# Regional Inception Workshop for East Africa
# 20-22 November 2013
# KIGALI, RWANDA

AFRICAN UNION
INTERAFRICAN BUREAU FOR ANIMAL RESOURCES

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AFRICAN UNION
INTERAFRICAN BUREAU
FOR ANIMAL RESOURCES
AU-IBAR

EUROPEAN COMMISSION

# Strengthening the Capacity of African Countries to Conservation and Sustainable Utilisation of African Animal Genetic Resources

# Report of the Regional Inception Workshop for the Animal Genetics Project

**Kigali, Rwanda**
**20th to 22nd November 2013**

**April 2014**

# Table of Contents

# Acronyms

| | |
|---|---|
| AnGR: | Animal Genetic Resources |
| AU: | African Union |
| AUC: | African Union Commission |
| AU-IBAR: | African Union-Interafrican Bureau for Animal Resources |
| CAADP: | Comprehensive African Agriculture Development Programme |
| CBO: | Community-based Organization |
| CGIAR: | Consultative Group on International Agricultural Research |
| CR: | Country Report |
| CSO: | Civil Society Organization |
| DREA: | Department of Rural Economy and Agriculture |
| EAC: | East African Community |
| FAO: | Food and Agriculture Organization of the United Nations |
| GPA: | Global Plan of Action |
| IGAD: | Intergovernmental Authority on Development |
| MS: | Member States of AU |
| NGO: | Non-Governmental Organization |
| R&D: | Research and Development |
| REC: | Regional Economic Community |
| SLU: | Swedish University of Agricultural Sciences |
| SoW-AnGR: | State of the World's Animal Genetic Resources |
| TCP: | Technical Cooperation Project |

# Acknowledgements

The Project Team would like to thank all the participants who attended this workshop and for their valuable contributions.

We wish to extend our sincere gratitude to the partners, particularly FAO ILRI and SLU who worked tirelessly to ensure that the workshop was a success. The mix of National Coordinators, scientists, practitioners and policy makers from the East African region provided stimulating deliberations during the workshop.

# Executive Summary

The workshop brought together 40 participants, mostly National Coordinators for the Management of Animal Genetic Resources. Other participants included representatives of international organizations ASARECA, FAO and ILRI, researchers and professionals working on animal genetic resources management in livestock administrations and universities. The National Coordinators (NCs) were from; Burundi, Djibouti, Kenya, Eritrea, Ethiopia, Sudan, South Sudan, Rwanda, Tanzania and Uganda.

Presentations on the project objectives, result areas and activities as well as the institutional arrangements were made. These generated a common understanding, among National Coordinators of Animal Genetic resources and other participants, on the project goal, objectives and outcomes as well as roles and responsibilities of stakeholders involved. Other presentations were made on breeding and conservation programmes, developments and research on breeding programmes, resource mobilization for research on animal breeding programs, update of the implementation of the GPA; report of the Intergovernmental Technical Working Group (ITWG) and financing the GPA. During the workshop, FAO also provided guidance on drafting, compilation and submission of the 2nd SoW-AnGR to the participants

The participants gave positive feedback on the project objectives as well as shared some concerns on the implementation strategy. National Coordinators of Animal Genetic Resources generally understood their roles and responsibilities within the project's decision-making structures, including reporting and communication lines. All these presentations engendered interactive discussions between the project team, other resource persons and the participants to the workshop. A detailed and comprehensive overview of the FAO reporting guidelines for the preparation of the reports on the State of the World's Animal Genetic Resources was presented and understood by National Coordinators.

The majority of the countries indicated that they have successfully set-up National Initiatives on AnGR and highlighted additional activities that they intended to roll-out these in future. On characterization of breeds, it was stated that some breeds have not been characterized both phenotypically and molecularly for example, the Sonjo goat breed of Tanzania. Some countries have national initiatives running successfully in line with the four strategic priorities of the GPA. An overview of the national activities under the Global Plan of Action showed that most countries in the East African region did not have National Advisory Committees (NAC) in place. This prompted an urgent plea by FAO to the NCs to assist in setting up these committees in their respective countries.

The host country (Rwanda) reported of its on-going project aimed at distributing 350,000 head of cattle to local farmers by 2014. Tanzania, Sudan, Ethiopia and Kenya have operational gene banks and national Artificial Insemination centres. Kenya also has a well-established breeding programme for the Sahiwal breed.

National Coordinators were reminded of the requirements for uploading national breed data on DAD-IS. Deadlines for the various FAO activities such as submission of Country Reports (31st January 2013) and updating of country data in DAD-IS (30th April 2014) were emphasized.

The following were the outcomes and recommendations of the workshop: (i) There is an urgent need to follow-up on the state of reporting at country level. AU-IBAR should take a proactive role to insure that countries meet the deadline for submission of Country Reports.(ii) South Sudan, Eritrea and Djibouti were identified as priority countries. These countries have minimal/no data of their animal genetic resources. The project should therefore, consider them as priority countries during the implementation of this project. (iii) The Sub-Regional Focal Point for Eastern Africa should be identified and established for AnGR (iv) A potential sub-regional genebank and conservation centre should be identified for the East Africa region.(v) Discussions should be initiated with the sub-regional research and development organizations to identify their roles in the implementation of the project. (vi) Member States were encouraged to establish National Strategies and Action Plans.

