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GENETICS





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BUREAU FOR ANIMAL
RESOURCES
AU-IBAR**



EUROPEAN COMMISSION

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

Year 1 Project Report

July 2013 – June 2014

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Acronyms

AnGR	Animal Genetic Resource
APU	Animal Production Unit
ARIS	Animal Resources Information System
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
AU	African Union
AUC	African Union Commission
AU-IBAR	African Union-Interafrican Bureau for Animal Resources
CAADP	Comprehensive Africa Agriculture Development Programme
CBD	Convention on Biological Diversity
CCARDESA	Centre for Coordination of Agricultural Research and Development for Southern Africa
CIRDES	Centre International de Recherche-Développement sur l'Élevage en zone Subhumide
CORAF	Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles
DAD-IS	Domestic Animal Diversity Information Service
DAGRIS	Domestic Animal Genetic Resources Information System
DREA	Department of Rural Economy and Agriculture
EAC	East African Community
EC	European Commission
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FSTP	Food Security Thematic Programme
GPA	Global Plan of Action
IGAD	Intergovernmental Authority for Development
ILRI	International Livestock Research Institute
ITC	International Trypanotolerance Centre
M&E	Monitoring and Evaluation
MS	Member States
NASRO	North African Sub-Regional Research Organization
PROGEBE	Project on Sustainable Management of Endemic Ruminant Livestock in West Africa
PSC	Programme Steering Committee
RECs	Regional Economic Communities
SoW-AnGR	The State of the World's Animal Genetic Resources for Food and Agriculture
S-RFP	Sub-Regional Focal Point
TA	Technical Assistant
WALIC	West Africa Livestock Innovation Centre

Executive Summary

Animal Genetic Resources (AnGR) for food and agriculture are essential for Africa food security, and contribute to the livelihoods of millions of people. However, genetic improvement programs in Africa, by governments, non-governmental organizations, bilateral aid agencies and the private sector have favoured the use of exotic breeds for crossbreeding, upgrading or replacement. These programs have mostly been implemented without clear policies, regulatory frameworks, strategic thinking and a long term view and were only motivated by the objective of rapid productivity gain resulting in indiscriminate, uncoordinated or uncontrolled crossbreeding activities. Moreover, the trans-boundary nature of the spatial distribution of livestock breeds calls for a harmonised legal and technical frameworks of exploiting the genetic attributes of Africa's livestock. Genetic resources are a global concern and of public interest that require global governance mechanisms.

On 18th July 2013, the African Union-Interafrican Bureau for Animal Resources (AU-IBAR) on behalf of the African Union Commission (AUC) signed with the European Commission (EC) a € 14.929 million grant for a joint management project through the signature of a Contribution Agreement for the implementation of the "Strengthening the Capacity of African Countries to Conservation and Sustainable Utilisation of African Animal Genetic Resources" project. The project aims to strengthen the capacity of countries and Regional Economic Communities to sustainably use and conserve African animal genetic resources through institutionalising national and regional policy, legal and technical instruments. The project will strengthen the inherent capacities of Regional Economic Communities (RECs) and the end-users at community level to improve the utilization of AnGR and rural livelihoods through:

- Establishment of the status and trends of animal genetic resources in Africa.
- Development of Policy frameworks for the sustainable use of AnGR.
- Supporting and strengthening national and regional conservation and improvement strategies and initiatives.
- Increasing knowledge, attitude and practice of the contribution of livestock and livestock sector to economic growth, food security and poverty reduction.

The present report covers the period of July 2013 to June 2014 and the main achievements include:

- A Continental inception workshop held in Abidjan.
- Three regional inception workshops held in Burkina Faso, Rwanda and Gaborone and their respective reports are available.
- A stakeholders' consultative meeting was held to discuss on ongoing activities on AnGR. Some collaboration entry points were identified during the meeting.
- Roles and responsibilities of key implementing partners defined based on synergies and complementarities and a road map developed.
- 40 AU MS assisted and supported to prepare and submit their Country Reports for the preparation of the 2nd SoW-AnGR by FAO. The success of this activity was highly commended by FAO.
- The assessment of the status and trends of AnGR in all MS is ongoing. This includes assessment of policies and legislations on AnGR in Africa that will inform the formulation of coherent policy and legislative frameworks for the management of AnGR including monitoring breeds at risk.
- A road map drafted for the establishment of the African Animal Genetic Information System (AAGRIS)

- The process of establishment of Sub-regional focal points for AnGR has been launched in East, Southern and North Africa with the installation of the interim steering Committees, the choice of institutions to host the secretariat of the S-RFP and a road map for the establishment of the S-RFP.
- A secretariat for animal genetic resources in Africa has been established as a network and community of practice for information sharing, lessons learning and coordination of AnGR initiatives on the continent.
- Assessment of AnGR *Ex-situ* and *In-situ* conservation facilities for 12 AU MS has been undertaken and preliminary analysis report proposed 4 countries (Burkina Faso – Western Africa, Rwanda – Eastern Africa, Botswana – Southern Africa and Cameroon – Central Africa) to host the regional gene banks. Northern Africa Region assessments are in the final stages.
- A proposed structure for the establishment of virtual regional gene bank has been developed and will be validated by MS.
- A communication strategy, an M&E framework have been drafted for validation by the SC of the project.
- A Webpage has been developed and systematic uploads of Communiques and Press releases after every key workshop posted. Other relevant key information on the project will regularly be shared.

Chapter 1: Introduction on the project

1. Project Overview

Animal Genetic Resources (AnGR) for food and agriculture are essential for Africa food security, and contribute to the livelihoods of hundreds of millions of people. However, genetic improvement programs in Africa, by governments, non-governmental organizations, bilateral aid agencies, and the private sector, have favored the use of exotic breeds for crossbreeding, upgrading, or replacement. These programs have mostly been implemented without clear policies, regulatory frameworks, strategic thinking and a long term view and, were only motivated by the objective of rapid productivity gain and this has resulted in indiscriminate, uncoordinated or uncontrolled crossbreeding activities. Moreover, the trans-boundary nature of the spatial distribution of livestock breeds calls for a harmonized legal and technical frameworks of exploiting the genetic attributes of Africa's livestock. Genetic resources are global goods and therefore are of public interest requiring a global approach to governance mechanisms.

On 18th July 2013, the African Union Interafrican Bureau for Animal Resources (AU-IBAR) on behalf of the African Union Commission (AUC) signed with the European Commission (EC) a € 14,929 million grant through the signature of a contribution agreement for the implementation of the "Strengthening the Capacity of African Countries to Conservation and Sustainable Utilisation of African Animal Genetic Resources" project. The project aims to strengthen the capacity of countries and Regional Economic Communities to sustainably use and conserve African animal genetic resources through institutionalising national and regional policy, legal and technical instruments.

