



Community-Based Management of Animal Genetic Resources

-A Tool for Rural Development and Food Security-

*International Workshop hosted by
the Department of Veterinary and Livestock Services, Swaziland
Held at Mountain Inn in Mbabane, Swaziland, May 7 to 11, 2001*

Workshop Documentation



This documentation report documents the workshop which took place in May 7 to 11, 2001. The report here is not a final synthesized report, but tries to capture the crude output of the workshop in a non-interpreted way as a base for shaping the final report.

THIS DOCUMENTATION IS MEANT TO BE A REFERENCE DOCUMENT for all participants which intends to provide the desired transparency. Almost all results of the working groups and plenary sessions are documented here. In addition, it includes the summary reports of the synthesisers.

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Foreword by the Organisers

The workshop was a first step to develop a conceptual framework for community-based management of animal genetic resources (CBMAnGR). This concept is based on the assumption that farmers are the custodians of Farm Animal Genetic Resources FAnGR and, therefore much better placed to manage these resources. CBMAnGR is an approach that integrates the livelihood needs of local communities (food security and poverty alleviation) and the call of the Convention on Biological Diversity to conserve biodiversity in its "natural habitats" through sustainable use.

Objectives of the workshop were to

- Elaborate recommendations to policy makers, donors, NGOs and other relevant actors of the SADC region with regard to community-based *in situ* conservation.
- Develop strategic elements for *in situ*-conservation of AnGR at the political, institutional and communal level of the management of agricultural biodiversity.
- Strengthen networking on AnGR in SADC and further the harmonisation of AnGR-related national policies and strategies.

The workshop was jointly planned and organized by the SADC/FAO/UNDP project on „Management of Farm Animal Genetic Resources in the SADC Region“, the Southern Africa Centre for Cooperation in Agricultural Research and Training (SACCAR), the SADC Livestock Coordination in Botswana and the German Technical Cooperation (GTZ) through the project "Managing Agrobiodiversity in Rural Areas". The workshop was hosted by the Department of Veterinary and Livestock Services of the Kingdom of Swaziland.

The workshop provided an opportunity for scientists, extensionists and representatives from NGOs from the SADC region to meet together with some international colleagues and exchange experiences and ideas. The highly motivated participants created a momentum for further developing and implementing the concept of CBMAnGR. The achieved results and recommendations provide input to SADC processes dealing with FAnGR management and will be brought to the respective FAO and CBD processes for consideration. It was recommended to formulate policies for the support of CBMAnGR in the SADC region.-The next steps- will be the publication of the papers and case studies - and the outputs of the theme groups established -.

We thank all participants for their valuable contributions, the Ministry of Agriculture of the Kingdom of Swaziland as a host, and the -various organisations for providing funds

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Acknowledgements by the Facilitator

I would like to thank all the participants for their active participation and dedication during the long hours. The rapporteurs and synthesizers took on an important extra work to capture all the creative ideas and the process steering group also spent a lot of extra time to design and plan the workshop process together with me. The Swazi team around Dorah and the secretaries, Margret and Sifundzile, did a great job in making the organisation of the workshop and the field trip smooth and pleasant. Andreas Drews, who did a large part of the preparation of the workshop and who took notes and typed the charts deserves special thanks.

Dr. Jürgen Hagmann

Summary

The workshop on 'Community-based Management of Animal Genetic Resources' was a joint venture of several organisations who see a under-utilised potential in the contribution the management of animal genetic resources to the improvement of rural livelihoods and to conserving genetic diversity in the SADC region. The aspect of community-based management is relatively new with regard to the animal genetic resources. Therefore, the workshop aimed at reaching a common perspective and shared understanding among the major players in the SADC region and to identify joint learning opportunities for future action.

During the workshop a group was formed who tried to capture the essence of the output in a short statement to be presented to relevant for a. Instead of a summary, this statement will be shown here:

STATEMENT ON *Community-Based Management of Animal Genetic Resources For Rural Development And Food Security*

Mbabane, Swaziland, 7 to 11 May 2001

The workshop - the first of its kind - was jointly organised by SADC, SACCAR, FAO, UNDP and GTZ and the MoA Kingdom of Swaziland to discuss Community Based Management of the Animal Genetic Resources (CBMAnGR). 71 participants from the SADC region and beyond attended.

In the SADC region about 75% of farm animals are kept by the communal/small holder sector-representing the majority of stockowners. The remainder is farmed in commercial systems. While the balance between these sectors varies between countries, the role of animal agriculture in sustaining livelihoods in the smallholder/communal sector is immense. Loss of animal genetic diversity currently threatens the sustainability of farming systems. Achieving food security under these circumstances is one of the greatest challenges facing the region.

Despite a growing global awareness of the importance of Animal Genetic Resources, little attention has been paid to the role of communities in managing these resources. CBMAnGR has a critical role to play in the alleviation of poverty.

Specific findings

CBMAnGR was defined as the management of AnGR in which decisions on defining, prioritising and implementing actions - that affect AnGR and their ecosystems - are made by the local communities who own/manage these resources.

The workshop highlighted the critical role of CBMAAnGR in the sustainable use of natural resources in the region – and resolved to develop and promote the concept at National, Regional and Global level

The workshop recommended that further actions be taken to:

- Promote participatory AnGR management based on local knowledge and resources for enhancing capacity in animal breeding, development and conservation
- Bring the importance of CBMAAnGR to the attention of FAO during the next meeting of the Commission on Genetic Resources.
- Formulate policies to support CBMAAnGR in the region
- Develop policies on the rights of local communities, farmers and breeders and the regulation of – and access to benefit sharing of AnGR.
- Ensure that proper mechanisms are put in place for research and development of CBMAAnGR
- Conduct economic valuation surveys – and investigate and develop markets for animals and animal products.

1 Workshop Opening and Introduction

The opening session was chaired by Dr RD Twala, Director of Vet. and Livestock services, Swaziland. Dr. Morupisi, SADC livestock Coordinator, presented an introduction into the topic. The workshop was then officially opened by Roy D Fanourakis, Minister of Agriculture and Cooperatives of the Kingdom of Swaziland.

For the facilitation of the workshop, a professional moderator was engaged by the organising committee. After the official opening, the organising committee handed over to the facilitator, Dr. Jürgen Hagmann.

1.1 Participants' Introduction

The facilitator first briefly explained his task as an independent, neutral moderator and asked the participants to introduce each other on the basis of the following task :

Participants' Introduction

Please find out about each other at your table:

- *Who you are and where your roots are.*
- *Share with your colleagues what you are proud of in your life so far (personally and professionally) !*

The small groups around the tables presented their discoveries about each other in an interactive way. After that the participants were asked to introduce themselves to the plenary saying their name and institution/organisation where they come from.

Another exercise outside the plenary room helped the group to get to know who they are. Participants were asked to group themselves according to a number of criteria: gender, science background (social vs natural sciences), institutions (govt, NGO, Universities etc). Later they were to position themselves against certain statements to which could agree or disagree. This revealed the basic positions of the participants.

The introduction of participants created an open atmosphere and revealed interesting details about the personal and professional characteristics of the participants.

1.2 Expectations and fears

The expectations and fears were identified through a brainstorming in the table groups on the following questions:

What should happen in this workshop is:

Action Plan with Follow-up <ul style="list-style-type: none"> Action plan for implementation Concrete and practical proposals on how to approach communities Proposals should have an element of value adding Way forward for SADC-CBManGR Obtain feedback form farmers Commitment for follow-up 	Implementations and Recommendations <ul style="list-style-type: none"> Practical recommendations which can be implemented and followed-up Implementable and clear recommendations and strategies Capacity building recommendations Clear set of recommendations Clear and specific recommendations Practical recommendations
Networking <ul style="list-style-type: none"> Exchange of information Better communication between all levels Sharing of experiences in the field (+/-) Linkages developed for future collaboration Should learn from other countries CBManGR 	Full participation <ul style="list-style-type: none"> Everyone's full participation Same level of understanding of the task Open discussion Respect other people's views
Commitment <ul style="list-style-type: none"> Punctuality Stick to time 	<ul style="list-style-type: none"> Submit final papers for proceedings in time Enhancement of personal understanding Clear definition of "indigenous" livestock

and the fears:

What should not happen in this workshop is:

<ul style="list-style-type: none"> Expect simple and uniform solutions Be prescriptive Think too theoretically Expect too much - expect too less 	<ul style="list-style-type: none"> Non-participation Long plenary session Absenteeism Late coming Hard feelings No cell phones
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Expectations and fears revealed some of the key concerns of the participants and issues to be discussed. Some of the warnings which came out of the expectations and fears served as reminders for the group.

1.3 Objectives and Outputs of the Workshop

Then the facilitator presented the workshop objectives and anticipated outputs as agreed by the workshop process steering group. These were compared to the expectations:

Objectives

The workshop aims at enhancing the debate and the implementation of community-based management of animal genetic resources.

Specific objectives are:

- *To discuss lessons learnt on CBMANGR and other relevant CBM programmes.*
- *To identify opportunities and constraints and critical requirements for successful implementation of activities.*
- *To develop/identify possible strategies for CBMANGR and in situ conservation.*
- *To strengthen networking among stakeholders.*

Anticipated Outputs

- *A (draft) statement with recommendations on sustainable AnGR management and the role of CBMANGR approaches.*
- *List of issues and possible strategies for enabling and enhancing CBMANGR.*
- *Joint learning mechanisms to support and implement CBMANGR policies and activities.*
- *Enhanced capacity to plan and implement CBMANGR policies and activities.*

Participants agreed that the objectives and anticipated outputs match with their expectations. No major points were added or subtracted.

Based on these objectives and anticipated outputs, an overview programme was designed by the process steering group.

1.4 Anticipated Workshop Programme

The facilitator presented a programme. However, it was stressed that the workshop process might require adaptations which will be done flexibly from day to day. It was emphasized that the goal of the workshop is not to fulfil a pre-designed agenda, but deal with real issues and this often requires major changes in the programme.

Participants agreed on this broad outline and on the fact that the programme will be handled flexibly.

Anticipated Programme (overview)	Monday	Tuesday	Wednesday	Thursday	Friday
Session 1 8:00	/	Presentations Topic 1	Presentations Topic II	Report-back to plenary	Strategies for future collab. + networking
Session 2 10:00 10:30	Official Opening	Working Groups	Working Groups	Presentations Topic III	Draft Statement
Session 3 12:30 14:00	Part. Introduction Objectives Programme	Work Groups cont'd Report back	Field Trip	Working Groups	Next Steps Workshop Evaluation
Session 4 15:30 16:00 18:00	Keynote Papers	Report back to plenary	Dinner	Report-back	/
Evening	Cocktail and Poster Presentations	Open Space	Dinner	Open Space	Open Space

Pls note: this programme will be handled flexibly according to the needs + opportunities emerging

1.5 Workshop organisation

Some issues on the workshop organisation were clarified. The workshop process steering group had a very important role to play. Together with the facilitator they elaborated the detailed agenda for every day, based on the objectives and the general group dynamics. This ensured that the process fully considered the needs and concerns of all participants.

Workshop Process Group

1 Task

- To get feedback from participants on the workshop process
- To plan together with the facilitator in the evenings, the next day, based on the desired outputs and participants feedback.

2 Members

Dorah Vilakati
Carter Morupisi
Louise Setshwaelo
Clemens Wollny
Annette von Lossau
Andreas Drews

Documentation Committee

- All crude outputs will be documented and distributed
- Rapporteurs will summarize group work sessions
- Synthesizers will make a synthesis of major blocks/themes:

For each topic bloc synthesizers were volunteering

2 Key Note Presentations

Three key note presentations were to set the broad scene for the workshop :

1. Peoples' Conservation of Animal Genetic Resources with Special Reference to Pastoralists – by *Ilse Köhler-Rollefson*
2. Smallholders and Community-Based Management of Farm Animal Genetic Resources – by *Antje Feldmann*
3. Defining Livestock Breeds in the Context of Management of Farm Animal Genetic Resources – by *Ed Rege*

Each presentation of 30 minutes followed some questions and clarifications after which the table groups were requested to briefly discuss the presentation among themselves and to come up with the two most important issues they felt needed to be dealt with in the workshop. All questions were collected on cards and later used to guide the discussions and working groups.

The whole session was synthesized with regard to the main points.

2.1 Synthesis Report

by Jacque Els and John Moreki

Paper 1. State of the Art of Community Based Management of Animal Genetic Resources by *Ilse Köhler-Rollefson*

Domestic animal diversity is the result of the way in which communities of farmers and pastoralists managed their AnGR in their respective habitats, according to their own preferences and needs. Breeds were developed in traditional societies without herdbooks and scientific interventions.

Different communities and cultural groups manage their AnGR, often dependant on their relationship with their livestock. Traditional systems of managing AnGR can be classified into three types: (1) Smallholders who keep animals integrated into crop cultivation; (2) Central authorities, mostly kings, chiefs and states who require secure access to high quality domestic animals and (3) the Pastoralists who keep animals on natural grazing and for whom animal breeding is economically and culturally dominant. The last group is associated with the greater degree of Animal genetic resources.

There are two reasons for CBMAAnGR in current times; (1) from the perspective of outsiders (the resource angle) - conservation is best achieved through utilization and (2) from the perspective of the pastoralists (the livelihood angle) - the livelihood angle.