# Background

The African Union-Interafrican Bureau for Animal Resources (AU-IBAR) organized three Regional Workshops in Ouagadougou (West and Central Africa), Kigali (East Africa) and Gaborone (Southern Africa). The workshops were organized to launch two initiatives on animal genetic resources (AnGR) in Africa; the first one was the project **"Strengthening the Capacity of African Countries to Conservation and Sustainable Utilization of African Animal Genetic Resources"** funded by the European Union and to be implemented by AU-IBAR while the second was the FAO Technical Cooperation Project (TCP) **"Assistance for Regional Initiative on Animal Genetic Resources in Africa"**. The workshops were jointly organized with ILRI with SLU and FAO. Another important component of the workshops was to assist National Coordinators of AnGR in Member States finalize and submit their Country Reports as contribution to the Second Report on the State of the World's Animal Genetic Resources for food and agriculture (SoW-AnGR).

AU-IBAR is currently implementing a project *"Strengthening the Capacity of African Countries to Conservation and Sustainable Utilization of African Animal Genetic Resources"* that seeks to strengthen the capacity of AU Member States and Regional Economic Communities to sustainably use and conserve African animal genetic resources through institutionalising national and regional policy, legal and technical instruments. The approach of the project is to fast-track the implementation of the Global Plan of Action (GPA) adopted in 2007 as the main strategy to ensure sustainable utilization and conservation of AnGR and halt their erosion.

During its 14$^{th}$ regular session, the FAO Commission on Genetic Resources for Food and Agriculture requested an update of the State of the World's Animal Genetics Resources for Food and Agriculture to be presented in November 2014. Countries are consequently invited to submit their reports to FAO not later than 31st January 2014 and at the same time to update their Animal Genetic Resource Inventories by 30$^{th}$ April 2014. The main objectives of the process leading to the *Report on the State of the World's Animal Genetic Resources* are to determine the state of global farm animal genetic resources, to evaluate policies and technologies for their utilization, to identify country priorities for immediate action, and to build local capacity to manage these resources.

One of the activities of the current project during the inception phase is to organise Regional Inception Workshops that represent major milestone of the project. They provide opportunities for communication, exchange and building of the project team and partnerships within the framework of its implementation. They will serve to promote the necessary synergy and chart the way forward for a successful implementation of the project. The ***Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture in Africa*** will provide baseline information for the project against which the project outputs will be measured.

The Regional Inception Workshop for East Africa was held from 19th to 22nd November 2013 at the Sportsview Hotel, Kigali, Rwanda. The workshop was co-organized by AU-IBAR, ILRI-SLU and FAO.

# Participants

Forty participants, mostly National Coordinators for the Management of Animal Genetic Resources, representatives of international organizations ASARECA, FAO and ILRI, researchers and professionals working on AnGR management in livestock administration and universities.

# Objectives of the Workshop

**The main objective was to:**

- Introduce the project to key stakeholders and provide opportunities for communication, sharing of information and enhance partnerships

**Specific objectives were to:**

- Create common understanding, among National Coordinators of AnGR on the project goal, objectives and outcomes as well as roles and responsibilities of partners and stakeholders involved
- Discuss the project's Result Areas, Activities, implementation strategy and the required information and make necessary adjustments
- Familiarize AU Member States with FAO's requirements and guidelines for the preparation of National Reports for the SoW-AnGR and update their Animal Genetic Resource Inventories
- Discuss and establish appropriate processes to update and enrich countries' databases

# Workshop Proceedings

The workshop was organized in plenary and group sessions. Presentations were generally in PowerPoint while a few were not. The following were the proceedings and deliberations of the workshop.

## Opening session

### Opening Remarks by AU-IBAR

Dr Simplice Nouala, representing the Director of AU-IBAR welcomed the participants and gave a brief overview of the project, its aims, objectives and funding. He presented the objectives of the Regional Inception Workshops and highlighted the challenges faced by the animal resources sector and the need for collaboration and concerted efforts on the utilization and conservation of AnGR.

### Opening Remarks by the Government of Rwanda

Dr Theogen Rutagwenda, representing the Government of Rwanda, warmly welcomed the participants to Rwanda. He informed the participants that Rwanda was now in its second CAADP Compact. He reported that Rwanda has an on-going project aimed at distributing 350,000 head of cattle to local farmers by 2014 to contribute to the conservation of AnGR. This will be done through the Ministry of Agriculture and Animal Resources and would promote the "one cow" policy which was aimed at increasing access of farmers to livestock and also increasing the national cattle herd.

### Opening Remarks by FAO

Dr Paul Boettcher, representing FAO, highlighted the role of FAO in East Africa, particularly on the regional priorities and on-going activities. He noted the opportunities offered by FAO which included being a neutral platform for intergovernmental dialogues and exchange of information. These platforms included the Commission on Genetic Resources for Food and Agriculture (CGRFA) and the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture (ITWG).

## Plenary presentations and discussions

### AU-IBAR-Presentation of the Genetics Project:

Drs. Mbole-Kariuki and Nengomasha presented the project's goal, objectives and expected outcomes as well as the proposed institutional arrangements including roles and responsibilities of partners and stakeholders involved and implementation strategy. The key milestones and expected dates of completion were also highlighted.

The participants gave positive feedback on the project objectives as well as shared some concerns on the implementation strategy. The presentations on the project as well as the institutional arrangements generated a common understanding among National Coordinators and other participants on the project goal, objectives and outcomes as well as roles and responsibilities of stakeholders involved. National Coordinators of Animal Genetic Resources generally understood their roles and responsibilities within the project's decision-making structures, including reporting and communication lines.