The main beneficiaries of the project are livestock owners in AU MS, especially those who rely on livestock production for their livelihoods. Other beneficiaries are technical staff and decision makers of national, regional and continental institutions and research centers involved in policy development, design of intervention strategies and support tools, and implementation of specific activities. Indirect beneficiaries are local communities benefitting from biodiversity conservation measures. The project will lead to the following key results (outcomes):

1. Establishment of the status and trends of AnGR in West, Central and East Africa.
2. Development of Policy frameworks for the sustainable use of AnGR.
3. Supporting and strengthening national and regional conservation and improvement strategies and initiatives.
4. Increasing knowledge, attitude and practice of the contribution of livestock and livestock sector to economic growth, food security and poverty reduction.

2. Project Structure

AU-IBAR is the lead institution of this project. Given its institutional position and its mandate, particularly as regards the execution of CAADP, AU-IBAR ensures synchronization, coordination and synergy with MS and RECs participating in this project. This project is domiciled in the Animal Production unit of AU-IBAR.

The project builds on the past or ongoing work of implementing partners namely:

- **ILRI** – ILRI programs focus mainly on characterizing indigenous breeds globally, conserving them and improving methods of use of livestock. ILRI has developed the DAGRIS database which will be revamped and linked to the AU-IBAR's ARIS database as its Animal Genetic component.
- **International Trypanotolerance Center (ITC)/WALIC (West African Livestock Innovation Center)** – this partnership will catalyze ITC's work in conducting research on and multiplication of *N'Dama* cattle and enhancing livestock productivity in West Africa through optimum and sustainable use of genetically resistant local breeds to foster the well-being of the population.
- **Le Centre International de Recherche-Développement sur l'Élevage en zone subhumide (CIRDES)** – through this partnership, CIRDES will enhance its work on research and development of livestock in its focus West African countries and training for its technical and agro-pastoral staff as well as transfer of new technologies in the domain of stock breeding.

The project management component comprises:

- The Project Steering Committee (PSC), which provides overall guidance on policy and strategy for the effective coordination, implementation, monitoring and evaluation of the Genetics Project. It is established to monitor progress in project execution, to review and approve annual work plans and budgets.
- The Project Management Team (PMT): plays the key role in project execution and supervises the production of project outputs and outcomes/results.

Chapter 2: Project Inception phase

The project inception phase focused at establishing the project operational structure and fine-tuning the project strategy for delivering the outputs and outcomes.

3. Recruitment of project Staff

The recruitment of the project team started 3 months before the beginning the project and was completed in October 2013. The team members assumed duties in November, December 2013 and January 2014. The team is composed of a TA (Technical Assistant), 2 PO (Project Officers) and 1 Data management expert. The team is supported by one M&E officer, an Administrative Assistant and an Account Assistant; all recruited and paid by the project. The team works under the supervision and guidance of the Head of Animal Production Unit.

4. Roles and Responsibilities of Partners

4.1. Implementing partners

During the formulation of the project, the following partners were identified as implementing partners based on their past and current involvement on AnGR initiatives on the continent. However, their respective roles and responsibilities were still to be clarified.

The project team had consultations with these partners and based on the principle of subsidiarity and comparative advantage the partners were assigned the activities as presented in the table below:

Table 1: Matrix on the Areas of involvement of Implementing Partners

	Partners			
	ILRI	FAO	CIRDES	WALIC
Result 1: The Status and trends of animal genetic resources in West, Central and East Africa established				
1 -Establish the state of AnGR in West Central and East Africa to identify threatened ruminant breeds and breeds at risk of extinction	Participation on the analysis and interpretation of identified threatened ruminant breeds and breeds at risk of extinction	Provide access to results of analyses of Country Reports for the 2 nd SoW-AnGR Collaborate to foster synergies in covering countries and harmonizing approaches under “TCP RAF 3403”	Analysis and interpretation of results	
2 -An inventory and assessment of existing policies and regulations on the use of animal genetic resources including genetic improvement of livestock in West, Central and East Africa	Participation in the analysis of existing policies and regulations	Provide access to results of analyses of Country Reports for the 2 nd SoW-AnGR. Provide technical backstopping in analysis of information Collaborate to foster synergies in covering countries and harmonizing approaches under “TCP RAF 3403”	Participation on the analysis of existing policies and regulations	
3 -Assessment of the genetic and socio-economic impact of production and management systems ie. crossbreeding with exotic breed, intensification, transhumance and commercialisation on local AnGR	Provide some information at continental level and/or oversee studies, genomic markers Participation on the analysis of existing policies and regulations To facilitate the specific studies in the regions (Assessment studies on socio-economic, genomic and environmental impacts)	Provide access to results of analyses of Country Reports for the 2 nd SoW-AnGR. Provide “off-line tool” and other support for harmonized collection of PEDs information Participation on the analysis of existing policies and regulations	Participate in the identification of criteria to define the case studies To facilitate the specific studies in the region (CORAF to provide information on study with Zebu introgression Transhuman	To facilitate the specific studies in the region To start proposed project on transhumance to provide information on the current study on Transhumance

			ce studies)	
4-Assessment of selection programs (including breeding objectives) on animal genetic diversity in West, Central and East Africa	Provide information or technical backstopping in studies Participation in the analysis of selection programs To facilitate the specific studies in the region (Assessment studies on socio-economic, genomic and environmental impacts	Provide information or technical backstopping in studies	Participation in the analysis of selection programs	To facilitate the specific studies in the region Participation on the analysis of selection programs
Result 2: Policy frameworks for the sustainable use of AnGR developed				
1-Develop national, regional and continental guidelines for the formulation and harmonization of crossbreeding policies	Participation in the guidelines for the formulation and harmonization of crossbreeding policies	Provide technical backstopping in the in designing guidelines – crossbreeding section in breeding and In Vivo guidelines harmonization of crossbreeding policies	Participation in the guidelines for the formulation and harmonization of crossbreeding policies	Take active part in designing the guidelines (for regional & Ndama - Djallonke programs consideration
2-Develop regional frameworks and policies for in situ and ex situ conservation		Will assist in developing the frameworks Development of general policy document		
3-Develop technical standards and protocols (including property rights and benefits sharing) for the exchange and use of genetic materials.	Participation in developing the standards and protocols	Provide technical backstopping in developing the standards and protocols Liaise with CGRFA to ensure legal compliance	Participation in developing the standards and protocols	
Result 3: National and regional conservation and improvement strategies and initiatives strengthened or established				
1-Support member states to establish and implement their National Action Plan for AnGR within their livestock policy.		Provide capacity building to “train the trainers at regional level” on institutional development and NAP		
2-Support member states to establish or strengthen their national breeding and conservation strategies		Part of NAP	Monitoring the implementation of specifics	Monitoring the implementation of specifics actions in the countries in

