Network News

July - December 2008

# SPGRC's New Head

The SADC Plant Genetic Resources Centre (SPGRC) has finally recruited a substantive Head, Dr Paul M. Munyenyembe who joined SPGRC on 18th July 2008.

Dr Munyenyembe brings a wealth of experience in conservation, having previously taught botany and conservation biology at universities in Tanzania and Malawi. Apart from conducting research in PGR conservation, he has also worked for IUCN –

-The World Conservation Union's Regional Office for Southern Africa (ROSA) as a Technical Advisor to the GEF/UNDP-funded Southern Africa Biodiversity Support Programme, and the Lake Chilwa Wetland and Catchment Management Project (an integrated conservation and development project (ICDP) supported by Danida.

The SPGRC network members and stakeholders welcome Dr Munyenyembe and hope that his capable direction will positively steer the network to higher heights.

## Board Elects New Chair and Vice-Chair

At its 25th Ordinary SPGRC Board meeting held at SPGRC in Lusaka, Zambia between 19th and 20th September 2008, the Board elected new Chair and Vice-Chair.

The Board elected Dr Gillian Maggs-Kölling from Namibia as the new Chair and the South African Board Member, Dr Julian Jaftha as Vice-Chair to respectively replace Dr Shadrack Mlambo from Zimbabwe and Dr Stephen Muliokela from Zambia.

The Board thanked the outgoing leadership for their immense contributions to the work and achievements made during their term in office.

| SPGRC Calendar of Events | |
|---|---|
| January 2009 | Consultations between SPGRC & SADC Secretariat (FANR) on sustainability study for SPGRC |
| January 2009 | Head's visit to Botswana NPGRC |
| February 2009 | Head's visit to Namibian NPGRC |
| March 2009 | Consultations with Madagascr NPGRC |
| April 2009 | Start constructions of Biotechnology Laboratory at SPGRC |
| July | NGB Course on Management of Plant Genetic Resources, Sweden |

# *News from the* SADC SECRETARIAT

The 28th Summit of SADC Heads of State and Government of the Southern African Development Community (SADC) was held in Sandton, Republic of South Africa from August 16 to 17, 2008.

The Summit was officially opened by Hon. Kabinga J. Pande, MP, Minister of Foreign Affairs and Special Representative of the President of the Republic of Zambia and SADC Chairperson, H.E. Dr. Levy Patrick Mwanawasa, SC.

The Summit elected H.E. Mr. Thabo Mvuyelwa Mbeki, the President of the Republic of South Africa and H.E. President Joseph Kabila of the Democratic Republic of Congo as Chairperson and Deputy Chairperson of SADC respectively.

The Summit elected H.M. King Mswati III of the Kingdom of Swaziland and H.E. President Armando Emilio Guebuza of the Republic of Mozambique as Chairperson and Deputy Chairperson of the SADC Organ on Politics, Defence and Security Cooperation respectively.

The Summit's outgoing Chairperson H.E. President Mwanawasa, in an address read on his behalf by his Special Representative, Hon. Pande, thanked Member States for the support rendered to him during his tenure. He emphasised the importance of upholding peace, security and democracy as a prerequisite for advancing the regional development

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# Regional *In-Situ*/On-Farm Draft Project

**Task Team Meeting**

A Regional Crop Working Group (Task Team) met from 8th to 10th June 2008 at SPGRC in Lusaka as mandated by the 2007 Review and Planning meeting.

The meeting was informed that the Task Team was put in place to develop a regional project proposal for resource mobilisation, and to identify potential donors for funding projects in order to implement the *in-situ*/ on-farm strategies.