The presentations engendered interactive discussions between the project team, other resource persons and the participants to the workshop. However, some participants were of the view that the project was over-ambitious and hoped that it would achieve its objectives. There was also some confusion over the use of "Regional" and "Sub-regional" and this was explained that it was all relative. For example, FAO considers Africa as a region. Africa considers the various geographical "regions". Other issues raised included the balance between conservation and production as was the issue of gene and genotypes. However, participants agreed that it is best to select those that can adapt to the

environment. It was also stressed that partnerships and collaboration are crucial when working with AnGR, especially where some are transboundary.

## FAO – Presentations on GPA, S-RFP, SoW-AnGR

Dr Boettcher of the FAO gave presentations on update of the implementation of the GPA. He also presented on regional priorities and on-going activities in Africa, highlighting what has been achieved in other African regions, for example the establishment of the Sub-Regional Focal Point for West and Central Africa where Dr Mamadou Diop was appointed acting Regional Coordinator. He emphasized that FAO would provide assistance to countries in East Africa to implement the Global Plan of Action on AnGR. He then explained some of the details of the GPA, highlighting the Strategic Priority Areas (SPA) and what Member States, RECs and the international community were expected to achieve on AnGR within each of the SPAs. There is need to establish sub-regional focal points and promote networking within the regions. He also highlighted the platforms at FAO available for discussion and networking specifically DAD-Net and how National Coordinators should take advantage of this platform to network and discuss AnGR issues with over 2000 other members/subscribers. Dr Boettcher also provided guidance on the drafting, compilation and submission of Country Reports for the 2nd SoW-AnGR. An overview of the FAO reporting guidelines for the preparation of the reports on the State of the World's Animal Genetic Resources was presented and understood by National Coordinators. The roles of National Coordinators (person responsible for the reporting on AnGR issues of the country) and National Focal Points (normally an institution under the Ministry of Agriculture responsible for policy, among other issues) were clarified. National Coordinators have a responsibility to promote the management of AnGR at national level, promote policy development, networking, raising awareness global reporting on their national AnGR issues. Participants were given an overview of the DAD-IS as well as the Funding Strategy of the GPA, the AnGR Journal, DAD-NET and generally how to access information from FAO. Dr Boettcher emphasized the deadlines for submission of various reports to FAO by the Member States as:

**27 October 2013**: National reporting on legal and policy frameworks affecting the management of animal genetic resources
**31 January 2014**: Country Report
**30 April 2014**: DAD-IS, national data checked, completed and updated

FAO appealed to the National Coordinators to represent their countries at the upcoming meetings in Rome:
**8th Session of the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture** (Rome, Italy - 26-28 November 2014)

- Discuss draft version of *The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture*
- Advise on updating the Global Plan of Action

**15th Session of the Commission on Genetic Resources for Food and Agriculture** (Rome, Italy - 19-23 January 2015)

- Endorse *The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture*
- Decision on updating the Global Plan of Action

## Group Work and Country Presentations

Participants were allocated to groups to discuss:
Breeding and Conservation programs

- Mapping national and regional initiatives
- Status of implementation of the GPA initiatives
- Opportunities for enhanced regional collaboration in development of breeding programs with present resources

The majority of the countries have set-up National Initiatives on AnGR and highlighted additional activities that they intend to roll-out in future. There were issues raised on the two important aspects of "conservation" and "production" and the need to balance between them. It was also stressed that there is need to select genes or genotypes that suit the environment. Various breeds that have not been characterized both phenotypically and molecularly were highlighted such as the Sonjo goat breed of Tanzania. However, an overview of the national activities under the Global Plan of Action indicated that most countries in the East African region did not have National Advisory Committees (NAC) in place. This prompted an urgent plea by FAO to the NCs to set up these committees upon return to their respective countries. Some countries have national initiatives running successfully in line with the four strategic priorities of the GPA.

Each National Coordinator gave a statement on their involvement in the first SoW-AnGR process and the implementation of the GPA and the experiences and lessons they had learned from these processes.

Countries presented their reports on the status and national initiatives on AnGR. The summary is presented below and the PowerPoint presentations are shown in Annexes:

### Kenya

- Kenya has the Sahiwal breeding programme
- There is a conservation initiative for the Red Maasai sheep
- The country is promoting the use of indigenous chickens and has a dairy goat improvement programme
- Some characterization of indigenous AnGR has been conducted
- There is a livestock recording system in place
- Kenya has gene bank facilities

**Sudan**

- The country started a conservation programme in 2005 for three cattle breeds, Kenana, Aryshire and Butana which were threatened. Blood samples and phenotypic measurements were for characterization
- There are some conservation programmes for dessert sheep breeds, Kalahari goat and Wier goat from Brazil with the Nubian Goat Research Station dedicated to the conservation of the Nubian goat and maintains a gene bank
- However, the country lacks policies to deal with indiscriminate crossbreeding
- Sudan currently has no programmes for the conservation of camels and donkeys

**Rwanda:**

- It also has breeding and conservation programmes particularly with dairy cattle
- Plans are underway to establish a joint gene bank with some regional Member States

**Burundi**

- The country has embarked on a restocking programme with cattle and small ruminants
- There is a livestock data recording systems "IBIS"
- A conservation programme on Ankole is being conducted
- There have been phenotypic and molecular characterization of cattle and goat breeds
- A National Consultative Committee on AnGR has been established
- An inventory of existing national and transboundary breeds has been established

**Ethiopia**

- The country has some national initiatives on the conservation of cattle, sheep and goat breeds
- Ethiopia has developed a National Action Plan for AnGR in its effort to conserve and develop its AnGR
- Ethiopia has a gene bank for conservation of AnGR

