

**A brief overview**  
**on conservation and sustainable use of**  
**Albanian animal genetic resources for food and agriculture**

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## **INSTITUTIONS SET UP INVOLVED IN LIVESTOCK CONSERVATION and USE**

### **PUBLIC INSTITUTIONS**

#### **At the national level**

- The Ministry of Agriculture and Rural Development is national authority for conservation and sustainable use of Animal genetic resources for Agriculture and Food (AnGR).
- National Network for AnGR conservation, management and sustainable use led by National Coordinator of AnGR

#### **At the regional level**

- Regional directorates of Agriculture and Rural Development, Extension Service and Public Veterinary Service structures, that are responsibilities to support the implementation of the programs and projects in field of conservation and sustainable use of AnGR.
- Centers for Agricultural Technology Transfer-Fushë Kruje, and Korça are public institutions that have the responsibility to cooperate with the national network for the conservation and sustainable use of AnGR

### **NON-GOVERNMENTAL ORGANIZATIONS**

National Breeders' Association (LEA), National Association of AI Operators, Blekalb Foundation – Science, Technology and Extension Service for Farms Development, Small Ruminants' Breeders' Association (SHFBI), ALBAGENE - National Association for FAnGR Conservation and Use

The main financial source for NGO-s are grants awarded by various international institutions such as GEF / UNDP, World Bank, etc. and in the framework of bilateral cooperation through various agencies such as GIS, Swedish International Development Agency (SIDA), Turkish Agency for International Cooperation TIKA, ect ..



## NATIONAL POLICIES/STRATEGY

The most important documents:

The National Strategy for Development and Integration 2014-2020, the Medium Term Budget Program and the sectoral, sub sectoral and crosscutting strategies

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National Strategy and National Action Plan for conservation, development and economical and sustainable use of AnGR

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## OBJECTIVES

- Identification and characterization of AnGR
- Establish and maintain the National data base for AnGR, native/ autochthonous/local and exotic breeds
- Promote and support the sustainable use of animal genetic resources for food and agriculture
- Conservation the diversity of animal genetic resource for present and future generations through develop the effective tools for implement national and local programs for *In-situ* and *ex-situ* conservation targeting the critical/endangered/ native/local breeds
- Building and/or strengthen institutional capacities at national and local levels
- Strengthen national educational and research facilities
- Promote a fair and equitable sharing of the benefits arising from the use of animal genetic resources for food and agriculture,
- Promote and support agro-ecosystems approaches for the sustainable use, development and conservation of animal genetic resources.
- Raise national awareness of the roles and values of AnGR
- Development an adequate legislation
- Strengthening the international co-operation



**National Action Plan  
Objectives- Achievements - Obstacles**

**The Strategic priorities:**

**I. Identification, Inventory and Monitoring of trend population:**

OBJECTIVES	Achievements	Obstacles
Inventory of local animal population/breeds	Periodic statistical evaluation	Insufficient capacity of the statistical service Lack of farmers' cooperation with the statistical service staff
Evaluation/estimation of zootechnical, production and reproduction traits	Partial evaluation – only in farms that use intensive production system	Lack of farmers interests and their organization Lack of financial support for implementation of improvement genetic programs or <i>in-situ on farm</i> conservation programs
Evaluation the trend of size population and level of risk of extinction	Carried out only for native animal breeds that are at critical or at risk of extinction	Lack the capacity for a continuous process
Cataloging the Albanian animal local breeds	Has been published	Lack the support of their up-date
Identification of local breeds/populations that were declared “At risk of extinction”,	It is done – 5 years ago	Need the sustainability
Evaluation of conditions and factors affecting the decline of farmer interest	It is done	Need the continuity and sustainability
Building up the Red book	It is done – 5 years ago	Need the sustainability

Population size of most important native animal breeds  
 Census or Statistical Evaluation date  
 Period 2015- 2018

Native cattle breeds  
 (Census 2015-2018)

Native cattle breeds	Population size			Trend
	Total	Bull	Cows	
Illyrian Draft cattle named "Albanian Prespa Cattle", "Busha" cattle	800-850	21	550-600	↗
Busha strain "Lekbibaj cow"	750-840	16	480-570	stable
Busha strain "Gurgucka"	700-760	22	560- 630	↗
Illyric cattle "Red of Scutary"	250-300	8	120-150	↘
	50-60	8	20-25	↗

