منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura

Country report

supporting the preparation of *The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture*, including sector-specific data contributing to *The State of the World's Biodiversity for Food and Agriculture*

- 2013 -

Country: Russian Federation

I. EXECUTIVE SUMMARY

Please provide an executive summary (not more than two pages) that will allow national and international stakeholders to gain a quick overview of the content of the country report.
The executive summary should contain information on:

- key trends and driving forces affecting animal genetic resources management in your country;
- strengths, weaknesses and gaps in capacity to manage animal genetic resources in your country;
- key constraints and challenges with respect to animal genetic resources management in your country;
- priorities and strategic directions for future action (focusing particularly on the next ten years).

At present, genetic improvement of livestock populations is achieved through:
a) internal reproduction;
b) imports of genetic resources (mainly live animals and pedigree semen) from North America, Western Europe and Australia.
In 2006-2008, the country implemented the National Priority Project for Development of Agro-Industrial Complex, when the government supported the import of a significant number of pedigree animals of the following species:

- cattle - 132619 heads;
- sheep - 70156 heads;
- pigs - 14249 heads;

The main goals of this part of the project was to increase the amount of livestock products through the use of high-value imported animals and to use their genetic potential to speed up the development of the genetic resources for Russian breeds both in pure breeding (first of all, dairy cattle and horses) and crossbreeding schemes (beef cattle, sheep, pigs, poultry).

II. DATA FOR UPDATING THE PARTS AND SECTIONS OF *THE STATE OF THE WORLD'S ANIMAL GENETIC RESOURCES FOR FOOD AND AGRICULTURE*

FLOWS OF ANIMAL GENETIC RESOURCES

1. Studies of gene flow in animal genetic resources have generally concluded that most gene flow occurs either between developed countries or from developed countries to developing countries. Does this correspond to the pattern of gene flow into and out of your country?

For developed countries, exceptions to the usual pattern would include significant imports of genetic resources from developing countries. For developing countries, exceptions would include significant exports of genetic resources to developed countries, and/or significant imports and/or exports of genetic resources to/from other developing countries.

- ○ yes
- ○ no
- ◉ yes but with some significant exceptions

1.1. If you answer “no” or “yes but with some significant exceptions”, please provide further details. Please include information on: which species are exceptions and which regions of the world are the sources and/or destinations of the respective genetic material.

It should be noted that the main flows of animal genetic resources have not changed since the previous period, but the intensity of import flow of genetic resources into the country became significantly greater (especially that of live animals, first and foremost, cattle and pigs).
As for the exports of genetic resources, they were exceptionally small in volume in the past ten years and mainly targeted the CIS countries (Azerbaijan, Kazakhstan, Armenia, Kyrgyzstan, Belarus).

2. Have there been any significant changes in patterns of geneflow in and out of your country in the last ten years?

- ○ yes
- ◉ no

2.1. If yes, please indicate whether this view is based on quantified data (e.g. import and export statistics collected by the government).

- ○ yes
- ○ no

2.2. If yes, please provide references (preferably including web links) (if relevant, indicate which types of animal genetic resources are covered).

2.3. Please also describe the changes, indicating the species involved, the direction of the changes, and the regions of the world to and from which the patterns of imports and exports have changed.

See item 1.1

3. Please describe how the patterns of geneflow described under Questions 1 and 2 affect animal genetic resources and their management in your country.

Note: Please answer this question even if the pattern of geneflow into and out of your country corresponds to the “usual” pattern described in the first sentence of Question 1 and/or has not changed significantly in the last ten years.

The gene flows described in items 1 and 2 don't have any significant impact on farm animals diversity of various species and breeds because imported animals belong to breeds which are traditionally used in Russian Federation.

LIVESTOCK SECTOR TRENDS

4. Please indicate the extent to which the following trends or drivers of change have affected or are predicted to affect animal genetic resources and their management in your country and describe these effects.

Note: Relevant impacts on animal genetic resources and their management might include, for example, changes in the type of animal genetic resources kept (e.g. different breeds or species), changes in the uses to which animal genetic resources are put, changes in the geographical distribution of different types of animal genetic resources, increases or decreases in the number of breeds at risk of extinction, changes in the objectives of breeding programmes, changes in the number or type of conservation programmes being implemented, etc. In the text sections, please briefly describe the changes. If possible, provide some concrete examples of the challenges or opportunities presented by the respective drivers and the actions taken to address these challenges or opportunities. If relevant, you may also indicate why a given driver is not affecting animal genetic resources and their management in your country. For a general discussion of drivers of change, please see The State of the World's Animal Genetic Resources for Food and Agriculture (Part 2, Section A) (http://www.fao.org/docrep/010/a1250e/a1250e00.htm).

Drivers of change	Impact on animal genetic resources and their management over last ten years	Future impact on animal genetic resources and their management (predicted for the next ten years)	Describe the effects on animal genetic resources and their management
Changing demand for livestock products (quantity)	low	low	Within the past ten years, these factors did not exercise a significant impact over the demand for livestock products. Some increase in the demand for livestock products has been the result of the overall positive change in the level of life (increasing consumer income); however, this factor was compensated for by rather significant inflation rates (on average, 7-8%), which led to the increase in prices for livestock products. During this time, the number of large retailers (integrated with supermarket chains) has somewhat grown, but this has not led to a quantitative change in the demand for livestock products. Taking into account the current trends in the livestock product market, a small increase in the demand for livestock products should be expected in the near future.
Changing demand for livestock products (quality)	medium	medium	While the quantitative demand for livestock products has not experienced a large increase, the demand for quality of livestock products has grown more. This has been influenced by the increase in income, as well as increase in the awareness of product quality. In the future, this tendency will probably be maintained and, according to optimistic forecasts, will even increase. This has been greatly impacted by the media, as well.
Changes in marketing infrastructure and access	low	none	In the past years, the changes in marketing infrastructure and access of manufacturers to the market of livestock products has been minimal. To a degree, the changes have been the result of the increase in the amount of products produced by farmers and private livestock owners, but there share of the overall market is very small. There is no reason to believe that in the near future the market infrastructure in Russia will change in a way that would encourage (or discourage) more access to the market of livestock products.

Drivers of change	Impact on animal genetic resources and their management over last ten years	Future impact on animal genetic resources and their management (predicted for the next ten years)	Describe the effects on animal genetic resources and their management
Changes in retailing	none	none	Within the past ten years, the number of chain supermarkets has become somewhat greater (especially in large and medium-size cities), which in its turn led to the increased demand for livestock products (mainly for psychological reasons, as well as due to convenient location). However, the prices and product quality in many supermarkets were not much different from those in small retail shops, which eventually led to only a minimum growth of demand for livestock products. It is most likely that we should not expect any changes in the retailing of livestock products in Russia in the near future.
Changes in international trade in animal products (imports)	medium	medium	The share of imported livestock products in Russia is significant (according to the Ministry of Agriculture, the share of imported beef, pork, and poultry, on average, amounted to 13-30 %, the share of imported dairy products constituted 23 %). This percentage remained stable during the past ten years; thus, the changes in the impact that this factor had on the market have been insignificant. At the same time, the National Priority Project for Development of Agro-Industrial Complex included the lease of 105650 dairy and beef cattle, 14249 pigs, 70156 sheep. This resulted in a significant quality change in breeds and populations of the country's livestock. Imported animals were used for both pure breeding and cross-breeding with Russian-based breeds. However, this has not led to great change in the genetic resources management structure. This was, firstly, due to the lack of system in the use of imported genetic material, which in its turn was the result of the lack of effective organizations managing genetic (breeding) resources at the level of breed and population; the lack of up-to-date research-based breeding programs for animals of various species. It seems likely that in the near future there will be less import of live pedigree animals and genetic improvement of populations will be achieved through the imports of semen and embryos, as well as through the optimization of the structural management of Russian-based breeds of various agricultural species. Thus, the level of impact of imported genetic resources over Russian genetic resources will remain medium in the following few years.

Drivers of change	Impact on animal genetic resources and their management over last ten years	Future impact on animal genetic resources and their management (predicted for the next ten years)	Describe the effects on animal genetic resources and their management
Changes in international trade in animal products (exports)	none	low	The level of exports of livestock products (including pedigree genetic material) in the past years has been minimal (Azerbaijan, Kazakhstan, Armenia, Kyrgyzstan, Belarus). Thus, the impact of this factor over the genetic structure of animal populations has been practically non-existent. In the near future it is possible to expect a more active animal export and, to a greater degree, semen exports, first and foremost, to the developing markets (particularly Central Asia).
Climatic changes	none	none	The climatic changes in Russia over the past ten years have not been significant, with the only exception of the summer of 2010, when temperatures remained unusually high (with an over 10°C increase compared to the average temperatures at this time of year) for a period of two or three months. This led to a rather significant decrease in livestock products, but there has not been a great change in the genetic resources and their management structure. Forecasts for the following few years do not show that this factor will lead to any change in the genetic resource management.
Degradation or improvement of grazing land	low	low	The state of grazing land has improved somewhat, but not significantly, in the past years. This was the the result of the introduction of up-to-date agricultural technologies in the cultivation of feeding crops. This tendency is likely to be preserved in the near future.
Loss of, or loss of access to, grazing land and other natural resources	none	none	This factor has no impact on livestock production in the Russian Federation.

Drivers of change	Impact on animal genetic resources and their management over last ten years	Future impact on animal genetic resources and their management (predicted for the next ten years)	Describe the effects on animal genetic resources and their management
Economic, livelihood or lifestyle factors affecting the popularity of livestock keeping	none	low	Livestock production is not a priority area in Russia due to a number of factors: lack of prestige, great labor intensity, peculiar working conditions and low pay, in many cases - availability of other more profitable jobs, lack of the necessary infrastructure, difficulties with sales etc. Thus, livestock production is not an attractive area of business, especially for smaller owners. Large (industrial) production, especially on specialized land, is more attractive mostly to citizens of the nearby towns and settlements, although the amount of pay to workers and specialists is also low. In the future, livestock production may gain in prestige in several regions of Russia (especially among young livestock production experts) due to the implementation of governmental programmes aimed at attracting young people to the agricultural sector (housing benefits, one-time bonuses, social security benefits etc.).
Replacement of livestock functions	none	none	This factor has no impact in the Russian Federation.
Changing cultural roles of livestock	low	low	The cultural factor is mainly the influence of clubs for old' (aboriginal) breeds, and that is very small.
Changes in technology	none	none	New technology has practically no impact over the genetic diversity of animal populations due to high implementation costs.
Policy factors	medium	medium	The government management system for livestock production influences the genetic diversity of animal populations through legislation and regulations for the livestock production sector.
Disease epidemics	low	low	A rigid system of laws and regulations in veterinary medicine, as well as a well-functioning system of state-run veterinary service provides for practically total prevention of epidemics among livestock.

OVERVIEW OF ANIMAL GENETIC RESOURCES

5. Please provide the number of locally adapted and exotic breeds kept in your country.

Data on the number of breeds is needed in order to calculate the percentage of breeds subject to the various management activities that are covered in this questionnaire. In line with the request of the Commission on Genetic Resources for Food and Agriculture at its Fourteenth Regular Session (CGRFA-14/13/Report, paragraph 31), FAO will implement the "locally adapted" vs. "exotic breed" classification system in the Domestic Animal Diversity Information System (DAD-IS). Once countries have fully updated their breed lists and classified all breeds in DAD-IS, it will be possible to use these data to obtain the numbers of breeds in each category.

Species	Locally adapted breeds	Exotic breeds
Cattle (specialized dairy)	4	0
Cattle (specialized beef)	12	0

Species	Locally adapted breeds	Exotic breeds
Cattle (multipurpose)	23	0
Sheep	43	0
Goats	7	0
Pigs	17	0
Chickens	41	0
Horses	44	0
Rabbits	11	0
Ducks	3	0
Geese	26	0
Quails	2	0
Turkeys	7	0

CHARACTERIZATION

To provide further details of your country's activities in the field of characterization, surveying and monitoring, please go to Strategic Priority Area 1 of the "Progress report on the implementation of the Global Plan of Action for Animal Genetic Resources 2007–2013" (below).

6. Please provide an overview of the current state of characterization in your country by indicating the extent to which the activities shown in the following table have been carried out.