Support for communities for the management of AnGR should be through the provision of incentives to local communities for managing their local breeds, provision of assistance to become more market orientated in their production, recognition of breeds which are currently not recognized and try to bridge the gaps/discrepancies between local and scientific concepts, e.g. "breeds". Ritual and social aspects of livestock keeping, and not just economic characteristics should be recognized.

Paper 2. Smallholder and Community Base Management of FanGR by Wolfgang Bayer, Antje Feldman, A. & Annette von Lossau

Smallholder farmers play an important role in the management of FAnGR. Smallholder animal keeping is often not well understood by development planners and therefore support measures for management of AnGR. Major misunderstandings are linkages between breeding objectives and multi-functionality of animals. The keeping of smaller herds results in more exchanging of breeding stock between farmers, pastoralists, commercial farmers and state farms. Smallholder settings differ greatly between location, cultural group and farm - on the one hand there is a large subsistence orientated sector, but a commercial orientated sector does exist. Support for the smallholder farmers should take the diversity of smallholder settings into account.

Paper 3: Defining Livestock Breeds in the Context of Management of Farm Animal Genetic Resources, By J.E.O. Rege

The concept of a breed was developed in Western Europe during the eighteenth century. Today, in the developed world, breeds are recognized as intra-specific groups, the members of which share particular characteristics, which distinguish them from other such groups, with formal organizations for each breed. In the developing world this has little meaning, but there are strains or types which owe their distinct identity to a combination of traditional breeding objectives, geographical and/or cultural separation by communities which own them. Breeds are an important basic unit of diversity. The concept of breed or equivalent concepts within species serve an important purpose in that it links products/functions to a group of animals that share common genetic background.

Synthesis of questions raised on the Keynote Addresses!

1. Stakeholder Participation

- What is the role of scientists/NGO's in CBMAAnGR?
- What is the role of external agencies in the accessing and conservation of IK?

2. Breeding Goals

- What are the breeding goals of smallholder farmers?
- Who decides on breeding goals and parameters?

3. Breed Improvement

- What are the strategies to improve reproduction in camels?
- What do we mean by "improving" livestock genetic resources?

4. IK

- Can we use the cultural value of breeds as a means of support for development programmes?
- How do we integrate IK in CBMFAAnGR with respect to smallholder farmer inputs?
- What is the importance of IK?

5. Information Exchange

- What can Africa learn from Indian experiences?

6. Definition of Smallholder

- How do we define Smallholder?

7. Role of AnGR IN Poverty Reduction

- Is AnGR conservation an entry point for poverty reduction?
- Are smallholders going to be extinct?

8. Role of Exotics

- Do exotics have an economic role in rural farming systems?

9. Conservation of AnGR

- What is the objective of conservation of genetic diversity - inter breed and intra breed

10. Breed Terminology

- What role does genetic distance have in the definition of a breed?
- Is there a difference between strain and breed?
- Is breed the correct term to use?
- Is there work being done to correct the misconception on breed naming by ethnicity?
- What should be the approach to breed naming for CBMAAnGR?
- What is the role of genetic characterization in breed definition?

11. Incentives for conservation and Marketing

- What incentives should be given to encourage farmers in CBMAAnGR?
- How can AnGR help smallholders penetrate the market dominated by large commercial producers?
- How can smallholder farmers be helped to change from subsistence to commercial production?
- Is the consumer base in Africa large enough to support niche markets?
- How can we come up with community based marketing channels?
- What is the role of AnGR as pastoralists become agro-pastoralists and more market orientated?

12. What is the effect of geographical barriers on the separation of breeds?**13. Does CBMAAnGR resources limits itself to so called indigenous breeds?****14. Is supporting certain breeding systems by smallholders likely to maintain diversity?****15. Control of Animal Industries - Indigenous or Exotics and how?**

3 Presentation on GEF Position and Procedures in Funding CBMAAnGR

Before getting deeper into the topic discussions, Maryam Niamir-Fuller, Regional Coordinator in the 'Global Environmental Facilities' (GEF) presented the possibilities for funding of AnGR activities through GEF. (The full presentation will be in the larger proceedings (non-electronic version). The presentation triggered a lot of interest and a long discussion was held as part of the 'open space' in the evening. Maryam wrote a summary on this discussion:

GATHERING OF EXPERT OPINION ON¹

In-situ Conservation and Sustainable use of Animal Genetic Resources (AnGR):

Contribution to guidance for GEF projects under OP 13

The purpose of this note is to contribute to the clarification of the role of GEF in funding in-situ conservation and sustainable use of AnGR. Only those issues that are specific to AnGR are discussed here. Other guidance to projects under OP 13 can be obtained from existing strategic documents.

Six major issues have been identified : (a) definition of what is globally significant domestic animal genetic resources (AnGR); (b) linkages between AnGR and their habitats; (c) conservation vs. production; (d) conservation vs. marketing; (e) policies and attitudes as root causes of threats; (f) and win-win situations and the GEF increment.

Defining Global Significance

Globally significant resources are those that are unique, rare, or of some other larger benefit to global environment and to mankind. In the case of AnGR, global significance can be explored at four levels

- ❑ Species level (unique or rare species that are threatened)
- ❑ Breed level (“indigenous” breeds)
- ❑ Trait level (unique traits, and/or traits that are adaptive to specific habitats)
- ❑ Genetic level (specific genes that define the traits)

At the **species level**, it is important to prioritize those whose population size is low and clearly threatened. There are very few species that fall in this category (??). Examples are :.....

At the **breed level**, it must be recognized that there is incomplete information and documentation of existing indigenous breeds. In fact, there is also lack of clarity in defining both of the terms “indigenous” and “breed”. Furthermore, there may be more than 5000 indigenous breeds in the world. Therefore, at the breed level, only those indigenous breeds that are clearly shown to be threatened with extinction should be prioritized for action.

¹ Ad hoc meeting of experts participating in the SADC/GTZ/UNDP/FAO Workshop on Community-based Management of Animal Genetic Resources; 7-11 May 2001; Mbabane, Swaziland.

At the **trait level**, each indigenous breed has one or more adaptive traits that are conditioned by the habitats they occupy, as well as by man's actions through domestication and selective breeding. Those traits that are unique and rare are of particular concern. For example, even though two breeds may share a similar trait (e.g. adaptation to high altitude), each will have developed a different and unique set of adaptation to its own environment, which is not transferable to the other environment. Thus unique adaptive traits are intricately tied to the habitat of origin. The global value lies in preserving threatened unique traits, as part and parcel of their environments. Possible criteria for establishing priorities at the trait level are :

- ❑ rare or unique (e.g. trypanotolerance)
- ❑ representative of major adaptive traits (tolerance to extreme heat or cold; drought tolerance; etc)
- ❑ degree of multiplicity of traits in the same breed
- ❑ traits linked to unique habitats or biodiversity hot spots.

At the **genetic level**, it may be possible to distinguish and conserve (in-situ) specific animal genes that contribute to these unique traits, however, in practical terms, this will not be easily measurable or monitored, and therefore the operational value is low. Therefore, working definitions of global significance should be sought at species, breed and trait levels.

Linking AnGR with their habitats

The genetic make-up and traits of indigenous domestic animals have been shaped by their adaptation to their environments. Man has deliberately selected for these adaptive traits over millenia. At the same time, domestic animals have been shown to have influenced and even shaped their environments. Examples are domestic ruminants in grazing-dependent savanna ecosystems. Furthermore, certain adaptive traits are known to disappear once the animal is removed from its environment (e.g. hardiness, trypanotolerance). Therefore, projects on in-situ conservation of AnGR cannot be separated from the conservation and sustainable use of their habitats.

The majority of indigenous breeds are raised by small holders and the poor, in typically communal settings. In-situ conservation and sustainable use of AnGR therefore must be community-based in order to be effective.

Conservation vs production

The aim of conservation is to maintain a distinct but dynamic gene pool. The aim of production is to improve productivity of desirable products (e.g. milk, meat, hardiness, etc.). These two are not necessarily contradictory. Techniques exist for ensuring a win-win situation, and projects should clearly identify and employ these techniques.

The relative loss of economic well-being from raising indigenous animals as opposed to exotics or cross-breeds, has been shown to be a myth. Methods and techniques exist for determining the comparative benefits and costs of the two strategies, and should be used in projects to overcome this myth at all levels.

Conservation vs. marketing

It has been shown that the lack of markets has led to the extinction of indigenous breeds. Thus the lack of market incentives is a threat to conservation, and the two are not contradictory. The stronger the market demand, the greater the incentive for farmers and herders to reproduce and sell indigenous breeds. In normal circumstances, farmers and herders only sell their surplus, thus

preserving a core nucleus for reproduction, and therefore contributing to conservation. Only in extreme circumstances (e.g. famine combined with a breed whose population is already low) is there a danger that market and other demands may lead to loss of indigenous breeds.

In these situations, the GEF window of Short Term Measures could be considered, to monitor the status of indigenous breeds and devise appropriate emergency actions (e.g. buying stock and preserving them in temporary ex-situ structures for the purpose of re-stocking later on). (Note: we need a clear statement here to justify eligibility of this kind of “emergency ex-situ” for GEF).

Policies and Attitudes

Most national policies and legal frameworks contain a certain bias against AnGR, in favor of crops and plant genetic resources. As a result, there are market distortions, biased subsidies, and relatively little support to promoting indigenous AnGR, all of which are root causes of threats to AnGR. Changing such policies requires attitudinal shifts, as well as integrated, multi-sectoral approaches. In particular, economic valuation (mentioned above) and land tenure issues should be addressed. For example, the free-rider syndrome on communal lands (where government employees invest in livestock to be grazed on communal lands) is a major disincentive to sustainable natural resource management.

Win-win situations and GEF increment

The aim of GEF projects should be to deliver on win-win situations where both global and local benefits can be expected. In the case of in-situ conservation of AnGR, global benefits can be expected from achieving, among others : healthy environments; diversity in AnGR at the global level; agro-ecosystem services; preservation of indigenous and local knowledge for mankind’s benefit.

National and local benefits expected from conservation and sustainable use of AnGR are, among others : poverty alleviation; livelihood security; sustainable economic development; healthy environments.

There can be considerable overlap between these different levels of benefits. The same activity might generate global and local benefits. Therefore, guidance for determining what activities are eligible for GEF funding (i.e. GEF increment) are :

- ❑ remove barriers to adoption and replication of in-situ conservation and sustainable use
- ❑ remove direct threats to globally significant resources
- ❑ demonstrate innovative methods, techniques, policies, etc.

[NOTE: should we add other issues specific to AnGR ? e.g. those related to IPR ?]

4 Community-Based Management of Farm AnGR: Building Consensus on Terminology

The topic was introduced by a presentation on definitions and concepts of Community-Based Natural Resource Management (CBNRM) by *O. T. Thakadu*. This triggered a discussion on the meaning of community based management in the field of animal genetic resources which was followed up with a small group work and later taken up by a so-called 'definition group'. This group picked up the increasing understanding of the issue by the group throughout the week and presented on Friday a synthesis on the definition of terms.

To get a common understanding what is meant by the term "Community-Based Management of Animal Genetic Resources" participants were asked to define the term by answering the following questions:

CBMAnGR: What is it?

<ul style="list-style-type: none"> • Sustainable use • Sustainable management • In situ and participatory conservation and sustainable use • Action: conservation and sustainable use • Sustainable utilisation: economic - environment - social 	<ul style="list-style-type: none"> • Collective decision making • Participatory community decision making • Joint decision making process within community • Community owned and controlled
<ul style="list-style-type: none"> • Absolute involvement of local communities in management of FAnGR • Stakeholder participation • Concerned persons are involved 	<ul style="list-style-type: none"> • Equitable sharing of benefits • Shared benefits • Sharing of resources and benefits • Collective recognition of FAnGR value
<ul style="list-style-type: none"> • Use of indigenous and other knowledge • Accounts for the environment and involves the use of indigenous knowledge 	<ul style="list-style-type: none"> • Its a farming systems approach • Holistic management approach • Local and integrated management • Integrated approach
<ul style="list-style-type: none"> • Reintroduction of indigenous animals in certain areas • Deal with local livestock • Empowers communities socially and economically • Baseline isolation lead to gene pool 	<ul style="list-style-type: none"> • External facilitation • Should include conflict management and resolution • Dynamic

CBMAnGR: What is it not?

<ul style="list-style-type: none"> • Prescriptive (3x) • Top down approach (4x) • It is not a Government project • Conflict generation • Should not lead to conflict • Leaving communities isolated • It is not a free-for-all-exploitation • Not animal oriented 	<ul style="list-style-type: none"> • Ignoring knowledge base • Not just conservation • Merely preservation (should involve sustainable use) • Not necessarily indigenous/native • Is no conventional breeding programme • (yet) on the agenda of enough policy makers
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- | | |
|--|--|
| <ul style="list-style-type: none">• Not purely scientific• AGRM is not FAnGRM | <ul style="list-style-type: none">• It is not ex situ management• CBMAGR - not static |
|--|--|

The exercise helped to put some boundaries around the topic, though not fully conclusive. It was decided to leave it at that level for the time being and take it up again once more discussions were held during the week.

