

The SADC Executive Secretary Visits the SADC Plant & Genetic Resources Centre

By: Barnabas Kapange - SPGRC and Duncan Samikwa - SADC Secretariat

The SADC Executive Secretary, Dr Stergomena Tax visited the SADC Plant Genetic Resources Centre



Inside Genebank: The Executive Secretary acquaints with germplasm conservation facilities and procedures

(SPGRC) in Lusaka, Zambia on 26th May 2016. She was met on arrival by the SPGRC Board Chairperson, Mr Godfrey Mwila and senior staff of the Centre. Dr Tax was making her first visit to SPGRC in order to acquaint herself with the institution.

In his welcoming remarks, the Head of SPGRC, Dr Paul Munyenembe informed the Executive Secretary (ES) of the uniqueness of the 27 year old SPGRC as a regional genebank in Africa, thanks

to the political support that the Centre enjoys from SADC Member States. He listed a number of achievements attained over the years which include provision of standard gene bank equipment and training of staff in plant genetic resources (PGR) management at different levels

both at SPGRC and in the Member States. He also informed the ES that about 45,000 seed samples were currently conserved in SADC Member States, of which 18,000 are at the SPGRC Base Collection for long-term storage. SPGRC has initiated the development of community seed banks in Member States and has also developed a web-based documentation system where PGR data can be exchanged instantly online.

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32nd SPGRC Board Meeting Held in Windhoek, Namibia

The 32nd SPGRC Board meeting was held in Windhoek, Namibia between 27th and 29th October 2015 under chairmanship of Mr Godfrey Mwila who, in his opening remarks, reminded Board Members that the role of the Board was to provide guidance to SPGRC. He said there was need to place SPGRC in a viable and sustainable position as SPGRC had the capacity to demonstrate its relevance at regional and international levels. The Chairperson also said that the Board had a huge task of restructuring the SPGRC Board and also on resource mobilisation. He then thanked SPGRC Management for providing necessary documentations for the meeting and also for the logistics. He also thanked Namibia for hosting the meeting.

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Dr Munyenembe elaborated that despite numerous successes and achievements, the Centre still faces many challenges, including, the outdated MoU Establishing SPGRC, unreliable power supply, inadequate funding and infrastructure; and inadequate human capacity.

In her response and address to the staff, the Executive Secretary expressed her pleasure at visiting SPGRC for the first time since ascending to the position of Executive Secretary of the SADC Secretariat in 2013. She promised that the visit to the Centre was not going to be her



Group photo: Executive Secretary and SPGRC staff

last.

She expressed her interest about the achievements made by SPGRC over the years and applauded the Centre for being at the forefront in coordinating the development and harmonization of plant genetic resources policies in the region. The Executive Secretary appreciated being accorded the opportunity to see first-hand the facilities used for conserving the plant genetic resources of the region. She said she was confident that the genetic resources of SADC will continue to be conserved for many generations to come and will also continue to contribute to the region's food and

nutrition security.

The Executive Secretary commended SPGRC for its achievements and urged the Centre to shift its focus from mere conservation to greater utilization of the conserved material as a contribution to food and nutrition security in the region. She also urged the Centre to conceive innovative approaches to additional resource mobilization in order to sustain its activities in Member States, especially in the face of the declining budget as a result of financial challenges faced by Member States.

For SPGRC to maintain its status as a regional centre of excellence in plant genetic resources conservation, the Executive Secretary urged the Management and

staff to be up to date with the best technologies and practices that meet international standards in the area of plant genetic resources conservation.

In his remarks, the SPGRC Board Chairperson, Mr Godfrey Mwila thanked the Executive Secretary on behalf of the Board, Management and staff for finding time in her busy schedule, to visit the Centre. He welcomed the Executive Secretary's commitment to be an Ambassador to drum up support for the Centre. He said that the Centre was very



Dr Tax addresses SPGRC staff

important for addressing some of the topical issues such as climate change food and nutrition security. He therefore urged SADC Secretariat's support for positioning SPGRC to play regional and global roles not only in conservation but also in sustainable utilization of germplasm materials.