**Tanzania**

- The country is in the process of developing a Livestock Policy and Breeding Act and a Livestock Identification, Registration and Traceability Act
- There is a conservation programme for the Mpwapwa and West Kilimanjaro cattle breeds
- Some phenotypic characterization and conservation programmes of indigenous AnGR has been conducted
- Tanzania is part of the SADC livestock data sharing scheme and has a functional gene bank

**South Sudan**

- Being a newly-established nation, there is little information available on AnGR

**Eritrea**

- There have been no studies conducted on AnGR, therefore the animals are considered types rather than breeds
- However, the country has embarked on phenotypic characterization of sheep, cattle and a programme on identification of dairy breeds "Grey Eritrean Friesian" with support from Teramo (Italy)

**Djibouti**

- The country lacks knowledge and skills on AnGR and there is little information available on breeds

**Uganda**

- The country has an Animal Breeding Act and has established the National Animal Genetic Resources Centre
- Uganda has a conservation programme for Ankole cattle breed as well as for poultry
- There has been characterization of indigenous AnGR as well as inventory of existing breeds
- Uganda proposes regional gene banks

# Workshop Outcomes and Recommendations

- There is an urgent need to follow-up on the state of reporting at country level. AU-IBAR should take a proactive role to insure that countries meet the deadline for submission of Country Reports.
- South Sudan, Eritrea and Djibouti were identified as priority countries. These countries have minimal/no data of their animal genetic resources. The project should therefore, consider them as priority countries during the implementation of this project.
- The Sub-Regional Focal Point for Eastern Africa should be identified and established for AnGR
- A potential sub-regional genebank and conservation centre should be identified for the East Africa region.
- Discussions should be initiated with the sub-regional research and development organizations to identify their roles in the implementation of the project.
- Member States were encouraged to establish National Strategies and Action Plans as this will be an essential opportunity to:
    - Increase visibility of AnGR
    - Establish expected contributions and benefits of all stakeholders
    - Attract funding for AnGR