*Composition of the Task Force*

- NPGRCs in-situ conservation officers
- Co-opted SADC national experts
- Officers from key collaborating institutions
- Head of SPGRC (*Ex-Officio*)
- SPGRC Senior Programme Manager responsible for *in-situ* conservation
- SPGRC Technical Advisor (*Ex-officio*)

**Terms of Reference**

- Developing a SADC Regional *In-situ* /on-farm Conservation Strategy;
- Set overall priorities i.e. identification of genetic resources of the species based on their present or potential socio-economic value and their conservation status;
- Identify and assess specific conservation status requirements of the target species, their populations and priorities through identification of the geographical distribution and the number of population to be conserved;
- Identify, enhance and strengthen linkages among stakeholders included in the network of *in-situ*/on-farm Conservation, with emphasis on broadening farmers' participation in crop diversity conservation and promotion on PGR gender related activities and indigenous knowledge;
- Develop management standard guidelines, including working procedures during the design and development of the projects;
- Develop, review and finalise proposals and identify potential donors for funding projects leading to the implementation of specific conservation activities;
- Identify inputs that can be provided by national stakeholders; and
- Monitor and evaluate projects endorsed by the taskforce.

A concern was raised on the need to bring in the issue of HIV/AIDS when developing the proposal and it was for the group to decide on how best to bring this issue into conservation and utilisation of PGRs. Also there was need to decide on what can be done as community seed banks have proved to be expensive.

The meeting proposed to mainly focus on two major strategies: on-farm conservation of crop diversity, and under-utilised plants.

As a way forward, a logical framework was developed by the team and presented to the planning meeting and the Senior Programme Manager *in-situ* has to develop the proposal, circulate it to the Task Team before sending it to NPGRCs for comments. This was to be done before March 2009. The first draft will be presented to the meeting of the Task Team which is to be convened and funded by SPGRC. The draft will then be circulated again to national centres for final comments.

## New Staff at SPGRC

Mr Olipen Phiri was recently recruited as a General Worker at SPGRC and will start work on 5th January 2009.

After completion of his secondary education in Chassa in 1992, Mr Phiri joined Polycor (Z) Ltd. in 1994 to work as a Machine Operator till 1996 when he moved on to join Vacuum Forming Industries and again as a Machine Operator.

In 1998 he joined Zamcargo (Z) Ltd. as a General Worker until 2001 before joining Mutupo & Associates on the same capacity.
He therefore brings a rich experience gained while serving the previous organisations and companies.

The SPGRC Network welcomes Mr Phiri and wishes him the best in executing his duties at SPGRC.

## Two Board Member Retirements

Two members of the SPGRC Board, namely Peter Herthelius and Elizabeth Matos have retired.

Mr Peter Herthelius who represented Sida in the Board for the past 21 years retires in December 2008 as a Senior Agricultural Advisor at Sida and therefore ceases to represent Sida in the Board. Dr Torsson Anderson of Sida takes over in handling the SPGRC Project in Nairobi, Kenya though he will be based in Stockholm, Sweden.

Ms Liz Matos, retired from representing Angola in the Board and will be replaced by Dr Antonio Alcochete.

The Board registered its appreciation for the contributions made by the two retirees who tirelessly advised, supported and led the SPGRC Network in a positive direction. The Board also promised to give support to the incoming replacements.

*Ms Liz Matos*

*Mr Peter Herthelius*

# Increasing and Improving Regional Capacity for Drying Facilities

**Background**

**Since way back in 2004, and upon discussing the development of a regional conservation strategy for potential support from the Global Crop Diversity Trust, the SPGRC network identified the problems faced in meeting standards for drying seeds for long-term conservation as a major constraint to effective and efficient conservation in the region.**

The Trust observed the need to complement Sida and Nordic Gene Bank (NGB) support to the network programme by expanding the seed drying capacity of the NPGRCs of Angola and Tanzania, and providing on-site training and technical assistance to ten NPGRCs in the repair, maintenance and optimal use of existing seed drying equipment. The Trust provided an initial US$ 37,500 for procurement of driers for Angola and Tanzania, and topped-up another US$ 21,648 to SPGRC to implement agreed upon activities with regard to increasing and improving regional capacity in drying facilities.

However, following partial achievement of the goal by the end of the project period (November 2004 to July 2005) due to various factors; towards the end of 2007, SPGRC sought approval of the Trust to revise the original agreement in order to effectively implement outstanding activities.

The revised letter of agreement signed in April 2008 provided for SPGRC to ensure completion of outstanding activities in at least six NPGRCs.