4.1 Why to Apply a Community-Based Approach to Management of AnGR?

On Thursday, the issue of common understanding of CBMAnGR came up again, this time more focused. Particularly the issue of 'community-based' management versus individually managed AnGR was discussed. The following rationales for community based management were mentioned:

- Communal range/grazing management requires a broader approach
- Entering on basis of resource or organisational/socio-political approach in order to address
 - Collective responsibilities
 - Sharing mechanisms
- Opportunity to enhance management (which is the crucial factor for success)
- Opportunity to involve more stakeholders (which is required to address the complexity involved)
- Opportunity to address different communities differently

Then the table groups worked on the question:

**WHAT ARE THE VALUES ADDED THROUGH CBMANGR?,
and came up with the following aspects:**

What are the boundaries of 'community' we work with?

- Community: geographical entity or group with common identity
- Community defined by their living environment
- Definition of community essential for benefit-sharing
- Communities share communal benefits, e.g. training, exchanges (non-monetary)

Enables Community-based decision making on

- Breeding programmes
- Husbandry
- Animal health and disease control

Taps into Resource sharing mechanisms

- Target community xxx of shared resources
- Mechanisms to share resources
- Profits from animals accrue on an individual basis
- Identify the core interests in conservation
- How to capture the interest of all in the community

Helps people to share common goals

- Common goals and decision making in rural communities
- Shared community goal

Helps people to organise and articulate themselves

- Organisational structure required
- Negotiation power of a large group
- Harder for poor to organise

Provides advantages through pooling resources

- Economies of scale - input and output prices
- Pooled inputs from a community are more effective

Enhances sharing and cooperation

- Collective responsibility for CBM
- Sharing responsibility and cooperation within community

Enables to bring together communal and commercial farmers

- Commercial equals exotic breeds?
- Critical success factor: involvement of commercial farmers
- Need to include commercial farmer communities as stakeholder
- Impact of commercial breeders on animal diversity

- Creating a pool of animals for selection/breeding decisions

- Let's not lose sight of both aims: conservation and poverty reduction

- Community-based activities attract donor attention

Discussion Around Terminology and the Advantages of CBM Programmes

- How does one define the term community: does it refer to 'the farming community' or to a socially cohesive group. Does community refer to a group defined according to geographical location.
- Commercial farmers around smaller communities have a number of possible negative impacts. They may own exotic animals, which can negate any good work done in terms of genetic improvement/conservation. Commercial farmers have sometimes exploited local communities by purchasing livestock at prices lower than their economic value. It is important that local communities are made aware of the value of their livestock.
- Commercialisation of indigenous breeds should not be allowed to 'pollute' the breed
- The focus in AnGR programmes should be on the 'poorest' so that they are not intimidated by the larger, commercial owners.
- A community can be defined as a group that shares natural resources and shares goals.
- Defining 'community' is essential for benefit sharing. Benefits normally go to households but it is important to have mechanisms to share there out further.
- An organisational structure is required if community-based decisions are to be made concerning breeding programmes.
- Working with a group as opposed to with individuals has a number of benefits:
 - A pool of resources/animals is available for selection
 - Economics of scale
 - Greater powers of negotiation
 - Collective responsibility
 - Pooled inputs are more cost effective
 - Attract donor attention
- With community-based programmes, shared responsibilities lead to co-operation within the community.
- Commercial farmers may not be part of the community but should be included as stakeholders as they are influential.
- Community-based means that it happens within a community not that it involves the whole community
- Community-based programmes are an effective process for AnGR programmes because individual herds are small.
- CBM programmes are an avenue for marginalised farmers to be represented fairly. It is an effective way to involve more stakeholders.
- Service approaches have changes such that community-based programmes are seen to be more effective.

As another step to create a clearer vision of what we mean by CBMAnGR was to pose the following question and have the groups work on them:

IF CBMANGR WAS VERY SUCCESSFUL, WHAT WOULD (A) FARMERS, (B) FARMERS ORGANISATIONS/COMMUNITIES, (C) R&D/DEVELOPMENT AGENTS DO OR DO DIFFERENTLY?

1. What would farmers do differently?

Farmers are eager to learn and share knowledge and information	<ul style="list-style-type: none"> ▪ Individual farmers acquire new skills ▪ Upgrade own knowledge ▪ Sharing knowledge, information and expertise
Farmers accept the set of by-laws and rules and implement them consciously	<ul style="list-style-type: none"> ▪ Individual will abide to agreed rules ▪ Agree to community breeding programme ▪ Stop buying other livestock breeds ▪ Castrate/remove unwanted males (as defined by organisation)
Farmers contribute to the development of collective breeding decisions	<ul style="list-style-type: none"> ▪ Collective and mutual breeding decisions ▪ Contribute to discussion and decision ▪ Individual preferences for certain traits, but breeding programmes are collectively made ▪ Lobby and participate in discussions of purpose at organisation meetings
Farmers contribute to collective development of infrastructure and other roles	<ul style="list-style-type: none"> ▪ Individual farmer will have specific duties assigned ▪ Contribute to infrastructural development (diptanks, water)
<p>Sales (decisions on marketing) will be done individually, but related to collective NRM</p> <p>Higher standards will be set</p> <p>Organise markets together</p> <p>Individual farmers will share resources with community members (female borrows, feed)</p> <p>Earn more money</p> <p>More individuals participate in CBMANGR</p> <p>Individual farmer benefit from better access to market</p>	

2. What would farmer / community organisations do differently?

Add value to AnGR products	<ul style="list-style-type: none"> ▪ Improved market access for AnGR (1) and (2) ▪ Add value to access reliable markets
Become the promoters of AnGR and share them with others	<ul style="list-style-type: none"> ▪ Promote use of local AnGR ▪ Use few community managed selected breeding material ▪ Give access to FanGR
Actively try to influence policy	<ul style="list-style-type: none"> ▪ Advocacy for policy

	<ul style="list-style-type: none"> ▪ Increased bargaining power (1) and (2) ▪ Collective bargaining and lobbying ▪ Increased influence on policy formulation (1) and (2)
Develop and implement rules and by-laws for AnGR	<ul style="list-style-type: none"> ▪ Develop rules and regulations to control infiltration of AnGR ▪ Avoid indiscriminate cross-breeding
Link and share with other actors and communities	<ul style="list-style-type: none"> ▪ Manage linkages ▪ Influence participation of neighbouring communities ▪ Negotiate with other stakeholders
Organise for collective rangeland management	<ul style="list-style-type: none"> ▪ Manage rangeland sustainably ▪ Improve land use practices ▪ Organise sustainable grazing and water use
Represent the interests of their members	<ul style="list-style-type: none"> ▪ Protect the interest of their members ▪ They would have to adjust to take into account the community needs
Develop systems to monitor implementation	
Communities would own the success of CBManGR	
Each community will set-up their own objectives and goals	
Organise commodity groups	
Mobilise resources	
Distribute the benefit and cost	
Communities would define the research goals	
They demand services	

3. What would R&D agents do differently?

Provide their services according to communities' needs and demands	<ul style="list-style-type: none"> ▪ Base programs on needs defined by communities ▪ Respond to the demand of the community ▪ R&D work will be focussed towards community needs ▪ Deliver services demanded by communities (3) ▪ Provide demand driven technologies and services
Development agencies will improve feedback mechanisms (communication)	
Research and farmer organisations to work out mechanisms of sharing FAnGR	
Change approach (subsistence towards commercial)	
Deliver effective services	<ul style="list-style-type: none"> ▪ Provide more resources to communities (3) ▪ Improve effectiveness of service delivery (3)
Learn about facilitation and other skills required for working with communities	<ul style="list-style-type: none"> ▪ Learn new facilitation skills ▪ Participate in training
Relevant training of R&D agents	

Inform and support policy development	<ul style="list-style-type: none"> ▪ Inform policy makers of success ▪ Provide technical information for policy formulation
Address the groups as the unit	
They facilitate priority setting with communities	<ul style="list-style-type: none"> ▪ They will involve communities in setting priorities ▪ Research will be participatory
They carry out research with farmers	<ul style="list-style-type: none"> ▪ More farming systems approach research ▪ Shift from on-station to on-farm research ▪ Undertake adaptive research
Encourage conservation of FAnGR (and diversity)	
Develop and manage appropriate nuclei of individual breeds	
Provide access to appropriate AnGR	

Discarded cards:

- Less substitution of exotics for local breeds
- Positive impacts on ecosystem function
- Conservation of local genotypes

The clarification of the changing behaviour of different actors was considered very useful to reach a common understanding. It also revealed the differences in understanding.

4.2 Defining Community-Based Management of AnGR & Related Terminologies

Based on these clarifications and the previous definitions, a drafting group defined the term more precisely and presented the result to the group. The following definitions were agreed upon after some discussion, clarification and modification:

Defining Community-Based Management of Farm AnGR and Related Terminologies

- 1. Community:** A group of people bound together by social, cultural and economic relations based on shared interests and living in a well-defined area. Although there may be differences between sub-groups (e.g. families) and individuals in a community, shared interests in cooperation outweigh competing interests and it is the shared interests that serve as the glue linking members together.
- 2. Community-Based Organization:** An entity formed or recognized by a community to represent community's interests and to implement, on behalf of the community, agreed management decisions.

- 3. Animal Genetic Resources (AnGR):** All animal species, breeds/strains and populations used for food and agricultural production and their wild or semi-domesticated relatives.
- 4. Management of AnGR:** The combined set of actions by which a sample, or the whole, of an animal population is subjected to processes of genetic and/or environmental manipulation with the aim of sustaining, utilizing, restoring, enhancing and understanding (characterizing) the quality and/or quantity of the AnGR and its products. Sustainable management incorporates those actions (including policy) which ensure that the AnGR meet present needs while also retaining their genetic integrity so as to be available for longer term needs.
- 5. Breed:** A distinct intra-specific group of animals, the members of which share particular characteristics, which distinguish them from other such groups. Although there are no identical words to 'breed' as used in western agriculture, equivalent concepts for designating identity of animal populations in traditional society exist. Specifically, a population for which the traditional owners have a 'name', should be accorded breed identity. Where there is lack of clarity in breed boundaries quantitative and molecular genetic characterization can be used to quantify 'distances' between such breeds in order to facilitate their classification.
- 6. Community-Based Management of AnGR:** The management of AnGR in which decisions on defining, prioritising and implementing actions that affect the AnGR and the agro-ecosystem are made by the local communities who own these resources. The AnGR involved may include germplasm not traditionally owned by the communities, either maintained as purebreds or in defined, purposeful crossbreeding with indigenous breeds. The rationale for considering community-based management (CBM) model for AnGR derives from the fact, established and widely used today in natural resource management, that most creative and productive activities of individuals and groups in society take place in communities. Specifically, with regard to AnGR, the bases for a focus on local communities include the fact that:
- they have a vested interest in all the natural resources on which their livelihoods depend, including the AnGR
 - they are best-placed to manage these resources as they own them, and, over years of managing them, have developed a deep understanding of what it takes to sustainably utilise them
 - as they have the most to lose in the event of loss of their AnGR, local communities have the commitment for the effective management of these resources so long as the proper support and incentives are made available to them.

Community-based management of AnGR has the following specific operational advantages when farmers/managers organise themselves for collective action:

- economies of scale in, and effective mechanism for, procurement of inputs and marketing of products
- collective responsibilities based on shared goals with regard to management of communally-owned resources - e.g. grazing lands, water resources, etc
- a large pool of (collective) herds/flocks allowing greater opportunities for genetic manipulation (e.g. selection and sharing of superior genetic material) than is possible in single herds/flocks
- an avenue through which marginalized groups (e.g. poor farmers) can express themselves and be heard by the larger community and government structures and achieve equity in access to knowledge and resources
- opportunity to effectively involve more stakeholders in the management of AnGR

Community-based management of AnGR is characterized by the following:

- is collectively run by members of the community through a participatory decision-making process

- day-to-day management is usually provided by elected community representatives (ECR)
- through a Representative and Accountable Legal Entity (RALE)
- may include multiple conservation options (in situ and ex situ) and genetic enhancement approaches (e.g. selective breeding and crossbreeding systems)
- is usually holistic - takes into consideration all system components (biophysical and socio-cultural, including indigenous knowledge) and interactions within the system
- can only work for AnGR (species, breeds and populations) perceived by communities to contribute positively to the quality of life of the community members
- requires that an enabling environment (which empowers and supports the community socially, economically and technically) be created and maintained, but without unsolicited external control or interference

5 Topic I: Community-Based Livestock Management

5.1 Case study presentations

5 Papers were presented as case studies to inspire the discussions. The papers were:

- 1. Community-Based Livestock Improvement and Conservation, Experiences from Open Nucleus Programs in West Africa - by Chia Valentine Yapi-Gnaore, Cote d'Ivoire*
- 2. Community Livestock Improvement Initiatives: A Case of Kathekani, Kenya - by Joyce Njoro, Kenya*
- 3. The Nguni, a case study - by Jenny Bester, South Africa*
- 4. Community-Based Promotion of Rural Poultry Diversity, Management, Utilisation and Research in Malawi - by Timothy Gondwe, Malawi*
- 5. Experiences of the Basotho Pony Mare Camp - by Temolo Lekota, Lesotho*

After each paper the table groups reflected on the main issues to be dealt with in the group work. The suggested tasks for the group were:

Suggested Tasks for the group work

The working groups were asked to analyse the cases and their own experiences using the following questions:

- What are the critical factors for success in CBMAAnGR, and why?
- What are the hindering factors, and why?
- What are possible ways/strategies to overcome these constraints?