Native Sheep breeds  
 (\*Statistical evaluation 2015  
 \*\* Census 2015-2018)

Breed	Number			Trend
Native and Local breeds				
	Total	Ram	Ewes	
Rrecka*	664000	15000	402000	↘
Ruda*	89000	3000	75000	↗
Bardhoke*	55400	11200	40100	↗
Shkodrane**	420	16	330	↘
Lara of Matit**	12400	744	9950	↗
Lara e Polisit**	850	43	680	↗

Native cattle breeds  
 (Census 2016-2018)

Breed	Number			Trend in the number
	Total	Boars	Sows	
Siska white of Scutary	320-350	14-18	39	↗
Spotted of Scutary	380-450	19-23	44	↗
Pig with wattle	240-260	11-14	27	↗

Native goats breeds  
 (Statistical evaluation 2016-2017)

Ecotype/ Breed	Number	Trend
Native ecotypes or breeds		
Caporre of Dragobi	9700	▼ Decreasing
Has	43000	— Stable
Velipoje	2800	▲ Increasing
Red of Mat	42500	— Stable
Lara of Kallmeti	1100	▲ Increasing
Capore of Mokrra	4350	▼ Decreasing
Black of Liqenas	3330	▲ Increasing
Dukat	6780	▲ Increasing
Muzhake	53250	— Stable
Native unclassified	650145	▼ Decreasing

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Table no. 1. Current status of Farm animal genetic resource – Native/ autochthonous breeds

Species	Most Common Name (Native/local Breeds)	Current Status	Reasons for Current Status
Pig	Native pig "Pig with wattle"	Critical	Replacement by imported breeds and crossbred with them. Low production and low income for family farms.
	Native pig "Spotted of Scutari"	Critical	
	Native pig "SiskaWhite of Scutari"	Critical	
Buffalo	Buffaloes	Critical	Low economic interest of farmers.
Cattle	Ilyric Dwarf cattle "Albanian Prespa cattle"	Endangered	Replacement by imported breeds and intensive crossbred with them. Low production and low income for family farms.
	Ilyric Dwarf cattle "Gurgucka cattle"	Critical	Low production and low income for family farms.
	Busha type "Lekbibaj Cattle"	Critical	Crossbred with Jersey and Simental cattle breed. Low production and low income for family farms.
	"Busha" cattle	Critical	Crossbred with Jersey and Simental cattle breed. Low production and low income for family farms.
	Illyric cattle "Red of Scutary"	Critical	Crossbred with Jersey. Low production and low income for family farms
Goat	Ecotype "Goat of Velipoja"	Vulnerable	Low production and low income for family farms.
	Ecotype "Capore of Dragobia"	Not endangered	Interest of farmers to produce the meat and milk for family consumption and difficulties to farming the cattle and sheep in the harsh conditions of the mountainous areas.
	Ecotype "Goat of Hasi"	Not endangered	Interest of farmers to produce the meat and milk for family consumption and difficulties to farming the cattle and sheep in the harsh conditions of the mountainous areas.
	Ecotype Goat "Red of Mati"	Not endangered	Interest of farmers to produce the meat and milk for family consumption and difficulties to farming the cattle and sheep in the harsh conditions of the mountainous areas.
	Ecotype "Red of Krraba"	At risk of extension	Increasing interest of farmers to farming one or two cows in their family farm
	Ecotype "Capore of Mokrra"	Critical	Lack of infrastructure for processing and marketing of milk.
	Ecotype " Black of Liqenasi"	At risk of extension	Low production and increasing the interest of farmers for farming the cows in their family farm.
	Ecotype "Black of Dukati"	At risk of extension	Lack of human resources, immigration of young people and absence of shepherds
	Ecotype "Spotted of Kallmeti"	Vulnerable	Immigration of population to urban areas
	Ecotype "Muzhake"	Not endangered	Interest of farmers to produce the local milk and meat productions for local market and tourists Good alternative for produce the milk and meat in harsh conditions of hille and mountain areas