Mr Mwila emphasized the need for expanding Genebank space that will include construction of a biotechnology laboratory that will see the Centre using modern technologies to conserve vegetatively propagated materials, conducting more accurate characterization using molecular markers, etc. He urged the Management to take advantage of the ongoing review of SADC Secretariat structure so that it encompasses issues of operation and management of the Centre.

During her visit, the Executive Secretary held discussions with Technical Departments that include Ex-situ Conservation, In-situ conservation, and Documentation & Information. As part of the discussions, she was introduced to the regional Genebank and the field where germplasm materials are multiplied and regenerated.

32nd SPGRC Board Meeting Held in Windhoek, Namibia

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Representing the SADC Director of Food Agriculture and Natural Resources (FANR), the Senior Programme Officer (SPO) - Food Security, Mr Bentry Chaura informed the Board that the Director FANR could not attend the SPGRC Board Meeting because she had other important engagements. Mr Chaura hoped that SADC (FANR) would have a draft of the Regional Agricultural Investment Plan to operationalize the Regional Agricultural Policy, by December 2015. He informed the Board that SADC had introduced a Paperless Meeting Policy whereby there will be no papers in the meetings with effect from 2016. Participants will be expected to use laptops during the meetings to access all the documents.



Group photo: 2015 SPGRC Board Members

The official opening remarks were delivered by the Namibian Deputy Director - Forestry and Botanical Research, Mr Vincent Louw on behalf of the Acting Permanent Secretary of Agriculture who was on other official duties. Mr Louw then read the speech after which he wished the Board fruitful deliberations.

On behalf of the other Board Members, the Swaziland Board Member, Dr Innocentia Kunene thanked the Deputy Director for Forestry and Botanical Research, Mr Louw for representing the Acting Permanent Secretary, Agriculture. She said the Board felt honoured and thanked Namibian Government and the Board Member for that country for hosting the meeting. She said the Board would make use of the two days of the meeting to guide SPGRC on different issues regarding its mandate, its Workplans and Budget, etc.

The Board was informed of the Decisions of the SADC Council of Ministers, made at its meeting held in Gaborone, Botswana in August 2015. It took several decisions of relevance to the mandate of SPGRC. These decisions were on agriculture and food security in the region and human resources



Board in session: Windhoek, Namibia

management within the SADC Secretariat. The Board was further informed that Council considered the Report of the Independent Staff Grievances Appeals Committee (ISGAC) that was constituted in 2014 to address grievances made by staff in relation to Job Evaluation undertaken by consultants engaged by SADC Secretariat earlier on.

The Board was informed that the Council also approved the employment contract frameworks now changed making regionally recruited staff serve for 4 year term, renewable once for a 4-year term; based on satisfactory performance and age limit of 60 years; and that locally recruited staff: 4 year term contract, renewable based on need for the position, satisfactory performance and to a maximum of 60 years age limit.

The Board learnt that the organisational structure of the SADC Secretariat was being reviewed and that Council approved the terms of reference towards the review of the SADC Secretariat organisational structure and institutional infrastructure.

Recalling its directive for SPGRC Management to draft Terms of Reference for a Task Force on the Restructuring of the SPGRC Board and that in 2014 it adopted the Terms of Reference on Restructuring of the Board, the Board was updated that the Task Force on Restructuring of the Board met in July 2015 and concluded its work and produced an Addendum to the MoU Establishing SPGRC to be adopted by SADC Member States.



The Board agreed to take the draft Addendum to the MoU Establishing SPGRC to their Governments for further consultations before they could consider and recommend it for approval by SADC Ministers Responsible for Agriculture and Food Security. The Board agreed that MoU submissions be sent to SPGRC by Board Members by December 2015 and it agreed to make a decision on the matter at the Extra Ordinary Board Meeting expected to be held in April 2016.

The Board was notified that the Head of SPGRC attended the 6th Session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture in Rome, Italy in October 2015 as an observer, with ten (10) SADC Member States also attending. The meeting deliberated on a number of issues including:

- Enhancement of the Functioning of the Multilateral System of Access and Benefit-sharing;
- The Funding Strategy;
- Development of the Global Information System;
- The Programme of Work on Sustainable Use;
- Farmers' Rights;
- Compliance;
- Cooperating with International Instruments and Organizations.