**Activities/Achievements**

The first activity for the revised agreement was procurement of basic servicing tool kit to be used for the running the training in NPGRCs and the activity was achieved within the scheduled timeframe first by identifying the project Consultant who facilitated procurement of a tool kit for use during on-site training and servicing of NPGRCs equipment.

The second activity involved training of staff, servicing of driers and assessment of the basic servicing facilities in selected NPGRCs. The time frame for this activity was June to July 2008 and the milestone is the success of a round trip that was made by the consultant to undertake this assignment in NPGRCs of Botswana, Lesotho, Mozambique, Tanzania and Zimbabwe within scheduled timeframe. The team experienced transport problems in Zimbabwe which led to a change of flights ultimately resulting in late arrival in Mauritius and the outcome was a cancellation of the workshop. SPGRC and Zambian NPGRC staff training took place at SPGRC where a hands-on practical was carried out.

The above activities have been achieved within the planned timeframes.

The third and last activities involve preparation of guidelines for servicing drying facilities of the network. Guidelines will be distributed as soon as they are ready.

**Annex 1 of ITPGRFA (List of Food Crops Covered under the Multilateral System)**

| Crop | Genus | Observations |
|---|---|---|
| Breadfruit | *Artocarpus* | Breadfruit only |
| Asparagus | *Asparagus* | |
| Oat | *Avena* | |
| Beet | *Beta* | |
| Brassica complex | *Brassica* et al. | Includes *Brassica, Armoracia, Barbarea, Camelina, Crambe, Diplotaxis, Eruca, Isatis, Lepidium, Raphanobrassica, Raphanus, Rorippa,* and *Sinapis*. The species *Lepidium meyenii* (maca) is excluded. |
| Pigeon pea | *Cajanus* | |
| Chick pea | *Cicer* | |
| Citrus | *Citrus* | Genera Poncirus and Fortunella are included as root stock |
| Coconut | *Cocos* | |
| Major aroids | *Colocasia, Xanthosoma* | Include taro, cocoyam, dasheen, and tania |
| Carrot | *Daucus* | |
| Yams | *Dioscorea* | |
| Fingermillet | *Eleusine* | |
| Strawberry | *Fragaria* | |
| Sunflower | *Helianthus* | |
| Barley | *Hordeum* | |
| Sweet potato | *Ipomoea* | |
| Grass pea | *Lathyrus* | |
| Lentil | *Lens* | |
| Apple | *Malus* | |
| Cassava | *Manihot* | Manihot esculenta only |
| Banana/Plantain | *Musa* | Except *Musa textilis* |
| Rice | *Oryza* | |
| Pearl millet | *Pennisetum* | |
| Beans | *Phaseolus* | Except *Phaseolus polyanthus* |
| Pea | *Pisum* | |
| Rye | *Secale* | |
| Potato | *Solanum* | Section tuberosa included, except *Solanum phureja* |
| Eggplant | *Solanum* | Section melongena included |
| Sorghum | *Sorgum* | |
| Triticale | *Triticosecale* | |
| Wheat | *Triticum* et al. | Including *Agropyron, Elymus*, and *Secale* |
| Faba bean/Vetch | *Vicia* | |
| Cowpea *et al.* | *Vigna* | |
| Maize | *Zea* | Excluding *Zea perennis, Zea diploperennis*, and *Zea luxurians* |

# *Habenaria occlusa, Eulophia schweinfurthii*: Rare, Extinct or Critically Endangered?

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## 1. Introduction

It would not be easy to recognize *Habenaria occlusa* even during flowering, for such period it is cold and rainy, and every bush and grasses are magnificently green and attractive. During flowering (October-May) many other orchids' species can be easily spotted from their colorful bloom. National Herbarium of Tanzania (NHT) and University of Dar es Salaam (UDSM) specimens' studies depict the peak orchids flowering time around February and March, otherwise flowering is staggered throughout the year (Fig. 1).