Note: Please focus on characterization studies that have been conducted within the last ten years (baseline surveys of population size may have been conducted in the more distant past). Recall that some types of characterization study on your country's breeds may have been conducted outside your country. For the first two columns, please insert the number of breeds; for columns 3 to 8 please choose one of the following categories: none; low (approximately <33%); medium (approximately 33–67%); high (approximately >67%).

Species	Baseline survey of population size	Regular monitoring of population size	Phenotypic characterization	Molecular genetic diversity studies – within breed	Genetic diversity studies based on pedigree	Molecular genetic diversity studies – between breed	Genetic variance component estimation	Molecular genetic evaluation
Cattle (specialized dairy)	4	4	high	none	high	none	low	none
Cattle (specialized beef)	12	11	high	none	high	none	none	none
Cattle (multipurpose)	23	16	high	none	high	none	none	none
Sheep	43	29	high	none	none	none	none	none
Goats	7	4	high	none	none	none	none	none

Species	Baseline survey of population size	Regular monitoring of population size	Phenotypic characterization	Molecular genetic diversity studies – within breed	Genetic diversity studies based on pedigree	Molecular genetic diversity studies – between breed	Genetic variance component estimation	Molecular genetic evaluation
Pigs	17	10	high	none	low	none	none	none
Chickens	41	37	high	none	none	none	none	none
Horses	44	33	high	high	high	high	high	none
Rabbits	11	5	high	none	none	none	none	none
Ducks	3	3	high	none	none	none	none	none
Geese	26	12	high	none	none	none	none	none
Quails	2	2	high	none	none	none	none	none
Turkeys	7	7	high	none	none	none	none	none

INSTITUTIONS AND STAKEHOLDERS

To provide further details of your country's activities in the field of institutions and stakeholders, please go to Strategic Priority Area 4 of the "Progress report on the implementation of the Global Plan of Action for Animal Genetic Resources 2007–2013" (below).

7. Please indicate the state of your country's capacities and provisions in the following areas of animal genetic resources management.

	Score
Education	low
Research	medium
Knowledge	low
Awareness	medium
Infrastructure	medium
Stakeholder participation	low
Policies	medium
Policy implementation	low
Laws	medium
Implementation of laws	medium

8. Please provide further information regarding your country's capacities in each of the above-mentioned areas of management. If relevant, please indicate what obstacles or constraints your country faces in each of these areas and what needs to be done to address these constraints. You may also provide information on any particular successes achieved in your country in any of these areas and on the reasons for these successes.

	Description
Education	Capacities: new educational programmes and disciplines for bachelor's and master's degrees devoted to the significance of animal genetic resources and their management; refreshment courses for professors and teachers and for people working in livestock breeding. Obstacles (constraints): low market demand for experts in animal genetic resources management and their conservation; few numbers and low expertise of teachers in the above mentioned field; subjects taught are not aimed at the need to conserve animal genetic resources, do not emphasize the importance of genetic diversity and the need to maintain it in livestock breeding systems.
Research	Capacities: research and development of genetic monitoring programs for livestock populations to be used in population improvement activities; development of large-scale research programmes in molecular-genetic livestock analysis at the national level and the level of specific breed. Obstacles (constraints): lack of a coordination center to manage research in the field; lack of researchers involved in the field; lack of technical equipment at most organizations; lack of funding for research in the field; low level of cooperation with international organizations and partners.
Knowledge	Capacities: increase of competence for all stakeholders; organizing refresher courses (first and foremost, for governmental officials, specialists working at organizations for breeding resources management). Implementing the experience of best examples and forecasts in the area. Creating databases of animals for further monitoring and assessment of animals of local, endangered and rare breeds and populations. Obstacles (constraints): lack of interest (prioritization) from state authorities and lack of state support for events; lack of stable funding sources; low economic feasibility of conservation and improvement of breeds with few animals and low productivity.
Awareness	Capacities: comprehensive promotion of rare breeds, mostly among the rural population; assessment of positive characteristics of rare breeds and provision of access to its results for animal owners; exhibitions, competitions, educational courses, rare breed shows. Obstacles (constraints): lack of interest on the part of breeding professionals; low funding; lack of access to information for animal owners; low demand for rare breed products.
Infrastructure	Capacities: increasing interest among the existing service structures for conservation and use of rare breeds genetic material; creation of collections, genetic banks of rare breed and species supported by the government; creation of a wide NGO network and development of conservation and distribution programmes for rare breeds and species. Obstacles (constraints): lack of state-run programmes aimed at the conservation of rare populations genetic resources; lack of public organizations to manage rare breeds and species genetic resources; lack of promotion programmes for such breeds and species at all levels of management.
Stakeholder participation	Capacities: increasing role of owners of rare breeds and species and involvement of professionals in the management of animal genetic resources; creating organizations for owners of rare breeds and determining their funding sources and support for their activities. Obstacles (constraints): lack of stable cooperation between the existing organizations of owners of rare breeds and species and governmental bodies of livestock management; lack of targeted programs of conservation and lack of professional experts; lack of clear goals for such activities and lack of perspective both at the national level and at the level of animal owners. Lack of attention to this area among researchers and the industry.

	Description
Policies	Capacities: creating federal and regional conservation programmes for rare and endangered breeds and species; development of governmental support programmes aimed at owners of rare breeds and species; creation of gene banks for rare breeds and species; increasing interest in breeding rare and endangered breeds and species among farmers and private plot owners. Obstacles (constraints): lack of sufficient attention to the issues of rare breeds and species conservation from governmental bodies, both in terms of economic feasibility and in terms of tradition and cultural heritage preservation.
Policy implementation	Capacities: development of a programme to open non-governmental organizations to deal with the conservation of rare and endangered breeds and species genetic resources; determining funding sources for them; creating conditions for their sustainable operation. Obstacles (constraints): low priority level of the issues related to the conservation of genetic resources of rare and endangered breeds and species at the national and regional levels of government; lack of organizational structure and course of action for non-governmental organizations of owners of rare and endangered breeds and species.
Laws	Capacities: improvement of the legislation and regulations on livestock breeding; optimization of the livestock breeding management structure for various breeds and species; development and approval of up-to-date regulatory documentations on the assessment of breeding characteristics and breeding records (information databases). Obstacles (constraints): lack of a single approach to the structure of livestock breeding among the experts; different levels of professionalism among he practitioners, scientists and government officials; unstable funding sources; bureaucratic obstacles to the ratification of legislative and regulatory documents. At the same time, there is a number of organizations and associations initiated by animal owners (Union of Livestock Breeders of Russia, Breeding Farm Association, societies of owners of specific breeds and species of rare animals, most of them focusing on poultry breeding). Such organizations have the status of legal entities, but they either focus on lobbying or act as amateur clubs that do not have a significant impact on the state of livestock breeding and policies thereof. The main role in livestock genetic resources management is played by the Ministry of Agriculture of the Russian Federation (federal government level) and regional Ministries, Administrations and Departments of Agriculture coordinating work on livestock breeding in the republics, regions and districts of the Russian Federation.
Implementation of laws	Capacities: creating functional structures to manage livestock breeding (breed associations and their chapters in the regions), with a clear description of their powers, funding sources and responsibilities; optimization of the types of breeding organizations; creating single hierarchical information system for livestock management at breed level; development of breeding programmes for specific breeds, with clear-cut goals, tasks and breeding methods. Obstacles (constraints): redundant governmental regulation in livestock breeding; breeding organizations of different levels lacking rights and responsibilities; concepts, definitions and requirements in Russian livestock breeding not harmonized with the international ones. The structural organization of livestock breeding in the Russian Federation at the moment is comprised of the following organizations (Table 4). Organizations are categorized as performing a certain type of activities by the Ministry of Agriculture of the Russian Federation on the basis of Regulations for livestock breeding. Types of organizations working in livestock breeding (Moscow, 2013) developed and approved by the Ministry. All organizations perform the responsibilities based on their functions and contribute to livestock genetic resources management.

9. What steps have been taken in your country to engage or empower the various stakeholders in animal genetic resources management (e.g. establishment of livestock keepers' organizations, development of biocultural community protocols)?

Note: Biocultural community protocol: a document that is developed after a community undertakes a consultative process to outline their core cultural and spiritual values and customary laws relating to their traditional knowledge and resources. For a discussion of the potential role of biocultural community protocols in the conservation of animal genetic resources, please see the guidelines In vivo conservation of animal genetic resources (http://www.fao.org/docrep/018/i3327e/i3327e.pdf).

Nothing

BREEDING PROGRAMMES

Note: Breeding programmes: systematic and structured programmes for changing the genetic composition of a population towards a defined breeding goal (objective) to realize genetic gain (response to selection), based on objective performance criteria. Breeding programmes typically contain the following elements: definition of breeding goal; identification of animals; performance testing; estimation of breeding values; selection; mating; genetic gain and transfer of genetic gain. Breeding programmes are usually operated either by a group of livestock breeders organized in a breeders' association, community-based entity or other collective body; by a large commercial breeding company; or by the government.

To provide further details of your country's activities in the field of breeding programmes, please go to Strategic Priority Area 2 of the "Progress report on the implementation of the Global Plan of Action for Animal Genetic Resources 2007–2013" (below).

10. Who operates breeding programmes in your country?

Note: the objective of this question is to identify which stakeholders lead or organize the breeding programmes that exist in your country. Stakeholder participation in the implementation of the various elements of breeding programmes is covered under Question 15. If you wish to provide further information on the activities of the various stakeholder groups (including collaborative activities on an international scale), please provide it in the text section of Question 15.

Species	Government	Livestock keepers organized at community level	Breeders' associations or cooperatives	National commercial companies	External commercial companies	Non-governmental organizations	Others
Cattle (specialized dairy)	yes	no	yes	yes	no	no	no
Cattle (specialized beef)	yes	no	yes	no	no	no	no
Cattle (multipurpose)	yes	no	yes	yes	no	no	no
Sheep	yes	yes	yes	no	no	no	no
Goats	yes	yes	yes	no	no	no	no
Pigs	yes	no	yes	no	no	no	no
Chickens	yes	yes	yes	no	no	no	no
Horses	yes	no	yes	no	no	no	no
Rabbits	yes	yes	no	no	no	no	no
Ducks	yes	no	no	no	no	no	no
Geese	yes	no	no	no	no	no	no
Quails	yes	no	no	no	no	no	no

Species	Government	Livestock keepers organized at community level	Breeders' associations or cooperatives	National commercial companies	External commercial companies	Non-governmental organizations	Others
Turkeys	yes	no	no	no	no	no	no

10.1. If you choose the option "others", please indicate what kind of operator(s) this refers to.

11. For how many breeds in your country are the following activities undertaken?

Note: Please do not include activities that are only undertaken for experimental purposes, i.e. include only activities that directly serve or involve livestock keepers. However, please include activities even if they do not at present form part of a breeding programme. The intention is to obtain an indication of whether the "building blocks" of a breeding programme are available or being developed in your country. Loc = Locally adapted breeds; Ex = Exotic breeds.

Species	Tools															
	Animal identification		Breeding goal defined		Performance recording		Pedigree recording		Genetic evaluation (classic approach)		Genetic evaluation including genomic information		Management of genetic variation (by maximizing effective population size or minimizing rate of inbreeding)		Artificial insemination	
	Loc	Ex	Loc	Ex	Loc	Ex	Loc	Ex	Loc	Ex	Loc	Ex	Loc	Ex	Loc	Ex
Cattle (specialized dairy)	4	0	4	0	4	0	4	0	4	0	0	0	4	0	4	0
Cattle (specialized beef)	11	0	11	0	11	0	11	0	11	0	0	0	11	0	11	0
Cattle (multipurpose)	16	0	16	0	16	0	16	0	16	0	0	0	16	0	16	0
Sheep	29	0	29	0	29	0	29	0	29	0	0	0	29	0	0	0
Goats	4	0	4	0	4	0	4	0	4	0	0	0	4	0	0	0
Pigs	10	0	10	0	10	0	10	0	10	0	0	0	10	0	0	0
Chickens	37	0	37	0	37	0	37	0	37	0	0	0	37	0	0	0
Ducks	3	0	3	0	3	0	3	0	3	0	0	0	3	0	0	0
Geese	12	0	12	0	12	0	12	0	12	0	0	0	12	0	0	0
Horses	33	0	33	0	33	0	33	0	33	0	0	0	33	0	0	0
Quails	2	0	33	0	2	0	2	0	2	0	0	0	2	0	0	0
Rabbits	5	0	5	0	5	0	5	0	5	0	0	0	5	0	0	0
Turkeys	7	0	7	0	7	0	7	0	7	0	0	0	7	0	0	0

12. Please indicate how many of the breeds in your country are subject to breeding programmes applying the following breeding methods.