The Governing Body adopted many resolutions on the issues discussed, but did not conclusively agree on the Enhancement of the Functioning of the Multilateral System of Access and Benefit-sharing, particularly on which model of user-based payment to adopt, although the subscription model received much support from the delegates.

SPGRC presented a statement to the Governing Body that was well received. As a result of the statement several countries and organizations approached the Head of SPGRC to learn more about the Centre and its network.

Finally, the Head of SPGRC informed the Board that following the new approved SADC Human Resources Policy, three Members of Staff at SPGRC will be retiring. These include the Driver - Mr Alexius M. Nyambe, the General Worker – Mr Wale Banda and the Head of SPGRC – Dr Paul M. Munyenymbe.

2015 Regional Technical Review and Planning Workshop

The workshop was held on 8th – 10th September 2015 in Lusaka, Zambia. In attendance were forty three (43) participants from NPGRs and SPGRC. Due to logistical problems, Mauritius and South Africa did not attend the meeting. Madagascar attended the meeting after a long absence. There were also representatives from Bioversity International, FAO (represented by the Sub-Regional Office for Southern Africa), and the International Crop Institute for the Semi-Arid Tropics (ICRISAT). In attendance were also two consultants who assisted SPGRC in the development of web-SDIS.



Group photo: Planning meeting participants

In his welcome note, the Head of SPGRC, Dr Paul Munyenymbe thanked the Multi-Donor Trust Fund coordinated by the World Bank through the SADC Secretariat for financially supporting SPGRC in holding of the meeting.

Dr Munyenymbe narrated some of important achievements made by the network during the year (2014/2015) that included: successful conclusion the FAO-funded Technical Cooperation Programme (TCP) on the development of National Strategies for PGRFA for 6 participating countries, namely; Botswana, Lesotho, Malawi, Mozambique, Tanzania and Zambia. He reported that a new proposal for TCP Phase II incorporating lessons learnt from the first Phase was being finalized by SPGRC before submitting it to FAO Sub-Regional office in Harare, Zimbabwe.

The Head reported finalization of the development of the SDIS, which was later presented and adopted for use by the network.



Screenshot of Web-SDIS

SPGRC finalized both the generic proposal on conservation and sustainable utilization of PGRFA and SPGRC Sustainability Strategy, which were approved by the SPGRC Board and were to be presented to SADC Ministers Responsible for Agriculture and Food Security in their coming meeting.

SPGRC hosted a meeting of the Africa Group in preparation for the Open-Ended Working Group-3 in Brazil on Access and Benefit Sharing.

In her remarks, the FAO Representative, Ms Joyce Mulila-Miti said FAO will continue to support the SPGRC and NPGRCs through TCP-Phase II project whose main objectives will be: to develop, adopt and publish National Strategies for PGRFA for the effective and efficient conservation and use of PGRFA in selected countries within SADC, to increase significantly the scope for using PGRFA in crop improvement as means for addressing climate change threats, to strengthen linkages between conservation, use and seed delivery as means to ensuring that farmers access high quality seeds and planting materials of the most suitable crop varieties, to strengthen national and regional capacities for the conservation and sustainable use of PGRFA, and to improve and strengthen information exchange and sharing mechanisms between communities, countries and globally.

In her greetings and remarks to the meeting, the ICRISAT representative, Ms Sakule Kudita

said ICRISAT will continue to do research on five selected crops in the region. These include sorghum, finger millet, groundnuts, pigeon peas, and chickpea; with main objective of characterization of genetic resources of the selected crops to molecular level, conservation and promotion of sustainable utilization of the same to farmers, breeders and scientists.

Remarks by representative of Bioversity International, Dr Ehsan Dulloo highlighted on the collaboration of NPGRCs with



Planning meeting in session, Lusaka, Zambia

Bioversity International which has reviewed their objectives and come up with new ideas for establishing a new project that will be enhancing the link between in-situ conservation and use of crop wild relatives in the SADC region to address the regional food security and mitigate predicted adverse impact of climate change.