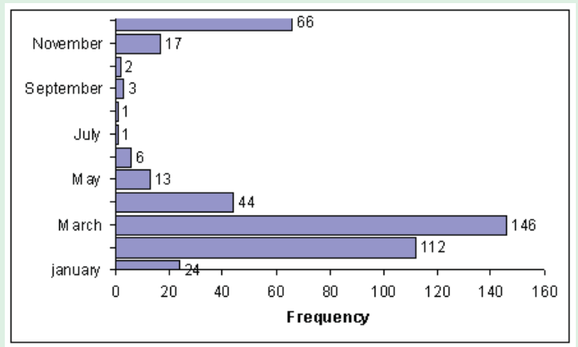


*Fig. 1: Temporal flowering distribution for orchids as depicted from specimens in the NHT and UDSM herbaria*

It is within this time (February-March) that *H. occlusa* is supposed to flower, however, the stem and flowers of *H. occlusa* plants are usually green like the surroundings making it difficult to be spotted or recognized from a distance. The plant (*H. occlusa*) is up to 3 – 4 ft (91 - 122 cm) tall; relative to other species, it is leafy and succulent with broader leaves around the stem (Photo 1).

## 2. Salient Findings of Field Expeditions

During a two weeks field work and after twelve 1000 $m^2$ Modified Whittaker plots (Stohlgren *et al*, 1995; Stohlgren *et al*, 1998) without spotting any extra colony of the species, makes it harder to stop skeptics and questions on its conservation status. Only one colony of the *H. occlusa* was encountered at Kitulo in Tanzania during the field work. Cribb and Leedal (1982) describe *H. occlusa* to be mostly confined at Kitulo and Mbeya peak, both in Tanzania, and claim that this species is only found in the Southern Highlands of Tanzania and was first described in 1964 from a plant collected on the Kitulo plateau. Niet and Gehrke (2005) reported nothing concerning this species though they visited Mbeya peak during March 2008, the time the species is also recorded to flower. The Flora of East Africa (1968) claim the distribution of *H. occlusa* unknown elsewhere apart from Southern Highlands region of Tanzania, thus calling for more attention on it conservation status.

*Photo 1: Habenaria occlusa plant, flowers and leaves are green*

Similarly, only one colony of *Eulophia schweinfurthii* was encountered, though its was only during a transect walk conducted at Ndulamo thus hesitation to strictly assign its extinction risks. With reference to the two herbarium data, *H. occlusa* was recorded to have been collected during 1986, 1989 and 1991 indicating its recent extent, while *E. schweinfurthii* was not found at all among the 439 herbarium specimens studied, yet while *H. occlusa* is inedible, *E. schweinfurthii* is edible.

## 3. Major Causes for Rarity, Extinction, Endangerment

### 3.1 Overexploitation Due to Trade

Edible orchid populations are overexploited in the Southern Highlands of Tanzania due to trade with Zambia and some of the species are claimed extinct (Davenport and Ndangalasi, 2003). The growing trade between Tanzania and Zambia is an aftermath of a similar overexploitation of the species which led to extinction of the popular edible species of the genus *Disa* in northern Zambia (Bingham, 2004), it is therefore quite possible that some edible species like *E. schweinfurthii* might suffer extinction. The three facts on *E. schweinfurthii* i.e. only one colony spotted, failure to find any specimen in the two herbariums and it being edible form the basis for the skeptics and questions on its conservation status. The Flora of East Africa (1989) however, indicates a wide distribution of the species in Africa and therefore even when this observation holds, it will only apply locally.


*Photo 2: Expeditious and overexploiting collection of plants for sale*

**3.2 Varying Land Uses**

While trade poses a major threat, facts remains of other threats including, changes in land use pattern, expansion of agricultural land and growth of human enterprise (Cribb and Leedal, 1982; Niet and Gehrke, 2005; Hamisy and Millinga, 2002; Gaston and Spicer, 2004), all are potential competitors to orchid habitats. Further alerts on the possible rate of threats to extinction, is when orchid habitat is competed by the forest plantations (Davenport and Ndangalasi, 2003; Hamisy, 2005; Niet and Gehrke, 2005), the growing economic activity in marked districts with high demand of land. Habitat loss/degradation holds the first position among species extinction threats, hence the need for its attention (Baillie, 2004).