Note: Loc = Locally adapted breeds; Ex = Exotic breeds.

Species	Breeding method			
	Straight/pure-breeding only		Straight/pure-breeding and cross-breeding	
	Loc	Ex	Loc	Ex
Cattle (specialized dairy)	2	0	2	0
Cattle (specialized beef)	0	0	12	0
Cattle (multipurpose)	17	0	6	0
Sheep	2	0	41	0
Goats	2	0	5	0
Pigs	0	0	17	0
Chickens	21	0	20	0
Horses	3	0	41	0
Ducks	0	0	3	0

13. Please indicate the state of research and training in the field of animal breeding in your country.

Species	Training	Research
Cattle (specialized dairy)	medium	medium
Cattle (specialized beef)	low	medium
Cattle (multipurpose)	low	low
Sheep	medium	low
Goats	low	low
Pigs	low	medium
Chickens	medium	medium
Ducks	low	low
Geese	low	low
Horses	medium	medium
Quails	low	low
Rabbits	low	low
Turkeys	low	low

14. Please indicate the extent to which livestock keepers in your country are organized for the purposes of animal breeding.

Species	Organization of livestock keepers
Cattle (specialized dairy)	medium
Cattle (specialized beef)	low
Cattle (multipurpose)	medium
Sheep	low
Goats	none
Pigs	low
Chickens	high

Species	Organization of livestock keepers
Ducks	none
Geese	none
Horses	high
Quails	low
Rabbits	none
Turkeys	none

15. Please indicate the level of stakeholder involvement in the various elements of breeding programmes in your country.

Note: If your country has different types of breeding programme, the level of involvement of the various stakeholders may vary from one type of programme to another. In answering this question please try to indicate the overall degree of involvement of the various stakeholder groups.

Cattle (specialized dairy)	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	medium	high	low	medium	medium	none	none	none
Animal identification	high	high	low	high	medium	medium	none	none
Recording	medium	medium	low	high	high	none	none	none
Provision of artificial insemination services	medium	low	none	high	high	low	none	none
Genetic evaluation	high	high	low	low	medium	none	none	none

Cattle (specialized beef)	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	medium	high	low	medium	medium	none	none	none
Animal identification	high	high	low	high	medium	medium	none	none
Recording	medium	medium	low	high	high	none	none	none
Provision of artificial insemination services	medium	low	none	high	high	low	none	none
Genetic evaluation	high	high	low	low	medium	none	none	none

Cattle (multipurpose)	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	medium	high	low	medium	medium	none	none	none
Animal identification	high	high	low	high	medium	medium	none	none
Recording	medium	medium	low	high	high	none	none	none
Provision of artificial insemination services	medium	low	none	high	high	low	none	none
Genetic evaluation	high	high	low	low	medium	none	none	none

Sheep	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	medium	medium	high	medium	none	none	none	none
Animal identification	high	high	high	high	none	none	none	none
Recording	medium	high	high	high	none	none	none	none
Provision of artificial insemination services	medium	low	none	none	none	none	none	none
Genetic evaluation	high	high	low	none	none	none	none	none

Goats	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	medium	medium	high	medium	none	none	none	none
Animal identification	high	high	high	high	none	none	none	none
Recording	medium	high	high	high	none	none	none	none
Provision of artificial insemination services	medium	low	none	none	none	none	none	none
Genetic evaluation	high	high	low	none	none	none	none	none

Horses	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	medium	medium	high	medium	low	none	none	none
Animal identification	high	high	high	medium	none	none	none	none
Recording	high	high	high	high	none	none	none	none
Provision of artificial insemination services	medium	medium	none	none	none	none	none	none
Genetic evaluation	medium	high	low	none	none	none	none	none

Pigs	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	medium	medium	medium	low	none	none	none	none
Animal identification	high	high	medium	high	none	none	none	none
Recording	high	medium	high	none	none	none	none	none
Provision of artificial insemination services	medium	low	none	none	none	none	none	none
Genetic evaluation	high	high	low	none	none	none	none	none

Chickens	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	high	high	high	low	none	none	none	none
Animal identification	low	high	high	medium	none	none	none	none
Recording	none	high	high	medium	none	none	none	none
Provision of artificial insemination services	medium	high	none	none	none	none	none	none
Genetic evaluation	high	high	low	none	none	none	none	none

15.1. If you choose the option "others", please indicate what kind of operator(s) this refers to.

15.2. Please provide further information on the roles that the stakeholders identified in the table play in the implementation of the various activities. If relevant, please also provide further information on the organizational roles played by the stakeholders identified in Question 10.

The government (state authorities in charge of the livestock genetic resources management): determines the overall line of population (species, group of breeds) development at federal and regional levels, provides the regulatory basis and determines funding support; develops and organizes the state system of identification of animals, semen, embryos, and other genetic resources; develops and provides a legislative and regulatory basis for the recording of genetic resources in information systems; develops state-level quality standards for semen, sets guidelines on artificial insemination, determines norms for the use of artificial insemination for different species, provides support to artificial insemination organizations; determines the list of obligatory activities for genetic evaluation of animals of different species, organizes such activities and supports their implementation.
Research organizations:
develop parameters for breeding programs, optimize the sizes of breeding groups and intensity of animal selection at every stage of the breeding process; develop principles, structure and technology for unique identification of animals; develop principles of recording animals of different breeds and species; develop improved methods of artificial insemination; develop methodological, organizational and technological basis for genetic evaluation of animals, provide services on genetic identification and evaluation of animals.
Livestock keepers associations and cooperatives (breeding centers/associations per breed): describe overall breeding goals (set performance standards, exterior standards, standards for animal growth and development, general principles for the selection of animals); in a number of cases, determine principles and terms of identification, may provide animal identification services; enter data on animals in breeding databases per breed and region (on the level of breed, recording is practically non-existent and is performed only in some regions.

16. Does your country implement any policies or programmes aimed at supporting breeding programmes or influencing their objectives?

Species	Policies or programmes
Cattle (specialized dairy)	yes
Cattle (specialized beef)	yes
Cattle (multipurpose)	yes
Sheep	yes
Goats	yes
Pigs	yes
Chickens	yes
Ducks	no
Geese	no
Horses	yes
Quails	no
Rabbits	no
Turkeys	no

16.1. Please describe these policies or programmes, indicating whether or not they include any measures specifically aimed at supporting breeding programmes for locally adapted breeds or any measures specifically aimed at supporting breeding programmes for exotic breeds (including breed-replacement programmes). Please indicate whether different types of programme are promoted in different production systems (and describe the differences).

Species	Description of policies or programmes
Cattle (specialized dairy)	Breeding programmes developed for specific breeds or regional populations. For some breeds (or regional populations), breeding indices (breeding goals) have been developed, breeding groups sizes determined, as well as animal evaluation principles. For other breeds - official regulatory documentation on animal evaluation.
Cattle (specialized beef)	Breeding programmes developed for specific breeds or regional populations. For some breeds (or regional populations), breeding indices (breeding goals) have been developed, breeding groups sizes determined, as well as animal evaluation principles. For other breeds - official regulatory documentation on animal evaluation.
Cattle (multipurpose)	Breeding programmes developed for specific breeds or regional populations. For some breeds (or regional populations), breeding indices (breeding goals) have been developed, breeding groups sizes determined, as well as animal evaluation principles. For other breeds - official regulatory documentation on animal evaluation.
Sheep	General line. Regulatory documents on animal evaluation
Goats	General line. Regulatory documents on animal evaluation
Pigs	General line. Regulatory documents on animal evaluation
Chickens	General breeding principles. General description of breeding principles.
Ducks	Specific technological issues. Livestock care and feeding technology
Geese	Specific technological issues. Livestock care and feeding technology
Horses	Breeding programmes developed for specific breeds. Description of breeding directions and general implementation principles.
Quails	Specific technological issues. Livestock care and feeding technology
Rabbits	General line. General description and directions of breeding.
Turkeys	Specific technological issues. Livestock care and feeding technology

17. Please describe the consequences of your country's breeding policies and programmes, or lack of breeding policies and programmes, for your country's animal genetic resources and their management.

Species	Description of consequences
Cattle (specialized dairy)	In breeds (regional populations) where relatively modern programmes of genetic improvement have been implemented (dairy cattle in Moscow, Leningrad, Kirov Oblasts and others, beef cattle in Orenburg Oblast) and effective organizational structures for livestock management exist, there has been performance growth, improvement of pedigree characteristics, increase in economic efficiency of livestock keeping at farms and businesses distributing genetic resources. For example, in the past ten years the average milk yield of dairy cattle in Moscow Oblast has been growing annually by 150-200 kg of milk, accompanied by improvement in quality characteristics (fat increase by 0.01%, protein increase by 0.02%). This is largely due to the development of a scientifically based version of the breeding programme (with clear determination of the size of breeding groups, selection intensity at different breeding stages), development of a regional database of pedigree animals, development and implementation of modern evaluation methods (BLUP, breeding index), organization of Mosplem non-profit partnership encompassing all breeding farms in the region, of a regional information and selection center and using it as basis for the development of livestock breeding information system. At the same time, the leading livestock breeder in the region (Moskovskoe livestock farm), which has its own artificial insemination organization, has significantly widened the semen market for its bulls: at the moment, semen of the best bulls from Moscow Oblast is supplied to pedigree and cash livestock farms in over fifty regions of the Russian Federation. However, examples like these are few.
Cattle (specialized beef)	
Cattle (multipurpose)	
Sheep	
Goats	
Pigs	
Chickens	

18. Please describe the main constraints to the implementation of breeding programmes in your country and what needs to be done to address these constraints. You may also provide information on any particular successes achieved in your country with respect to the establishment and operation of breeding programmes and on the factors that have contributed to these successes.

For most livestock breeds and species in different regions of the Russian Federation, breeding is based on an obsolete, but still officially approved regulatory procedure developed back in the 1970s-1980s. There is neither organizational structure for livestock management within regions and breeds nor services for livestock breeders. The lack of active functioning breeders' associations leads to breeds being divided into separate regional subpopulations that often are managed without specific breeding programmes or any coordination on the interregional management level. Within breeds, a large number of zone- ,region-, and farm-specific animal types are still registered and recognized as breeding success on the governmental level; however, they do not contribute to the conservation of genetic diversity or breed and population improvement in any way. All this is reason enough for a rather low level of development of genetic improvement systems for various breeds and species in the Russian Federation.

19. Please describe future objectives, priorities and plans for the establishment or further development of breeding programmes in your country.

Species	Description of future objectives, priorities and plans
Cattle (specialized dairy)	To improve the situation, a number of tasks have to be tackled in the nearest future: 1. to develop a modern structural scheme of breeding and service organizations for different breeds and species at all management levels; 2. to develop a detailed technological procedure for livestock breeding per breed and species (unique identification, information systems, breeding traits determination etc.); 3. to develop modern breeding programmes to improve genetic qualities of species, breeds and populations of livestock; 4. to create databases of genetic resources for livestock management at the levels of breed and population; 5. to develop and implement modern evaluation methods at the levels of breed and population, while taking into account breed- and population-specific characteristics and breeding goals; 6. to create a system for the conservation of genetic resources of aboriginal, rare and endangered species and breeds, to determine parameters and terms of use for such a system; 7. to create a modern scientifically based and functional legislative and regulatory basis for livestock breeding in Russia, with the aim of development, sustainable use and conservation of livestock genetic resources; 8. to determine the lines of government policy to enhance cooperation between livestock keepers, their associations and Russian livestock keeping organizations and international structures working on the improvement of systems for the conservation and development of livestock genetic resources.
Cattle (specialized beef)	
Cattle (multipurpose)	
Sheep	
Goats	
Pigs	
Chickens	

CONSERVATION

To provide further details of your country's activities in the field of conservation, please go to Strategic Priority Area 3 of the "Progress report on the implementation of the Global Plan of Action for Animal Genetic Resources 2007–2013" (below).

