conservation. In order to increase usage, SPGRC has deliberate efforts for supporting local seed systems and linking with seed production, recognizing and incorporating medicinal plants and traditional knowledge in the systems, as well as mainstreaming HIV/AIDS.



Zambian Agriculture Minister, Hon. Ben Kapita visiting SPGRC

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Background

The Southern African Development Community (SADC) Plant Genetic Resources Centre (SPGRC) was established in 1989 as a 20-year project with donor funding from the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) and SADC member countries. The 20-year project agreement period is coming to an end in 2009. Over the years of its existence, the SPGRC and the network programme has gained considerable experience, which should be built upon. SPGRC further supports regional efforts aimed at enhancing food security, enshrined in the SADC Common Agenda and the Regional Indicative Strategic Development Plan (RISDP).



The SADC comprises 14 countries: Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

Vision and Mission

The SPGRC's vision is "to be the lead institution of excellence and reliability in the conservation and sustainable use of plant genetic resources and a key player in contributing to the enhancement of food security and eradication of poverty in SADC region."

Our mission is "to mobilise, conserve and make available plant genetic resources using appropriate technologies and standards, thereby contributing to sustainable development, environment and food security for the well being of the people of SADC." plant genetic resources activities in the SADC region.

Mandate and Objectives

The mandate of SPGRC has been to conserve the plant genetic resources of the region through a network of National Plant Genetic Resources Centres (NPGRCs) thereby contributing to the well being of people of the region.

SPGRC has the objective of developing and maintaining regional and national capacity for conservation of plant genetic resources; strengthening coordination and collaboration in the conservation, evaluation, documentation and use of PGR; facilitating accessibility and promoting sustainable utilisation of PGR; and promoting development and harmonisation of national and regional policies and legislation consistent with international obligations.

Location

The centre is located at Chalimbana Research Station, 25 Kilometres off the Great East Road in Lusaka, Zambia.

Programmes and Functions

Listed below, are programmes and functions co-executed by SPGRC and NPGRCs: Maintenance of infrastructure and base collection; germplasm collection and conservation; development and harmonisation of PGR legislation; and human resources development and training. It is also responsible for supporting local seed systems and fostering linkages to seed production; and conserving medicinal plants, traditional knowledge, and mainstreaming HIV/AIDS.

Germplasm Collection



In-Situ/On-farm Conservation

The main activities of *in-situ* conservation include: development of databases of mandate species; carrying out eco-geographic studies of the mandate species; development of strategies for *in-situ* conservation. It is also responsible for identification of conservation sites; establishment of genetic reserves in the SADC region; and monitoring, management and restoration of germplasm in the genetic reserves.

On-farm conservation activities include: identifying target species and areas; multiplication of threatened



crops for redistribution to farmers; documentation of Indigenous Knowledge related to farming practices and identifying methods and strategies used to maintain plant genetic resources on-farm.

Ex-Situ Conservation

This activity deals with the establishment of functional seed handling activities at SPGRC and the NPGRCs. This includes processing of seed from harvesting, cleaning and threshing, drying, packaging and storing in the genebank. It also includes determination of seed moisture content and germination tests to assess viability of the seed going into storage.

Field Genebanks

Vegetatively propagated crops such as cassava, sweet potato, banana/plantains, sugarcane, coffee, tea, sisal, pineapple and strawberry that are threatened with genetic erosion, are initially conserved in field genebanks in various countries



Characterisation and Evaluation

In order to give further identity to each accession, samples are planted in small plots and their agronomic and morphological characters recorded. These include such attributes as plant height, grain colour, size, etc., meaning each sample kept in the genebank carries a descriptive identity apart from its data about where it was collected. The genetic integrity is maintained by using pollination bags to avoid cross-pollination.

To promote the use of this material by researchers, information pertaining to such attributes as disease/pest resistance, adaptability are also recorded, thus providing a basis for the decision on whether to use an accession or not in a breeding or crop improvement programme.