*Photo 3: Cypress forest plantation established at the heart of a prime area for orchids collection and habitat*

**3.3 Changing Habitats**

In terms of habitat preference *H. occlusa*, is a high altitude species. At Mbeya peak it was found in a colony along a stream Cribb and Leedal (1982) and during this study the colony was spotted at the river plain indicating likeliness that its habitat of preference to be riverine vegetation.

The extracted herbarium information indicates that most of the orchids were collected from grasslands, which account for 31% of the specimens, followed by *mbuga* vegetation 22% and woodland vegetation 19%, all together accounting for 72.3%, at altitudinal range of 1500 – 2500 m above see level (Fig. 2), at which more than 50% of the orchid specimens were collected.

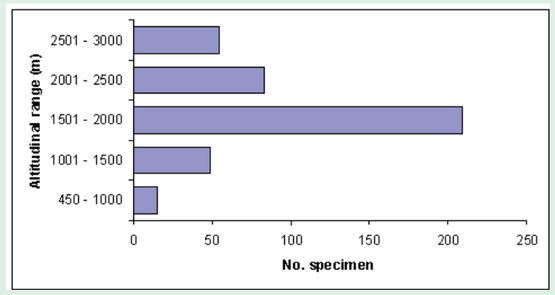


*Fig. 2: Altitudinal range of orchid distribution depicted from the herbarium specimens*

Understanding of key habitats of preference of individual orchid species will ease conservation and identification of threatened species as a result of habitat loss or degradations. Knowledge on species habitat preference is vital and provides an easy link of a species to extinction threats, especially where environment, hence species habitats, are under serious non-random destructions. The logic is simple: emergence of certain changes related to habitat, like development of settlement, expansion of agricultural land and plantation in certain habitat types is linked to disappearance of certain species or families preferring that niche. Orchid collectors use a similar knowledge in locating new sites for collection. Such knowledge is also important for conservation managers in identifying *refugia*, especially at this time of rapid climatic change where conservation managers will have to assist plant movement as a rescue (Davis and Shaw, 2001). Niet and Gehrke (2005) inferred a higher extinction threat to *Satyrium johnsonii* relative to *S. abberrans* and *S. comptum*, partly basing on the fact that the latter two species grow in microhabitats unsuitable for farming and not in areas which are targets for tuber collection. This helps in rational resource allocation and upholding strategic conservation management.

**4. Way Forward**

The two Orchidaceae species conservation status need be verified according to IUCN categories to be clear of skeptics and question on their conservation status and thus help to set priorities for conservation measures for their protection. IUCN Categories and Criteria are widely used and easily understood yet designed for national, regional and global taxon assessment and classification of their extinction risk. There are nine IUCN Red List Categories which include Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), and Not Evaluated (NE) (IUCN, 2001). Like the IUCN categories suggests, it is not straight forward categorizing, as the taxon risks can be national, regional or global and this clarity is important. Yet, some critics need be considered, Burgman *et al*. (1995) demanded precautious observations when inferring threats to species as some of them are inherently small, thus taxon historical background on its prevalence is important in this case to assign threats, whereas Pupulin (2004) insisted on the need of scientific data when including orchids under CITES as opposed to the current situation where all orchids are considered to be under threat. While conscious of the two cautions and the IUCN Categories in setting conservation priorities, equally attention should be paid to large population taxa to avoid insidious extinction debts or impending extinction of the current observed large taxon populations (Gaston and Spicer, 2004).

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# The African Access and Benefit Sharing Capacity Development Workshop Madagascar, 23 - 28 November 2008

**1. Introduction**

The workshop was held in Madagascar from the 23rd to 28th November, 2008, well attended by over 90 participants from all corners of the African continent. This was the last session of the GTZ funded project on Access and Benefit Sharing (ABS) Capacity Building initiative geared at information sharing on how countries negotiate with bioprospectors in relation to ABS regulations. The major objective for the capacity building initiative was to establish a mechanism that puts the developing countries in a position to market "their" genetic resources profitably in future - and to create through ABS an economic incentive for conservation and the sustainable use of local biodiversity.