as part of their National Action Plan for AnGR.			actions in the countries in their jurisdiction	their jurisdiction
3-Support the development of regional (REC based) conservation policies and strategies for transboundary breeds and populations that are at risk	Participation in policy formulation & development	Provide technical backstopping in in policy formulation & development	Participation in policy formulation & development	Participation in policy formulation & development
4-Support the establishment of a regional/sub-regional facility for ex situ conservation, in particular cryogenic storage and establish a gene bank on AnGR	Provide the back-up gene bank as part of their biobank for the REGION	Serve on “Advisory Board”; software “cryoweb” available in DAD-is (Europe) national to regional	Possibly hosting & animating of a Regional Gene Bank (West Africa)	
5-Support the establishment and strengthening of national and regional livestock breeders’ associations.	Build on approaches from East Africa Dairy work	FAO has guidelines on general establishment of associations	Participation in the identification of the livestock breeders’ associations. monitoring the implementation of specific actions in the countries in their jurisdictions	Participation in the identification of the livestock breeders’ associations. monitoring the implementation of specific actions in the countries in their jurisdictions
Result 4: Knowledge, attitude and practice of the contribution of livestock and livestock sector to economic growth, food security and poverty reduction, promoted.				
1-Develop harmonized tools (protocols) for Characterization and Inventory of AnGR	Will assist in developing harmonized tools	Will assist in developing harmonized tools, possibly e-learning: to develop tools for each species for capture of individual phenotypic characterization data and compilation of breed-wise statistics for DAD-IS	Will assist in developing harmonized tools	
2-Establishment of AnGR database	Will assist in developing database, expand country	Could assist on interoperability of database with DAD-		

	DAGRIS	IS: regional display? DAD-IS training		
3 -Establish and strengthen regional monitoring of trends and associated risks of trans-boundary breeds.	Through ILRI could assist in protocols/systems for monitoring of trends	Develop transboundary breed tool for DAD-IS (national tool already available)	Implement the monitoring system at regional level	Implement the monitoring system at regional level
4 -Develop regional networks for information sharing	Everybody. This activity will consist of strengthening or establishing new one (network for coordination of regional initiatives, position of Africa Pre-ITWG)			
5 -Establish or strengthen regional focal points for AnGR.	Provide technical support to the national focal points, S-RFP, regional focal points			
6 -Document and disseminate best practices and lessons learnt from AnGR conservation and improvement initiatives	Make available, share best practice on AnGR initiatives for compilation and publication	(joint publication of all partners)		

4.2. Other Stakeholders:

A detailed stakeholders' analysis was also conducted aiming at defining their roles and contribution to the project:

- The Ministry responsible for livestock development. They are the ministry in charge of Animal Genetic Resources management in the MS. They are responsible for the formulation of national policies and strategies for the management of AnGR and the coordination of the implementation of the GPA. For the implementation of the project they have appointed a project focal point whose responsibility will be to lead the project in its technical and development directions. They will undertake all duties of the project management at national level in close collaboration with the RECs and AU-IBAR. They will also be responsible for compiling national reports, budgets and work plans. The project focal point will work in close collaboration with the National Coordinator of AnGR whose responsibilities are to:
 - Liaise with FAO as main official contact point for the Global Focal Point;
 - Monitor data on breeds and oversee their insertion in DAD-IS ;
 - Evaluate, coordinate and monitor national AnGR projects;
 - Initiate AnGR research;
 - Promote networking nationally and internationally;
 - Make information available to the public through publications and presentations;
 - Follow international activities related to AnGR.
- The RECs: Arab Maghreb Union (UMA), Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC), Economic Community of Central African States (ECCAS), Economic Community of West African States (ECOWAS), Intergovernmental Authority on Development (IGAD), Southern African Development

Community (SADC) – will facilitate mainstreaming of AnGR priorities into national and regional agricultural investment plans, harmonization of regional policies for trans-boundary breeds and establishment of regional gene banks.

- Livestock Breeders Associations – these are the guardians of a vital pool of biodiversity that needs conserving. They represent the interests of livestock breeders by lobbying to influence national policies. They will also serve as a platform to transmit knowledge and technological innovations.
- Research Centers/Institutions – these will include those involved in design of intervention strategies, support tools and implementation of specific activities that contribute to policy development.
- Small holder livestock owners and keepers – these are the custodians of AnGR in Africa whose livestock are at risk of dilution or extinction and whose livelihoods depend on them. In particular women, occupy a central role in the use and production mainly in incorporating animal source goods from AnGR in household diets.

5. Year 1 Planning Retreat

A project team retreat was organized to plan for effective and efficient management of the project and to critically discuss the requirements of the project, implementation modalities and to provide opportunities to engender creativity and interaction among project team members. The retreat further offered opportunities for team members to make their contributions on how best the project could be implemented and managed; setting goals and expectations as well as allocating roles and responsibilities of the team members. A detailed Work Plan was developed based on the four project Result Areas and their Activities (*Annex I*).

6. Communication and visibility

A communication and visibility strategy for the project has been drafted based on the guidelines provided by the EU.

(http://ec.europa.eu/europeaid/work/visibility/documents/communication_and_visibility_manual_en.pdf).

This strategy underscored the need for sharing the knowledge, experiences and information gained in the field to enhance participatory local management and planning for sustainable natural resources. Several steps will be taken to ensure that the project experience and outputs are effectively and widely disseminated locally, regionally and globally. Furthermore, all disseminated approaches will be in accordance with the EC visibility guidelines, which in their provisions, require the EC funded projects, EC and the implementing organizations to work together to ensure appropriate visibility actions for a programme as a whole, as well as for specific interventions and activities under the programme.

The document on the Visibility Plan for the Genetics project outlines the objectives, activities, methods and resources that AU-IBAR and the project implementing partners will utilize to ensure widespread publicity for the project, its objectives, activities, progress and achievements. The strategy to put in place, will aim at enhancing the visibility and promote the Genetics Project; establishing a feasible and efficient system of communication to contribute to knowledge creation and to policy and decision-making in the field of Animal Genetics; informing about project activities and outcomes and to raise awareness on the key

issues addressed by the project among all stakeholders and final beneficiaries, while assuring the effective communication within the consortium and with other relevant actors outside the project consortium.

The main activities to constitute the strategy are summarized in a Matrix defining on one hand the communication objectives, the responsibilities, the key messages, the most appropriate tools, the targets (European citizens, EU Institutions and international donor community, beneficiary population) and on another hand the Financing modalities, the Implementation and finally the Evaluation and Audit.

The method to use will build on the combination of tools (Letters, press release, flyers, brochures, media campaigns, stakeholders' workshops, banners, promotional items, photographs, videos, websites, cross visit programs, success stories, working papers, policy briefs, public conference) and resources (financial and human particularly the project staffs, the implementing partners' staff and the service providers).

The steps taken in the implementation of the strategy include:

- Conduct of four Inception workshops which are expected to instil a sense of ownership of the project by stakeholders and decision makers;
- Production of Communiques and Press releases after every key workshop which are posted on the AU-IBAR website;

<http://www.au-ibar.org/angr/432-regional-inception-workshops-for-animal-genetic-resources>

<http://www.au-ibar.org/angr-press-releases>

- Development of the Genetic Project Webpage on which specific project activity outcomes are posted;
- Development of a Communication and Visibility Strategy for the project which was drafted during the project team retreat for validation by the Steering Committee.