The groups should

- Choose a facilitator for the group discussions
- Nominate a group rapporteur who summarises the group discussions on one to two pages
- Nominate a presenter, who reports back the group results to the plenary in less than 10 minutes

5.2 Results of WG 1: Monitoring and Evaluation (Impact Assessment)

Issues to be dealt with (emanating from the table group discussions after the presentations):

- How do you monitor the programme?
- In view of Aids/HIV is small stock of any help to children/old?
- Is AnGR conservation an entry point for poverty alleviation?
- What is realised improvement?
- How to ensure link between increased productivity and improved nutrition?
- Role of AnGR in poverty alleviation
- How to monitor success in CBMFAAnGR?
- Do the benefits reach the poorest farmers?
- How do we define a smallholder?
- (What are) measurable benefits to the farmers?
- Are smallholders going to be extinct?
- Definition of smallholder
- How to identify
- How we balance conservation and livelihood?

Results of group work:

Group members: Maria da Gloria Taela - Simon - Annette - Clemens - Louise - Gondwe - Stanley - A.M. Mohale - Antje - C.N. Morupisi - Romualdo Uaila

Critical Success Factors	<ul style="list-style-type: none"> ▪ Define target groups ▪ Set-up of monitoring structures in the community ▪ Monitoring based on well-being indicators (human and animal) ▪ Use of participatory approach to identify measurable benefits ▪ Development of relevant recording system (incremental cost sharing plan) ▪ Contribution of the AnGR to the well-being ▪ Sustainable use of AnGR could be an entry point for poverty reduction ▪ Balance of conservation and livelihood needs to be monitored ▪ Contribution to food security and child nutrition
Hindering Factors	<ul style="list-style-type: none"> ▪ Displacement of people ▪ Dynamic changes of communities due to natural or man made disasters ▪ Proper monitoring lacking ▪ Absence of baseline data ▪ Delayed and biased communication process ▪ Impact of HIV/Aids pandemic ▪ Conservation by itself ▪ Complexity to attribute benefits ▪ Lack of access to resources
Strategies	<ul style="list-style-type: none"> ▪ Provide FAO with cross-cutting studies (SOW) ▪ M&E must consider "sequence of events" towards impact ▪ Develop appropriate M&E framework ▪ M&E to ensure access and control ▪ Monitoring involves all stakeholders ▪ Assessment of livelihood impact of conservation and genetic erosion ▪ Indicators address biological, economic and social issues ▪ Cost: Benefit of conservation positive (farmer's view) ▪ Valuation of conservation of AnGR ▪ Monitor service provided to the society through AnGR ▪ Monitor to equity in benefit-sharing

5.3 Results of WG 2: Breeding Goals / Breed Improvement

Issues to be dealt with:

- Management is almost more important than genetic improvement
- Relevance of ONBS for CBManGR?
- How to avoid breed crossing in a village environment?
- How to accommodate multiple breeds in one area?
- Can the project demonstrate the competitiveness of the Nguni in this set-up?
- What is the objective of conservation of genetic diversity (inter-breed and intra-breed)?
- What happens to the by-products in the program?
- Can management achieve as much as cross-breeding?
- X-breeding impact on genetic diversity
- What is the extent of the genetic erosion of indigenous gene pools?
- What type of cross-breeding (program) is conducive to conservation goals?
- What are the breeding goals of a smallholder farmer?
- "Commercially bred" indigenous bulls - adaptability questioned
- Selection criteria excluded farmers limited by infrastructure
- How is breeding controlled?
- Do exotics have an economic role in rural farming systems?
- What do we mean by "improving" animal genetic resources?
- Is the program a controlled mating or controlled breeding?
- Where do we select males from? Commercial vs. communal farms.
- What are they doing to add value to Basotho pony?
- How important is crossbreeding programme?
- Who decides on breeding goals and parameters?
- IK
- Animal health
 - Health records necessary / health programmes!
 - Why vaccination on indigenous chicken breeding?
 - Disease problems with one station
 - How to protect adaptation of local breeds?

Results of group work:

Group members: Thembukos - Brigid - Chikungwa - Kabata - Ed Rege - Ducasse - Mruttu - Mtonga - Maposa - Martyniuk - Yapi-Gnaore - Lekota - Barnabas - Mike Mingay - Dorah Vilakati

Critical Success Factors	Reasons
Setting breeding goals	
<ul style="list-style-type: none"> ▪ Participatory approach 	<ul style="list-style-type: none"> ▪ Goals set by outsiders won't have ownership by the community and will not be achieved ▪ All other stakeholders (extension, researchers, policy makers) need to be included to ensure their support.
<ul style="list-style-type: none"> ▪ Realistic goals 	<ul style="list-style-type: none"> ▪ To accept the limitations of the breeds, the environment (social-economic situation of the community)
Implementing a breed improvement programme	<ul style="list-style-type: none"> ▪ Facilitate conflict resolution ▪ Appropriate economic incentives

	<ul style="list-style-type: none"> ▪ Behaviour change
<ul style="list-style-type: none"> ▪ Understanding of the farming system 	
<ul style="list-style-type: none"> ▪ Existing infrastructure 	
<ul style="list-style-type: none"> ▪ Identification of animals 	<ul style="list-style-type: none"> ▪ To enable record keeping and vaccination programmes
<ul style="list-style-type: none"> ▪ Capacity of farmers (knowledge etc.) 	<ul style="list-style-type: none"> ▪
<ul style="list-style-type: none"> ▪ Effective extension Services 	<ul style="list-style-type: none"> ▪ To provide support to farmers and relevant raining
<ul style="list-style-type: none"> ▪ Relevant selection criteria 	<ul style="list-style-type: none"> ▪ Trait must be easily measurable ▪ Depends on the breeding programme
<ul style="list-style-type: none"> ▪ Market forces 	<ul style="list-style-type: none"> ▪ Determine and influence the breeding goals
Hindering Factors	Reasons
Community land tenure	<ul style="list-style-type: none"> ▪ Particularly communal systems are impossible to control breeding, source of conflict
Absence of owners	<ul style="list-style-type: none"> ▪ Hinder the decision making process
Trans-humanic systems	<ul style="list-style-type: none"> ▪ Pastoralists with nomadic habits
Lack of controlled mating	<ul style="list-style-type: none"> ▪
More than one breed in one area	<ul style="list-style-type: none"> ▪ Difficult to control breeding
Various interests/aims within community	<ul style="list-style-type: none"> ▪ Results in conflict
Unsuitable/un-adapted genetic resources	
Cattle rustling	
Socio-cultural factors	<ul style="list-style-type: none"> ▪ Against castration ▪ Against individual prosperity
Development agencies interventions	
Strategies	<ul style="list-style-type: none"> ▪
Policy development in the area of CBMANGR	<ul style="list-style-type: none"> ▪ Recognition/appreciation of the system ▪ Initial financial support until sustainability is reached ▪ Relevant training of extension staff
Development of appropriate grazing systems	<ul style="list-style-type: none"> ▪ Requires community involvement
Establishment of decision making process	<ul style="list-style-type: none"> ▪ Elected committees, representing the breeders, can decide even when owners are absent
Innovative ways to control mating	<ul style="list-style-type: none"> ▪ Separate grazing, e.g. of males and females ▪ Breeding camps
Community animal health workers to supplement extension staff	<ul style="list-style-type: none"> ▪
Group discussions prioritising of goals	<ul style="list-style-type: none"> ▪ Make community aware of limitations
Selection of superior animals within community	<ul style="list-style-type: none"> ▪ Preferable to bringing in animals from outside

Additionally mentioned strategies in the rapporteurs report:

- Fixed factors, e.g. tenure require innovative ideas from the community in order to achieve practical solutions, e.g. castration of poor bulls so that introduced bulls can be effective.
- Another fixed factor: nomadic pastoralists - the extension service must be adapted to the requirements, e.g. make use CAHW instead of Eos.

5.4 Results of WG 3: Sustainability of CBMAAnGR

Issues to be dealt with:

Critical Success Factors

- What is the probability that this project will continue without donors?
- What is the purpose of managing AnGR?
- Can short-term and long-term objectives be matched through incentives?
- What are we conserving? Breeds or Genes?
- Precondition for Sustainability?
- What kind of support services should be developed simultaneously?
- Why subsidize sale of pony - is this sustainable?
- Is it a sustainable program?

Hindrances for Success

- Do current economic incentives prevent sustainable use of breeds?
- Lack of clear objectives in this initiative
- Is a big goat sustainable long-term?

Strategies

- Mechanisms for combining s- and l-term objectives - market vs conservation
- How to scale-up intervention based CBAnGR programmes?
- Need integrative CBAnGR conservation with P.T.D. in NRM - for resource poor

Results of group work:

Group members: Ronald Dlamini - A.M. Shongwe - G.W. Ocen - Rosemary Vilakati - Joyce Njoro - Florence Mhllanga - Christo Nowers - John Steven - Keith - Jacque - Jenny Bester - Brian - B. Dzelisa

Critical Success Factors	
Institutional support	<p>Government:</p> <ul style="list-style-type: none"> ▪ Enabling policies formulated ▪ Financial support to lack-start programmes ▪ Technical support for backstopping <p>NGOs</p> <ul style="list-style-type: none"> ▪ Financial support ▪ Technical support ▪ Capacity building <p>Traditional institutions</p> <ul style="list-style-type: none"> ▪ Endorsement of project ▪ Commitment in community ▪ Community mobilisation ▪ Provide leadership <p>Research and training institutions</p> <ul style="list-style-type: none"> ▪ Technical support ▪ Capacity building ▪ Awareness <p>Breed societies (should be community-based)</p> <ul style="list-style-type: none"> ▪ Protect local breeds

	<ul style="list-style-type: none"> ▪ Promote own breeds ▪ Promote research into local breeds
Participatory approach	<ul style="list-style-type: none"> ▪ Community participation at all levels ▪ Commitment and sense of ownership ▪ Provides indigenous knowledge ▪ Financial contribution ▪ Participatory decisions in identifying community programme leaders
Benefits <ul style="list-style-type: none"> ▪ Human nutrition and health ▪ Financial income - self employment ▪ Household food security ▪ Prestige through increased numbers ▪ Cultural identity / satisfaction ▪ Agro-tourism 	<ul style="list-style-type: none"> ▪ Equitable sharing of benefits ▪ Socio-cultural empowerment ▪ Goods and services / economic empowerment ▪ Breeders rights / patenting ▪ Improved animal productivity
Inputs	<ul style="list-style-type: none"> ▪ Financial inputs ▪ Technical inputs - knowledge ▪ Feed resources to be improved ▪ Human resources (e.g. labour inputs) ▪ Water resources ▪ Infrastructure: road network, telecommunications ▪ Market development ▪ Herd health programme
Net working	<ul style="list-style-type: none"> ▪ Effective communication - within and outside ▪ Information exchange ▪ Strategic linkages ▪ Advocacy
Farming systems approach	<ul style="list-style-type: none"> ▪ Integrated approach to management taking a holistic view
Market access and availability	<ul style="list-style-type: none"> ▪ Niche markets identified ▪ Value added products ▪ Access to market - local, regional etc. ▪ Market information ▪ Good quality packaging ▪ Product promotion and labelling ▪ Marketable products
Clear objectives	<ul style="list-style-type: none"> ▪ Community developed business plan ▪ Shared vision well defined ▪ Short and long-term objectives
Sound animal and range management	
Hindering Factors	
Political instability / civil strife	
Lack of market access / availability	<ul style="list-style-type: none"> ▪ Market protectionism ▪ Low product quality ▪ Poor product development ▪ Lack of market information
Inadequate natural resources	<ul style="list-style-type: none"> ▪
Lack of institutional support	<ul style="list-style-type: none"> ▪ enabling policies ▪ Political will

Inadequate extension of indigenous breeds	
Lack of appreciation of true value of local breeds	
Technical modernisation	
Strategies	
Develop accurate, farmer friendly information	
Integrated business plan	
Integrated marketing strategy	
Promotion of local breeds	
Review training and research programmes	
Policy - review, improve and formulate	
Empower leadership within community	

5.5 Results of WG 4: Incentives for Conservation and Marketing

Issues to be dealt with:

- Why is it a problem, if a community has cultural preferences over economic drive?
- An initiative of commercial farmers pushed to smallholders
- What is the role of AnGR as pastoralists become agro-pastoralists and more market oriented?
- How can we come up with community-based marketing channels?
- How can smallholder farmers be helped to change from subsistence to commercial production?
- Potential of eco-tourism as incentive for CBMAnGR
- How do we value the socio-cultural values?
- Is the consumer base in Africa large enough to support niche markets?
- How can AnGR help smallholder penetrate the market dominated by the large commercial producers?
- What incentives should be given to encourage farmers in CBMAnGR?