20. Please provide an indication of the extent to which your country's breeds are covered by conservation programmes.

Please focus on at-risk breeds and breeds for which there are serious grounds for concern about their potential to fall into the at-risk category in the near future. Countries should not reduce their scores because of a lack of conservation programmes for breeds that are clearly not at risk. The main purpose of this question is to obtain an indication of the extent to which your country's conservation programmes meet the objective of protecting breeds from extinction. If your country has no official national criteria for classifying breed risk status or lacks the relevant data for identifying which breeds are at risk, please base your answers on estimations. Please also note that Question 8 of the "Progress report on the implementation of the Global Plan of Action for Animal Genetic Resources – 2007 to 2013" (below) requests countries to provide information on the criteria they use to assess the risk status of animal genetic resources.

Note: n/a = no programmes implemented because all breeds of this species present in the country are secure.

Species	In situ conservation	Ex situ in vivo conservation	Ex situ in vitro conservation
Cattle (specialized dairy)	none	none	none
Cattle (specialized beef)	none	none	none
Cattle (multipurpose)	high	none	none
Sheep	high	none	none
Goats	low	none	none

Species	In situ conservation	Ex situ in vivo conservation	Ex situ in vitro conservation
Pigs	low	none	none
Chickens	high	low	none
Horses	high	none	none
Rabbits	medium	none	none
Ducks	high	none	none
Geese	high	low	none
Quails	low	none	none
Turkeys	medium	none	none

21. Does your country use formal approaches to prioritize breeds for conservation?

- ○ yes
- ◉ no

21.1. If so, which of the following factors are considered?

Note: See Sections 2 and 3 of the FAO guidelines In vivo conservation of animal genetic resources (http://www.fao.org/docrep/018/i3327e/i3327e.pdf).

	Considered in formal prioritization approaches
Risk of extinction	no
Genetic uniqueness	no
Genetic variation within the breed	no
Production traits	no
Non-production traits	no
Cultural or historical importance	no
Probability of success	no

22. Please indicate which of the following methods are used as elements of in situ conservation programmes in your country and which operators are managing them.

Note: Operators: the sector(s) that initiate(s) and manage(s) the respective activities. If both sectors undertake the respective activity, please answer "yes" in both rows. Please answer "yes" if the respective sector only works with some of the species targeted. If necessary, details of which sector addresses which species can be provided in the textual response. Information on what kinds of public- or private-sector organizations undertake the activities can also be provided, if necessary, in the textual response. Species targeted: Please answer "yes" if there are any such activities targeting the respective species, whether they are undertaken by the public sector, private sector or both.

Operators / Species targeted	Promotion of niche marketing or other market differentiation	Community-based conservation programmes	Incentive or subsidy payment schemes for keeping at-risk breeds	Development of biocultural community protocols	Recognition/award programmes for breeders	Conservation breeding programmes	Selection programmes for increased production or productivity in at-risk breeds	Promotion of at-risk breeds as tourist attractions	Use of at-risk breeds in the management of wildlife habitats and landscapes	Promotion of breed-related cultural activities	Extension programmes to improve the management of at-risk breeds	Awareness-raising activities providing information on the potential of specific at-risk breeds
Public sector	no	no	yes	no	no	no	no	no	no	no	yes	yes
Private sector	yes	yes	yes	yes	no	no	no	yes	no	yes	yes	yes
Cattle (specialized dairy)	no	no	no	no	no	no	no	no	no	no	no	no
Cattle (specialized beef)	no	no	no	no	no	no	no	no	no	no	no	no
Cattle (multipurpose)	no	no	yes	no	no	no	no	no	no	no	yes	yes
Sheep	yes	yes	yes	yes	no	no	no	yes	no	yes	yes	yes
Goats	no	no	yes	no	no	no	no	yes	no	no	yes	yes
Pigs	yes	yes	yes	yes	no	no	no	no	no	yes	yes	yes
Chickens	no	no	yes	yes	no	no	no	yes	no	no	yes	yes
Horses	yes	yes	yes	yes	no	no	no	yes	no	yes	yes	yes
Rabbits	no	no	yes	no	no	no	no	no	no	yes	yes	yes
Ducks	no	no	yes	no	no	no	no	no	no	no	yes	yes
Geese	no	no	yes	no	no	no	no	no	no	no	yes	yes
Quails	no	no	yes	no	no	no	no	no	no	no	yes	yes
Turkeys	no	no	yes	no	no	no	no	no	no	no	yes	yes

22.1. Please provide further details of the activities recorded in the table and any other in situ conservation activities or programmes being implemented in your country.

In spite of the fact that the official programmes on in-situ conservation of farm animal genetic resources are not acting, however some political decisions and activity of public structures mostly based on ethnic and religious traditions and principles influence on presentation of some farm animal species and breeds in number of country's regions.
So, confirmed some farms as genefund, state bodies make support for conservation of rare and endangered species and breeds and promote reproduction of their animal genetic resources.
In regions where the majority of the human population are Muslims, as rule, the local authorities and religious organizations provide with some support to owners of sheep stocks including animals of rare breeds. In some cases, the kind of support is provided by Jewish communities.
But these examples are very small in number and have indirect impact on preservation of animal genetic resources in Russia.

23. Does your country have an operational in vitro gene bank for animal genetic resources?

In vitro gene bank: a collection of documented cryoconserved genetic material, primarily stored for the purpose of medium- to long-term conservation, with agreed protocols and procedures for acquisition and use of the genetic material.

- ○ yes
- ◉ no

23.1. If your country has no in vitro gene bank for animal genetic resources, does it have plans to develop one?

- ○ yes
- ◉ no

23.2. If yes, please describe the plans.

24. If your country has an in vitro gene bank for animal genetic resources, please indicate what kind of material is stored there.

	Stored in national genebank
Semen	no
Embryos	no
Oocytes	no
Somatic cells (tissue or cultured cells)	no
Isolated DNA	no

25. If your country has an in vitro gene bank for animal genetic resources, please complete the following table.

Species	Number of breeds for which material is stored	Number of breeds for which sufficient material is stored	Does the collection include material from not-at-risk breeds?	Have any extinct populations been reconstituted using material from the gene bank?	Have the gene bank collections been used to introduce genetic variability into an in situ population?	Have the gene bank collections been used to introduce genetic variability into an ex situ population?	Do livestock keepers or breeders' associations participate in the planning of the gene banking activities?
Cattle (specialized dairy)							
Cattle (specialized beef)							
Cattle (multipurpose)							
Sheep							
Goats							
Pigs							
Chickens							

25.1. Please provide further details of the activities recorded in the table (including any examples of the use of gene bank material to reconstitute populations or introduce genetic variability) and any other in vitro conservation activities or programmes being implemented in your country.

26. Does your country have plans to enter into collaboration with other countries to set up a regional or subregional in vitro gene bank for animal genetic resources?

- ○ yes
- ◉ no

26.1. If yes, please describe the plans, including a list of the countries involved.

27. If there have been any cases in your country in which breeds that were formerly classified as at risk of extinction have recovered to a position in which they are no longer at risk, please list the breeds and describe how the recovery was achieved.

There is no farm animal breed classification on a base of the risk-status in Russian Federation.

REPRODUCTIVE AND MOLECULAR BIOTECHNOLOGIES

28. Please indicate the level of availability of reproductive and molecular biotechnologies for use in livestock production in your country.

Note: low = at experimental level only; medium = available to livestock keepers in some locations or production systems; high = widely available to livestock keepers.

Species	Biotechnologies								
	Artificial insemination	Embryo transfer	Multiple ovulation and embryo transfer	Semen sexing	In vitro fertilization	Cloning	Genetic modification	Molecular genetic or genomic information	Transplantation of gonadal tissue
Cattle (specialized dairy)	high	medium	none	medium	none	none	none	medium	none
Cattle (specialized beef)	medium	low	none	none	none	none	none	low	none
Cattle (multipurpose)	high	medium	none	medium	none	none	none	medium	none
Sheep	medium	none	none	none	none	none	none	low	none
Goats	low	none	none	none	none	none	none	low	none
Pigs	low	none	none	none	none	none	none	low	none
Horses	medium	none	none	none	none	none	none	medium	none
Rabbits	low	none	none	none	none	none	none	none	none
Chickens	low	none	none	none	none	none	none	none	none
Ducks	none	none	none	none	none	none	none	none	none
Geese	none	none	none	none	none	none	none	none	none
Quails	none	none	none	none	none	none	none	none	none
Turkeys	high	none	none	none	none	none	none	none	none

28.1. Please provide additional information on the use of these biotechnologies in your country.

Reproductive and molecular biotechnologies are gaining ground in Russian Federation, it is not directly related with all aspects of biotechnological methods which are used in world practice of animal husbandry but some of their technological elements. With all this going on the intensities of biotechnologies using in various species of farm animals are very different. For instance, there are AI stations in about each region of Russia that open all possibilities for artificial insemination of females in each population and each species of farm animals. But AI method are widely used only in large-scale farms with dairy cattle, less widely used in herds of beef cattle and horses. Artificial insemination is used also in sheep breeding and goat breeding but this method of genetic resources reproduction is maintained in very restricted number of farms. Artificial insemination is not widely used in pig breeing, poultry and work with rabbits. Artificial insemination is practically not implemented in farmer and private small herds (it is only used in a very few number of locations, for instance in some regions of North Caucasus, where points of animal artificial insemination are organized). This situation is related with traditional habits on animal reproduction and also with an absence of service network and other reasons.

The level of embryotransplantation expansion is not high in animal husbandry of Russian Federation. This is caused by the following reasons:

- insufficient results of embryotransplantation;
- lack of practical use of modern methods for female donors and sire selection;
- some veterinary restrictions;
- relatively high costs of embryotransplantation in comparison with other methods of animal reproduction.

As for other biotechnological methods shown in table it is necessary to point out that the insemination animals with sexing semen is used in very restricted number of herds (as rule, services are provided by foreign companies).

29. If the reproductive and/or molecular technologies are available for use by livestock keepers in your country, please indicate which stakeholders are involved in providing the respective services to the livestock keepers.

	Stakeholders					
	Public sector	Breeders' associations or cooperatives	National non-governmental organizations	Donors and development agencies	National commercial companies	External commercial companies
Artificial insemination	yes	yes	no	no	yes	yes
Embryo transfer	yes	yes	no	no	yes	yes
Semen sexing	yes	no	no	no	yes	yes
Genetic modification	no	no	no	no	no	no
Molecular genetic or genomic information	yes	yes	no	no	yes	no

29.1. Please provide additional information on the roles that the providers identified in the table play in the provision of biotechnology services in your country.

Even being not very developed, structure of biotechnological methods with farm animals in Russia is due to various factors:
1. Legislation base in the field of animal breeding.
All breeding farms with dairy cattle are obliged to use AI methods for genetic resources reproduction. Another mandatory requirement is the lack of reducing the number of animals. When any farm is in difficulties with reproduction of genetic resources of females specialists sometimes used insemination heifers with sexing sperm in order to get more females in progeny generation.
In some cases legislation base requires to examine the reliability animals of their origin by using of molecular-genetic methods.
2. Price performance.
All AI stations and embryotransplantation centers are highly interested (uniformed as “National commercial companies” in table 15) in expansion of areas of their activities.
The interest of scientific and educational organizations in the framework of implementation of projects, programmes and research plans.

30. Please indicate which biotechnologies your country is undertaking research on.

Biotechnologies	Public or private research at national level	Research undertaken as part of international collaboration
Artificial insemination	yes	no
Embryo transfer or MOET	yes	no

Biotechnologies	Public or private research at national level	Research undertaken as part of international collaboration
Semen sexing	no	no
In vitro fertilization	yes	no
Cloning	no	no
Genetic modification	yes	yes
Use of molecular genetic or genomic information for estimation of genetic diversity	yes	yes
Use of molecular genetic or genomic information for prediction of breeding values	yes	yes
Research on adaptedness based on molecular genetic or genomic information	yes	no

30.1. Please briefly describe the research.

The research investigations in the framework of biotechnologies in animal husbandry are implemented by scientific and educational organizations exclusively. These organizations are represented in table above (table 15) as “Public sector”. Basically these studies are carried out within frameworks of thematic plans, the performance of which is provided by state and regional (in some cases) budgets. A very few investigations are based on financial support of private commercial companies which, in general, pursue the goals of identifying advantages of their products (for instance, technologies or sperm or embryo of high quality, etc.).
International cooperation, even it is realized by leading research and educational organization in the field of animal husbandry, is carried out in very restricted scale and is organized on a base of personal contacts with foreign partners.