7. Monitoring, evaluation and reporting

A project Monitoring and Evaluation framework has been developed specifically for the project. The entire framework is presented and described in 10 sections, among which selective ones are listed below:

- **The conceptual framework:** here is detailed the Results Matrix, Framework and the key Performance Indicators. The levels of indicators for the Genetic project include: the Impact indicators, Outcomes indicators, Outputs indicators and Input indicators.
- **The Monitoring Process:** focusing on the Results monitoring, the process, the Compliance, Financial, Context and Results Oriented Monitoring (ROM) Missions.
- **Evaluation Process:** comprise of baseline collation; evaluations (real time, mid-term and Final); the Criteria (Relevance, Effectiveness, Efficiency, Impact and Sustainability), Audit, Follow up and Implementation of Key Recommendations.
- **Monitoring and Evaluation Plan:** presented in form of Matrix, it includes the indicators tracking. It captures these details at four levels: impact, outcome, output and process levels. The matrix clearly identifies what is to be monitored and evaluated, when, how and with what resources.

- **Data collection, Processing and Dissemination:** Data Collection Methods & Tools ; Document Review; Focus Group Discussions ; Key Informant Interviews ; Checklist Interviews & Questionnaires; Control Groups; Analysis & Dissemination.
- **Reporting:** Annual reports (Technical and Financial); Progress report (Six monthly; Quarterly); M&E Reports; Evaluation Report and Reporting Schedule.
- **Risk Analysis and Mitigation Strategy:** with emphasis on Identification; Analysis; Planning; Management as well as Project Close Out and Exit Strategy, and
- **Project sustainability and Closure:** As part of the project sustainability, an exit strategy will be developed in the first year of project implementation. The intention of this strategy will be to depict the withdrawal of the Genetic project's support in building the capacity of MS and RECs to sustainably use and conserve AnGR while sustaining the impact gained during the course of implementation. The project close out phase will take place the last three months of the project implementation. It will be the process of ending the technical, operational and financial functions of the AnGR project. The purpose will be to detail formal acceptance and an orderly process for ending the project.

Chapter 3: First Year project achievements

8. Inception Workshops

Inception workshop in Abidjan

The inception workshop to launch the project was held in Abidjan, Côte d'Ivoire, from 14th to 15th April 2013. The workshop was attended by Directors of animal Production representing 46 AU MS, Livestock Officers from RECs (4) and sub-regional organizations, with expertise in genetics and animal breeding ASARECA, CIRDES, WALIC (3). The objectives of the workshop were to:

- Present and share with stakeholders the project objectives, activities and implementation strategy.
- Agree on the role and responsibility of project focal point and that of the National Focal Points of Animal Genetic Resources.
- Create synergies with other on-going initiatives at national and regional levels.

From the various discussions the following recommendations were made at the end of the workshop:

(i) **On the Coordination and Synergy with ongoing initiatives**

- As part of baseline collection, existing initiatives should be properly mapped and areas of complementarity and synergy identified.
- The project should complement the activities of TCP/RAF/3403 on "Assistance for Regional Initiative on Animal Genetic Resources in Africa" to avoid duplication.
- The RECs should play an important role in coordinating AnGR initiatives especially when transboundary breeds are involved.
- The anchorage of Sub regional focal points in RECs or other regional organizations is essential and should be pursued during the implementation of the project to ensure sustainability and avoid the experience of Southern Africa.

- The establishment of regional gene banks should be innovative and build on existing ones.
- The geographical coverage for Result 1 of the project should be expanded to cover the 54 AU MS.
- Sub-regional research and development organizations should be included as stakeholders in the project and invited in the SC of the project.

(ii) *The role of the Focal Points and the Focal Institutions*

- The Focal Point of AnGR at national and regional levels should be institutions with clear mandate on the management of AnGR.
- These institutions should appoint a Coordinator who will be the main contact point.
- The focal points and their coordinators should be the same for both FAO and AU-IBAR.
- The coordinator should constantly report to the Directorate of Animal production under the docket of which AnGR issues are within the Ministry Responsible for Livestock development.
- AU-IBAR and FAO will prepare TORs of Focal Points and Coordinators to be discussed and validated during the 1st meeting of coordinators.

The Project Regional Inception workshops

The Regional Inception Workshops were held, for West and Central Africa in Ouagadougou, Burkina Faso on from 6th - 9th November 2013, from 20th - 23rd November 2013 Kigali, Rwanda, 26th - 29th November 2013 Gaborone, Botswana, for East and Southern Africa, respectively. The regional inception workshop for Northern Africa was held in Algiers, Algeria from 9th to 10th June 2014 combined with the Regional workshop for the establishment of the Sub-Regional Focal Point for AnGR for Northern Africa.

The Regional Inception workshops aimed at acquainting National Coordinators, Focal Points of Animal Genetic Resources (AnGR), implementing partners and other key stakeholders with the project. The workshops were appropriate platforms to exchange and share ideas and technical information related to AnGR and to build on expectations, address key concerns and elicit inputs on the implementation strategy. The workshops provided opportunities for promoting synergies among partners and key stakeholders.

Other issues discussed included;

- Mapping of the national and regional initiatives (inventory).
- The current status of implementation of these initiatives (nationally and regionally).
- Status of implementation of the Global Plan of Action.
- Opportunities for enhanced regional collaboration in development of breeding programmes.

It was clear that most countries had successfully set-up national initiatives and highlighted additional activities that they intended to conduct in the future. The workshop emphasized the need to develop clear breeding strategies for breeds across the regions, strengthening of pre-existing regional projects and promoting capacity-building initiatives within the regions.

The three regional workshops produced the following recommendations:

- There is an urgent need to follow-up on the status of reporting at country level and AU-IBAR should take a proactive role to insure that countries meet the deadlines for submission of country reports.
- Discussions should be initiated with the sub-regional research and development organizations to identify their roles in the implementation of the project.
- A functional and informative AnGR database populated by the region should be established.
- There should be more training for animal breeders and collaboration should be encouraged between universities in AnGR for MSc and PhD training programmes.
- There should be fair exchange of genetic materials and information among the Member States in the region.
- Regional collaboration in molecular characterization of AnGR should be promoted.
- Livestock recoding systems for SADC should be introduced.
- That Member States should establish National Strategies and Action Plans to increase visibility of AnGR.
 - That the conservation and sustainable utilization of trans-boundary breeds such as Djallonké sheep, African dwarf pig, N'Dama cattle, should be continued.
 - That value-addition and market-access strategies should be devised to help the West Africa region respond better to the erosion of AnGR.