# Appendices

a) Workshop programme
b) Presentations
c) List of participants

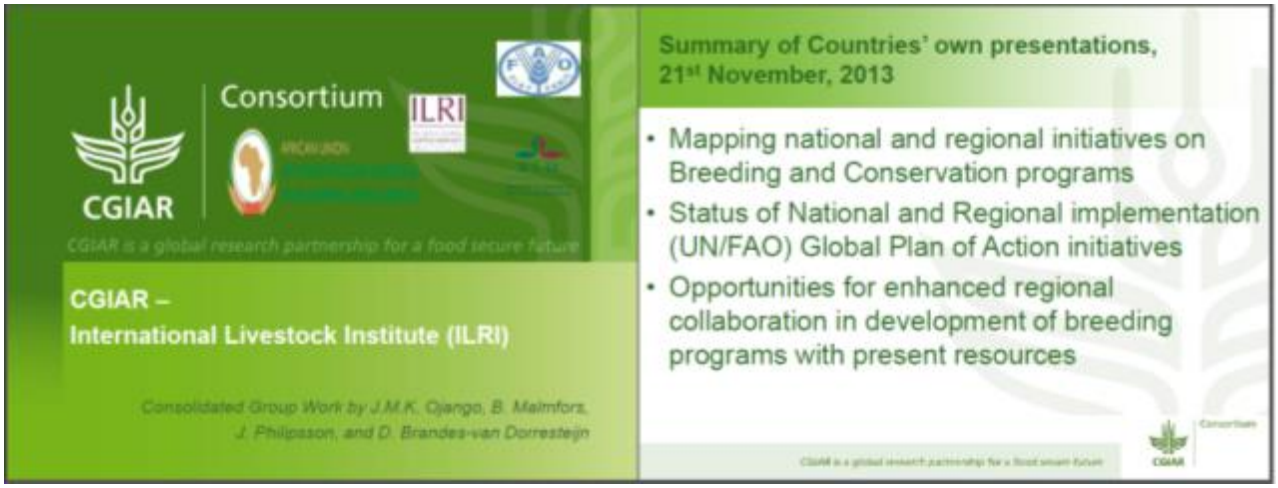
## Workshop Programme

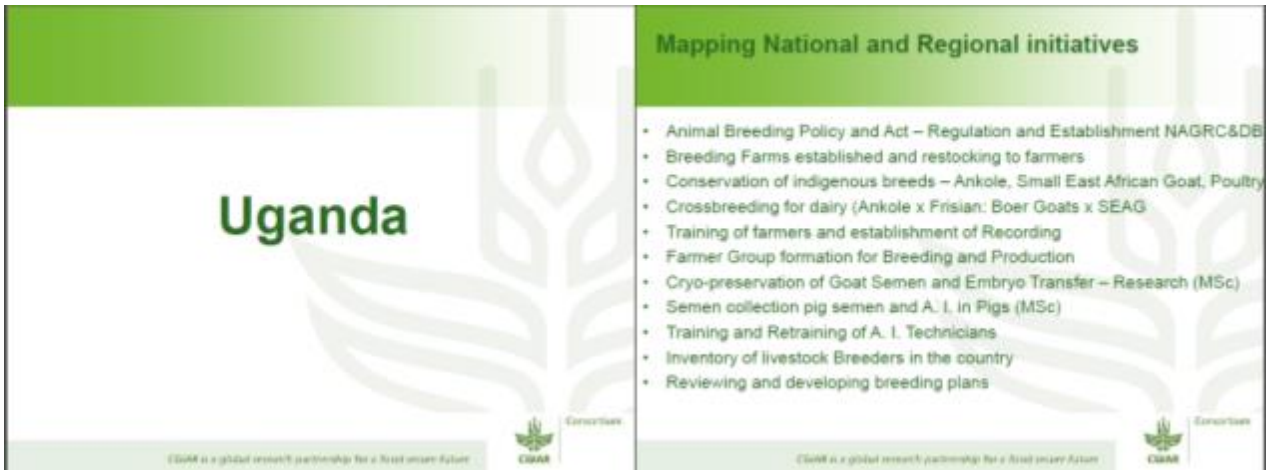
| | | | |
|---|---|---|---|
| | | **National Coordinators (NC)** | |
| **Time** | **Participants** | National Coordinators (FAO focal points) of each region<br>Repr. of organizations / partners | |
| | **Day 1** | | |
| 9:00-12:00 | **Arrival and registration** | | |
| ***12:45-14:00*** | ***Lunch*** | | |
| | ***Session 3: Joint session – Breeding and Conservation programs*** | | |
| 14:00-15:00 | | Welcome: ILRI Regional Representative<br>Remarks by ILRI and SLU<br>Remarks FAO<br>Remarks by AU-IBAR<br>Short presentation of participants<br>Group photo | |
| 15:00-15:15 | Coffee Break | | |
| 15:15-16:00 | Presentations (20 minutes each) | AU-IBAR— Strengthening the Capacity of African Countries to Conservation and Sustainable Utilization of African Animal Genetic Resources<br>FAO: Assistance for Regional Initiative on Animal Genetic Resources in Africa | |
| 16:15-16:30 | | Discussions | |
| 16:30-16:45 | Presentation | ILRI/SLU give brief presentations—regional and world-wide examples, challenges and opportunities | |
| 16:45-17:30 | | General Discussion | |
| | **Day 2** | | |
| | ***……Session 3: Breeding and Conservation programs, continued*** | | |
| 8:30-10:30 | Group work | Breeding and Conservation programs<br>• Mapping national and regional initiatives<br>• status of implementations (nationally and regionally) Global Plan of Action initiatives<br>• Opportunities for enhanced regional collaboration in development of breeding programs with present resources | |
| 10:30-11:00 | Coffee Break | | |

| | | | |
|---|---|---|---|
| 11:00-11:30 | Plenary | Feedback from group work | |
| | ***Session 4: Developments and research on breeding programs*** | | |
| 11:30-12:15 | Group work | Prioritized issues for developments in AnGR | |
| 12:15-12:45 | Plenary | Feedback from group work | |
| 12:45– 14:00 | Lunch | | |
| **Two Parallel Sessions** | ***Session 5: Resource mobilization for research on animal breeding programs***<br>***Developing concept notes—what could be done with present resources? What else would be needed?*** | | ***AU-IBAR/ FAO- NC's SoW*** |
| 14:00-15:00 | Groups/ Plenary | Discussions/Conclusions | ***Update of the implementation of the GPA : report of the ITWG, financing the GPA etc*** introduction & discussions |
| 15:00–15:30 | Coffee Break | | |
| 15:30–17:00 | ***Joint session – Ways forward in conclusion***<br>***Outputs & Outcomes*** | | |
| 19:00- | ***Joint Dinner*** | | |
| | **Day 3** | | |
| | **Topic: The preparation of the Second State of the World's Animal Genetic Resources**: Objective: participants are briefed about the SoW-AnGR:2 process and able to coordinate the reporting in their country | | |
| 8:30-10:00 | Presentation including Q&A session and discussion: Overview: State of the World's Animal Genetic Resources process & the implementation of the Global Plan of Action (GPA) | | |
| 10:00-10:30 | Coffee break | | |
| 10:30-11:30 | Statements by each National Coordinator on his/her involvement in the first SoW-AnGR process and the implementation of the GPA – experiences and lessons learned | | |
| 11:30-12:00 | Presentation including discussion: The 2nd State of the World's Animal Genetic Resources process and the update of the GPA | | |
| 12:00-12:30 | Demonstration including discussion: The Domestic Animal Diversity Information System and national reporting on AnGR | | |
| 12:45-14:00 | Lunch | | |
| 14:00-14:30 | Presentation including discussion: Preparation of the national report | | |
| 14:30-15:30 | Group work: Preparation of the national report: how & whom to involve; problems & issues | | |
| 15:30-16:00 | Coffee Break | | |
| 16:00-17:00 | Reporting back by working groups and discussion | | |

| | |
|---|---|
| 17:00-17:30 | Take home messages and closure |

## Presentations




## Opportunities for enhanced regional collaboration in development of breeding programs with present resources

- Regional Recording Programs
- Characterization Programs
- Conservation Programs
- Long term Strategy - Discriminate Cross- breeding Programs
- Joint Training Programs
- Research and Development Programs
- Market value chains developed
- Feeds and feeding Programs developed
- Smallholder farmer Programs
- Regional Gene Banks
- Programs for famers keeping indigenous livestock
- Monitoring of breeding programs

# Tanzania

## Mapping of National initiatives

- Developed livestock policy 2006 and Breeding act.
- Areas set aside for conservation: Mpwapwa and West Kilimanjaro
- State of AnGR
- Development of Livestock identification, registration and traceability act.