31. Please estimate the extent to which artificial insemination (using semen from exotic and/or locally adapted breeds) and/or natural mating is used in your country’s various production systems.

Note: low = approximately <33% of matings; medium = approximately 33–67% of matings; high = approximately >67% of mating; n/a = production system not present in this country.

Cattle (specialized dairy)	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	low	low	low	high	none
Artificial insemination using nationally produced semen from exotic breeds	none	none	none	none	none
Artificial insemination using imported semen from exotic breeds	none	none	none	none	none
Natural mating	high	high	high	low	none

Cattle (specialized beef)	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	low	low	none	medium	none
Artificial insemination using nationally produced semen from exotic breeds	none	none	none	none	none
Artificial insemination using imported semen from exotic breeds	none	none	none	none	none
Natural mating	high	high	high	medium	none

Cattle (multipurpose)	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	low	low	low	high	none
Artificial insemination using nationally produced semen from exotic breeds	none	none	none	none	none
Artificial insemination using imported semen from exotic breeds	none	none	none	none	none
Natural mating	high	high	high	low	none

Sheep	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	none	none	none	low	none
Artificial insemination using nationally produced semen from exotic breeds	none	none	none	none	none
Artificial insemination using imported semen from exotic breeds	none	none	none	none	none
Natural mating	high	high	high	high	none

Goats	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	none	none	none	low	none
Artificial insemination using nationally produced semen from exotic breeds	none	none	none	none	none
Artificial insemination using imported semen from exotic breeds	none	none	none	none	none
Natural mating	high	high	high	high	none

Horses	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	none	none	low	medium	medium
Artificial insemination using nationally produced semen from exotic breeds	none	none	none	none	none
Artificial insemination using imported semen from exotic breeds	none	none	none	none	none
Natural mating	high	high	high	medium	low

Chickens	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	none	none	none	low	none
Artificial insemination using nationally produced semen from exotic breeds	low	none	low	low	low
Artificial insemination using imported semen from exotic breeds	none	none	none	none	none
Natural mating	high	none	high	medium	high

Turkeys	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	none	none	low	high	none
Artificial insemination using nationally produced semen from exotic breeds	none	none	none	low	none
Artificial insemination using imported semen from exotic breeds	none	none	none	none	none
Natural mating	high	none	high	low	high

32. Please provide further details on the use of reproductive and molecular biotechnologies in animal genetic resources management in your country. Please note any particular constraints to implementing these activities and any problems associated with their use. Please indicate what needs to be done to address these constraints and/or problems. You may also provide information on any particular successes achieved in your country in the use of biotechnologies in animal genetic resources management and on the factors that have contributed to these successes.

The levels of AI expansion in practical work with farm animals are very variable in relation with species and categories of farms (industrial enterprises, farmer's or private farms). This is due to following reasons:

- systems of animal farming with various species (intensive or extensive);
- features of technological process of animal reproduction (in particular, the complexity of AI us in comparison with natural mating);
- availability of consumer service for artificial insemination of animals (charges for delivery, presence of AI specialists, costs for AI, conditions for AI carry out).

As result, the methods of artificial insemination of animals are practically not used in majority of farmer's and private farms. There are very few examples when these categories of farms can employ method above discussed. For instance, the method is used in cases when small-scale farms are located in immediate proximity to industrial farm which has AI specialists.

The estimation of AI dissemination in various production systems in Russian Federation is presented in Table.

Artificial insemination of animals belonging to other species (not shown in table) is not used in farms of Russian Federation with exception of pig breeding where artificial insemination is widely used in industrials farms (level of extension is high, sperm is produced in the same farms), but semen is native, not deep frozen.

III. DATA CONTRIBUTING TO THE PREPARATION OF *THE STATE OF THE WORLD'S BIODIVERSITY FOR FOOD AND AGRICULTURE*

INTEGRATION OF THE MANAGEMENT OF ANIMAL GENETIC RESOURCES WITH THE MANAGEMENT OF PLANT, FORESTRY AND AQUATIC GENETIC RESOURCES

1. Please indicate the extent to which the management of animal genetic resources in your country is integrated with the management of plant, forestry and aquatic genetic resources. Please describe the collaboration, including, if relevant, a description of the benefits gained by pursuing a collaborative approach.

	Extent of collaboration	Description
Development of joint national strategies or action plans	extensive	The legislation base is working out and implemented in practice of animal farming with aims of damage minimization to environment; control bodies are setup in each region.
Collaboration in the characterization, surveying or monitoring of genetic resources, production environments or ecosystems	extensive	The monitoring for conditions of soil, plants, water, aquatic genetic resources is conducted on permanent base; it is provided estimation of production systems impact levels on environment.
Collaboration related to genetic improvement	none	-
Collaboration related to product development and/or marketing	limited	Organization of limited number farms with exclusive standards to quality of animal products so called “ecological production”.
Collaboration in conservation strategies, programmes or projects	limited	Joint programmes for conservation of natural reserves and other territories with protected ecological systems.
Collaboration in awareness-raising on the roles and values of genetic resources	limited	Organization of animal genetic resources exhibitions, shows (including representatives of rare breeds and species)
Training activities and/or educational curricula that address genetic resources in an integrated manner	extensive	Programmes for studies in secondary schools, agricultural colleges and universities contain special courses of knowledge.
Collaboration in the mobilization of resources for the management of genetic resources	none	-

2. Please describe any other types of collaboration.

The management of animal genetic recourses is integrated with the management of plant, forestry and aquatic genetic resources on the base of problems related with probabilities of damaging to environment by impact of animal farming and materials recovery.
For overcoming these problems there are official requirements (on state legislation level), for execution of which the following special bodies of state level.

3. If relevant, please describe the benefits that could be achieved by strengthening collaboration in the management of genetic resources in the animal, plant, forest and aquatic sectors in your country. If specific plans to increase collaboration are in place, please describe them and the benefits foreseen

4. Please describe any factors that facilitate or constrain collaborative approaches to the management of genetic resources in your country.

5. If there are constraints, please indicate what needs to be done to overcome them.

ANIMAL GENETIC RESOURCES MANAGEMENT AND THE PROVISION OF REGULATING AND SUPPORTING ECOSYSTEM SERVICES

6. Do your country's policies, plans or strategies for animal genetic resources management include measures specifically addressing the roles of livestock in the provision of regulating ecosystem services and/or supporting ecosystem services?

Regulating ecosystem services: "Benefits obtained from the regulation of ecosystem processes" – Millennium Ecosystem Assessment. 2005. Ecosystems and human well-being: synthesis. Washington D.C., Island Press (available at http://millenniumassessment.org/documents/document.356.aspx.pdf), page 40. Supporting ecosystem services: "Services necessary for the production of all other ecosystem services" – Millennium Ecosystem Assessment. 2005. Ecosystems and human well-being: synthesis. Washington D.C., Island Press (available at http://millenniumassessment.org/documents/document.356.aspx.pdf), page 40.

- ○ yes
- ◉ no

6.1. If yes, please describe these measures and indicate which supporting and/or regulating ecosystem services are targeted, and in which production systems.

Examples of supporting and regulatory ecosystem services provided by livestock might include the following: provision or maintenance of wildlife habitats (e.g. via grazing); seed dispersal (e.g. in dung or on animals' coats); promoting plant growth (e.g. stimulating growth via grazing or browsing); soil formation (e.g. via the supply of manure); soil nutrient cycling (e.g. via supply of manure); soil quality regulation (e.g. affecting soil structure and water-holding capacity via trampling or dunging); control of weeds and invasive species (e.g. via grazing or browsing invasive plants); climate regulation (e.g. by promoting carbon sequestration through dunging); enhancing pollination levels (e.g. by creating habitats for pollinators); fire control (e.g. by removal of biomass that may fuel fires); avalanche control (e.g. grazing to keep vegetation short to reduce the probability that snow will slide); erosion regulation (e.g. indirect via fire control services); maintenance of water quality and quantity (e.g. indirect effect via erosion control); management of crop residues (e.g. consumption of unwanted crop residues by animals); pest regulation (e.g. by destruction of pests or pest habitats); disease regulation (e.g. by destruction of disease vectors or their habitats); buffering of water quantities – flood regulation (e.g. indirect effect via fire and erosion control).

The ecosystem services (privileges, benefits, financial support, etc) addressed to stakeholders are practically absent in Russian Federation.
Country's policies, plans and strategies for animal genetic resources management expose special requirements to production system, farming, by-products utilization for farms with all patterns of ownership. The compliance contributed to preservation of ecological situation (the conditions of soils, forests, plants, water, aquacultures etc.) on sufficient level.

6.1.1 Please describe what the outcome of these measures has been in terms of the supply of the respective ecosystem services (including an indication of the scale on which these outcomes have been obtained).

6.1.2 Please describe what the outcome of these measures has been in terms of the state of animal genetic resources and their management (including an indication of the scale on which these outcomes have been obtained).

7. Do your country's policies, plans or strategies for animal genetic resources management include measures specifically addressing environmental problems associated with livestock production?

Examples might include choosing to use particular species or breeds because they are less environmentally damaging in a given ecosystem or adapting breeding goals to produce animals that have some characteristic that makes them more environmentally friendly.

- ○ yes
- ◉ no

7.1. If yes, please describe these measures and indicate the environmental problems that are targeted, and in which production systems.

7.1.1 Please describe what the outcome of these measures has been in terms of the reduction of the respective environmental problem (including an indication of the scale on which these outcomes have been obtained).

7.1.2 Please describe what the outcome of these measures has been in terms of the state of animal genetic resources and their management (including an indication of the scale on which these outcomes have been obtained).

8. Please describe any constraints or problems encountered or foreseen in the implementation of measures in your country aimed at promoting the provision of regulating and supporting ecosystem services or reducing environmental problems.

This problem is not discussed yet on official level in Russian Federation.

9. Please provide examples of cases in which the role of livestock or specific animal genetic resources is particularly important in the provision of regulating and/or supporting ecosystem services in your country. Please also describe any examples in which diverse animal genetic resources are important in terms of reducing the adverse environmental effects of livestock production.

10. Please describe the potential steps that could be taken in your country to further expand or strengthen positive links between animal genetic resources management and the provision of regulating and/or supporting ecosystem services or the reduction of environmental problems. If your country has specific plans to take further action in this field, please describe them.

11. Please provide any further information on the links between animal genetic resources management in your country and the provision of supporting and/or regulating ecosystem services and/or the reduction of environmental problems.

IV. PROGRESS REPORT ON THE IMPLEMENTATION OF THE *GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES* – 2007 TO 2013

Note: Please provide further details in the text boxes below each question, including, if relevant, information on why no action has been taken.

STRATEGIC PRIORITY AREA 1: CHARACTERIZATION, INVENTORY AND MONITORING OF TRENDS AND ASSOCIATED RISKS

- The state of inventory and characterization of animal genetic resources
- The state of monitoring programmes and country-based early warning and response systems
- The state of international technical standards and protocols for characterization, inventory, and monitoring

1. Which of the following options best describes your country's progress in building an inventory of its animal genetic resources covering all livestock species of economic importance (SP 1, Action 1)?

Glossary: An inventory is a complete list of all the different breeds present in a country.

- (●) a. Completed before the adoption of the GPA
- ( ) b. Completed after the adoption of the GPA
- ( ) c. Partially completed (further progress since the adoption of the GPA)
- ( ) d. Partially completed (no further progress since the adoption of the GPA)

Please provide further details:

In 1995 it has been established official special commission under supervision of Ministry of Agriculture in Russian Federation. This commission is responsible for official publication of farm animal breeds stature-allowed to be bred in Russia.

2. Which of the following options best describes your country's progress in implementing phenotypic characterization studies covering morphology, performance, location, production environments and specific features in all livestock species of economic importance (SP 1, Actions 1 and 2)?

- (●) a. Comprehensive studies were undertaken before the adoption of the GPA
- ( ) b. Sufficient information has been generated because of progress made since the adoption of the GPA
- ( ) c. Some information has been generated (further progress since the adoption of the GPA)
- ( ) d. Some information has been generated (no further progress since the adoption of the GPA)
- ( ) e. None, but action is planned and funding identified
- ( ) f. None, but action is planned and funding is sought
- ( ) g. None

Please provide further details:

Annually the number of research institutes actualize data about phenotypic characteristics of breeds in the main species of farm animals according the official order of the Ministry of Agriculture.