Result Area 1: The Status and trends of animal genetic resources in West, Central and East Africa established

The baseline characterization and inventory of AnGR are fundamental for breed improvement and conservation programmes, and for contingency planning to protect valuable resources at risk. However, according to *The State of the World's Animal Genetic Resources for Food and Agriculture (SoW)*, population size is missing for over two-thirds of African breed populations. The gaps in data and information on the breeds and their production systems are obstacles to the effective sharing of data and information within and between countries, which hinders the joint development of trans-boundary breeds. The activities in this result area aim at taking stock of the existing situation and generate knowledge and evidences that will be used for policy dialogue and guidance, advocacy and awareness rising, under the other three result areas. Under this result the following activities are envisaged:

1. Establish the state of AnGR in Africa to identify threatened ruminant breeds and breeds at risk of extinction.

During the inception workshops and the preparation of the country reports for the 2nd SoW, information on the flows of AnGR, livestock sector trends, overview of AnGR, characterization, institutions and stakeholders, breeding programs, conservation, reproductive and molecular biotechnologies, integration of the management of AnGR with management of plants forestry and aquatic genetic resources, provision of regulating and supporting ecosystem services, progress in the implementation of GPA and emerging issues were collected. These information are currently been analyzed and will be compile in a publication “State of African animal genetic resources” and a “Status and trends of African animal genetic resources”.

At global level, and with the support of AU-IBAR, 50 AU MS have submitted their report for the 2nd SoW currently under preparation by FAO compared to less than 20 for the 1st SOW. The countries are currently been supported to update their AnGR inventories into the DAD-IS as part of the 2nd SoW. So far, before the deadline of 31st May 2014, 14 AU-MS have updated inventories on Breeds and/or livestock populations.

2. Inventory and assessment of existing policies and regulations on the use of animal genetic resources including genetic improvement of livestock in Africa.

The inventory of policies on the use of the animal genetic resources has been completed and the figure below shows the countries having policies on the use of AnGR. The first analysis of these policy showed that there is no policy on crossbreeding despite the fact that crossbreeding activities are dated as far back as the colonial period.

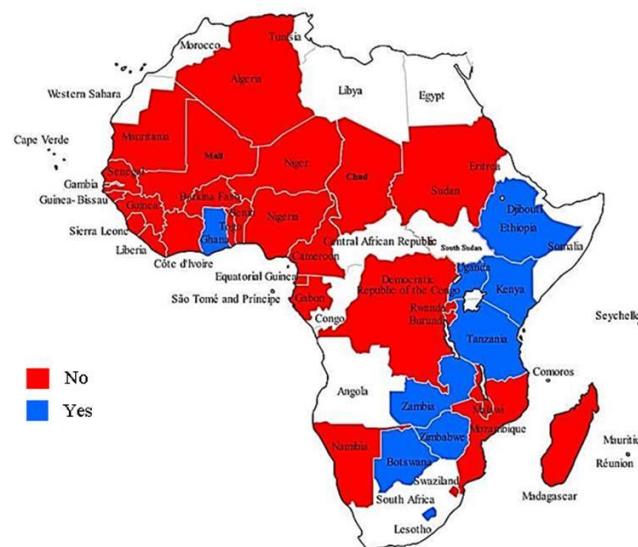


Figure 1: Overview of the countries that have developed Policy frameworks for the sustainable use of AnGR on the continent

Result Area 3: Supporting and strengthening national and regional conservation and improvement strategies and initiatives

In order to successfully conduct genetic improvement initiatives on the continent, this result is proposing technical and financial support to national and regional initiatives. Collaboration among breeding institutions, research organizations and large local enterprises and abroad will be given high importance to build up strategic alliances to share resources, and to achieve synergies in the common development of AnGR.

1. Support Member States to establish and implement their National Action Plan for Animal Genetic Resources within their livestock policy

The status of countries with National Action Plan has been completed and shown in the figure below.

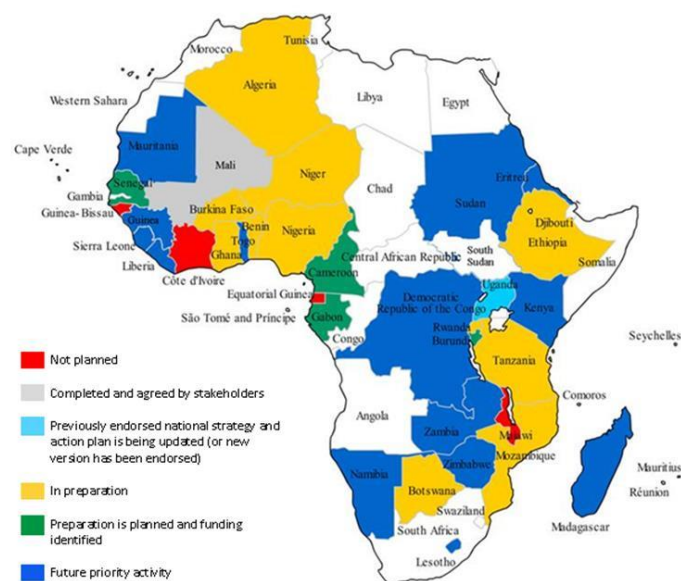


Figure 2: Overview of Countries that have established and implemented their National Action Plan for Animal Genetic Resources within their livestock policy

2. Support Member States to establish or strengthen their national breeding and conservation strategies as part of their National Action Plan for Animal Genetic Resources

Some of the countries have submitted requests to support specific activities within their National Action plans. These countries include Ethiopia, Eritrea, Cote d'Ivoire and Liberia. The project team has set criteria for support, which will focus on policy formulation, the breeding programmes and optionally upon request.

4. Support the establishment of regional facility(ies) for ex situ conservation, in particular cryogenic storage and gene banks on AnGR

This activity firstly aimed at developing an overview of the existing Gene banks in Africa and the material held by them as well as the conditions under which the material is available. This overview will serve further deliberations on the establishment of regional Gene banks and ultimately on an African Gene bank Network for Animal Genetic Resources.

In order to support the activity a list of Gene banks was established, drawn from the country reports for the second SoW-ANGR. The list included Burkina Faso, The Gambia, Uganda, Botswana, South Africa, Ethiopia, Rwanda, Tanzania, Zimbabwe, Niger, Mauritania and Cameroon and Chad. A checklist was developed and pre-assessment visits were planned.

The preparation and execution of the visits to conservation facilities were organized and coordinated with the collaboration of the host countries (focal Institutions).

The result from the analysis of the assessments visits proposed a list of facilities to be upgraded or supported as regional facilities by the Genetic Project. The following initiatives, in each region, were the most promising and as such were recommended to serve as Regional Animal Gene Banks. The proposed locations of the Animal Gene Banks in the different regions are:

- In West Africa at the CIRDES, Burkina Faso;
- In Southern Africa, the Gene Bank for Animal Genetic Resources in Gaborone, Botswana;
- In Eastern Africa, the National Gene Bank in Rwanda;
- In Central Africa the IRAD Bambui Regional Centre;
- For Northern Africa, a future mission will advise on the facility that should be selected to serve the purpose.