A new web-SDIS was presented narrating the milestones its development encountered. All the modules that are ready for use (collections, accessions, distribution, references and the reports) were later on demonstrated on a live system through a local host. The meeting adopted the web-SDIS and agreed to start using it once installed in their respective countries. The region will be able to share information on the global platform, GENESYS. The database is globally accessible with a link at SPGRC website (www.spgrc.org.zm) or directly to <http://sdis.spgrc.org.zm>.



In order to enhance utilization of germplasm, SPGRC Network members were urged to include issues of germplasm utilization in their national strategies to ensure increased use of materials conserved in the genebanks. Where there are projects and resources allow, countries were also urged to involve stakeholders including NPGRCom members in PGR awareness raising and advocacy for increased utilization.

SPGRC shared In situ/on-farm conservation strategies developed to cover such areas as the development of Crop Wild Relative checklists, Community Seed Banks, farmer participatory screening, multiplication, registration and commercialisation of preferred adaptive local crops following the

Quality Declared Seed systems, crop recovery systems after natural disasters and the promotion of African Leafy Vegetables. The strategies serve as a broad regional framework upon which the development of national on-farm conservation strategies may be based and to be a working document for the coordination of in situ/on-farm conservation activities in the region.

The meeting discussed at length how the network document and maintain data for in-situ conservation, tackling frequent drier and cold room and other equipment breakdowns, and how the network can step-up utilization of conserved germplasm.

Disaster Impact Assessment in Malawi and Namibia (May – June 2015)

(By: Thandie Lupupa, Senior Programme Officer – In-Situ Conservation)

Background Information

Climate change has become one of the most serious threats to food security in the Southern Africa Development Community (SADC) region which is experiencing significant effects that are threatening continued farming of traditional crops which are the building blocks for breeding for improved varieties. Trends in weather patterns in recent years have been worsening, resulting in mostly late-planted crops, failing to produce any yield, as the seasons have tended to terminate early or have effectively shortened. The distribution of rainfall through the years is changing, and temperatures are rising.

Countries that have recently (2014/15 season) experienced severe impacts from floods include Madagascar, Malawi, Mozambique, Tanzania and Zimbabwe. Member States that were hit by prolonged dry spells before the seed setting of various recycled crops are: Southern Angola, Botswana, Namibia, Swaziland, parts of South Africa and Zimbabwe.

Climate change is likely to further impose new risks beyond the range of current experiences for farming communities. These challenges call for the formulation "Climate Smart"

approaches which respond to the changing circumstances. The contribution of farmer varieties to food and nutritional security cannot be ignored. They have been custodians of these materials for decades, making selections to come up with cultivars that are immensely used for food, development of improved high yielding, disease tolerant and drought tolerant varieties. It is therefore imperative to identify and build upon farmers' Traditional Knowledge and practices that constitute their coping and adaptation options to climate change.

It is against this background that the SADC Plant Genetic Resources Centre (SPGRC) through the In Situ and On-farm Conservation Unit commissioned a survey on the assessment of the impacts of drought in the Zambezi Region in Namibia and of floods in the southern part of Malawi. The major aim was to find out lost crops and get the views of farmers on adaptation measures after the natural calamities.

Objectives

1. To assess the impact of floods and drought on agriculture productivity;



2. To identify lost traditional crops for restoration purposes; and
3. To facilitate the adoption of on-farm of traditional crop diversity and Climate Smart Agriculture practices (Zambezi Region, Namibia).

Methodology and Data Collection

The visit to Malawi in May 2015 was conducted following the floods that occurred during the early stages of the planting season in the southern part of the country. The visit to Namibia was done in June 2015 mainly to facilitate the establishment of on-farm conservation groups and to assess the impact of drought in the region. Both visits were done in collaboration with the National Plant Genetic Resources Centres and the Agricultural Extension Services.