## Status of implementation

Characterization mainly phenotypic:

- Cattle: Ankole, Iringa red, Fipa, Tarime, Sukuma, Gogo, Masai, Singida white
- Goats: Gogo, Newala, Kigoma/Ujiji, Pare white, masai
- Sheep: Gogo, Masai, Tanzania BHP
- Poultry: Kishingo, Kawaida, Kinyavu, kuchi, bukini, horas

Conservation:

- Insitu: Mpwapwa cattle, Blended goat
- Exsitu-Live: Mpwapwa cattle at Sachil, Fipa at Sachil, Blended goat Kongwa, Sonjo, Pare white, red masai
- Exsitu_cryo: Mpwapwa cattle at NAIC

## Status of implementation

- SADEC: Livestock data sharing e.g.
- FAO-DAD-IS: Livestock breeds information sharing
- ILRI_SLU: Capacity building

Breeding program:

- Crossbreeding of Sahwal and Masai cattle to improve productivity under EAAPP (regional)
- National:
- Performance evaluation of Mpwapwa breed under different environment and selection process.
- Crossbreeding program for dairy cattle under humid environment
- Introduction of germplasm to improve productivity of local cattle

## Opportunities for enhanced regional collaboration in development of breeding programs with present resources

- Diverse of AnGR
- NAIC equipped with facilities for semen storage, cryopreservation and training
- Public farms (Research, MU, Training, Ranches)
- Training and research institutes
- Political will to collaborate
- Some trained human resource in Animal breeding
- Institutional willingness to collaborate
- Communication net works
- Tanzania member of SADEC, AU,EA,

# Rwanda

## Mapping National and Regional initiatives

Breeding and Conservation Program initiatives:

- Local initiation
- Cattle breeding – On going
- Pure breeding: importation of exotic breed ( mainly Friesian and Jersey)
- Crossbreeding initiates
  - Friesian x Ankole
  - Jersey x Ankole
  - Brown Swiss x Ankole
  - Sahiwal x Ankole
- One cow per poor family program
- Conservation initiative
  - Ankole breed at two Government Station

## Mapping National and Regional initiatives

Small Ruminant Breeding – On going

- Boer x Small East African goat
- Galla x Small East African goat

Indigenous Sheep x Merino sheep

Pigs

Landrace x Indigenous pigs

Large white x indigenous pigs

Pietrain x indigenous pigs

Poultry

Hatchery- Distribute both Broiler and layers

## Global Plan of Action initiatives

- Characterization and monitoring of trend – Only phenotypic characterization of small east african goats has been done – ASARECA project.
- Conservation and Animal breeding – On both farm and Government Experimental Stations going on at different levels
- Human capacity development – SIDA project to support capacity at both PhD and MSc Levels.
- Policy and Cooperation

  Strategic plan done for: Animal genetic improvement,
  Animal Nutrition
  Meat Industry
  Poultry industry
  Fisheries and Aquaculture
  Bee Keeping

## Opportunities for enhanced regional collaboration in development of breeding programs with present resources

- Joint establishment of Gene banks for transboundary breeds
- Joint Research and Animal breeding within ASARECA member countries- especially the indigenous breeds
- Staff exchange in both Universities and Research institutions at national and regional levels.

# Ethiopia

## Mapping national and regional initiatives

**National**

- Crossbreeding work at research level
- The National Artificial Insemination Center (HF, Jersey, Borena, Horro, Fogera, Begait and Sheko)
- Community based breed improvement on sheep and goats
- Selective breeding of an indigenous Chicken
- National dairy herd performance recording and advisory
- Ex-situ conservation (cryo-conservation of cattle semen)
- Crossbreeding of Menz Sheep with Awass
- Establishment of breeding and conservation ranches (cattle: Fogera, Begait , Horro and Borena)

**Regional**

Promotion of Indigenous Chicken (Ethiopia, Kenya, Uganda)

## Global Plan of Action initiatives

National Plan of action

- NPA draft prepared by ad-hoc committee
- A workshop organized for Stakeholders to discuss the draft
- Amendments were made as per recommendation of stakeholders workshop
- Final draft to be presented to the newly established State Ministry
- Aspects of inventory and monitoring has started

Regional Activity

- Promotion of indigenous Chicken (Ethiopia, Kenya, Uganda)

## Opportunities for enhanced regional collaboration in development of breeding programs with present resources

- Presence of trans-boundary breeds
- Presence of regional economic and political organizations
- Recognition about the role livestock play in the economy of the different countries
- Increased recognition about the power of working together
- Presence of resources (e.g. expertise), skills that need to be pulled together for efficient utilization

# Kenya

## Mapping national and regional initiatives on breeding and conservation programs

Sahiwal breeding programme:

Objective – Enhance generation of gender responsive cattle breeding technologies for improved milk production from indigenous cattle

Location – Kenya, Uganda and Tanzania

Donor – Worldbank (EAAPP)

Partners – KARI, NaLIRRI-Uganda, TaLIRI- Tanzania, NAGRC &DB – Uganda


## Poultry breeding programme

CGIAR

Promotion of indigenous chicken

Objective – genetic improvement of indigenous chicken for improved livelihoods

Location – Kenya, Uganda and Ethiopia

Donor – FAO funding strategy for AnGRs

Partners – MoALF Kenya, Ethiopia Institute of Biodiversity, MAAIF Uganda, FAO

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## Indigenous chicken improvement program (INCIP)

CGIAR

Objective – increase the productivity of IC along the value chain.

Location – Kenya

Donor – Worldbank (KAPP)

Partners - Egerton University, KARI Kenya

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## Dairy goat improvement program

CGIAR

Objective – Genetic improvement of dairy goat for increased milk yield.