Species	Most Common Name (Native/local Breeds)	Current Status	Reasons for Current Status
Sheep	Native breed "Shkodrane"	Critical	Decreasing the interest of farmers for wool. Small animal with low milk and meat production
	Native breed "Bardhoka"	Not endangered	Interest of farmers to produce the milk and meat. Animal with good production performances
	Native breed "Ruda"	Not endangered	Increasing the interest of farmers to produce meat. Animal with good production performances
	Local sheep Native Mati"	Not endangered	Increasing the interest of farmers to produce meat. Animal with good production performances
	Native breed "Spotted of Polisi"	Critical	Migration of population to urban areas. Lack of infrastructure for marketing the productions
	Common breed "Rrecka"	Not endangered	Alternative for produce the milk and meat in the most of rural areas in conditions of extension tradition system of production with the low inputs
Chicken	Local "Tirana chicken"	Critical	Crossbreed with imported breeds
	Local Black Tropoja Lekbibaj	Not endangered	Increasing the interest of farmers to produce the eggs and meat for family consumption
	Local Black Devolli	Not endangered	
	Albanian Partridge color chicken	Not endangered	Increasing the interest of farmers to farming the turkey for local market - Albanian tradition for consumption the turkey meat in New Year Holidays
	Speckled Albanian chicken	Not endangered	
	Bronze and Copper Turkey - Zadrimea	Not endangered	
Rabbit	Local breed "Commune"	Not endangered	Interest of farmers to farming the rabbit as an alternative production activity for family consumption.
Dogs	Albanian shepherd dog	Not endangered	Migration of human population to urban areas
	Dog of Sharri - Canic Illycicum	Not endangered	
	Dog of Kuksi	Not endangered	
	Dog of Terbaci	Critical	

### The main actions at middle terms:

- (i) prepare the methodology for national census and establish the necessary infrastructure
- (ii) develop the national protocols for characterization, inventory and monitoring trend of associated risks



## II. Characterization

Phenotypic and molecular genetic characterizations of native/local breeds it is not a continuous process. It is done only in the framework of implementation of some *in-situ* conservation projects

During 2007-2018, phenotypic characterization has been made for 18 native/ autochthonous animal breeds/populations

### Molecular genetic characterization

Specie	Breeds	Number of animals	Country where is located the lab.
Cattle	Albanian Prespa Cattle	46	Germany
	Lekbibaj cattle –Busha type	50	Germany
	Busha cattle- Dibra region	39	Germany
Sheep	“Ruda” breed	135	Italy & Norway
	“Bardhoke” breed	210	Italy
	“Recka” local sheep breed	86	Italy
	“Shkodrane ”- breed	65	Italy
	‘Lara e Polisit’	35	AU - Tirana
Goat	“Caporre Dragobisë”	25	Econogene Concertium
	“Velipoja”	35	Econogene Concertium
	“Caporre e Mokrres”	20	Econogene Concertium
	‘Black of Dukati’	25	Econogene Concertium
	Ecotyp “Hasi”	30	Econogene Concertium
	Ecotyp “Mati”	35	AU - Tirana
Poultry	Local “Tirana chicken”	25	Italy
	Albanian Partridge color chicken	20	Italy
Pig	Native pig "Pig with wattle"	22	Germany
	Native pig "Spotted of Scutari"	25	Germany
	Native pig "Siska White of Scutari"	23	Germany

#### The main obstacles are:

- The identification system/matriculation of the animals is not complete and is not fully functional.
- There is not any program financed by public funds to perform genetic characterization of all species/breeds and local populations of farm animals.
- The farmers are not organized in breeding associations that are necessary for herd book establishing
- The farmers awareness about the value of animal matriculation system and performance is low.
- The awareness of public institutions and funding required to support the development of national and local capacities for the implementation of a periodic census system in farm animals are, lacking.

#### The main actions at the middle terms:

- (i) develop the national protocols for phenotypic and molecular characterization of FAnGR.
- (ii) strengthen capacities for the research at agricultural university
- (iii) establishment the new Livestock Research National Center.





**Owerviev**  
**on implementation of the breeding programs**

In Albanian are breed 42 native/local adapted breeds and 14 exotic breeds. A large part of the farm animal population in Albania consists of crosses of the native with exotic breeds.

Species	Native/ locally breeds	Exotic breeds
Cattle (specialized dairy)	6	4
Cattle (multipurpose)	1	1
Sheep	9	3
Goats	8	2
Pigs	3	1
Chickens	5	3
Horse	3	
Asses	2	
Buffaloes	1	
Rabbits	1	
Turkeys	2	
Bee	1	

**Breeding programmes – main species**

**Cattle breeds** - The genetic improvement exotic breeds, achieved using the imported biologic materials. The policies like, reduction of the import taxes, subsidies for farmers that establish the commercial farms with more that 50 cow etc., have the indirect impact to genetic improvement of dairy cattle.