The first workshop of this magnitude was held in November 2006 in Cape Town, the second in December, 2007 in Kenya. A number of sub-regional workshops mainly on awareness raising, training on negotiation skills (e.g. Windhoek, September 2008) have been held including the Ministerial meeting held in Seychelles in the preparation for the 9th Conference of the Parties (COP9) to the Convention on Biological Diversity.

The Madagascar workshop was also aimed at working out an African position for an operational text for the International Regime on the implementation of ABS. Unfortunately SPGRC did not participate in the previous workshops except for the one held in Windhoek.

The topic of "access to genetic resources and benefit-sharing" was first brought to the global negotiating table in 1992 during the Earth Summit in Rio. This is where the Convention on Biological Diversity (CBD, Biodiversity Convention) was opened for signature. The CBD's three objectives are the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources (ABS).

*Farmers' vegetable plots - for income generation, to substitute charcoal Making*

**2. Workshop Objectives**

• take stock of the first implementation phase (2006-2008) of ABS Capacity Development Initiative for Africa and provide guidance for its second phase from 2009-2011;

• foster the implementation of ABS regulations at the national and local level by exchanging experiences with bioprospecting in the region, and;

• reflect on the ABS related outcomes of COP 9 and the recommendations of the Ad Hoc Technical Expert Group on Compliance to support the formulation of an operational text for the international ABS regime of the African Group.

**3. ABS Negotiations**

Negotiations between different stakeholder groups play a crucial role in the development and implementation of ABS legislation and regulations at the international as well as at the national level. Furthermore, getting to mutually agreed terms (MAT) with appropriate benefit-sharing regulations is vital for successful bioprospecting agreements. However, practice reveals that negotiating partners are often not equally empowered to sit at level eyes at the negotiating table. This is why there is need for the SADC region to be trained on ABS negotiation skills.

**4. Sub-Regional updates**

The Central, West, East and South African regions gave presentations on conservation and ABS related activities carried out in the respective sub-regions. In all the regions, capacity building workshops have been done particularly in the development of guidelines for the implementation of ABS.

Major challenges relate to minimum commitment from politicians, lack of legislation addressing ABS. It became clear that a lot is still to be done on awareness raising. In overall, Africa is organized although it is still not clear how benefits are to be shared but the continent has the capacity of negotiators.

In all case studies presented, there was no evidence of benefits in the form of royalties that trickles down to communities. Agreements were signed but when it comes to sharing of benefits, there is still a problem.

**5. Bioprospecting**

Bioprospecting involves searching for, collecting, and deriving genetic material from samples of biodiversity that can be used in commercialized pharmaceutical, agricultural, industrial, or chemical processing end products. By the early 1990s, objections to uncompensated bioprospecting that does not share benefits with the source country became contentious. Since 1991, the Convention on Biological Diversity (CBD) has embodied the principles of compensated bioprospecting globally.

*Bioprospecting field trip*

Compensated bioprospecting involves obtaining prior informed consent from the source country, sharing benefits, and promoting sustainable use of biodiversity. Where indigenous knowledge holders are involved, efforts are made to recognize and protect their rights. Benefits can take various forms, from royalties to negotiated advance and milestone payments, capacity building, facilities and equipment transfer, personnel training, sharing of research, and other forms.

It is important that all stakeholders have the opportunity to be heard and help shape policy through the political process. After the Legislature determines overall policy, the actual implementation of a regulatory framework may fall to a bioprospecting working group composed of representatives of stakeholder groups, including state agencies, to work out the details, guided by legislative policy.

**6. Field Trip, Bioprospecting in Groups**

Nine groups were formed, each led by a Technician. The target species was *Sclerocarya birrea*, Marula. Specimens were taken from the roots, bark, leaves, fruits and the wood.

Passport data was taken including data on the vegetative parts of the tree, i.e. its height, trunk diameter, colour of the leaves, flower, etc. In most cases, samples are then deposited to a local laboratory where extractions are done and sent for further processing most commonly to developed countries.