In Malawi, visited sites were Mbewe, Livunzu, Mapelela and Pokonyola. Data collection was done through focus groups and household visits. At all sites, consultations were done with the local Agriculture Extension Workers. An overview on the existing knowledge on climate change and its impacts was done. Farmers were asked to mention crops lost due to the floods (Malawi) and drought (Namibia).

In Namibia, the work programme was drawn up with the Agriculture Extension Section at Katima Mulilo whose intern informed the communities on the respective dates for having the discussion meetings with the farmers. Data was collected



Devastating effects of drought in Namibia

from farmers' groups using a semi structured instrument with lead questions. Sites visited were: Kabbe, Ibbu, Chinchimane, Sangwane, Kaanja/Sachoma, Kalomo/Sachoma, Mubiza, Sikanjabuka, Ngoma, Masokotwane, Lunyanti, Kasheshe and Impalila Island.

Results and Discussions

The farming activities were disrupted by the floods in Malawi and households had difficulties in coping with replanting. At the time of the visit, some families were still accommodated in tents. Most of the farmland was abandoned and there were small patches of cotton and sesame that were replanted.



Replanted crop using farmer-saved seed after floods raises hope in Malawi

In Mbewe, 50% of cereal crops such as maize, sorghum and millets were washed away. Other crops were affected at this site, including: cow pea (65ha), ground nuts (78ha), pigeon pea (45ha) and sesame. Crops were affected by run-off, water logging and some fields near the river banks were sealed with sand. The most affected areas were those between the Mwanza and the Nkombendzi rivers. At Livunze, flooded field crops had cotton, maize, rice, beans, sorghum and millets. Sesame and cow peas were re-planted after the severe rains using farmer-saved seed and the crop stand was good though the fields were small in size. Some cattle, goats, pigs and poultry also died. The low areas of the Mwamphazi section were badly flooded.



Cooperating partners and NGOs contributed fertilizers, maize and beans hybrid seed samples, cow pea improved varieties, sweet potato vines and cassava cuttings. The quantities were not enough to sustain the families to the next planting season.

Farmers at the Pokonyola Village said when the floods hit the area, they had already planted maize, rice, sorghum, finger millet, pearl millet, cotton, pigeon peas, mung bean, beans, cow pea, sesame, ground nut, sweet potato, taro, yams, pumpkins, pepper and gourds. Most of the seeds used was saved and selected from the previous years' harvest. Some farmers confirmed that some of their material was collected and conserved at the National Genebank and they were advised to request for samples to restore their lost crops. All the affected sites had no Community Seed Banks.

The following information was collected from the Zambezi Region in Namibia:

- The previous planting season was very dry; nothing was harvested. The crops were scotched by the sun during the prolonged dry spell experienced between February to March 2015 when crops were at knee-height. Everything was lost and it was too late to replant at that time;
- Farmers requested seed samples for restoration from the National Genebank;
- Farmers reported that sharing of planting material is something of the past, cash payments are a requirement, even battering is no longer practiced. This makes it difficult to get planting material at community level;
- The area used to have plenty water lilies that were flood tolerant but now these are difficult to find due to drought and climate change; and
- Farmers said they would appreciate to be given seedlings for leguminous trees for planting in their fields, to improve the degraded soils.

Concluding Remarks

Communities affected by natural disasters often receive small quantities of hybrid seeds to be planted for one season. They also get food hampers that are not enough to feed and sustain families up to the next planting season. The dependency on hybrids is also not sustainable because they can't afford buying seed every year.

There is need to promote the establishment of Community Seed Banks in the region to intensify and conserve local crop diversity, strengthen local seed systems, provide smallholder farmers with easy access to quality locally adaptable seeds, seed saving, exchange and selling of local seeds.

Farmers in the Zambezi Region have lost most of their local crops that could be their option for the future. The adaptability and resilience of traditional crops to stress provide farmers with needed coping strategies to face the challenges of climate change.