**Sheep breeds** - Only in a few cases the sheep exotic breeds are being breed as pure breed. In these cases the breeding programs uses the imported rams and ewes. The crossbreeds with local breeds is the most important objective. Public policies aims to support implementation of the crossbreeding schemes.

**Goat breeds** - The import of goat exotic breeds, Saanne and Alpine breeds, it is also necessary to associate the breeding programmes, too. The policies to support crossbreeds of native/local goat breeds with Alpine and Sanne exotic breeds intended to orient the farmers to define clear breeding objectives in accordance with their capacities and future market development.

**Analyze of the current situation show that the main constraints to the implementation of breeding programmes are:**

- Insufficient capacities of public and other institutions, like research centers, public extension service, NGO etc.. to compile the realistic breeding policies and programmes.
- Lack of financial support.
- Low levels of collaboration between the farmers.
- Low level of knowledge about the new breeding technologies,
- Low level of awareness in farmers community about the importance of breeding programme
- Lack or insufficient technical support to implement the breeding programmes,
- Low economic levels of farmers, weak financial system in rural areas and difficulties in finding funds, necessary for implementation of breeding programme



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**CONSERVATION: *In-situ* and *ex-situ* conservation**

***In-situ/on farm conservation programmes***

Specie	Breed	Number of farms	Years	Financial source	Institution
Buffalo	Buffalo	12	2002-2014	GEF/UNDP MoAFRD	Albagene Association CATT-Fushë-Kruja
Cattle	Albanian Prespa cattle	21	2005-2015	GEF/PNUD SAVE Foundation	Albagene Association SAVE Foundation
	Busha strain "Lekbibajt cows"	8	2005-2014	MoAFRD	CAT-Fushë-Kruja Blekalb Foundation
	Busha	32	2008-2015	GEF/UNDP MoAFRD	Blekalb-Foundation CATT-Fushë-Kruja AU-Tirana
Goat	Ecotype "Capore of Mokrra"	12	2014-2016	GEF/PNUD	Blekalb-Foundation
	Ecotype "Capore of Dragobia"	31	2013-2015	French cooperation MoAFRD	AU-Tirana MADA RASP
	Ecotype "Black of Dukati"	8	2010-2012	GEF/PNUD	NASR
Sheep	'Breed Shkodrane" breed	14	2005-2006 2010-2012	GEF/PNUD MoAFRD	Albagene Association Blekalb foundation CATT –SRS -Korça
	Breed "Lara of Polisit"	10	2013-2016	GEF/PNUD MoAFRD	Blekalb foundation CATT –SRS -Korça
Pig	Native pig "Pig with wattle"	5	2007-2010	GEF/PNUD SAVE Foundation	Albagene Association SAVE Foundation
	Native pig "Spotted of Scutari"	6	2007-2010	GEF/PNUD SAVE Foundation	Albagene Association SAVE Foundation
	Native pig "Siska White of Scutari"	8	2007-2010	GEF/PNUD SAVE Foundation	Albagene Association SAVE Foundation



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**Ex-situ conservation programmes**

Specie	Breed	Ex-situ conservation						
		In vivo				In vitro		
		Number of animal		Gene bank	Somatic cell		Semen	Gene bank
		M	F		Number of animal			
				M	F	Doses		
Buffalo	Buffalo	1	3	Zoo	5	25		CATT-Fushe-Kruja
Cattle	Albanian Prespa cattle	1	4	CATT -Korça			250 for 3 bulls	CATT-Fushe-Kruja
	Busha strain "Lekbibajt cows"	3	40	Private farms	10	50	750 for 4 bulls	CATT-Fushe-Kruja
Goat	Ecotype "Capore of Mokrra"	4	55	Privat farms	10	50		CATT -Korça
	Ecotype "Velipoja"	4	35	Rescues Station Privat farm				
Sheep	"Shkodrane" breed	8	60	CATT -Korça	10	50		CATT -Korça
	Breed "Lara of Polisit"	8	60	CATT -Korça	10	50		CATT -Korça
Pig	Native pig "Pig with wattle"	2	6	Rescues Station Privat farm				
	Native pig "Spotted of Scutari"	2	4	Rescues Station Privat farm				
	Native pig "Siska White of Scutari"	2	6	Rescues Station Privat farm				



The *in-situ* conservation programmes are implemented following:

- Compiling the *in-situ* conservation program as community-based conservation program.
- Establish the farm group where the program is implemented
- Training of the farmers
- Support to increase the capacity and improve housing conditions and animal feed
- Promotion of native breeds and their productions
- Use of subsidy payment scheme.