3. Which of the following options best describes your country's progress in molecular characterization of its animal genetic resources covering all livestock species of economic importance (SP 1)?

- ( ) a. Comprehensive studies were undertaken before the adoption of the GPA
- ( ) b. Sufficient information has been generated because of progress made since the adoption of the GPA
- ( ) c. Some information has been generated (further progress since the adoption of the GPA)
- (●) d. Some information has been generated (no further progress since the adoption of the GPA)
- ( ) e. None, but action is planned and funding identified
- ( ) f. None, but action is planned and funding is sought
- ( ) g. None

Please provide further details:

Some research investigations for molecular characterization of breeds in cattle, pigs, horses, sheep, goats and poultry keeping have be done and are doing by the number of research organizations in the frames of their thematic research schedules.

4. Has your country conducted a baseline survey of the population status of its animal genetic resources for all livestock species of economic importance (SP 1, Action 1)?

Glossary: A baseline provides a reference point for monitoring population trends. Population status refers to the total size of a national breed population (ideally, also the proportion that is actively used for breeding and the number of male and female breeding animals).

- (●) a. Yes, a baseline survey was undertaken before the adoption of the GPA
- ( ) b. Yes, a baseline survey has been undertaken or has commenced after the adoption of the GPA
- ( ) c. Yes, a baseline survey has been undertaken for some species (coverage increased since the adoption of the GPA)
- ( ) d. Yes, a baseline survey has been undertaken for some species (coverage not increased since the adoption of the GPA)
- ( ) e. No, but action is planned and funding identified
- ( ) f. No, but action is planned and funding is sought
- ( ) g. No

Please provide further details:

From the number of actions listed in SP1 of GPA it is partly doing (in the level of research investigations) cataloging of data on localization and state of AnGR, their characteristics and dynamic changes.

5. Have institutional responsibilities for monitoring the status of animal genetic resources in your country been established (SP 1, Action 3)?

Glossary: Monitoring is a systematic set of activities undertaken to document changes in the population size and structure of animal genetic resources over time.

- ( ) a. Yes, responsibilities established before the adoption of the GPA
- ( ) b. Yes, responsibilities established after the adoption of the GPA
- ( ) c. No, but action is planned and funding identified
- ( ) d. No, but action is planned and funding is sought
- (●) e. No

Please provide further details:

6. Have protocols (details of schedules, objectives and methods) been established for a programme to monitor the status of animal genetic resources in your country (SP 2)?

- ( ) a. Yes, protocols established before the adoption of the GPA
- ( ) b. Yes, protocols established after the adoption of the GPA
- ( ) c. No, but action is planned and funding identified
- ( ) d. No, but action is planned and funding is sought
- (●) e. No

Please provide further details:

7. Are the population status and trends of your country's animal genetic resources being monitored regularly for all livestock species of economic importance (SP 1, Action 2)?

- (●) a. Yes, regular monitoring commenced before the adoption of the GPA
- ( ) b. Yes, regular monitoring commenced after the adoption of the GPA
- ( ) c. Yes, regular monitoring is being undertaken for some species (coverage increased since the adoption of the GPA)
- ( ) d. Yes, regular monitoring is being undertaken for some species (coverage not increased since the adoption of the GPA)
- ( ) e. No, but action is planned and funding identified

- ○ f. No, but action is planned and funding is sought
- ○ g. No

Please provide further details:

Regular monitoring is annually carrying out according requirements of the Ministry of Agriculture.

8. Which criteria does your country use for assessing the risk status of its animal genetic resources (SP 1, Action 7)?

Glossary: FAO has developed criteria that it uses to allocate breeds to risk-status categories based on the size and structure of their populations (http://www.fao.org/docrep/010/a1250e/a1250e00.htm).

- ○ a. FAO criteria
- ○ b. National criteria that differ from the FAO criteria
- ○ c. Other criteria (e.g. defined by international body such as European Union)
- ◉ d. None

Please provide further details. If applicable, please describe (or provide a link to a web site that describes) your national criteria or those of the respective international body:

9. Has your country established an operational emergency response system (http://www.fao.org/docrep/meeting/021/K3812e.pdf) that provides for immediate action to safeguard breeds at risk in all important livestock species (SP 1, Action 7)?

- ○ a. Yes, a comprehensive system was established before the adoption of the GPA
- ○ b. Yes, a comprehensive system has been established since the adoption of the GPA
- ○ c. For some species and breeds (coverage expanded since the adoption of the GPA)
- ○ d. For some species and breeds (coverage not expanded since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ◉ g. No

Please provide further details:

10. Is your country conducting research to develop methods, technical standards or protocols for phenotypic or molecular characterization, or breed evaluation, valuation or comparison? (SP 2, Action 2)

- ◉ a. Yes, research commenced before the adoption of the GPA
- ○ b. Yes, research commenced after the adoption of the GPA
- ○ c. No, but action is planned and funding identified
- ○ d. No, but action is planned and funding is sought
- ○ e. No

Please provide further details:

The investigations in above mentioned direction is conducted on permanent base by the main research institutes in the field of animal husbandry. However the most results are not officially implemented in practical work (as normatives officially confirmed by Ministry of Agriculture).

11. Has your country identified the major barriers and obstacles to enhancing its inventory, characterization and monitoring programmes?

- (●) a. Yes
- ( ) b. No
- ( ) c. No major barriers and obstacles exist. Comprehensive inventory, characterization and monitoring programmes are in place.

Please provide further details. If barriers and obstacles have been identified, please list them:

The main problem in this way is the lack of official systems on animal registrations and data actualization on regional and breed levels of management, the absence of data bases for breeds in any species of farm animals.

12. If applicable, please list and describe the measures that need to be taken to address these barriers and obstacles and to enhance your country's inventory, characterization and monitoring programmes:

It seems necessary to work out confirm programmes on official level on mandatory cataloging of AnGR, to appoint of responsible organizations, their functions, privileges and duties.

13. Please provide further comments on your country's activities related to Strategic Priority Area 1: Characterization, inventory and monitoring of trends and associated risks (including regional and international cooperation)

Note: It is not necessary to duplicate information provided in previous sections. Where relevant, please provide cross-references.

Annually the Ministry of Agriculture organize process on collecting of regional summary data for monitoring of animals within breeds, phenotypical characteristics, and results of AnGR use. In the main cases (for majority animal species) the quality of information is right to bind animal keepers without validation by any independent organizations.

STRATEGIC PRIORITY AREA 2: SUSTAINABLE USE AND DEVELOPMENT

- The state of national sustainable use policies for animal genetic resources
- The state of national species and breed development strategies and programmes
- The state of efforts to promote agro-ecosystem approaches

14. Does your country have adequate national policies in place to promote the sustainable use of animal genetic resources (see also questions 46 and 54)?

- (●) a. Yes, since before the adoption of the GPA
- ( ) b. Yes, policies put in place or updated after the adoption of the GPA
- ( ) c. No, but action is planned and funding identified
- ( ) d. No, but action is planned and funding is sought
- ( ) e. No

Please provide further details. If available, please provide the text of the policies or a web link to the text:

The main political attitudes are determined in legislation base in the field of animal husbandry of Russian Federation (can be found in www.mcx.ru).

15. Do these policies address the integration of agro-ecosystem approaches into the management of animal genetic resources in your country (SP5) (see also questions 46 and 54)?

Glossary: The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way (for further information see http://www.cbd.int/ecosystem/description.shtml).

- (●) a. Yes
- ( ) b. No, but a policy update is planned and funding identified
- ( ) c. No, but action is planned and funding is sought
- ( ) d. No

Please provide further details:

The integration of agro-ecosystem approaches into the management of animal genetic resources in Russia consists in exposing requirements on environmental resources using in animal farming and by-product utilization.

16. Do breeding programmes exist in your country for all major species and breeds, and are these programmes regularly reviewed, and if necessary revised, with the aim of meeting foreseeable economic and social needs and market demands (SP4, Action 2)?

- (●) a. Yes, since before the adoption of the GPA
- ( ) b. Yes, put in place after the adoption of the GPA
- ( ) c. For some species and breeds (coverage has increased since the adoption of the GPA)
- ( ) d. For some species and breeds (coverage has not increased since the adoption of the GPA)
- ( ) e. No, but action is planned and funding identified
- ( ) f. No, but action is planned and funding is sought
- ( ) g. No

Please provide further details:

Selection programmes with main breeds and species of farm animals have been work out by research organizations. But they usually contain common information about state of populations, classic principles and methods for their improving without determination of specific characteristics of populations in questions, without optimization of selection groups of animals, etc. The results of selection programmes implementation are generally not under control not under control and not under systematic correction.

17. Is long-term sustainable use planning – including, if appropriate, strategic breeding programmes – in place for all major livestock species and breeds (SP4, Action 1)?

- (●) a. Yes, since before the adoption of the GPA
- ( ) b. Yes, put in place after the adoption of the GPA
- ( ) c. For some species and breeds (further progress made since the adoption of the GPA)
- ( ) d. For some species and breeds (no further progress made since the adoption of the GPA)
- ( ) e. No, but action is planned and funding identified
- ( ) f. No, but action is planned and funding is sought
- ( ) g. No

Please provide further details:

There are common directions (plans) for long-term sustainable use of main animal populations. Monitoring for their implementation is responsibility of federal and regional official structures.

18. Have the major barriers and obstacles to enhancing the sustainable use and development of animal genetic resources in your country been identified?

- ( ) a. Yes
- (●) b. No
- ( ) c. No major barriers and obstacles exist. Comprehensive sustainable use and development measures are in place.

Please provide further details. If barriers and obstacles have been identified, please list them:

19. Have the long-term impacts of the use of exotic breeds on locally adapted breeds (e.g. economic, environmental or genetic impacts) and on food security been assessed in your country (SP4, Action 1)?

Glossary:

Exotic breeds are breeds that are maintained in a different area from the one in which they were developed. Exotic breeds comprise both recently introduced breeds and continually imported breeds.

Locally adapted breeds are breeds that have been in the country for a sufficient time to be genetically adapted to one or more of traditional production systems or environments in the country. The phrase "sufficient time" refers to time present in one or more of the country's traditional production systems or environments. Taking cultural, social and genetic aspects into account, a period of 40 years and six generations of the respective species might be considered as a guiding value for "sufficient time", subject to specific national circumstances.

a. no exotic breeds are being used for agricultural production.

Please provide further details:

There are no exotic breeds in main species of farm animals in Russia. System of AnGR reproduction in any breed is based on mixed use of homeland and imported genetics.

20. Have recording systems and organizational structures for breeding programmes been established or strengthened (SP4, Action 3)?

- ○ a. Yes, sufficient recording systems and organizational structures for breeding programmes have existed since before the adoption of the GPA
- ○ b. Yes, sufficient recording systems and organizational structures for breeding programmes exist because of progress made since the adoption of the GPA
- ○ c. Yes, recording systems and organizational structures for breeding programmes are partially in place (and were established or strengthened after the adoption of the GPA)
- ◉ d. Yes, recording systems and organizational structures for breeding programmes are partially in place (but no progress has been made since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ○ g. No

Please provide further details:

Adoption of the GPA not exert influence on official normatives for animal recording systems and organizational structures for breeding programmes existed before.

21. Are mechanisms in place in your country to facilitate interactions among stakeholders, scientific disciplines and sectors as part of sustainable use development planning (SP5, Action 3)?

- ○ a. Yes, comprehensive mechanisms have existed since before the adoption of the GPA
- ○ b. Yes, comprehensive mechanisms exist because of progress made since the adoption of the GPA
- ○ c. Yes, mechanisms are partially in place (and were established or strengthened after the adoption of the GPA)
- ◉ d. Yes, mechanisms are partially in place (but no progress has been made since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ○ g. No

Please provide further details:

Adoption of the GPA did not facilitate interactions among stakeholders, scientific disciplines and sectors in question.

22. Have measures been implemented in your country to provide farmers and livestock keepers with information that facilitates their access to animal genetic resources (SP 4, Action 7)?