The separate Animal Gene Bank that will serve the needs of a backup will be under the Mandate of the African Union Commission and will be established at the ILRI (Nairobi). ILRI will serve as the Laboratory for the African Union Commission and will hold samples of each region, thus providing security against accidental loss.

Taking into account the limited number of operating Animal Gene Banks, the high costs of their establishment and running, the lack of technical expertise and resources, another potential option was to consider the creation of an African Animal Gene Bank Network based on the model of the European Network of Gene Banks. It will be a Virtual Gene Bank that might operate as a network of already existing gene banks (in Situ/ex situ national or regional conservation initiatives).

Some recommendations have also been proposed in order to developed, strengthen and/or support the proposed regional facilities.

5. Support the establishment and strengthening of national and regional livestock breeders' associations

A mapping of breeders' associations has been established. It focuses on the existence, the level of organization (how well are they organized in terms of governance, coverage, service to livestock keepers?). The Maps below show the countries with, those without organized breeders' associations and others where information need to be gathered. The maps also reflect the speculations dealt with by these associations.

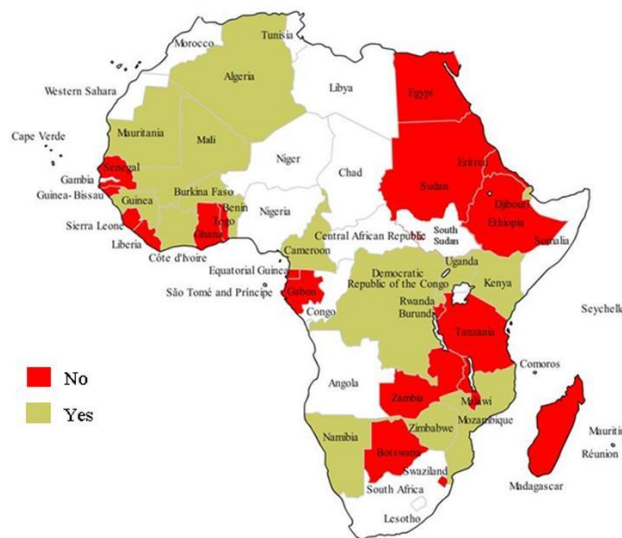


Figure 3: Overview of Countries that have established national livestock breeders' associations

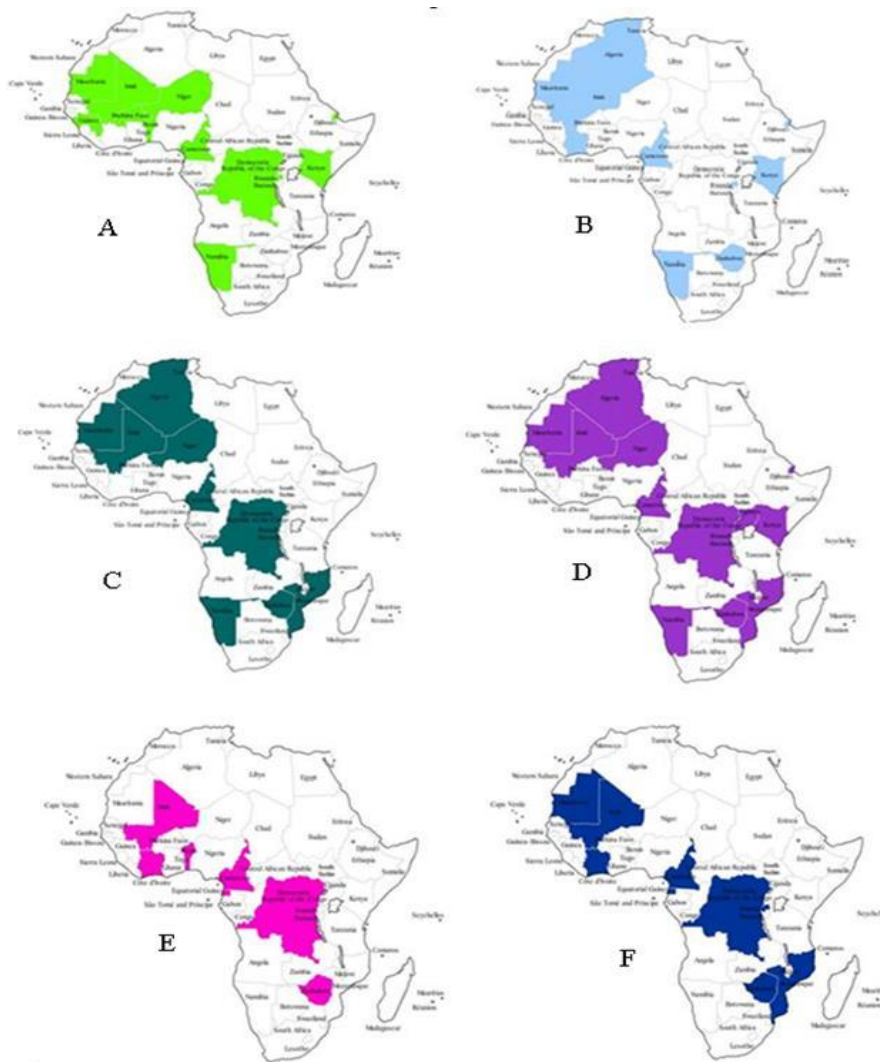


Figure 4: Overview of Countries that have established national livestock breeders' associations for (A) dual purpose, (B) milk, (C) sheep, (D) goat, (E) pig and (F) poultry.

Result Area 4: Increasing knowledge, attitude and practice of the contribution of livestock and livestock sector to economic growth, food security and poverty reduction

1. Develop harmonized tools (protocols) for characterization and inventory of AnGR

Consultative discussions have been held with key implementing partners (FAO, ILRI, CIRDES and BecA) and recommendations have been made to undertake an assessment of all existing characterization, inventory and monitoring tools/protocols of AnGR to guide revision and/or harmonization processes. Based on the FAO published guidelines on characterization and inventory tools/protocols, a thorough assessment on the degree of adoption of these guidelines by member states, research institutions and institutions of higher learning, the impact of the adoption in relation to characterization and inventorization, identification of challenges and shortcomings will be undertaken. The ultimate goal is to establish whether there is a need to revise and/or harmonize the existing tools/protocols.

This activity will be realized through initiating e-discussions whose outputs will be deliberated upon in a workshop. The workshop will formulate a clear strategy for the improved utilization of characterization, inventory and monitoring tools. In relation to the strategy adopted being revision, harmonization or development of the tools/protocols, roles and responsibilities of the relevant key actors will be defined to enable the actualization of the activity.

2. Establishment of AnGR database

Following consultations with various stakeholders, it was proposed to develop an African Animal Genetic Resources Information System (AAGRIS). The proposed information system will function as a “one-stop-shop” where a wide range of end users will be able to obtain relevant information to acquire knowledge, inform policy makers, raise awareness and promote best practices in the management of AnGR. This information will cover key aspects of AnGR e.g. monitoring and surveillance information, geo-referencing information, AnGR relate-research information, livestock records, conservation activities etc. Under the Animal production core area, AAGRIS will form one of its modules housed within AU-IBAR Animal Resources Information System (ARIS 2). The following road map for the African AnGR Information System (AAGRIS) was developed and agreed upon following a consultative meeting with ILRI – a key implementing partner.