Location – Kenya

Donor – GTZ, Germany

Partners – MoALF, DGAK, GTZ, KLBO

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## Global Plan of Action initiatives

CGIAR

1. Characterization – for IC, Sahiwal, Kenyan Alphine, Zebu cattle (ongoing)
   - Inventory – still a challenge
2. Sustainable use of AnGRs
   - Some breeding programs in place
   - Several breed societies in place. Need for breed societies that target the indigenous population
   - Livestock recording systems (need for strengthening through capacity building)

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## Conservation initiatives

3. Conservation programs

A. Sheep and Goat station
- Red Maasai Sheep – Naivasha
- Galla goat – Bachuma (coast) and Kimose (Baringo)
- SEAG – Macalder, Migori county

B. National Sahiwal Stud, Naivasha

C. Boran Cattle Stud, KARI Lanet and ADC Mutara

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## Policy/ institutional frameworks and Capacity building

1. National Livestock policy 2008
2. Protection of genetic resources, traditional knowledge and folklore
3. Draft Animal breeding policy
4. Draft Animal breeding bill
5. Strategy plan for MoALF

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## Institutions

1. KAGRC
2. KALRO
3. National focal point for coordination of the management of AnGRs

Capacity building
- Short and Long training on AnGRs e.g., Animal breeding
- Infrastructural development in the research institutes – resources, state-of-art equipment etc.

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## Opportunities for enhanced regional collaboration in development of breeding programs with present resources

- Regional projects e.g., EAAPP
- AU/IBAR Project
- Existence of transboundary breeds
- RECs e.g., EAC, IGAD
- Lack of breeding programmes in South Sudan – a key driver for the government/ development partners to invest in AnGRs

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# Burundi

## Mapping National and Regional initiatives

- There is a restocking program for cattle and small ruminants in the whole country. Crossed Friesian and boer goats are imported from our neighbour countries by the Government and the cooperation projects (WorldBank, IFAD, EU, ABD and some NGOs)
- National AI program focusing on cattle which is fully operating in the provinces supported by developing projects
- There is a national data recording and identification system called "IBIS" initiated by IFAD which is still in its implementing stage by the Directorate of Livestock
- There is a national research institute (ISABU) which was dealing with phenotypic characterization of sahiwal and Ankole and adaptability of exotic breeds (sahiwal, friesian, jersey ). In 2012 a nucleus of pure breed friesian and jersey was imported for the multplication purpose.

## Mapping national and regional initiatives

- The national agricultural research institute ( ISABU) is conducting a conservation program for the local breed Ankolé
- An FAO ongoing project for characterization phenotypic and molecular for cattle and goats which began in 2012

## Global Plan of Action initiatives

- A national consultative committee for animal genetic resources is in place
- FAO TCP is working on cattle and goat characterization
- There is an inventory of existing breeds in the country by the national consultative committee

## Opportunities for enhanced regional collaboration in development of breeding programs with present resources

- FAO and IFAD are involved in helping to put in place the national strategy for animal genetic resources development
- Burundi is a member of EAC which has an important program to develop the livestock in the region
- AU-IBAR project for animal resources will capitalize and strengthen the efforts made by Burundi in the livestock resources management
- Burundi can also benefit from research results obtained by neighbour countries as we share a number of breeds as Ankolé
- As the country do not have enough specialists in AnGR it can benefit from the expertise of the region in that aeria

## Sudan

## National Initiatives

- Cattle: Kenana, Butana and locally-adapted Ayrshire
  - Characterization:
    - Phenotypic measurements
    - Blood samples have been collected from farmers herds
      - Not yet analyzed completely
  - In vivo conservation:
    - Large research herd for Butana.
    - Small herd for Kenana

## National Initiatives

- Goats: Nubian, Sahel and Mountain
  - Populations are large but precise status is unknown
  - Some crossing is occurring with Saanen and Damascus breeds
  - Conservation: government stations for Nubian

## National Initiatives

- Sheep: Desert, North Riverine, Arid Land, West African Fulani, Nilodesert
  - Status is critical for North Riverine Wool, others unknown, only limited importation of exotics
  - Govt station: central area – Desert breeds

## National Initiatives

- Chicken: Large and small breeds
  - Small breeds are considered endangered
  - Government station: small breeds
- Donkey and camel: no particular government intervention

## Government Policy

- No formal government policy on animal genetic resources
  - No specific funding for genetic resources projects
- There is a livestock development policy
  - Historically had supported cattle crossbreeding with exotic breeds
  - Now government does not actively support it, but semen importation is widespread privately

## Global Plan of Action Initiatives

- No particular active support
- Development of a National AnGR Action Plan has been discussed, but not yet undertaken

## Opportunities for Regional Cooperation

- Utilize local Sudanese breeds in neighboring countries
  - Butana and Kenana are well adapted and relatively high producing for local cattle breeds with low input
  - Goat breeds are high producing and very adaptable to low input
    - Can be valuable part of crossbreeding programme

## Opportunities for Regional Cooperation

- Very large livestock populations for study and development
- Good cooperation between universities and research stations
  - Research opportunities for exchange students
- Well-equipped laboratories

## Priorities

- National animal genetic resources policy
- Development of formal breeding programmes for management and improvement of local cattle populations
  - –Sheep and goats = second priority

# Eritrea

## Background

- As the country has not done an in depth study on its Animal Genetic Resources, we still talk about types not breeds. Based on this we have:
- About three cattle types
- About Seven Sheep types
- About Five Goat types
- About Two- three Camel, donkey types

## Mapping National and Regional initiatives

1.1 Phenotypic Characterization of Sheep and Cattle in the Central Highland
- Shemezana type of sheep in Shemezana Area
- Areza type of Sheep in Areza
- Fait tailed Sheep in Central Higland Zone

1.2 Identification of intensively managed Dairy Cows in collaboration with an Italinan Organization (Teramo)

1.3 Banning the slaughter of female animals in the slaughter houses.

1.4 Banning the export of productive female animals

1.5 Encouraging community to keep their indigenous Livestock genetically intact. ( Camel herders and sheep herders)

## Global Plan of Action initiatives

2.1 Sheep breed characterization

- Start community based breeding programme with the help of ASARECA.