- ○ a. Yes, comprehensive measures have existed since before the adoption of the GPA
- ○ b. Yes, comprehensive measures exist because of progress made since the adoption of the GPA
- ○ c. Yes, measures partially implemented (and were established or strengthened after the adoption of the GPA)
- ◉ d. Yes, measures partially implemented (but no progress has been made since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified

- ○ f. No, but action is planned and funding is sought
- ○ g. No

Please provide further details:

Information for farmers and livestock keepers about animal genetic resources and access to them is carried out through official information of state and regional bodies, mass media and organization of exhibitions and animal expositions

23. Has your country developed a national policy or entered specific contractual agreements for access to and the equitable sharing of benefits resulting from the use and development of animal genetic resources and associated traditional knowledge (SP3, Action 2)?

- ○ a. Yes, sufficient measures (policy and/or agreements) have been in place since before the adoption of the GPA
- ○ b. Yes, sufficient measures (policy and/or agreements) are in place because of progress made since the adoption of the GPA
- ○ c. Yes, some measures (policy and/or agreements) are in place (progress has been made since the adoption of the GPA)
- ○ d. Yes, some measures (policy and/or agreements) are in place (but no progress has been made since the adoption of the GPA)
- ○ e. No, but a policy and/or agreements are in preparation
- ○ f. No, but a policy and/or agreements are planned
- ◉ g. No

Please provide further details:

24. Have training and technical support programmes for the breeding activities of livestock-keepers been established or strengthened in your country (SP 4, Action 1)?

- ◉ a. Yes, sufficient programmes have existed since before the adoption of the GPA
- ○ b. Yes, sufficient programmes exist because of progress made since the adoption of the GPA
- ○ c. Yes, some programmes exist (progress has been made since the adoption of the GPA)
- ○ d. Yes, some programmes exist (but no progress has been made since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ○ g. No

Please provide further details:

Training and technical programmes for livestock-keepers support are realized by existing extension service organizations in regional levels.

25. Have priorities for future technical training and support programmes to enhance the use and development of animal genetic resources in your country been identified (SP 4, paragraph 42)?

- ○ a. Yes, priorities have been identified or updated since the adoption of the GPA
- ◉ b. Yes, priorities were identified before the adaption of the GPA but have not been updated
- ○ c. No, but action is planned and funding identified
- ○ d. No, but action is planned and funding is sought
- ○ e. No

Please provide further details:

The priorities were identified in the state educational standards and relative normative documents before the adoption of the GPA which did not influence on their updating.

26. Have efforts been made in your country to assess and support indigenous or local production systems and associated traditional knowledge and practices related to animal genetic resources (SP 6, Action 1, 2)?

- ○ a. Yes, sufficient measures have been in place since before the adoption of the GPA
- ○ b. Yes, sufficient measures are in place because of progress made since the adoption of the GPA
- ○ c. Yes, some measures are in place (and were established or strengthened after the adoption of the GPA)
- ◉ d. Yes, some measures are in place (but no progress has been made since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ○ g. No

Please provide further details:

Some kind of activities for assess and support indigenous local production systems has been carried out and put into practice now by state and regional bodies in animal husbandry through implementation of financial support.

27. Have efforts been made in your country to promote products derived from indigenous and local species and locally adapted breeds, and facilitate access to markets (SP 6, Action 2, 4)?

- ○ a. Yes, sufficient measures have been in place since before the adoption of the GPA
- ○ b. Yes, sufficient measures are in place because of progress made since the adoption of the GPA
- ○ c. Yes, some measures are in place (and were established or strengthened after the adoption of the GPA)
- ○ d. Yes, some measures are in place (but no progress has been made since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ◉ g. No

Please provide further details:

28. If applicable, please list and describe priority requirements for enhancing the sustainable use and development of animal genetic resources in your country:

Desirable priority requirements are not determined.

29. Please provide further comments on your country's activities related to Strategic Priority Area 2: Sustainable Use and Development (including regional and international cooperation)

Note: It is not necessary to duplicate information provided in previous sections. Where relevant, please provide cross-references.

No comments.

STRATEGIC PRIORITY AREA 3: CONSERVATION

- The state of national conservation policies
- The state of *in situ* and *ex situ* conservation programmes
- The state of regional and global long-term conservation strategies and agreement on technical standards for conservation

30. Does your country regularly assess factors leading to the erosion of its animal genetic resources (SP 7, Action 2)?

- ○ a. Erosion not occurring
- ○ b. Yes, regular assessments have been implemented since before the adoption of the GPA
- ○ c. Yes, regular assessments have commenced since the adoption of the GPA
- ○ d. No, but action is planned and funding identified
- ○ e. No, but action is planned and funding is sought
- ◉ f. No

Please provide further details:

31. What factors or drivers are leading to the erosion of animal genetic resources? Please describe the factors specifying which breeds or species are affected:

Factors leading to the erosion of animal genetic resources are not defined.

32. Does your country have conservation policies and programmes in place to protect locally adapted breeds at risk in all important livestock species (SP 7, SP 8 and SP 9)?

Glossary: Locally adapted breeds are breeds that have been in the country for a sufficient time to be genetically adapted to one or more of traditional production systems or environments in the country. The phrase "sufficient time" refers to time present in one or more of the country's traditional production systems or environments. Taking cultural, social and genetic aspects into account, a period of 40 years and six generations of the respective species might be considered as a guiding value for "sufficient time", subject to specific national circumstances.

- ○ a. Country requires no policies and programmes because all locally adapted breeds are secure
- ○ b. Yes, comprehensive policies and programmes have been in place since before the adoption of the GPA
- ○ c. Yes, comprehensive policies and programmes exist because of progress made since the adoption of the GPA
- ○ d. For some species and breeds (coverage expanded since the adoption of the GPA)
- ◉ e. For some species and breeds (coverage not expanded since the adoption of the GPA)
- ○ f. No, but action is planned and funding identified
- ○ g. No, but action is planned and funding is sought
- ○ h. No

Please provide further details:

Programmes for preservation of locally adapted breeds are carried out through state financial support system for farms with rare breeds (so called "genestock farms").

33. If conservation policies and programmes are in place, are they regularly evaluated or reviewed (SP 7, Action 1; SP 8, Action 1; and SP 9, Action 1)?

- ○ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ◉ d. No

Please provide further details:

34. Does your country have in situ conservation measures in place for locally adapted breeds at risk of extinction and to prevent breeds from becoming at risk (SP 8 and SP 9)?

Glossary: Locally adapted breeds are breeds that have been in the country for a sufficient time to be genetically adapted to one or more of traditional production systems or environments in the country. The phrase "sufficient time" refers to time present in one or more of the country's traditional production systems or environments. Taking cultural, social and genetic aspects into account, a period of 40 years and six generations of the respective species might be considered as a guiding value for "sufficient time", subject to specific national circumstances.

- ○ a. Country requires no in situ conservation measures because all locally adapted breeds are secure
- ○ b. Yes for all breeds
- ○ c. For some breeds (coverage expanded since the adoption of the GPA)
- ◉ d. For some breeds (coverage not expanded since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ○ g. No

Please provide further details:

Measures for support of farms with locally adapted breeds are implemented through the system of state financial donations realizable to genestock farms.

35. Does your country have ex situ in vivo conservation measures in place for locally adapted breeds at risk of extinction and to prevent breeds from becoming at risk (SP 8 and SP 9)?

Glossary: Ex situ in vivo conservation - maintenance of live animal populations not kept under their normal management conditions - e.g. in zoological parks or governmental farms - and/or outside the area in which they evolved or are now normally found.

- ○ a. Country requires no ex situ in vivo conservation measures because all locally adapted breeds are secure
- ○ b. Yes for all breeds
- ○ c. For some breeds (coverage expanded since the adoption of the GPA)
- ◉ d. For some breeds (coverage not expanded since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ○ g. No

Please provide further details:

Financial support is realized to 3 research institutes which include special departments for ex situ in vivo conservation of hens and goose. This support is provided by Ministry of Agriculture from state budget.

36. Does your country have ex situ in vitro conservation measures in place for locally adapted breeds at risk of extinction and to prevent breeds from becoming at risk (SP 8 and SP 9)?

Glossary: Ex situ in vitro - conservation, under cryogenic conditions including, inter alia, the cryoconservation of embryos, semen, oocytes, somatic cells or tissues having the potential to reconstitute live animals at a later date.

- ○ a. Country requires no ex situ in vitro conservation measures because all locally adapted breeds are secure
- ○ b. Yes for all breeds
- ○ c. For some breeds (coverage expanded since the adoption of the GPA)
- ○ d. For some breeds (coverage not expanded since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ◉ g. No

Please provide further details:

37. Please describe the measures (indicating for each whether they were introduced before or after the adoption of the GPA) or provide a web link to a published document that provides further information:

The measures described in item 35 have been introduced before adoption of the GPA. No other measures in this way are carried out in Russia.

38. If your country has not established any conservation programmes, is this a future priority?

- ○ a. Yes
- ◉ b. No

Please provide further details:

39. Has your country identified the major barriers and obstacles to enhancing the conservation of its animal genetic resources?

- ○ a. Country requires no conservation programmes because all animal genetic resources are secure
- ○ b. Yes
- ◉ c. No
- ○ d. No major barriers and obstacles exist. Comprehensive conservation programmes are in place

Please provide further details. If barriers and obstacles have been identified, please list them:

40. If your country has existing ex situ collections of animal genetic resources, are there major gaps in these collections (SP 9, Action 5)?

- ◉ a. Yes
- ○ b. No

If yes, have priorities for filling the gaps been established?

- ○ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ◉ d. No

Please provide further details:

41. Are arrangements in place in your country to protect breeds and populations that are at risk from natural or human-induced disasters (SPA 3)?

- ○ a. Yes, arrangements have been in place since before the adoption of the GPA
- ○ b. Yes, arrangements put in place after the adoption of the GPA
- ○ c. No, but action is planned and funding identified
- ○ d. No, but action is planned and funding is sought
- ◉ e. No

Please provide further details:

42. Are arrangements in place in your country for extraction and use of conserved genetic material following loss of animal genetic resources (e.g. through disasters), including arrangements to enable restocking (SP 9, Action 3)?

- (●) a. Yes, arrangements have been in place since before the adoption of the GPA
- ( ) b. Yes, arrangements put in place after the adoption of the GPA
- ( ) c. No, but action is planned and funding identified
- ( ) d. No, but action is planned and funding is sought
- ( ) e. No

Please provide further details:

There is a set of state arrangements related with protection from environmental disasters and their consequences.

43. Is your country conducting research to adapt existing, or develop new, methods and technologies for in situ and ex situ conservation of animal genetic resources (SP 11, Action 1)?

- ( ) a. Yes, research commenced before the adoption of the GPA
- ( ) b. Yes, research commenced since the adoption of the GPA
- ( ) c. No, but action is planned and funding identified
- ( ) d. No, but action is planned and funding is sought
- (●) e. No

Please provide further details. If yes, please briefly describe the research:

44. Does your country implement programmes to promote documentation and dissemination of knowledge, technologies and best practices for conservation (SP 11, Action 2)?

- ( ) a. Yes, programmes commenced before the adoption of the GPA
- ( ) b. Yes, programmes commenced since the adoption of the GPA
- ( ) c. No, but action is planned and funding identified
- ( ) d. No, but action is planned and funding is sought
- (●) e. No

Please provide further details:

45. What are your country's priority requirements for enhancing conservation measures for animal genetic resources? Please list and describe them:

The priority requirements for enhancing conservation measures for animal genetic resources are absent in Russian Federation.

46. Please provide further comments describing your country's activities related to Strategic Priority Area 3: Conservation (including regional and international cooperation)

Note: It is not necessary to duplicate information provided in previous sections. Where relevant, please provide cross-references.

No comments.

STRATEGIC PRIORITY AREA 4: POLICIES, INSTITUTIONS AND CAPACITY-BUILDING IMPLEMENTATION AND FINANCING OF THE GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES

- The state of national institutions for planning and implementing animal genetic resources measures
- The state of information sharing
- The state of educational and research facilities capacity for characterization, inventory, and monitoring, sustainable use, development, and conservation
- The state of awareness of the roles and values of animal genetic resources
- The state of policies and legal frameworks for animal genetic resources

47. Does your country have sufficient institutional capacity to support holistic planning of the livestock sector (SP 12, Action1)?

- (●) a. Yes, sufficient capacity has been in place since before the adoption of the GPA
- ( ) b. Yes, sufficient capacity is in place because of progress made after the adoption of the GPA
- ( ) c. No, but action is planned and funding identified
- ( ) d. No, but action is planned and funding is sought
- ( ) e. No

Please provide further details:

Institutional capacity is defined as sufficient but it is acting not effective enough.