Results of group work:

Group members:

Mizek Chagunda - Peta Jones - Adam Drucker - Anita Idel - Petros Nyathi - Ellen Mahlase - Chaya Teeluck - Hendrik van Wielligh - Norbert Dube

Critical Success factors	Reasons
Adequate infrastructure	<ul style="list-style-type: none"> ▪ Promotes production and marketing
Enabling policy environment (legal structures, land tenure, taxes etc.)	<ul style="list-style-type: none"> ▪ Facilitate conflict resolution ▪ Appropriate economic incentives ▪ Behaviour change
Socio-cultural incentives	<ul style="list-style-type: none"> ▪ Difficult to change ▪ Non-market incentives for production/conservation
Known markets / Realistic future markets	<ul style="list-style-type: none"> ▪ Reliable source of income ▪ Ensures continuity of production ▪ Has commercialisation potential
Value adding	<ul style="list-style-type: none"> ▪ Promotes financial sustainability
Physical environment	<ul style="list-style-type: none"> ▪ Determines species
Skills (leadership and husbandry)	<ul style="list-style-type: none"> ▪ Facilitates community functioning

Hindering Factors	Reasons
Unresolved land tenure	<ul style="list-style-type: none"> ▪ Disincentive to production and access to credit
Markets dominated by large commercial farmers	<ul style="list-style-type: none"> ▪ Externalisation of costs ▪ Unfair competition
Poor legal framework	<ul style="list-style-type: none"> ▪ Creates confusion = conflict ▪ Policies do not support CBManGR ▪ Incentives incompatible with CBManGR (conservation and sustainable use)
Land holdings too small	<ul style="list-style-type: none"> ▪ Inappropriate systems
Lack of knowledge and skills in community	<ul style="list-style-type: none"> ▪ Production and marketing suffer
Strategies	<ul style="list-style-type: none"> ▪ Information and knowledge sharing ▪ Education and training <ul style="list-style-type: none"> ○ Formal, syllabus ○ Informal ▪ Increased focussed support to small farmers (affirmative action) ▪ Removal of existing agricultural subsidies which damage Agrobiodiversity ▪ Ensuring market information flow ▪ Proper evaluation of indigenous AnGR ▪ Rewrite policies in accordance with community-based development ▪ Research and funding for research (sociological, cultural and economic performance of breeds etc.) ▪ Granting land tenure, ownership ▪ Alternative land use and production systems

5.6 Results of WG 5: Stakeholder Participation

Issues to be dealt with:

Stakeholder Participation

- Community to include: scale, use, composition
- Is this a community model?
- Involvement of farmers in project management
- What category of farmers were involved? (1st presentation)
- How to deal with non-participating members?
- What is the role of scientists/NGOs in CBMFAAnGR?
- What is the role of external agencies in the accessing and conservation of IK?

Linking Farmers and Government

- Need for communication
- Institutional support
- How to link farmers, communities and government?
- Required government support and private tenure

- Initial government support

IK

- Can we use the cultural value of breeds as a means of support for development programmes?
- How do we integrate IK in CBMFAnGR with respect to small holder farmer inputs?
- What is the importance of indigenous knowledge?

Direct to presentations

- Is management at Bunda similar to the community?
- What is the future of the EA goat?
- Does the Basotho pony qualify as a global asset (GEF)?
- What are the actual users of poultry?

Results of group work:

Group members: Ilse - John Moreki - Msechu - Zakhe - Janet - Steve - J. Mapemba - Shimadry - Kilo - Chihana - J. Mwenya

Stakeholders	<ul style="list-style-type: none"> ▪ Farm animal keepers ▪ Researchers ▪ NGOs ▪ Community leaders ▪ Extension agents ▪ Policy makers and politicians ▪ Private sector ▪ Veterinary services ▪ Donors
Success factors	<ul style="list-style-type: none"> ▪ Good communication ▪ Recognition and utilisation of indigenous knowledge ▪ Mutual trust ▪ Adequate resources/funds ▪ Commitment and full participation ▪ Flexible time frame ▪ Sense of ownership and partnership ▪ Introduction of appropriate technology and knowledge from other sources ▪ Full understanding of objectives and aims of the program ▪ Effective extension service
Hindering Factors	<ul style="list-style-type: none"> ▪ High initial costs ▪ Requires a lot of time ▪ Disputes among stakeholders ▪ Preconceived ideas by stakeholders ▪ New area from which methodologies and capacity are being developed ▪ Lack of political will ▪ Political interference ▪ Land tenure ▪ Conflicting views on land use ▪ Different expectations by stakeholders ▪ Lack of capacity in interactive/participatory approaches

Constraint	Strategies
	<ul style="list-style-type: none"> ▪ Lack of ability to handle multidisciplinary teamwork
High initial cost	<ul style="list-style-type: none"> ▪ To raise awareness of donors, Government and NGOs of the importance of AnGRs ▪ Contribution by communities ▪ Spreading responsibilities ▪ Co-financing
Requires a lot of time	<ul style="list-style-type: none"> ▪ Clarifying objectives and aims ▪ Effective communication
Disputes among stakeholders	<ul style="list-style-type: none"> ▪ Defining roles ▪ Having a written protocol ▪ Allow for flexibility ▪ Transparency and accountability
Preconceived ideas	<ul style="list-style-type: none"> ▪ Clear understanding of objectives of program
New area	<ul style="list-style-type: none"> ▪ Learning from successful CBM programs ▪ Research and development of new methodologies ▪ Training in new methodologies
Political will and interference	<ul style="list-style-type: none"> ▪ Awareness on roles of politicians
Land tenure and land use	<ul style="list-style-type: none"> ▪ Negotiations and bye-laws for land use
Different expected outputs	<ul style="list-style-type: none"> ▪ Awareness
Lack of capacity	<ul style="list-style-type: none"> ▪ Capacity building
Multidisciplinary teamwork	<ul style="list-style-type: none"> ▪ Capacity building

Comments from Plenary (Rapporteur: Ilse Köhler-Rollefson):

- We should recognise the traditional hierarchy and make an effort to go through traditional leaders and chiefs and respect their values.
- In order to raise awareness of politician, it might be a good idea to arrange a workshop for them on CBManGR.
- The question of land tenure has come up in several of the working groups – it appears to be a crucial issue.

5.7 Synthesis of Topic 1

by Ilse Köhler-Rollefson

The purpose of the first session was to clarify participants' concepts of community-based management of AnGR (CBManGR) and to work towards a clearer definition and understanding. It was emphasized that CBManGR differs from other types of AnGR management that it seeks to achieve the sustainable use of AnGR by utilizing indigenous knowledge, empowering communities socially and economically, and being dynamic.

There were five case study presentations in this session.

The presentation by O.T. Thakadu of the Department of Wildlife and National parks in Botswana detailed experiences made with community based natural resources management (NRM). It described how natural resources had originally served as a buffer against poverty and other calamities, but that earlier approaches to conservation had only resulted in alienating communities from their natural resource base. A paradigm shift in conservation to community based approaches has yielded better results. Lessons learnt include the importance of an enabling environment, the need for positive effects on the livelihood and the creation of a legal entity or CBO to implement management decisions.

The paper by C.V. Yapi Gnaore from the CNRA in Ivory Coast detailed experiences made with an open nucleus breed improvement project for Djallonke sheep. Lessons learnt included the need for continuous extension services, good communication, availability of veterinary services and other inputs, as well as farmer's motivation.

Joyce Njoro from ITDG in Kenya described a community driven initiative for breed improvement in which her organisation had been approached for logistical and technical support to upgrade the local East African goat breed through cross-breeding with Galla goats in order to achieve better growth rates. While the livestock keepers were committed to the "project" because of the better performance of the crosses, there was also concern about the ability of the environment to sustain animals with larger body sizes.

Jenny Bester from the NAC in Irene (South Africa) described the various steps taken in a project to upgrade Nguni cattle kept by local communities in Northern province and East Cape. Tested bulls had been placed for three years in local communities who had been encouraged to save in order to be able to purchase a new bull. An important success factor in this project were the market linkages provided by a local NGO (Agrilink).

A paper by T.N.P. Gondwe et al. From the University of Malawi described a community-based project to promote rural poultry diversity, management, utilisation and research. The project involved setting up open nucleus breeding centres in the communities themselves which will supply better than average animals to individual farmers.

A contribution from Lesotho centered on efforts to conserve the Basotho pony by means of "mare camps".

Based on comments and questions relating to these presentations, five working groups were formed.

Working Group 1 : Monitoring and Evaluation came to the following conclusions:

- Monitoring must be based on well-being indicators of both humans and animals,

Working group 2 (Breeding Goals and Breed Improvement)

- Emphasized that critical success factors include a participatory approach with respect to the setting of breeding goals, bearing in mind how realistic it is, the need to identify/mark animals, to understand the farming system and the presence of a certain infrastructure.
- In order to achieve breeding goals, necessary strategies are to develop appropriate policies, to find innovative ways of controlling mating and to prioritise goals through group discussions.

Working Group 3 (Sustainability of CBMA_nGR)

- Critical success factors identified included institutional support from the government, NGOs, traditional institutions, research and training institutions and breed societies, participatory approaches, benefits accruing to the community in regards to food security, income, prestige, satisfaction, the availability of inputs and market access.

Working group 4 (Incentives for Conservation and Marketing)

Working Group 5 (Stakeholder participation)

- This working group dealt with the issue of how to achieve stakeholder participation and mechanisms for linking farmers and the government.
- It identified good communication, mutual trust, recognition and utilisation of IK, a flexible time frame, adequate resources and introduction of appropriate technology and knowledge from other

sources. Hindering factors include high initial cost, possibility of disputes among stakeholders, interference by politicians and unresolved land tenure as constraints. Strategies to achieve success would include co/financing of projects, having a written protocol, a clear understanding of objectives of the program and capacity building.

6 Topic II: Economic Evaluation

Topic 2 had 3 paper presentations and was followed through with the same procedure and group work questions as topic 1

6.1 Case Study Presentations

1. The Economic Valuation of AnGR: Importance, Application and Practice - by *Adam Drucker, United Kingdom*
2. Role of AnGR in Poverty Alleviation: The Case of the Box Keken Pig in SE Mexico - by *Simon Anderson, United Kingdom*
3. Access and Benefit-Sharing in the Context of Farm-Animal Genetic Resources - by *Anita Idel, Germany*

6.2 Results of WG 1: Economic Valuation

Issues to be dealt with:

- Values will vary with communities
- How to calculate economic value?
- How do you translate values from micro to macro level?
- How can we make decisions if no or unreliable (value) data exist?
- In the absence of economic values, what do we use as reasonable indicators?
- Different livestock functions - non-production traits most important
- Various livestock functions depending on age/sex of community members
- How to capture economic values not linked to production?
- What are the negative impact values of AnGR?
- How can we value manure production and control of insects?
- How is colour valued?
- Information required to value AnGR

Results of group work:

Group members: George Ocen - Peta Jones - Adam Drucker - Musa Kunene - Joyce Njoro - Florence Mhlanga - Arvind Shimadry - Yobe Mtonga - Mizeck Chagunda - Dave Ducasse - K. Kabata - Patrick Chikungwa - Klans Illies - Romnaldo Vaila

Critical Success factors	<ul style="list-style-type: none"> ▪ Data availability and get-ability - quantitative and qualitative record-keeping, including animal health records ▪ Methods of valuation - criteria, identification of traits ▪ Awareness of importance and uses of economic valuation ▪ Clear objectives for valuation - how will information be used? ▪ Indigenous knowledge on socio-cultural valuation ▪ Valuation skills ▪ Market information ▪ Financial and institutional support
Hindering Factors	<ul style="list-style-type: none"> ▪ Lack of data ▪ Trans-humant nature of some communities ▪ Narrow focus on some production traits ▪ Multi-purpose nature of animal genetic resources ▪ Lack of consensus on value- value differ between communities and people, different communities value different animals differently, whereas policy-makers want agreement or give top-down valuations. ▪ Valuation technologies interested on AnGR ▪ Lack of skilled personnel to do valuation, especially social values ▪ Lack of funding and institutional support
Strategies	<ul style="list-style-type: none"> ▪ Raise awareness on the nature of values ▪ Develop simple data collection methods ▪ Develop skills/training in valuation of AnGR - include health workers at very beginning, empower all extension workers in AnGR valuation. ▪ Raise institutional awareness on the nature of values ▪ Include animal health as part of strategy/concept ▪ Participatory approach to developing a of traits and the selection of criteria ▪ Test and apply methodologies - ensure uptake by farmers, breeders, policy-makers. ▪ Funding for initial valuation case studies (FAO, UNDP, GTZ, SACCAR)

Comments from plenary (Rapporteur: Peta Jones) :

- Purpose of valuation is to use values to translate into better policies - also this workshop should provide the framework
- Shortage of skills is not necessarily shortage of personnel
- Economic valuation hitherto concentrated much more on crops
- There is a need to identify and develop the necessary skills and competencies.