Recommended action plans to be taken include the following:

- a) Sensitize the agricultural extension workers on the importance of maintaining traditional crops at farmers' fields (on-farm conservation);
- b) Multiply identified priority crops and distribute to improve crop and dietary diversity;
- c) Multiplications to be carried out at Agricultural Research Institutes, Lead Farmers' fields, and demonstration plots;
- d) Revive farmer-to-farmer seed sharing and exchange to establish strong cultural and social seed networks;
- e) Facilitation and promotion of on-farm management of crop diversity through field days and seed fairs;



- f) Seed distribution for crop restorations to commence during the 2015/16 planting season, starting with few farmers depending on the available seed quantities at the NPGRCs;
- g) Document the flow of seed sharing and record the community database to keep the inventory of local crops, leguminous trees and wild fruit trees;
- h) Promote Climate Smart Agriculture practices through agro-forestry, conservation agriculture and integrated farming systems (crops, livestock and fisheries); and
- i) Governments to support establishment of Community Seed Banks, production of adaptive quality local crops for commercialization to improve seed systems and restoration of lost crops as part of the post disaster management strategy.

Meeting of the Ministers of Agriculture and Food Security Ezulwini, Swaziland

The SADC Ministers responsible for Agriculture and Food Security met on 22nd July 2016 in Ezulwini, Swaziland. The objective of the meeting was to review the Food Security situation and progress in the implementation of Regional programmes including the development of the Regional Agriculture Policy Investment Plan. The meeting was also intended to update Ministers on the Food Security situation in the Region following the drought induced by the El Niño phenomenon.

The meeting was attended by 10 SADC Member States. Also in attendance were the Sub Regional Coordinator for Southern Africa of UN Food Agriculture Organisation (FAO), the Vice Chairperson of Centre for Coordination of Agriculture Research Development for Southern

Africa (CARDESA) Board, and the Director for Food, Agriculture and Natural Resources (FANR) representing the Executive Secretary of SADC.

The meeting was officially opened by His Excellency the Right Honourable Prime Minister of the Kingdom of Swaziland, Dr. Barnabas Sibusiso Dlamini who highlighted the importance of agriculture as a source of food, income and employment. He indicated that agriculture is central to our culture and economies and that progress had been made in the sector and commended the Region for finalising the Revised Regional Indicative Development Plan (RISDP) and the Industrialisation Strategy which are pivotal to transforming the economies of the Region and poverty reduction. He implored the Honourable

Ministers to deliberate with open minds particularly, that the meeting was taking place at a time when the region was experiencing the devastating impacts of the El Niño.

During the meeting, Ministers underscored the importance of agriculture to the socio-economic development of the region and noted the positive progress the region is making in improving agricultural production. Ministers observed that the Region has been severely affected by the drought induced by the El Niño event of 2015/16. The Regional Vulnerability Assessment indicates a 9.3 million tonnes cereal deficit and 40 million people at risk of food insecurity in the Region. The region is currently importing cereals to offset the shortfall. Ministers were concerned



with the food security situation in the Region will continue to deteriorate this season due to poor harvest. As such, food prices are expected to rise as a result of the decline in food production. The situation is aggravated further by the depreciation of regional currencies against the US Dollar. These will further burden the already vulnerable households that have exhausted their coping mechanisms as this will be the second consecutive season with poor harvest.

Ministers supported the declaring of a Regional Disaster and the launching of the Humanitarian Appeal. They noted that the Appeal will be launched by His Excellency, Lt. General, Dr. Seretse

Khama Ian Khama, the President of the Republic of Botswana and the SADC Chairperson on 26th July 2016 in Gaborone, Botswana. Ministers noted that the Appeal highlights a funding gap of US\$ 2.4 billion to cover the humanitarian needs for about 40 million people in the region.

Ministers approved the Regional Agricultural Investment Plan which will enhance agricultural production, productivity and competitiveness, as well as improve regional and international trade and access to markets. The RAP will also strengthen the response plans for Member States and build resilience to address chronic food insecurity. Ministers recommended to

Council the creation of a Ministerial Sub-Committee to oversee the implementation of the Regional Agricultural Investment Plan.

Ministers reviewed progress on the implementation of the SADC Plant Genetic Resources Centre (SPGRC) programmes. In this regard, Ministers approved a Generic Programme which seeks to enhance regional capacity to conserve and sustainably utilize the plant genetic resources for Food and Agriculture in the Region.

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