48. What is the current status of your country's national strategy and action plan for animal genetic resources (SP 20)?

Glossary: National strategy and action plan for animal genetic resources: a strategy and plan, agreed by stakeholders and preferably government-endorsed, that translates the internationally agreed Global Plan of Action for Animal Genetic Resources into national actions, with the aim of ensuring a strategic and comprehensive approach to the sustainable use, development and conservation of animal genetic resources for food and agriculture.

- ( ) a. Previously endorsed national strategy and action plan is being updated (or new version has been endorsed)
- ( ) b. Completed and government-endorsed
- ( ) c. Completed and agreed by stakeholders
- ( ) d. In preparation
- ( ) e. Preparation is planned and funding identified
- ( ) f. Future priority activity
- (●) g. Not planned

Please provide further details. If available, please provide a copy of your country's national strategy and action plan as a separate document or as a web link:

49. Are animal genetic resources addressed in your country's National Biodiversity Strategy and Action Plan (http://www.cbd.int/nbsap/)?

- ( ) a. Yes
- ( ) b. No, but they will be addressed in forthcoming plan
- (●) c. No

Please provide further details:

50. Are animal genetic resources addressed in your country's national livestock sector strategy, plan or policy (or equivalent instrument)?

- ○ a. Yes
- ○ b. No, but they will be addressed in a forthcoming strategy, plan or policy
- ○ c. No, animal genetic resources are not addressed
- ◉ d. No, the country does not have a national livestock sector strategy, plan or policy

Please provide further details. If available, please provide the text of the strategy, plan or policy or a web link to the text:

51. Has your country established or strengthened a national database for animal genetic resources (independent from DAD-IS) (SP 15, Action 4)?

- ○ a. Yes, a national database has been in place since before the adoption of the GPA
- ○ b. Yes, a national database is in place because of progress made since the adoption of the GPA
- ○ c. Yes, a national database is in place but still requires strengthening (progress since adoption of the GPA)
- ○ d. Yes, a national database is in place but still requires strengthening (no progress since adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ◉ g. No

Please provide further details:

52. Have your country's national data on animal genetic resources been regularly updated in DAD-IS?

Note that the Commission on Genetic Resources for Food and Agriculture has requested FAO to produce global status and trends reports every two years.

- ○ a. Yes, regular updates have been occurring since before the adoption of the GPA
- ○ b. Yes, regular updates started after the adoption of the GPA
- ○ c. No, but it is a future priority
- ◉ d. No

Please provide further details:

53. Has your country established a National Advisory Committee for Animal Genetic Resources (SP 12, Action 3)?

- ○ a. Yes, established before the adoption of the GPA
- ○ b. Yes, established after the adoption of the GPA
- ○ c. No, but action is planned and funding identified
- ○ d. No, but action is planned and funding is sought
- ◉ e. No

Please provide further details. If a National Advisory Committee has been established, please list its main functions:

54. Is there strong coordination and interaction between the National Focal Point and stakeholders involved with animal genetic resources, such as the breeding industry, livestock keepers, government agencies, research institutes and civil society organizations (SP 12, Action 3)?

- ○ a. Yes, strong coordination has been in place since before the adoption of the GPA
- ○ b. Yes, strong coordination was established after the adoption of the GPA
- ○ c. No, but action is planned and funding identified
- ○ d. No, but action is planned and funding is sought
- ◉ e. No

Please provide further details:

55. Does the National Focal Point (or other institutions) undertake activities to increase public awareness of the roles and values of animal genetic resources (SP 18)?

- ○ a. Yes, activities commenced before the adoption of the GPA
- ○ b. Yes, activities commenced after the adoption of the GPA
- ○ c. No, but activities are planned and funding identified
- ○ d. No, but activities are planned and funding is sought
- ◉ e. No

Please provide further details:

56. Does your country have national policies and legal frameworks for animal genetic resources management (SP 20)?

- ○ a. Yes, comprehensive national policies and legal frameworks were in place before the adoption of the GPA and are kept up to date
- ○ b. Yes, comprehensive and up-to-date national policies and legal frameworks in place because of progress made since the adoption of the GPA
- ○ c. Yes, some national policies and legislation in place (strengthened since the adoption of the GPA)
- ◉ d. Yes, some national policies and legislation in place (not strengthened since the adoption of the GPA)
- ○ e. No, but action is planned and funding identified
- ○ f. No, but action is planned and funding is sought
- ○ g. No

Please provide further details:

57. Which of the following options best describes the state of training and technology transfer programmes in your country related to inventory, characterization, monitoring, sustainable use, development and conservation of animal genetic resources (SP14, Action 1)?

- ○ a. Comprehensive programmes have been in place since before the adoption of the GPA
- ○ b. Comprehensive programmes exist because of progress made since the adoption of the GPA
- ○ c. Some programmes exist (further progress since the adoption of the GPA)

- (●) d. Some programmes (no further progress since the adoption of the GPA)
- ( ) e. None, but action is planned and funding identified
- ( ) f. None, but action is planned and funding is sought
- ( ) g. None

Please provide further details:

58. Have organizations (including where relevant community-based organizations), networks and initiatives for sustainable use, breeding and conservation been established or strengthened (SP 14, Action 3)?

- ( ) a. Yes, comprehensive organizations, networks and initiatives have existed since before the adoption of the GPA
- ( ) b. Yes, comprehensive organizations, networks and initiatives exist because of progress made since the adoption of the GPA
- ( ) c. Yes, some organizations, networks and initiatives exist (established or strengthened since adoption of the GPA)
- (●) d. Yes, some organizations, networks and initiatives exist (but no progress made since adoption of the GPA)
- ( ) e. No, but action is planned and funding identified
- ( ) f. No, but action is planned and funding is sought
- ( ) g. No

Please provide further details:

Some structures (as rule, on base of research organizations) have officially been established as breed associations or selection centers by Ministry of Agriculture. But being officially nominated they do not play any significant role in management of animal breed resources.

59. Are there any national NGOs active in your country in the fields of:

Characterization?

- ( ) a. Yes
- (●) b. No

Sustainable use and development?

- ( ) c. Yes
- (●) d. No

Conservation of breeds at risk?

- ( ) e. Yes
- (●) f. No

If yes, please list the national NGOs and provide links to their web sites:

60. Has your country established or strengthened research or educational institutions in the field of animal genetic resources management (SP 13, Action 3)?

- ( ) a. Yes, adequate research and education institutions have existed since before the adoption of the GPA
- ( ) b. Yes, adequate research and education institutions exist because of progress made since the adoption of the GPA
- ( ) c. Yes, research and education institutions exist but still require strengthening (progress made since the adoption of the GPA)
- (●) d. Yes, research and education institutions exist but still require strengthening (no progress made since the adoption of the GPA)
- ( ) e. No, but action is planned and funding identified
- ( ) f. No, but action is planned and funding is sought

- ○ g. No

Please provide further details:

No comments.

61. Please provide further comments describing your country's activities related to Strategic Priority Area 4: Policies, Institutions and Capacity-building (including regional and international cooperation)

Note: It is not necessary to duplicate information provided in previous sections. Where relevant, please provide cross-references.

No comments.

IMPLEMENTATION AND FINANCING OF THE *GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES*

- The state of international collaboration for planning and implementing animal genetic resources measures
- The state of financial resources for the conservation, sustainable use and development of animal genetic resources

62. Has your country established or strengthened international collaboration in (SP 16):

Characterization?

- ○ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ◉ d. No

Sustainable use and development?

- ○ e. Yes
- ○ f. No, but action is planned and funding identified
- ○ g. No, but action is planned and funding is sought
- ◉ h. No

Conservation of breeds at risk?

- ○ i. Yes
- ○ j. No, but action is planned and funding identified
- ○ k. No, but action is planned and funding is sought
- ◉ l. No

Please provide further details:

63. Are there any international NGOs active in your country in the fields of:

Characterization?

- ○ a. Yes
- ◉ b. No

Sustainable use and development?

- ○ c. Yes
- ◉ d. No

Conservation of breeds at risk?

- ○ e. Yes
- ◉ f. No

If yes, please list the international NGOs:

64. Has national funding for animal genetic resources programmes increased since the adoption of the GPA?

- ○ a. Yes
- ◉ b. No

Please provide further details:

65. Has your country received external funding for implementation of the GPA?

- ○ a. Yes
- ◉ b. No
- ○ c. No, because country generally does not receive external funding

Please provide further details:

66. Has your country supported or participated in international research and education programmes assisting developing countries and countries with economies in transition to better manage animal genetic resources (SP 15 and 16)?

- ○ a. Yes, support or participation in place before the adoption of the GPA and strengthened since
- ○ b. Yes, support or participation in place before the adoption of the GPA but not strengthened since
- ○ c. Yes, support or participation in place since the adoption of the GPA
- ○ d. No, but action is planned and funding identified
- ○ e. No, but action is planned and funding is sought
- ◉ f. No

Please provide further details:

67. Has your country supported or participated in programmes aimed at assisting developing countries and countries with economies in transition to obtain training and technologies and to build their information systems (SP 15 and 16)?

- ○ a. Yes, support or participation commenced before the adoption of the GPA and strengthened since
- ○ b. Yes, support or participation commenced before the adoption of the GPA but not strengthened since
- ○ c. Yes, support or participation commenced since the adoption of the GPA
- ○ d. No, but action is planned and funding identified

- ○ e. No, but action is planned and funding is sought
- ◉ f. No

Please provide further details:

68. Has your country provided funding to other countries for implementation of the Global Plan of Action?

- ○ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ◉ d. No
- ○ e. No, because country is generally not a donor country

Please provide further details. If relevant, specify whether funding was bilateral or multilateral; research cooperation or aid; and to whom and for what it was given:

69. Has your country contributed to international cooperative inventory, characterization and monitoring activities involving countries sharing transboundary breeds and similar production systems (SP 1, Action 5)?

- ○ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ◉ d. No

Please provide further details:

70. Has your country contributed to establishing or strengthening global or regional information systems or networks related to inventory, monitoring and characterization of animal genetic resources (SP 1, Action 6)?

- ○ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ◉ d. No

Please provide further details:

71. Has your country contributed to the development of international technical standards and protocols for characterization, inventory and monitoring of animal genetic resources (SP2)?

- ◉ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ○ d. No

Please provide further details:

The work in above mentioned direction in doing in the frames of Eurasian Economic Community customs union (in collaboration with Belarus and Kazakhstan).

72. Has your country contributed to the development and implementation of regional in situ conservation programmes for breeds that are at risk (SP 8, Action 2; SP 10, Action 1)?

- ○ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ◉ d. No

Please provide further details:

73. Has your country contributed to the development and implementation of regional ex situ conservation programmes for breeds that are at risk (SP 9, Action 2; SP 10, Action 3; SP 10, Action 4)?

- ○ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ◉ d. No

Please provide further details:

74. Has your country contributed to the establishment of fair and equitable arrangements for the storage, access and use of genetic material stored in supra-national ex situ gene banks (SP9, Action 3)?

- ○ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ◉ d. No

Please provide further details:

75. Has your country participated in regional or international campaigns to raise awareness of the status of animal genetic resources (SP19)?

- ○ a. Yes
- ○ b. No, but action is planned and funding identified
- ○ c. No, but action is planned and funding is sought
- ◉ d. No

Please provide further details:

76. Has your country participated in reviewing or developing international policies and regulatory frameworks relevant to animal genetic resources (SP 21)?

- (●) a. Yes
- ( ) b. No, but action is planned and funding identified
- ( ) c. No, but action is planned and funding is sought
- ( ) d. No

Please provide further details:

The works are carried out in the framework of Eurasian Economic Community customs union (in collaboration with Belarus and Kazakhstan).

EMERGING ISSUES

77. In view of the possibility that at some point countries may wish to update the GPA, please list any aspects of animal genetic resources management that are not addressed in the current GPA but will be important to address in the future (approximately the next ten years). Please also describe why these issues are important and indicate what needs to be done to address them.
Issues to be addressed in future

Issues to be addressed in future (next ten years)	Reasons	Actions required
I think first at all it is necessary to reorganize system of animal breeding in Russian Federation including: • legislative base; • organizational structure; • principles of animal populations improvement in all levels of management; • creation of independent informational system and data bases; • improving education levels; • system of collaboration between producers, product processing and service organizations; • etc.		

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