6.3 Results of WG 2: Defining Poverty

Issues to be dealt with:

- Values will vary with communities
- How to calculate economic value?
- How do you translate values from micro to macro level?
- How can we make decisions if no or unreliable (value) data exist?
- In the absence of economic values, what do we use as reasonable indicators?
- Different livestock functions - non-production traits most important
- Various livestock functions depending on age/sex of community members
- How to capture economic values not linked to production?
- What are the negative impact values of AnGR?
- How can we value manure production and control of insects?
- How is colour valued?
- Information required to value AnGR

Results of group work:

Group members: Gondwe - Barnabas - Mruttu - Lekota - Brigid - Janet - Emmanuel - Rosemary - Mike Mingay - J.P. Mapemba - John Stephen - Christo - Kilo

Non-homogeneous communities	Addressing the situation	Critical to successful CBMAAnGR	Hindering success	Strategies
Relative terms	Ensure all groups are represented	Define economic groups	Disguising assets to attract aid	Trust / Time
PRA to identify groups	Match programs to community needs	Deliberate targeting of poorest for poverty alleviation	Incorrect observations	Verify assessment
Local wealth ranking	Choice of breed depends on target group	Committees must be representative	Well to do groups may nominate	Strong facilitation
Criteria for defining groups	Flexible donors or match donors to projects	Target livestock breeds owned by target group	If unrelated issues arise	Provide links with other organisations
Food security No. and type of livestock	Recognise local authorities	Poorest must have livestock to conserve	Communities with bad experiences	Trust, prompt feedback, keep contract
Assets, income level and nature				

As reported by Brigid Letty:

Communities are non-homogeneous with respect to levels of wealth. Terms such as poorest and poor are relative and must be identified for a particular community. "Poor" in one community may not be the same as the "poor" in another.

Another division of communities could be on the basis of technology adoption rates. Most communities will have early adopters, sceptics and laggards.

Participatory techniques (e.g. PRA) should be used to identify wealth groups in a community. Techniques such as transect walks and wealth ranking are useful for this. The community will have its own ways of ranking wealth. E.g. In Mosai communities, people with lots of cattle/livestock would be considered to be wealthy.

Some confusing situations arise e.g. where a man may have a poor house but own a tractor - this should be considered when using assets to indicate wealth.

Criteria for defining economic groupings:

- The level of food security
- Species and number of livestock owned by house-hold
- Household assets
- Level and nature income.

Outsiders should be aware of the sensitivities associated with health ranking. PRA methods allow for this.

It is often useful to obtain secondary information about a community from NGO's and extension service already active in a community.

When assessing household wealth it is important to verify livestock ownership as the keepers are not always the owners of the assets.

How do we approach differences in economic status?

Ensure that all livestock owners are involved in the program and that an elected committee represents all economic groups. Ensure that work programs reflect the situation in the community - do not do cattle work in a community where the poorest of the poor have chickens (if the 2nd aim is poverty alleviation).

In terms of animal genetic resource conservation, the choice of breed will depend on those owned by the target group.

Donors need to be flexible so that community interests can be accommodated. One option is for an NGO or extension officer in contact with a community to run a PRA process and then feed the results through to donors to find financial support.

Critical Success factors	<ul style="list-style-type: none"> ▪ Recognise traditional authority structures. ▪ Classification of economic groups - in particular define the "poorest", if the objectives are both CBMANGR and poverty alleviation. ▪ The "poorest" must in fact own livestock which requires conservation. ▪ Deliberate targeting of the poor and poorest - committees must be representative of all groups. It is then necessary to target the livestock species owned by the target group.
Hindering Factors	Strategies to address them
The most "well-to-do" group may dominate meetings and committees because of having a higher social standing	<ul style="list-style-type: none"> ▪ Strong facilitation (PRA processes) to remove dominating figures and 'hear' the poorest
Donors' objectives are not always	<ul style="list-style-type: none"> ▪ Donors should not arrive with pre-conceived issues or

matched by community interests	<p>donors should be matched to issues that arise</p> <ul style="list-style-type: none"> ▪ A knowledge of which donors deal with particular issues ▪ Donors should provide links with other organisations that are able to deal with issues which arise ▪ Build trust through regular report backs, especially in new communities
Past bad experiences make communities sceptical e.g. no follow up following PRA training.	<ul style="list-style-type: none"> ▪ Build trust through regular report back, especially in new communities

6.4 Results of WG 3: Approaches to Poverty Alleviation

Issues to be dealt with:

- How to avoid a possible contradiction between poverty alleviation and conservation?
- Instruments to use in support of the poor in society for CBM
- Do we have appropriate approaches to poverty relief in our communities?
- How do we avoid new dependencies by providing incentive payments?
- Policy to reduce poverty
- Need for development of subsidies for indigenous AnGR
- How can the issue of re-impacts of subsidies be addressed in CBManGR?
- Extreme poverty cause fast erosion of AnGR
- What can we do about marginalized agriculture and animal diversity loss?

Results of group work:

Group members: A.M. Mohale - Leonard - Steve - Clemens - Zakhe - Chaya - Louise - Jenny - Gloria - Brian - Chihana - P. Nyathi - Aubrey - Antje

Critical Success factors	<ul style="list-style-type: none"> ▪ Enlist participation of all stakeholders ▪ Clear definition of roles ▪ Harmonise development policies with conservation needs and strategies ▪ Broad understanding of categories of poverty ▪ Participatory poverty assessment ▪ Understand the relationship between poverty and FanGR ▪ Access to appropriate FanGR ▪ Appropriate extension and technology ▪ Empowerment through capacity building ▪ Develop proper tools for M&E ▪ Public awareness and advocacy
Hindering Factors	<ul style="list-style-type: none"> ▪ Lack of public awareness in FAnGR ▪ Lack of coordination by advisory groups - mixed messages ▪ Inappropriate policies ▪ Inadequate adaptive research ▪ Political instability ▪ Socio-cultural beliefs ▪ Animal health factors

	<ul style="list-style-type: none"> ▪ Natural calamities (floods, droughts etc.) ▪ Human health (e.g. Aids/HIV)
Strategies	<ul style="list-style-type: none"> ▪ Make incentives output related ▪ Targeted gradual incentive removal ▪ Capacity building ▪ Appropriate policies ▪ Innovative, appropriate and adaptive research ▪ Apply systems approach ▪ Work within existing cultural environment ▪ FAnGR to be part of integrated rural development ▪ Use animal tolerant to endemic diseases

Report by Louise Sethshwaelo

Critical Factors:

Avoiding possible contradiction:

- It is important that the approached enlist participation in of all stakeholders in order to build consensus on what priorities should be addressed in animal genetic resources management in order to alleviate poverty within the community
- To avoid contradictions between development policies that address poverty and needs for conservation of biological resources there is need to harmonise development FAnGR conservation to ensure that they are not working against each other.
- It is also important to have a clear definition of notes of all the key players to ensure that FAnGR programme are implemented effectively.

Instruments to use in support of poverty alleviation approaches in the society for CBManGR

- There is need to ensure access of farmers to appropriate genetic material. This is especially important in planning restocking programs in communities following natural disasters as well as displaced people through other factors and events.
- There is need to develop and provide appropriate breeding methods that can be used by communities to sustainably utilise FAnGR to improve their livelihoods.
- There should be a clear understanding and appreciation of the contribution of farm animals in reducing poverty and contributing to household food security. In this context this will provide a proper guide in formulating and implementing livestock programs aimed at alleviate poverty.
- There is need to empower communities through training to provide them with skill needed to develop their own breeding goals and objectives that we most likely to address the issues food production as well as income generation within the community.
- There is need to develop and operationalise proper tools for monitoring and evaluation to ensure that CBManGR programs do contribute to poverty alleviation and enable changes in approach and implementation as and when its deemed necessary.
- There is need for public awareness concerning the potential contribution of FAnGR in poverty reduction and influence development policies dealing with livestock. The need for advocacy and constituent building to generate support for CBM activities in important.

In providing incentives, how do we avoid people becoming dependent on these incentives?

- The incentives should be based on outputs but not necessarily to be seen as payment but as recognition of achievement.
- Incentives provided to encourage farmers should be removed gradually as farmers gain confidence and ownership of the program

Hindrances

- Lack of awareness and access to information leads to inappropriate approaches being applied and wrong decisions being made both at policy level and program implementation.
- Lack of proper coordination in programs geared at poverty alleviation and those for the management of farm animal genetic resources to results in lack of complimentary and collaboration and waste of resources through unnecessary duplications
- Political instability which leads to internal displacement of peoples may also disrupt progress made in CBMANGR as well as make displaced people even more poorer
- Some socio-cultural believes and practices may work negatively in implementing approaches for CBM FAnGR as well as poverty alleviation more especially when considering delineation of responsibilities and authority not only at household but also at community level
- Animal health issues may also act as a limitation in areas where breeds not adapted to the diseases endemic in the locality.

Strategies

- Make incentives output related as per item 3 of critical factors
- Target and gradual removal of incentives.
- Capacity building to empower farmers to make informed decision and implement activities.
- Appropriate policies.
- Appropriate and innovative adaptive research should be done to provide appropriate technologies.
- Apply systems approach in implementing programs.
- Work with existing cultural environment in such a way that cultural believes and practices are used effect to contribute to CBMANGR implementation.
- Make the strategies for CBMANGR an integral part of the integrated rural development strategy for the country.
- use animals that are better adapted or have tolerance to endemic diseases in the area.

6.5 Results of WG 4: Intellectual Property Rights (IPR)

Results of group work:

Group members: Ilse - Jacque - Msechu - ELA - Stanley - Moreki - Anita - Wolf - Ellen - Norbert - Ed Rege - Keith - Maryam - Annette

Critical Success factors	<ul style="list-style-type: none"> ▪ Govt. policies to control 3rd parties + legislation ▪ Difference between law and implementation ▪ Appropriate policies and specific legislation / legal framework for IPR ▪ Define benefits and their time of accrument ▪ Implementation or development of IC's ▪ Participatory policy formulation ▪ Definition of "intellectual" and "material" property rights
Hindering Factors	<ul style="list-style-type: none"> ▪ Lack of awareness of IPR at all levels ▪ Lack of interaction at all levels ▪ Clarity of ownership issues ▪ Benefit sharing can lead to conflict (e.g. Nguni + Lippazaner) ▪ Less money available from public sector - research more

	<p>dependant on companies for funding</p> <ul style="list-style-type: none"> ▪ Lack of well documented cases of biopiracy ▪ Contradictory international conventions ▪ Lack of legislation at national level ▪ Lack of monitoring "traceability" ▪ Skewed perceptions on the value of AnGR vs PGR ▪ PIC + MAT negotiation where many countries have the same FanGR ▪ Lack of understanding of patenting at all levels
Strategies	<ul style="list-style-type: none"> ▪ Benefit-sharing agreements ▪ Code of conduct/ ▪ Protocol for using genetic material of animal origin ▪ Labelling / certification/ traceability ▪ Benefit-sharing framework ▪ Working groups on IPR at national, regional and international workshops ▪ Document cases of biopiracy - awareness ▪ Establish mechanisms for monitoring of biopiracy at all levels - through national, regional capacity building in IPR at all levels - by means of sui generis IPR ▪ Organise workshops for capacity building at all levels and awareness raising at grassroots level

Additions by the Rapporteurs: Ilse Köhler-Rollefson and Jacque Els:

IPR with respect to AnGR is a subject that has barely received any attention so far; but with the establishment of this working group we have decided that it is an issue.

Are AnGR affected by patenting ?

AnGR represents a typical orphan commodity - nobody is interested in it until something happens or until somebody does something. Some guidance was taken from the plant sector: the patent for the Basmati rice was withdrawn after governments and NGOs raised awareness and took action.

With AnGR, the problems of establishing ownership are even bigger.

Some breeds occur in several countries, for instance the Nguni in South Africa, Botswana, Namibia, etc. Another example was cited from Europe: the Lipica horse breed occurs both in Austria and Slovenia and this has led to problems

Should we therefore talk about populations (at country level) rather than breeds ?

This could also cause problems, because patenting is against traditional customs.

6.6 Synthesis of Topic 2

by *Brigid Letty*

Discussion points:

A. Role of AnGR in Poverty Alleviation; the Case of the Box Keken Pig in SE Mexico - by *S. Anderson*

The primary objectives poverty alleviation and conservation of AnGR was seen as a tool to achieve this since livestock are responsible for fulfilling a range of roles in poor, marginalized communities.

Functions of livestock vary across wealth groups within a particular community while within households, the beneficiaries differ depending on the economic level.

- It is thus necessary during participatory work to target the most vulnerable members of the poorest households

Livestock attributes for poverty reduction included productivity, utility, security and convertibility.

When evaluating AnGR it is necessary to consider not only economic perspective (optimal productivity traits) but also non-income perspectives that enable livestock to fulfill other livelihood functions.

Some livelihood functions include role in crop production (traction), savings, insurance, social relations etc. Production is often not an important feature.

Some identified constraints to CBM AnGR conservation were:

- The erosion of genetic resources through cross breeding.
- Policies in place such that no one listens to peasants, pr-poor policies about and subsidies support intensive agriculture.
- There is a failure to capture the benefits of conservation in the market place.

B. The Economic Valuation of AnGR: Importance Application and Practice - by *A. Drucker*

In order to decide which genetic resources should be conserved, it is necessary to give values to traits - most significant are those traits, which do not have a formal market value.