### **Awareness**

Various awareness activities have been organized and developed to support *in-situ* conservation programs, among which can be listed:

- Compilation and printing the booklets to promote the farm animal autochthonous breeds
- Organize every year:
  - The European Agrobiodiversity Day
  - The International Symposium “Biodiversity- conservation and sustainable use for rural development”
- National and local competitions and fairs for promote the native animal breeds and their products



## Breeding programs and Conservation - The challenges

-The farmers are not organized in breeding associations, which are necessary in order to establish herd book and for the implementation of all other actions in frame of *in-situ* conservation programs

-The farmers awareness about the value of animal matriculation system and production control is low. As consequence the farmers investment in this area are absent.

-Not enough level of public awareness, regarding to the values of autochthonous genetic pool in farm animals

-Low level of economic development

-Lack of knowledge and necessary infrastructure for the conservation, management and sustainable economic use of autochthonous breeds / populations

-Lack of public funds necessary for the implementation of conservation programs, particularly relevant to *ex-situ* conservation

-Not enough capacities for development the International, cross border and regional collaborations to support the development of biodiversity protection and sustainable economic use of FAnGR, *in general* , and native/autochthonous breeds, *in particular*

## Need for action

- Ministry of Agriculture and Rural Development should up-date the Matrix-Plan for implementing of National Action Plan for genetic improvement and conservation of FAnGR, as part of Sectorial Strategy for Rural Sustainable Development.

- Development of necessary infrastructures, tools and capacities, at national and local level, in public and private sector, for implementation both *In-situ* and *Ex-situ* conservation programs and genetic improvement programs



## **The legal framework**

The legal framework that regulates and distributes duties, rights and responsibilities to various public and private institutions, at the national and local level, does not fully address the various technical, economic, social, property, etc. issues that relate with the problems, needs and activities that are required to be done for the conservation and sustainable use of AGnR. The legislation is not fully aligned with the international and EU legislative framework, and with the requirements of international conventions and protocols where Albania adheres or has ratified it.

## **Administrative and institutional capacities**

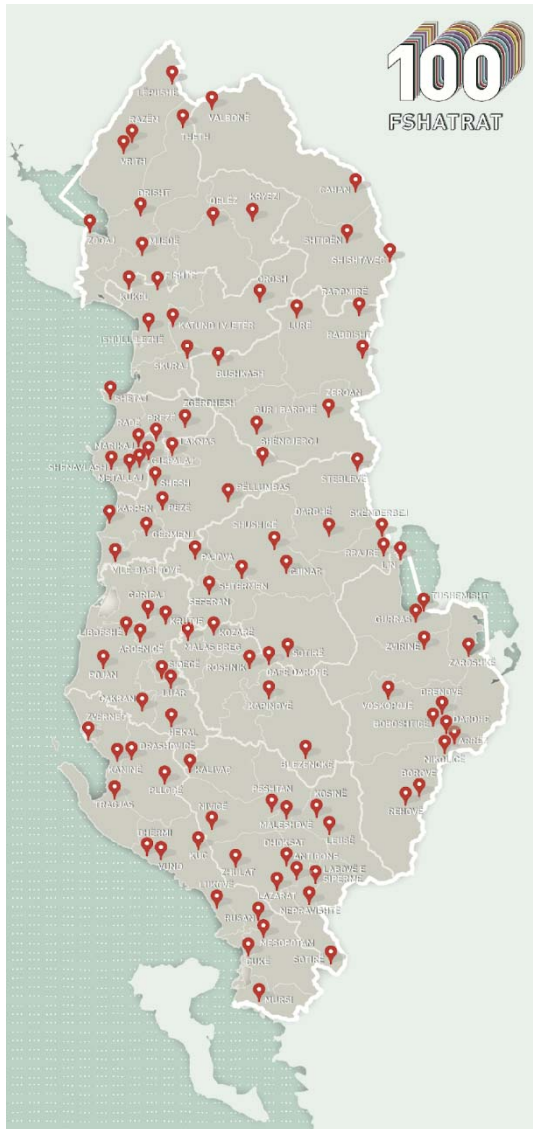
Currently there are no structures and there is no effective responsible institution for implementation the National Plan of Action for AGnR at national and local level.