## Opportunities for enhanced regional collaboration in development of breeding programs with present resources

- Availability of enabling environment ( draft livestock policy and strategy)
- Availability of human resource to be trained ( Animal Science gradguates)
- Availability of various genetic material attributed to diverse agro-ecological zone.
- Availability of communities actively practicing specific type of animal raising
- Establishment of National A.I Centre
- Regional and International Organizations

# South Sudan

## Mapping National and Regional Initiatives

South Sudan is the youngest country in Africa.

- Livestock population comprise:
  - 11.7 million heads of cattle
  - 12.4 heads of goats
  - 12 million heads of cattle
  - There are also other livestock species such as chicken, pigs, and donkeys. But their numbers are not known

## continue

- Despite the large livestock population very little has been done in terms of breeding and conservation programme.
- The only effort to improve the local cattle was done in 1972 after Addis Ababa agreement.
- The then Government of Gaafar Nimeri established Dairy farm in the major towns of South Sudan and introduce exotic breeds to improve the local cattle.

## Continue

- As those farms were being operationalize, the second war of SPLA broke out and the farms were dilapidated.
- Other initiatives were done by NGOs that were working to improve food security in the south Sudan during the War.
- However those initiative were carried out in unorganized manner.

## Continue

- Currently the Animal Resource and Fisheries sector is preparing a national breeding policy.
- The other Regional Initiative is the AU-IBAR and FAO project which is trying to address issues on AnGR.
- The project has come at the right time for South Sudan to work closely with AU-IBAR and FAO to develop better breeding and conservation programmes.

## Opportunities for enhanced Regional Collaboration

- The fact that nothing much has been done in South Sudan on AnGR, the Government/ development partners to invest in the field of AnGR.
- There is a political will by the Government of South Sudan improve food security and livelihood of the rural communities who depend on livestock. This is stipulated in South Sudan Development Plan.

## Status of implementation of Global Plan of Action.

- South Sudan just got its independence in July 2011.
- Nothing is done as far as Global Plan of Action is concerned.
- The National Coordinator on AnGR has just been appointed.
- The only Regional Initiative is the AU-IBR and FAO project.

# DJIBOUTI

## Mapping National and Regional initiative

State of knowledge of animal genetic resources in the Republic of Djibouti:

The determination of breeds of domestic animals has not been established formally.To our knowledge, there has been no real research on animal genetic resourc es in Djibouti.

The livestock species present in Djibouti are:
Bovine: 40,000 heads
Camels: 50,000 heads
Small Ruminants:1000,000 heads
Anis: 6500 heads

All species in highland

## Con't

### Locally adapted breeds

- **Cattle breeds:**
1- Zebu Afar
2- Zebu Somali

- **Sheep breeds:**
1-Afar Breed
2-Moussa Ali Breed
3-Somali Breed
4-Somali Arab Breed

- **Goats breeds:**
1- Somali Breeds
2- Afar Breeds
-The camelline Breeds (camel)
1-IGAD/AFAR Breeds
2-Somali Breeds

## Con't

### POLICIES, STRATEGIES AND LEGISLATION

- It is based on the following orders:
  -Decree 1119 of 1 August 1956 regulating the inspection of Animal and animal products and also foodstuff.
  - Decree 1120 of 1 August 1956 regulating the import, transit, export and movement of live animals and animal products
  - Decree 244 of 8 March 1951 on the animal health and animal production.

  -Deliberation No. 472/6 L of 24 May 1968 on settlement hygiene and roads in the Republic of Djibouti.
  It is applied by veterinary inspectors and health officials of the DESV, assisted by the LANAA and prefects Districts

## Global Plan of Action initiatives

### Status of Implementation

- The country does not currently have the necessary skills in the field of animal genetic resources. The only research center in the country (CERD) has no capacity to deal with the characterization of breeds. However, some actions are always undertaken such as import and miscegenation by private operators. These crosses are not conducted scientific way, nobody really knows the genetic potential of mixed breeds obtained.
- There are no in-situ conservation program OR the ex-situ conservation

## Con't

- The Ministry of Agriculture, Livestock and Sea in charge of Water Resources (MAEM-RH), in charge of drafting the national report on the AnGR, was restructured by the establishment of a new AnGRnization found more suited to its tasks, powers and socio-economic, political and environmental context in 2001 (Law No. 142/AN/01/14ième the October 2001).
- Socio-professional associations, has been set up to monitor the activities of AnGR at the national level.

## Opportunities for enhanced regional collaboration in development of breeding programs with present resources

– Regional and International organization like East Africa community, IGAD, FAO, AU-IBAR, ILRI and others

## The Way Forward

- General consensus
  - Animal genetic resources are important
  - Funds are limited
- Two major activities in the short term
  - Second State of the World
  - Launch of AU-IBAR project
- Collaboration is needed

## The Way Forward

- NC agree that they are empowered to lead the process
  - Require collaboration of all stakeholders
  - Welcome this collaboration
- Establishment of National Strategies and Action Plans will be a key opportunity
  - Increase visibility of AnGR
  - Establish contributions/benefits of all stakeholders
- All stakeholders will have to maximize return from AU-IBAR project and SoW/NSAP process

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