The following types of values can be given to genetic resources:

1. Direct use values - sale of milk, meat, hides etc
2. Indirect use - a role in ecosystem functions
3. Option values - such as livestock being a form of insurance
4. Bequest values - the wish to be able to pass something on to ones descendants
5. Existence values - where the value is just that something is know to still exist e.g. blue whale

The importance of valuation in policy formation

It is necessary to give values to genetic resources so that this can feed into policy formulation

Policies need to conserve local genetics through actions such as the removal of subsidies that favour export agriculture, re-orientation of subsidy policies, market creation and commercialisation of local breeds. Benefit sharing genetic call options royalty nights and licensing agreements will also be incentives for communities to conserve their resources.

Methods for valuation should consider the following: actual economic importance of the resource, the contingent valuation, opportunity cost, priorities of breeding programs and production losses averted.

C. Access and Benefit sharing in the Context of Farm-Animal Genetic resources - by A. Idel

A model law was developed by the OAU as African model legislation to regulate the use of animal genetic resources in particular the concept of benefit sharing so that the rights of local communities are protected.

Access by third parties must be controlled. One such measure would be through the "prior informed consent" concept. Communities must give consent before outsiders harvest genetic resources.

Local animal farmers and breeders should be encouraged and supported to consider criteria for what they consider a risk for further breeding.

Breeders and keepers of farm animal genetic resources need to obtain an equitable share of benefits arising from the use of animal genetic resources.

Discussion Simon

- Communities should be recognized as being heterogeneous in terms economic status, resource endowment and the ways in which they utilize resources - in particular farm animals. This means that when community - based projects are implemented, such differences have to be accounted for.
- We need to come up with implementable strategies to account for heterogeneity.

Discussion Adam

- As of now, we do not have any economic values for traits/breeds - especially in Africa. What do we use at this point? Make use of other case studies already conducted or do 'quick' preliminary studies in order to obtain some values.

Discussion Anita

- With respect to the phrase "benefit sharing" the question was raised as to who the community is sharing the benefits with. The feeling being that the community should not be "sharing" the benefits as they in fact have ownership of the genetic resources and all benefits should accrue to them. The response: It's not clear how the community should share benefits, but if a product is marketable and a profit is generated then this should be of benefit to the community from which the product originated.
- The benefits may take a long time to be realised
- Perhaps due to research processes, so some possible non-monetary benefits should be accrued throughout the process. Some sort of immediate "payment" may be necessary, such as a programme to build capacity within the community.
- Clarification on the concept of 'third parties' was sought.
- This would be the body responsible for taking a genetic resource from the original community to the consumer - could be a research institution.

Plenary Session Discussions

Approaches to Poverty alleviation

- It was agreed that human health must be considered when talking of poverty alleviation - in particular AIDS. Thus an integrated rural development programme is essential.

- The presentation did not clearly define the role of animal genetic resources in poverty alleviation but it was concluded that use of the correct animals could achieve this. Policy makers will need to be thoroughly convinced of these links.
- Governments and politicians forget that animals can generate income, which can then be used to purchase food and thus ensure food security.

Economic Valuation

- Valuation means attaching a value while evaluation refers to assessing performance, potential or utilizability.
- In order to come up with values for traits we need to make use of multi-disciplinary skills in economists alone cannot achieve this.
- By giving values to non-economic traits it is possible to convince politicians that current policies are skewed towards exotic breeds. This will allow for policy changes.
- The question was raised concerning the lack of values at the point. It was agreed that values will differ between communities so participatory processes should be used to generate some baseline data.

Defining Poverty

- Do AnGR programmes wildlife?

Discussion points

- At the present time, many communities mainly have crossbred animals - which is to invest in pure-breeds for these processes. - Response: Nucleus herds and subsidised actions could supply them.
- In successful CBM systems - what are the components of success?
- Systems are dynamic, but still require support.
- Nucleus herd held on research stations will be managed under different conditions to those where they are being utilised.
- Farmers must be involved in the development of a breed because they are users.
- If policy makers are informed of successes using community-based approaches then this will lead to policy changes so that personnel receive training in these methodologies - this starts at the level of universities.

7 Topic III: Institutional and Policy Framework

7.1 Case Presentations

Three papers were presented. The full presentation will be available in the long version of this documentation which will be distributed on a CD Rom.

Paper 1: Intergovernmental Mechanism in the Global Management of Animal Genetic Resources *by Dr. Elzbieta Martyniuk, Poland*

Paper 2: Access to Biological Resources and Benefit Sharing: Legislation in South Africa - *by Ellen M. Mahlase, South Africa*

Rapporteur: Antje Feldmann

There is an absence of legislative framework on Access and Benefit Sharing (ABS). ABS in South Africa is captured in the following legislation:

White Paper on Conservation and Sustainable Use of Biological Diversity (1997)

The White Paper was drafted in accordance with the objectives of the CBD and has to control the access to SAs indigenous genetic resources through the introduction of appropriate legislation and establishment of institutional structures. An efficient permitting system whereby authorization is required for the collection of any biological or genetic resources to be used for research, trade or commercial purposes.

National Environmental Management Act NEMA (draft 2000)

ABS in South Africa has been outlined in the biodiversity chapter of the National Environmental Management (NEMA) and is housed in the National Department of Environmental affairs and Tourism (DEAT).

Objectives

- The objective is to
 - regulate the access to biological resource (wild, domesticated, in situ, ex situ) and knowledge
 - to ensure the fair and equitable sharing of environmental
 - to arise economic and social benefits from their use
- ABS regulations do not apply
 - biochemical or genetic material of human origin
 - exchange of biological resources among local communities
 - associated knowledge and innovations resulting from non-profit making practices, uses or customs

Permit for the access to biological resources

Access to biological resources and/or knowledge for academic research or commercial purposes is prohibited without a permit.

The applicant is required to conduct an environmental impact assessment.

The access permit stipulates:

- the species

- the activity
- the time period (research permit 5 years, commercial permit 3 years)

Access and benefit sharing agreements

- comply with any criteria and minimum terms and conditions that may be prescribed
- shall provide for mutually agreed terms and conditions for the fair and equitable sharing of benefits arising from the use of the resources including the use of derivatives and synthesised products
- serve national interest

Conclusion

The draft is not yet opened for public comment and has not been tabled in parliament. It is still in its preliminary stage.

Discussion

How far is the benefit sharing as a national interest even focused on community level?

The ABS is not focused to the sharing of benefits between persons and should work on national level.

Paper 3: The Role of Breed Societies and Breed Conservation Non-Governmental Organisation in Community-based Farm animal Genetic Resources – by Keith Ramsay, South Africa

Rapporteur/Synthesis: Yobe Mtonga

- The traditional communal farming sector has the biggest potential for sustainable use of indigenous and locally adapted breed.
- Breed societies, breed conservation NGO's and clubs will play a key role in the promotion and conservation of AnGR.
- The information on indigenous and locally adjusted breeds is often fragmented and difficult for rural, emergent farmer, stockowner to access.
- Rural communities have less access to appropriate technology and to markets
- The concept of community (clubs) based management rather than working with individual should be encouraged to facilitate sustainable use of AnGR, Conservation and improvement.
- Breed societies should work with rural communities in partnership in identification, basic recording and animal husbandry practices.
- Breed societies, clubs NGO's should become more involved with rural communities through placement of animals and facilitation of community involvement on change of AnGR and marketing.
- Improvements in the management of the veld and animal production practices in a logistic and coordinated approach is critical in most communal areas in improvement of production.
- The focus on breed improvement should be based on improvement of traits within breeds and their environments.

Questions: How can we approach the communal nature of grazing systems in order to improve rangelands?

Answer: There is need for animal scientist and range ecologists to work together to formulate strategies.

Q: What have been the success stories of breed societies in implementation of CBMAAnGR?

A: There is need for breed societies to open up membership even to those local communities who may not meet the requirement for debated recording and performance details but can register births. There is also need to develop models that will be applicable to our rural communities.

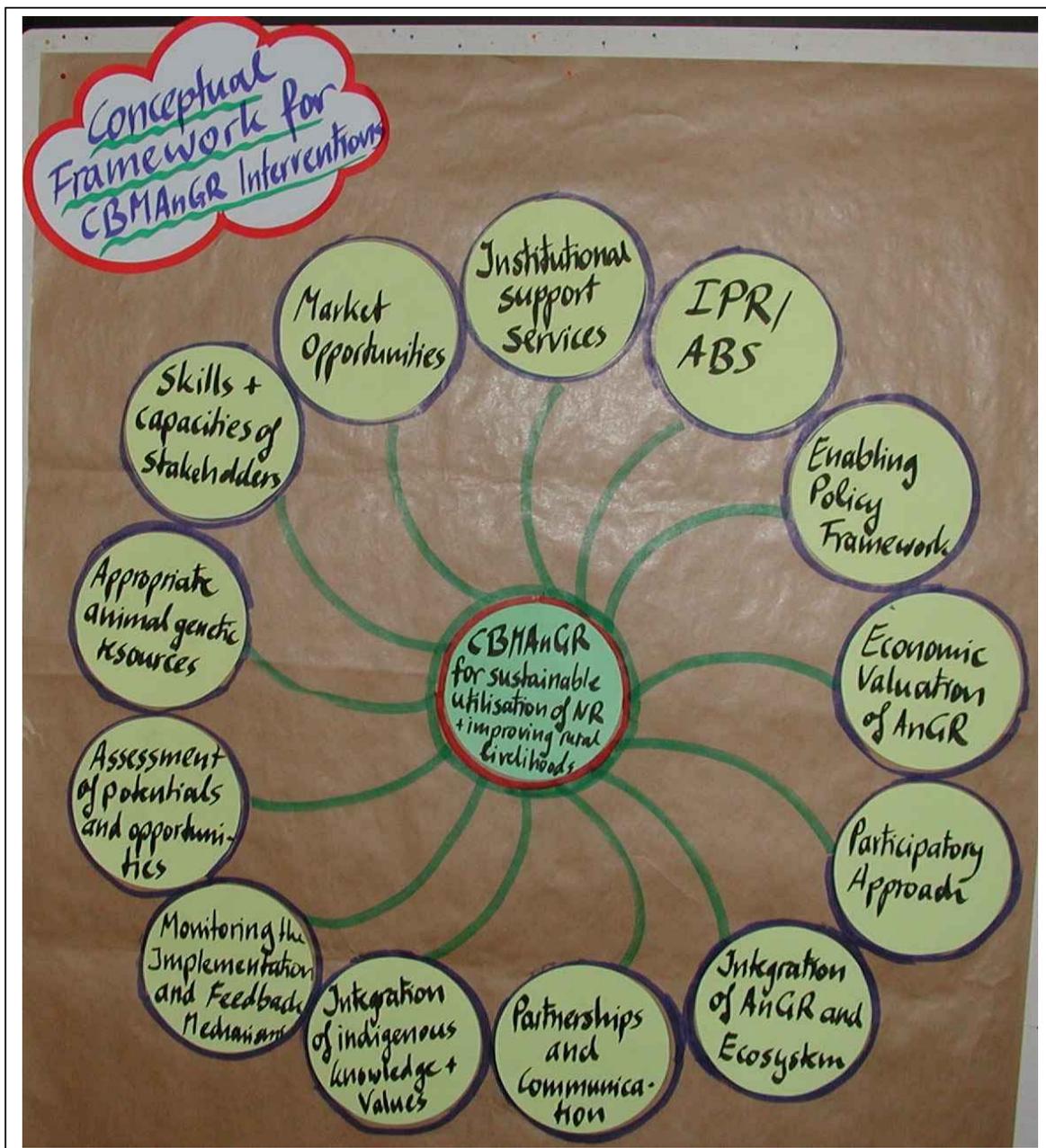
7.2 Synthesis of topic 3

by *S.M. Makuza*

1. Integrated CBMANGR needs to promote involvement and empowerment of rural communities by linking their economic and social development to AnGR.
2. Implementation of CBMANGR entails development of management plans with local communities, facilitation at all levels and establishment of representative and accountable legal entities and formulation of resource (AnGR) governance by-laws and regulations.
3. For CBMANGR implementation, the policy and legal framework must be in place to create an enabling environment.
4. If communities have incentives and given proper tools for management of AnGR, they can effectively organize themselves and take appropriate conservation actions.
5. The future of conservation of AnGR lies on the support of the local communities.