Referring to the new developments in local and national government, it is necessary to reconsider and support the development of National network for identification, characterization, conservation, management and sustainable use of AnGR

In Albania there is no reference institution for the monitoring and implementation of programs for the conservation and management of the AnGR, there is no institution focused on scientific research in this field.

The new changes in the territorial administrative map of Albania and the expected changes in the regional institutional structures that are responsible for the implementation of AnGR policies, strategies and action plans, require that extensive public and private services to be reconsidered at national and local level.





Conservation and Sustainable use of  
**Agro biodiversity**  
National Program 2018-2022  
“100+ Villages”

**4 PILARs**

**Agriculture – Tourism – Traditional culture – Infrastructures**

**General objective**

-Sustainable rural development through the development of agrotourism and ecotourism, the effective use of biodiversity, cultural traditions, the traditional system of production and processing of agricultural products of domestic crops and animals of local breeds

**The main tool**

- The private initiative through PPP (Public Private Partnership) development



## **AGRICULTURE**

-Support the farmers communities for revitalization the traditional production system, cultivation and farming the native plant varieties and animal breeds, use the traditional processing of plant and animal productions

-Capacity building to support farmers cooperation necessary for implementation the: “Incubatory of village” – an informal group of farmers that work following the slogan:

**“CONSERVATION THROUGH UTILIZATION”**

## **TOURISM**

-Support the private initiatives for establish the touristic houses at village level.

-Support the farmers to implement the local market for traditional products

## **INFRASTRUCTURES**

- Investment in road network construction, water supply and public service capacity building.

## **TRADITIONAL CULTURE**

- Capacity building to support the local group, young people, women for revitalization the traditional culture





**Budget**  
**Albanian government - 20 MLN €**

**GIZ -10 MLN €**

**EU pre-accession assistance IPARD – 94 MLN €**



### **General recommendations – Actions in middle term**

- Up-date the National Strategy and National Action Plan for conservation, development and economical and sustainable use of PGR and AnGR.
- Building and/or strengthen institutional capacities at national and local levels that are necessary to implement the programmes for conservation and use of PRG and AnGR:
  - (i) Establish a National Advisory Committee as the ad-hoc institution having the authority to declare breeds at risk of extinction
  - (ii) Institutionalization of National Focal Points for PGR and AnGR
  - (iii) Support for revitalizing the national network responsible for the management and conservation of farm animal genetic recourses.
  - (iv) Building of National Agency for AnGR as an public institution responsible for conservation, management and use of AnGR national
  - (v) Promote coordination and synergy between the different authorities dealing with various aspects of planning, within and across ministries, farmers, as well as with other stakeholders, and ensure their participation in the process
- Strengthen national educational and research facilities. To achieve this it is necessary:
  - (i) Identification the short-term, medium-term and long-term needs for research and education, and promote the formation of the relevant experts
  - (ii) Review national research and education capacities in relevant fields, and establish targets for training to build the national skill base.
  - (iii) In partnership with other countries, strengthen the capacities of Agricultural university, research and training centers, rivitalization of the public and private extension services at national and local levels



## Continues - Recommendations - Actions in middle term

- Develop the effective tools for implement national and local programs for *In-situ* conservation, of critical/endangered/ native/local breeds of farm animals, through:
  - (i) Financial support directly for breeders of threatened breeds,
  - (ii) Implement the measures to support agricultural production systems that manage areas of importance to breeds at risk,
  - (iii) Encouragement of breed organizations, community-based conservation organizations, non-governmental organizations and other actors to participate in conservation efforts.
  
- Establish the necessaries institutional structures and infrastructures for implement ex-situ conservation programmes, building and management of the National Genetic Bank, *ex-situ in vivo* and *Criobank*, for native/indigenous animal breeds.
  
- Raise national awareness of the roles and values of agrobiodiversity
  
- Strengthen the relationships with international partners and institutions
  
- Middle-term development of the Albanian legislation relevant to Animal Genetic Resources for Food and Agriculture should aim to:
  - (i) Completion of the legislative framework in accordance with the obligations deriving from the International Conventions and Agreements that Albania has ratified.
  - (ii) Approximation of the national legislation with International and EU legislation



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**Thank you  
for you attention!**