Table 2: Roadmap for the establishment of an African Information system/hub for AnGR

ROLES/ACTIVITY	INSTITUTIONS ROLE	DEADLINE
Facilitate a Consultative meeting with stakeholders to carry out comprehensive needs assessment/survey and additional potential partners	AU-IBAR	Q1
Establish missing information in pre-existing databases	AU-IBAR	Q1
Compilation of information from 2 nd SoW-AnGR and others	AU-IBAR	Q2
ROLES/ACTIVITY	INSTITUTIONS ROLE	DEADLINE
Determine minimal information required on global interface	AU-IBAR	Q2
Develop information system structure, layout, architecture	AU-IBAR ILRI	Q4
Feedback on previous “pilot studies”	AU-IBAR ILRI	To be communicated
Pilot the developed tools within new information system in selected countries	AU-IBAR	2015
Roll out information system across continent	AU-IBAR	2016

4. Develop regional networks for information sharing

A meeting with Institutions involved in regional animal breeding initiatives on the continent was organised with representatives from FAO, ILRI, CIRDES, WALIC, CORAF, ASARECA and RUFORUM. The objective of this meeting was to discuss and identify current and past initiatives on AnGR in Africa and also provided an opportunity to promote synergies and a platform for communication and building partnerships for the management of AnGR. The meeting was also to identify gaps in knowledge and key areas of concern in AnGR, strategize on what can be done to fill knowledge and information gaps. The main output of the meeting was the agreement to establish an **African Animal Genetic Resources Secretariat** that will foster coordination, collaboration and coherence in the management of Animal Genetic Resources in Africa. This Secretariat will among other tasks, facilitate knowledge sharing through creation of a network and strengthening existing networks on AnGR (i.e. using the DAD-Net setup) and joint planning. Other outcomes of the meeting included:

- The identification of some priority actions on matters related to AnGR.
- The identification of initiatives/ projects /programmes as well as the evaluation of the capacities and potential contributions of these initiatives/ projects/ programmes to the sustainable utilization and conservation of AnGR.
- The provision of an opportunity to promote synergies and a platform for communication and enhancing project team building and partnerships for the successful implementation of the project.

5. Establish or strengthen regional focal points for animal genetic resources

The process of establishment of S-RFP has been initiated in East, Southern and Northern Africa.

- For East Africa, an Interim Steering Committee (ISC) was put in place and its governing instance comprising National Coordinators of Kenya (Chair), Ethiopia (Vice-chair), Sudan and Rwanda (Secretary) was elected. A roadmap as well as priority actions for the Interim Steering Committee with timelines and responsibilities were developed with formal establishment of the S-RFP foreseen by September 2014. ASARECA was appointed as the Host Institution for the S-RFP for East Africa. The appointment has been accepted officially with the nomination of a regional coordinator by ASARECA following the Note Verbal by AU-IBAR.
- For Southern Africa, the structure agreed on to govern the S-RFP comprised a Secretariat, a Sub-regional Coordination, a Steering committee and Specific Task Forces. An Interim Steering Committee chaired by Zambia with Namibia as Deputy Chair and CCARDESA as Secretary was elected to guide the process till the establishment of the Steering Committee by August – September 2014, following a developed roadmap with timelines and responsibilities. CCARDESA was appointed as the Host Institution for the S-RFP for Southern Africa. The acceptance of CCARDESA followed the Letter of request by AU-IBAR and has been translated, so far by an appointment of a Regional Coordinator and the facilitation of the first planning meeting of the Interim Steering Committee (ISC) for the Sub-Regional Focal Point (S-RFP) back to back with the CCARDESA's Annual General Assembly.

- For Northern Africa the process of establishment of the S-RFP concluded with the designation of Algeria through INRAA to host the Sub-regional Focal Point. A road map was developed to accompany the process of the establishment of S-RFP by November 2014. This includes among key action points, INRAA, as S-RFP to appoint a Sub-Regional Coordinator, establish a Steering Committee and initiate some of the activities listed in the priority actions for the S-RFP.

6. Document and disseminate best practices and lessons learnt from animal genetic conservation and improvement initiatives

Raising awareness and advocacy for policy change necessitates the use of evidence and experiences coming from the field. From activities undertaken under Result 1, best practices and/or major lessons learnt in management and conservation of AnGR will be identified and documented. Good practice papers and policy notes will be produced and disseminated through the Project activities and also through AU-IBAR other advocacy forums, including the ALive platform.

Chapter 4: Challenges and Recommendations

During the inception period, the following issues were raised and call for attention.

- **The geographical coverage of the project:** Based on the approved project document, Result 1 on the Status and trends of animal genetic resources covered only 34 MS of the Regional Economic Communities of ECOWAS, ECCAS, EAC and IGAD. However, following deliberations during the continental inception workshop, it became clear that an all-inclusive approach was necessary. Therefore, the project team recommends the inclusion of all 54 countries to be considered in Result 1.
- **The project staff was recruited 5 to 6 months after the contract signing date which marked the start of the project.** This could consequently result to a delay in the delivery of the project Year 1 outcomes.
- **“Disconnection” in term of planning/timing and objectives of the Activity 1 and those of the Second Report of the SoW-AnGR and DAD-IS:** the Activity 1 of the project was conceived on its own right to gather data and information and feed into the 2nd SoW-AnGR and DAD-IS. Unfortunately, the deadlines for the compilation and analysis for the 2nd SoW-AnGR and DAD-IS did not allow sufficient time for the project to conduct a comprehensive analysis of the data and information gathered. It is therefore, recommended that the information and data gathered through the project could feed into the creation of the “status and trends” presentation of AnGR for the African context.
- **Difficult harmonisation in term of timing of some project activities with Partners’ projects (for instance the TCP/RAF/3403 on “Assistance for Regional Initiative on Animal Genetic Resources in Africa” and Funding of the GPA) so as to prevent duplication in implementation:** Areas of possible synergies between projects were identified. However, each project had its own workplan, thus creating difficulties in synchronisation.

- **Difficulties to get the involvement of the RECs in the project:** so far only EAC, COMESA, SADC and IGAD have managed to attend project activities such as Regional inception workshops. It has been difficult to mobilize and get on board the remaining RECs. It is therefore, recommended that there is increased effort to engage the remaining RECs through dialogue and interaction.
- **The establishment of Physical Regional gene banks:** this activity is related to the possibility of creating regional “back-up” gene banks, either within a regional institution or country. This raises potential problems of ownership of the genetic materials belonging to individual countries as well as conditions of access to the materials especially if the host is not an AU institution. It is therefore, recommended that these proposed regional gene banks are anchored in regionally-mandated institutions.
- **Delay in signing memorandum of understanding with key implementing partners** despite having identified key areas of partnership. It is therefore recommended to put in place a more speedy process in light of this.