8 Towards a Conceptual Framework for CBMA_{NGR}

As an overall synthesis of the discussions and analysis taken place during the workshop, the success factors identified were clustered and headings were defined as 'cornerstones' for CBMA_{NGR} interventions (see table below). Cornerstones within a conceptual framework were defined as fundamental conditions which need to be in place for this type of interventions to be highly effective. The model represents a systemic perspective on interventions, where there is no hierarchy between the elements (as in a logframe), but they are all equally important and need to be addressed if not in place. The following frame was developed:



For each cornerstone a group of volunteer participants were defined, who would like to focus on the topic and take it further after the workshop. Volunteers were nominated to be the facilitators / coordinators of these groups (bold). The tasks of the facilitators were defined by the group as:

- Put together an email list
- Circulate documentation, which is available
- Inventory of what people are doing
- Keeping members updated
- Set up goals and strategy for the group

Cornerstone	Group members (facilitators in Bold)
<p>Participatory Approach</p> <ul style="list-style-type: none"> ▪ Ownership ▪ Participatory approach resulting in major input from local community ▪ Use of participatory approach to identify measurable benefits ▪ Clear definition of roles ▪ Enlist participation of all stakeholders ▪ Committees must be representative ▪ Ownership and commitment of communities ▪ Endorsement, commitment and leadership by traditional institutions ▪ What is the probability that this project will continue without donors? ▪ Mutual trust ▪ Recognition and utilisation of indigenous knowledge ▪ Understanding of the farming system ▪ Strong facilitation / PRA 	<p>J.K.K. Msechu Roland X. Petros Nyathi Dzelisa Joseph Mwenya Peta Jones J. Moreki Yapi-Gnaore H.A. Mruttu Yobe Mtonga Florence Mhlanga Kafishi Kilo John Stephen Jacob Mapemba Annette von Lossau A.M. Mohale P. Chikungwa S.D. Chihana A.M. Shongwe C. Teeluck R. Shimadry Musa Kunene E. Otsogile Simon Anderson</p>
<p>Economic Valuation of AnGR</p> <ul style="list-style-type: none"> ▪ Clear valuation objectives (purpose) ▪ Method of valuation / criteria ▪ Valuation skills ▪ Awareness of importance and uses of economic valuation ▪ Define benefits (monetary and non-monetary) and their timing ▪ Cost: benefit of conservation positive (farmer's view) 	<p>Adam Drucker Yapi-Gnaore Mizek Chagunda Timothy Gondwe Brian Thawana Rosemary Vilakati Janet Muguni Stanley M. Makuza Petros Nyathi Keith Ramsay</p>

Cornerstone	Group members (facilitators in Bold)
	H.A. Mruttu Florence Mhlanga Annette von Lossau Ed Rege Dzelisa Simon Anderson
Enabling Policy Framework <ul style="list-style-type: none"> ▪ Rewrite policy in accordance with CBD ▪ Enabling policy environment ▪ Review existing policies and legal framework ▪ Participatory policy formulation ▪ Implementations or development of ICs ▪ Appropriate policies and specific legal framework ▪ Land tenure ▪ Harmonise development policies with conservation needs and strategies ▪ Removal of existing agricultural subsidies damaging AnGR diversity ▪ Approach to influence policy 	Elzbieta Martyniuk C.N. Morupisi Romualdo Uaila Keith Ramsay Annette von Lossau Adam Drucker
IPR/ABS <ul style="list-style-type: none"> ▪ Difference between law and implementation (policing) ▪ Government policies to control third parties and legislation ▪ Defining intellectual and property rights 	Anita Idel Ed Rege Keith Ramsay Ellen Mahlase Ilse Köhler-Rollefson Annette von Lossau Andreas Drews M.S. Mohlabi
Institutional Support / Services <ul style="list-style-type: none"> ▪ Institutional support ▪ Appropriate extension and technology ▪ Research and funding for research ▪ Trust / prompt feedback / keep contact ▪ Institutional support from government: policy, finance, technical ▪ Effective extension service ▪ What kind of support services should be developed simultaneously 	Please do insert your names again and the name of the facilitator (list got lost!!)
Assessment of Potentials and Opportunities <ul style="list-style-type: none"> ▪ Realistic goals - appreciation of limitations ▪ Understand the relationships between poverty and FAnGR ▪ Contribution to food security and child-nutrition ▪ Broad understanding of categories of poverty ▪ Participatory poverty assessment ▪ Define target groups ▪ Define economic groups ▪ Deliberate targeting of poorest for poverty alleviation 	Yapi-Gnaore J. Moreki M.S. Mohlabi Musa Kunene Petros Nyathi C.N. Morupisi Simon Anderson

Cornerstone	Group members (facilitators in Bold)
<ul style="list-style-type: none"> ▪ Poorest must have livestock to conserve ▪ What is the purpose of managing AnGR? ▪ Flexible timeframe 	
<p>Appropriate Animal Genetic Resources</p> <ul style="list-style-type: none"> ▪ Access to appropriate FAnGR ▪ Development of relevant recording system (including cost sharing plan) ▪ Data "get-ability" and availability (record keeping) ▪ Proper evaluation of FAnGR (socio-cultural research) ▪ What are we conserving? Breeds or genes? ▪ Identification of animals ▪ Relevant selection criteria ▪ Breeding improvement programmes 	<p>Leonard Maposa J.F. Els Norbert Dube Florence Mhlanga G.W. Ocen Yobe Mtonga J.N. Njoro D.Z. Stanley M. Makuza A.M. Mohale Timothy Gondwe Rosemary Vilakati Janet Mnguni Ntombizakhe Mpofu B. Thewana Yapi-Gnaore Petros Nyathi Wolf von Wielligh Ed Rege</p>
<p>Skills and Capacities of Stakeholders</p> <ul style="list-style-type: none"> ▪ Skills (leadership and husbandry) ▪ Education and training - informal, formal, syllabi ▪ Empowerment through capacity building ▪ Capacity of farmers (knowledge etc.) ▪ Skills and partners for animal health aspects 	<p>Peta Jones Roland X. Joseph Mwenya S.D. Chihana Ellen Mahlase Klaus Illies G.W. Ocen Dzelisa Petros Nyathi Florence Mhlanga Janet Mnguni Romualdo Uaila Norbert Dube Ilse Köhler-Rollefson A.M. Mohale P.Chikungwa Yobe Mtonga John Stephen Elliot Nxumalo Wolf von Wielligh</p>
<p>Market Opportunities</p> <ul style="list-style-type: none"> ▪ Value adding ▪ Realistic future markets ▪ Known markets ▪ Develop strategies on marketing of IAGR, farmer 	<p>Christo Nowers Rosemary Vilakati Wolf von Wielligh Mizek Chagunda</p>

Cornerstone	Group members (facilitators in Bold)
<ul style="list-style-type: none"> incentives etc. ▪ Ensure market information flow ▪ Can short-term and long-term objectives be matched through incentives? ▪ Define market (abattoirs, wholesalers, self-retail) 	Janet Mnguni E. Otsogile J.F. Els Keith Ramsay Annette von Lossau Antje Feldmann Adam Drucker A.M. Mohale
Integration of Indigenous Knowledge and Values <ul style="list-style-type: none"> ▪ Socio-cultural incentives ▪ Indigenous knowledge on socio-cultural values ▪ Socio-cultural empowerment 	Ilse Köhler-Rollefson Rosemary Vilakati Dzelisa Dlamini Janet Mnguni Mizek Chagunda T. Lekota Jacob Mapemba Timothy Gondwe Keith Ramsay Peta Jones
Partnership and Communication <ul style="list-style-type: none"> ▪ Communication networks and linkages ▪ Provide linkage with other organisations ▪ Partnerships ▪ Information and knowledge sharing ▪ Public awareness and advocacy 	Peta Jones Jenny Bester Antje Feldmann Norbert Dube A.M. Shongwe Maria da Gloria Taela
Integration of AnGR and Ecosystems <ul style="list-style-type: none"> ▪ Explore alternate land use ▪ Sound animal and range management 	Antje Feldmann Anita Idel Stanley Makuza Leonard Maposa Elzbieta Martyniuk Jacque Els Florence Mhlanga Christo Nowers Timothy Gondwe Petros Nyathi
Monitoring Implementation and Feedback Mechanisms <ul style="list-style-type: none"> ▪ Monitoring based on well-being indicators (human and animal) ▪ Set-up of monitoring structures in the community ▪ Balance of conservation and livelihood needs to be monitored 	Simon Anderson Peta Jones

The cornerstones need to be further worked out, with their core contents, main strategies to address these issues, and possible ways on how this can be

implemented. Together with solid case examples this could develop into a guide for CBMANGR interventions.

Once the interest groups were formed, all participants were asked to come up with any suggestion for a proposal which they would like to pursue, as a group or as an individual 'champion'. So far, one concrete proposal came up from South Africa:

Supporting the marketing of Nguni products

Participants:

- Ministry of Agriculture, RSA, K. Ramsey
- Department Genetic Resources, Eirene, RSA, J. Bester
- NDA East Cape, RSA, Christo Nowers
- GTZ Sectorial Project Management of Agrobiodiversity, A.v.Lossau

Proposed activities:

1. Analysing experiences in the field of marketing Nguni products
2. Feasibility study for the marketing of Nguni leather
3. Contacting the private sector in RSA and outside
4. Analysing possibility of labelling products of the Nguni cattle
5. Support the improvement of tanning and leather processing at local level
6. Work out proposals for equity benefit sharing at community level

More initiatives were encouraged and might come up after the workshop.

9 Next Steps

First, the facilitator reviewed the outputs of the workshop so far:

What We Have Achieved in This Workshop so far

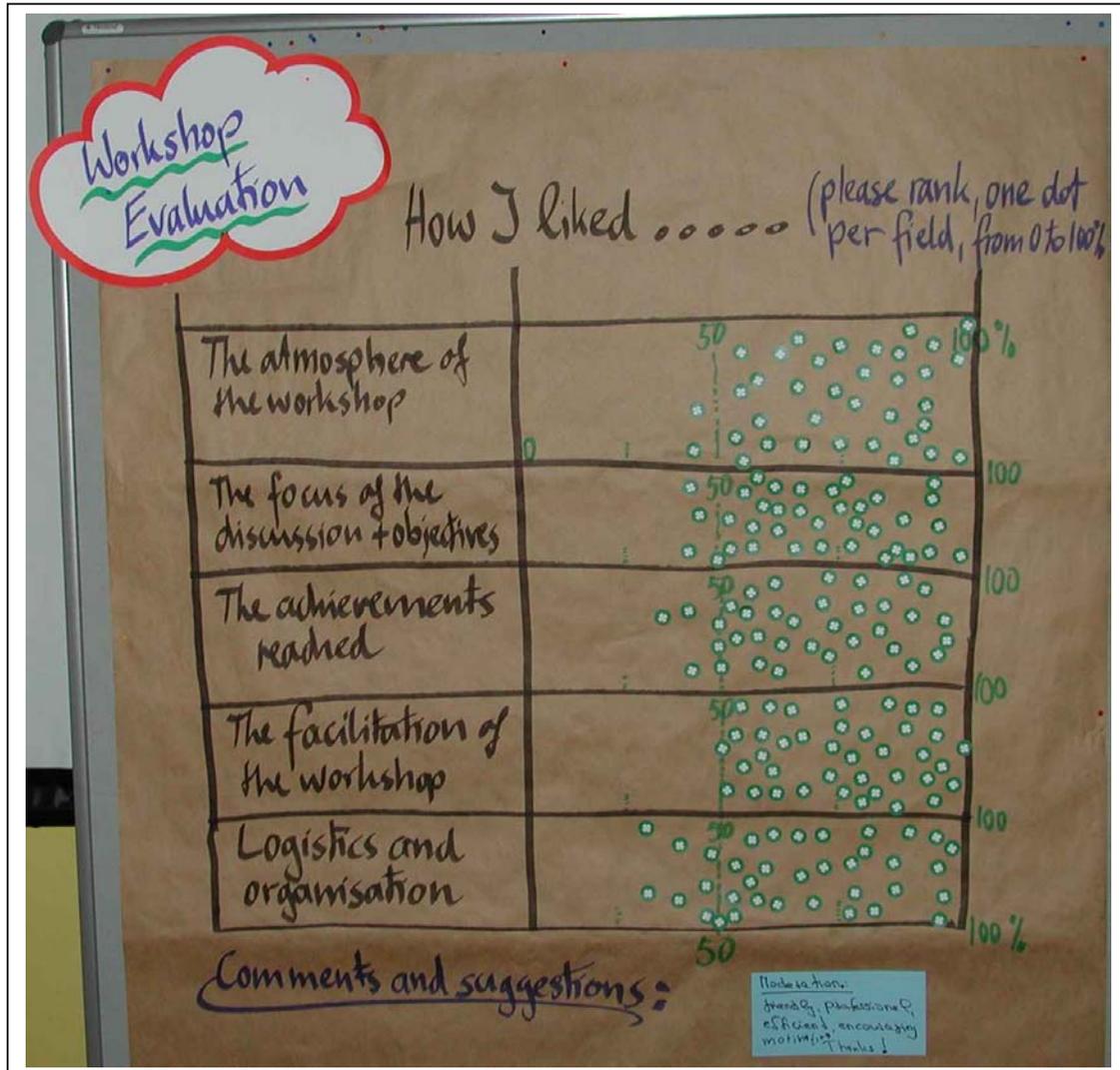
- Clarification and definition of CBMA_nGR
- Statement / resolution
- An initial conceptual framework
- List of bottlenecks and strategies to overcome them
- Networking mechanisms for follow-up and joint learning

Then the immediate next steps were elaborated:

What	Who	When
Workshop documentation electronic version	Andreas Jürgen	15.05.01
Proceedings with full papers CDROM version	Louise, Annette Clemens	To be clarified June 2001
Contribution to COP 6 -> statement Presentation of statement	ELA SADC representative	October 2001
Case study -> included/presented to CBD	ELA	November 2001

10 Workshop Evaluation

The workshop was evaluated by participants through a ranking exercise. The large size of the group did not allow an individual evaluation through cards. The results are shown on the picture below.



After the evaluation, the facilitator thanked all the participants for their active and lively participation. Particularly the process steering groups' contribution was acknowledged as they took the co-responsibility for the successful workshop process.

The workshop was closed by Dr. Morupisi from SADC. He thanked every body and wished a good trip home.

11 Annex

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