Crop wild relatives (CWR) are plant species that are related to cultivated crops. They include the ancestors of cultivated crops. CWR are a critical source of genes for resistance to diseases, pests and stresses such as drought and extreme temperatures that can be used in plant breeding, with the potential to enhance sustainable food security in the face of challenges such as climate change and population growth.

CWR are found in all types of habitats. They are often vulnerable and require urgent conservation, but are not commonly included in national conservation programmes. The ACP-EU supported SADC CWR Project, implemented in Mauritius, South Africa and Zambia, aims to enhance the in situ conservation of CWR by developing capacity in the SADC region to conserve and sustainably utilize CWR for climate change adaptation and to persuade governments to endorse national strategies and implement an action plan for the effective conservation of CWR.

CWR in Zambia

The project has documented 459 CWR species of 29 priority crops in Zambia. In a prioritization exercise carried with the project, local partners drew up a list of 30 priority CWR species of cowpea (Vigna), cucumber (Cucumis), African eggplant (Solanum), millets (Eleusine, Pennisetum), rice (Oryza), sorghum (Sorghum), sweet potato (Ipomoea) and yam (Dioscorea).

Impacts and Results

Improved human capacity

Staff at the Zambia Agriculture Research Institute (ZARI) were trained in techniques of in situ conservation. These included how to prioritize CWR for conservation and how to identify the most promising areas for their conservation. Additional training focused on how to identify desirable traits in wild populations and make use of them in breeding.
Highlight – Identification of national sites for active in situ conservation of priority CWR taxa

Lack of capacity, awareness and information has largely limited conservation of CWR in Zambia. Based on detailed analysis, the project identified three priority CWR species – one of cucumber and two of cowpea – that do not occur within any of the existing protected areas of Zambia. A map of species-richness data for the priority CWR species was generated and reveals six possible areas with the greatest number of species (Figure 1). These areas numbered 1-4 – in Northern, Eastern, Lusaka and Copperbelt Provinces respectively – have the highest species richness. Area 5 (in Northwestern Province) and Area 6 (in Western Province), while not as rich overall, can still make a significant contribution to in situ conservation of CWR.

Figure 1. Identification of proposed sites for genetic reserves for in situ conservation of priority CWR taxa in Zambia

Developed National Strategic Action Plan for conservation and use of priority CWR

The National Strategic Action Plan (NSAP) contains a set of 7 strategic actions and 16 concrete actions that need to be implemented by various stakeholders to ensure the safe conservation and use of CWR in Zambia.

Increased awareness of national stakeholders of the value of CWR

As local communities are going to be important in carrying out conservation, it is important that their management practices and anticipated interventions are taken into consideration. Local communities participated in the process through focus group discussions and economic surveys. These activities gave the project a clear understanding of how communities perceive and recognize CWR.

In addition, national stakeholder institutions (see list below) representing policymakers, researchers, breeders and civil society participated in consultations to agree priorities for CWR and to develop the NSAP.

Together, these actions involving local and national stakeholders have led to increased awareness of the value of CWR and the importance of its conservation. Thanks to this enhanced understanding and awareness of the value of crop wild relatives, the NSAP for the conservation and use of CWR has been mainstreamed into the revised National Biodiversity Strategic Action Plan.

Looking forward

As a country, Zambia is looking forward to mainstreaming the conservation and sustainable use of priority CWR taxa in the National Development Plan. In order to achieve this, we expect to disseminate the results generated by the project through meetings and conferences to national stakeholders at policy, technical and local community levels. The key documents to be used in these disseminations will include the NSAP and policy briefs on specific areas.

SADC CWR Project Partners

SADC CWR project partners

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University of Birmingham, United Kingdom
University of Mauritius, Reduit, Mauritius
Directorate of Genetic Resources, Department of Agriculture, Forestry and Fisheries, South Africa
Zambia Agriculture Research Institute

Zambian partners

Zambia Agriculture Research Institute (National Project partner)
Zambia Wildlife Authority (ZAWA)
University of Zambia (UNZA)
Agriculture Consultative Forum
National Agricultural Information Services (NAIS)
Department of Policy and Planning
Community Technology Development Trust-Zambia (CTDT)
Biodiversity Community Network (BCN)
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