Appendix

Annex 1: Workplan and milestones for the first year of the project

	Period (Months)											
	J	F	M	A	M	J	J	A	S	O	N	D
Result 1												
Activity 1: Establish the state of AnGR in West Central and East Africa to identify threatened ruminant breeds and breeds at risk of extinction												
Activity2: An inventory and assessment of existing policies and regulations on the use of animal genetic resources including genetic improvement of livestock in West, Central and East Africa												
Activity 3: Assessment of the genetic and socio-economic impact of production and management systems ie. crossbreeding with exotic breed, intensification , transhumance and commercialisation on local AnGR												
Activity 4: Assessment of selection programs (including breeding objectives) on animal genetic diversity in West, Central and East Africa												
Result 2	J	F	M	A	M	J	J	A	S	O	N	D
Activity 1. Develop national, regional and continental guidelines for the formulation and harmonization of crossbreeding policies												
Activity 2. Develop regional frameworks and policies for in situ and ex situ conservation												
Activity 3. Develop technical standards and protocols (including property rights and benefits sharing) for the exchange and use of genetic materials.												
Result 3	J	F	M	A	M	J	J	A	S	O	N	D
Activity 1. Support member states to establish and implement their National Action Plan for AnGR within their livestock policy.												
Activity 2. Support member states to establish or strengthen their national breeding and conservation strategies as part of their National Action Plan for AnGR.												
Activity 3. Support the development of regional (REC based) conservation policies and strategies for transboundary breeds and populations that are at risk												
Activity 4. Support the establishment of a regional/sub-regional facility for ex situ conservation, in particular cryogenic storage and establish a gene bank on AnGR												
Activity 5. Support the establishment and strengthening of regional livestock breeders' associations.												
Result 4	J	F	M	A	M	J	J	A	S	O	N	D
Activity 1. Develop harmonized tools (protocols) for Characterization and Inventory of AnGR												
Activity 2. Establishment of AnGR database												
Activity 3. Establish and strengthen regional monitoring of trends and associated risks of transboundary breeds.												
Activity 4. Develop regional networks for information sharing												
Activity 5. Establish or strengthen regional focal points for AnGR.												
Activity 6. Document and disseminate best practices and lessons learnt from AnGR conservation and improvement initiatives												

Annex 2: Outline project team roles: major duties and responsibilities

Project Technical Assistant

He will provide general technical assistance to the Project Team. Specifically he will:

- Assist in developing work plans, the execution of the project and follow-up activities implemented at continental, regional and national levels;
- Provide technical support to the project Team at AU-IBAR and technical backstopping to MS and RECs in project related fields;

- Ensure approaches used to implement project activities by the project team and partners are scientifically and technically sound and provide regular feedback to the project management at AU-IBAR;
- Ensure quality on reporting of the programme activities;
- Initiate and lead the production of project publications;
- Plan and organize with the project team technical meetings;
- Provide technical input and support; ensure that relevant genetic quantitative and qualitative data related to animal genetic resources is collected, reviewed and analyzed to make recommendations for greater impact and organizational efficiency;
- Establish or strengthen and maintain regional/international networks for the use, development and conservation of animal genetic resources;
- Identify technical problems and implement corrective measures as required ;
- Propose amendments to assure that project objectives can be met;
- Provide technical support in the operational, management and organizational aspects of national and regional animal gene banks;
- Perform all other duties as requested by the Chief Animal Production Officer or the Director.

Project officer in charge of the Project Management and Institutional capacity development

He will provide day to day management of the project and oversee institutional capacity development activities of the project. Specifically he will:

- Assist the Chief Animal Production Officer to develop working procedures and contractual arrangements with the implementing partners;
- Assist the Chief Animal Production Officer to ensure effective use of the project's human, financial and technical resources;
- Assist the Chief Animal Production Officer in coordinate the execution of the programme and follow-up activities implemented at continental, regional and national levels;
- Brand the project and liaise with implementing partners, AU-IBAR, steering committee, and all other identified stakeholders during the execution of the project ;
- Assure effective communication to all stakeholders on the programme ;
- Assist to identify functional problems and implement corrective measures as required;
- Propose amendments to assure that project objectives can be met;
- Provide technical input and support for the establishment or strengthening of fully functional national and Sub-Regional Focal Points for animal genetic resources;
- Prepare reports according to agreed formats and standards to IBAR, steering committee and donors
- Prepare an annual report on the implementation of the Global Plan of Action to be submitted to FAO
- Assist in organizing steering committee meetings and other technical and coordination meetings
- Undertake institutional capacity development activities of the project in line with the GPA
- Perform all other duties as requested by the Chief Animal Production Officer or the Director

Project Officer in charge of Policy and capacity development

He will provide support and oversee the implementation of policy and capacity development related activities. Specifically he will:

- Review existing national/regional policies and regulatory frameworks, with a view to identifying any possible effects they may have on the use, development and conservation of animal genetic resources
- Provide guidance and oversee policy formulation processes
- Assist to assure effective communication to all stakeholders on the programme
- Assist to identify functional problems and implement corrective measures as required
- Assist to prepare reports according to agreed formats and standards to AU-IBAR, steering committee and donors
- Assist to Brand the project and liaise with implementing partners, IBAR, steering committee, and all other identified stakeholders during the execution of the project
- Review the implications and impacts of agreements and developments relevant to access to animal genetic resources and sharing the benefits of their use upon animal genetic resources stakeholders
- Assist to prepare an annual report on the implementation of the Global Plan of Action to be submitted to FAO
- Assist in organizing steering committee meetings and coordination meetings
- Perform all other duties as requested by the Chief Animal Production Officer or the Director

Data Management Expert

She will provide technical support in the establishment and operationalization of AnGR database at national, regional and continental levels. Specifically she will:

- Compile and analyze genetic data using statistical tools (e.g. ASReml, Genpop) and prepare reports that exhibit outputs, outcomes, and genetic trends
- Develop and manage Databases integrating registration and performance testing data that could be used for breeding value estimation through BLUP technology
- Provide inputs in the development of protocols for participatory monitoring of trends and associated risks, and characterization of local breeds managed by livestock keepers
- Provide inputs in the development of technical standards and protocols for phenotypic and molecular characterization, including methods for the assessment of important traits and economic valuation.
- Provide input and support in the organization of animal genetic resources activities, including the preparation of breed characterizations, identification of breeds which are endangered, matching of breeds in adjacent countries which have different names, but which may be genetically identical
- Provide inputs and technical support to the development of a module on AnGR in ARIS 2 at national, regional and continental levels that is compatible with the main databases DAGRIS and DAD-IS;
- Recommend and implement new operating methods to improve data flow, collection, editing, processing, analyses and distribution.
- Assist in data management related activities of projects within the unit
- Perform all other duties as requested by the Chief Animal Production Officer or the Director