*Demonstration on mounting a herbarium specimen*

During plenary, it was realized that most countries are experiencing the same problem. Agreements are signed but there are no policies or enforcement measures to ensure that communities receive what is due to them. In some cross boundary cases such as the *Hoodia* species occurring in South Africa, Botswana and Namibia; it is difficult to implement the ABS procedures.

**7.0 African Position for the 2010 Negotiations**

During the last day of the workshop, the African position for the 2010 negotiations was discussed, comments consolidated by a drafting team. The participants were also informed that it was the end of the life cycle of the ABS project and another proposal was presented targeting what countries need to do in readiness to the last negotiations in 2010, COP10 in Japan.

**8.0 Conclusion**

It was a very fruitful workshop. Lessons learnt pertain to what to consider when planning for ABS negotiations; particularly the involvement of communities at all levels. It is important to note that the benefit sharing arrangement for crops (those not included in the ITPGRFA Annex 1 list) have to follow the same ABS procedures. It is therefore prudent for SPGRC to make a close follow-up on the final International ABS Regime

# Publications

Allcochete, A. A. N.[1,2,3] , Rangel, P. H. N.[4] and Ferreira, M. E.[3,5] (2008). Genetic structure of rice samples from a germplasm bank
[1]Dpto Biologia da Universidade Agostinho Neto, Luanda, Angola.
[2]Dpto Biologia Celular da Universidade de Brasília, Brasília, DF, Brasil
[3]EMBRAPA-Recursos Genéticos e Biotecnologia, Laboratório Genética Vegetal, Brasília-DF, Brasil.
[4]EMBRAPA-Arroz e Feijão, Santo Antônio de Goiás, GO, Brasil.
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**Abstract**
The analysis of genetic relationships in crop species is an important component of crop improvement programmes, as it serves to provide information about genetic diversity. Accurate assessment of levels and patterns of genetic diversity can be invaluable in crop breeding for diverse applications such as analysis of genetic variability in cultivars, identifying diverse parental combinations to create segregating progenies with maximum genetic variability for further selection, and introgressing desirable genes from diverse germplasm into the available genetic base. In this study, three multiplex panels of fluorescent microsatellite markers were used for automated genotyping of 298 rice accessions, part of it collected in different areas of Brazil and conserved in a genebank. Sixteen marker loci distributed throughout the rice genome were genotyped and the data used to estimate pairwise genetic distances between the accessions. A Neighbour-Joining based dendogram was used as model to define clusters and infer possible genetic structuring of the collection. The analysis of the genetic relationships of these accessions suggested no significant correlation between clustering based on distance data and subpopulaition differentiation based on MCMC approach. The estimates of Wright's F-statistics revealed a high value of inbreeding coefficient (FIS) and a relatively high overall fixation index (FIT) but only moderate levels genetic differentiation (FST) of subpopulations defined according to the genetic distance clustering model. It is possible that the use of germplasm conserved in rice germplasm collections could be enhanced if molecular characterization and population genetics approaches could be more intensively applied to better define the sample of accessions which would be more appropriately suited to different genetic and breeding purposes.

Key words: Rice accessions, genetic diversity, microsatellite, multiplex genotyping.

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agenda. He noted the progress made towards deeper regional integration, specifically the launch of the SADC Free Trade Area that took place during the sitting of Summit. He further emphasised the need for infrastructure development, food security as well as strengthening the capacity of the SADC Secretariat in order to ensure effective implementation of regional integration programmes. He handed over the SADC Chairpersonship to H.E. President Mbeki

In accepting the SADC Chairpersonship, H.E. President Mbeki thanked the outgoing Chairperson for the progress achieved during his leadership of SADC and on behalf of Summit expressed the wish for President Mwanawasa's speedy recovery. He recalled that the strength and achievement of SADC over many years has been derived from its political unity and cohesion and that this will be required in order to address the current challenges facing the region, including reversing marginalisation, and addressing the twin scourges of underdevelopment and poverty.

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