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AGRICULTURAL BIOLOGICAL DIVERSITY

The first report on the state of the world's animal genetic resources for food and agriculture: paper submitted by the Food and Agriculture Organization of the United Nations

Note by the Executive Secretary

1. The Executive Secretary is circulating herewith, for the information of participants in the seventh meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), a background paper prepared by FAO providing a progress report on the preparation of the report on the state of the world's animal genetic resources for food and agriculture, and how it relates to the programme of work on agricultural biodiversity under the Convention. This information note supplements the progress report by the Executive Secretary on the implementation of the programme of work on agrobiodiversity, including the development of the international pollinators initiative (UNEP/CBD/SBSTTA/7/9).

2. The paper is being circulated in the form and language in which it was submitted to the Secretariat of the Convention on Biological Diversity.

* UNEP/CBD/SBSTTA/7/1.

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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 | Organización de las Naciones Unidas para la Agricultura y la Alimentación

THE FIRST REPORT ON THE STATE OF THE WORLD'S ANIMAL GENETIC RESOURCES FOR FOOD AND AGRICULTURE:

A CONTRIBUTION TO THE IMPLEMENTATION OF THE AGRICULTURAL BIOLOGICAL DIVERSITY PROGRAMME OF WORK UNDER THE CONVENTION ON BIOLOGICAL DIVERSITY

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I. INTRODUCTION

1. Genetic resources are among the most valuable assets that a country holds. Human societies have, for at least 12 000 years, recognized the importance of these assets and have been engaged in the domestication of wild plants and animals to meet a variety of needs. The number of domestic animal species contributing to agriculture is low, with less than 30 species being used extensively, and with less than 14 species accounting for over 90 percent of global livestock production. While the number of species being used in the livestock sector is low, the genetic diversity of these species has been used extremely effectively. Farmers and breeders have successfully selected animals for a variety of traits and production environments, resulting in the development of more than 6 200 breeds of livestock. From just nine of the 14 most important species (cattle, horse, ass, pig, sheep, buffalo, goat, chicken and duck) as many as 4 000 breeds have been developed and used worldwide.

2. Domestication of animals has made it possible for humans to survive in a wide range of environments, from the hot-humid tropics to arid deserts, extremely cold arctic and mountainous regions. Domestic animals contribute to food and agriculture in many ways providing meat, milk products, eggs, fibre, and fertilizer for crops, manure for fuel, and essential draught power. Domestic animals are extremely important economic resources serving to reduce farmers risk exposure, generate employment, and even-out seasonal farm labour demands. It is estimated that directly and indirectly, domestic animals supply 30 to 40 percent of the total value of food and agriculture production.

3. Globally, demand for animal products is increasing at an unprecedented rate - the so-called livestock revolution - and is expected to continue to grow in the future. The driving force behind the demand surge for animal products is a combination of human population growth, rising incomes and urbanization in developing countries. Enhancing animal genetic resources management capacity, and conserving the genetic diversity that has made possible the development of thousands of breeds of domestic animals, are essential to further develop these resources. This will increase their role in achieving food security and sustainable development.

Sustainable Development and Sustainable Intensification

4. The challenge to achieve food security for all is greater now than it has ever been before, with one out of six people in the world currently being underfed. Options for increasing food production for the approximately 800 million people suffering from hunger and malnutrition are limited. Most lands suitable for food production are already utilized, and thus increased agricultural output will not be achieved, in most countries, by expanding the agricultural land base. Increasing outputs through increased inputs is possible for some countries, but is generally not an option for many developing countries, especially the least developed ones.

5. There are many challenges to achieving global food security and enhancing rural development, and there are also opportunities. One is the potential to significantly increase the contribution of animal genetic resources to both food security and rural economic diversification and development. To realize this potential, use and development of animal genetic resources must be effectively planned to achieve the desirable outcomes.

6. Unfortunately, past attempts to increase agricultural production using genetic improvement of domestic animals have not always been well planned and undertaken with all of the important factors being considered. Too often, the emphasis has been on increasing output without understanding the requirements for long-term sustainability. Many developing countries, faced with food shortages and rural poverty, emphasized replacement of their traditional or local breeds of livestock with exotic breeds, without fully understanding the implications of this strategy. There is a strong attraction to exotic breeds, since under the right conditions such as low stress and high inputs, their outputs are impressive. However, in many developing countries, a strategy of totally replacing local breeds through importation of exotic breeds or crossbreeding programmes that reduce adaptive fitness, will not achieve the desired outcomes. Locally adapted breeds are often able to survive and produce valuable products in low input and variable environments. A strategy to develop them is likely to be more sustainable over the long-term, also avoiding dependence on external genetic resources. This could prove to be extremely important as disease outbreaks and other events may prevent or restrict the movement of animals, embryos and gametes.

7. Sustainable intensification of livestock systems requires the setting of achievable and sustainable production levels, and the best utilization of available inputs. This is necessary for the entire range of production environments, but is especially critical for the use and development of animal genetic resources in low- to medium-input production environments common in the developing world. Achieving sustainable intensification is complex and requires highly trained and skilled individuals, and significant institutional planning and management capacity. It is essential that farmers, breeders, planners, policy makers, and livestock managers understand the roles and values of both locally adapted and exotic animal genetic resources, and their potential for use and development in all production environments.

8. Failure to undertake careful assessments of the available genetic diversity and understand the potential to use and develop animal genetic resources in each available production system will limit gains in production and productivity, and may result in undesirable effects, reducing rather than enhancing food security rather.

Conserving Animal Genetic Resources

9. Animal genetic diversity is rapidly eroding despite the strongly growing demand for livestock products. A recent survey undertaken by the Food and Agriculture

Organization of the United Nations (FAO), has determined that many breeds of livestock have become extinct, and that 35 % of all remaining mammalian breeds and 63% of avian breeds included in the survey are currently at risk of extinction.

10. The loss of non-domesticated species, especially the wild ancestral species to domestic livestock, is also cause for concern in the livestock sector. Ancestral species are those wild species that are the free-living counterparts of the world's major domestic livestock species: cattle, sheep, goats, horses, asses, pigs, camelids, and the avian species. Their contributions to food and agricultural production must not be overlooked in developing sustainable agricultural biodiversity strategies. In addition to the already domesticated animal species, there are a number of other taxa that are at present undergoing varying degrees of domestication. These include species of deer, musk oxen, African and Asian elephants, bears, rodents, rabbits, ostrich, emu, and rhea (ñandú), and several reptile groups important for their meat and skin. There are also many yet unexploited wild animal resources that could in future make a significant contribution to agriculture.

11. Conservation of animal genetic resources is essential to enable farmers to adapt to changing environmental conditions and consumer demands. Variation in environmental conditions such as disease outbreaks, drought, floods and climatic anomalies, as well as changes in consumer preferences, is inevitable. It is therefore in the best interest of societies to ensure that farmers and breeders have access to the widest possible range of animal genetic resources so that they can effectively respond to change. It is impossible to predict the nature of the change, but change is certain, and the livestock sector must not be left without its animal genetic diversity insurance policy.

12. Conservation of animal genetic resources is also essential to fully realize the investment that has been made over many human generations in developing these resources. Also, ensuring the conservation of wild species will provide opportunities to further develop and expand the livestock sector. Identification of wild species with potential to contribute to agriculture, and integration of agricultural biodiversity conservation strategies and plans with generalbiodiversity conservation initiatives is essential.

Critical Challenges

13. Countries and their farmers face many challenges in their efforts to achieve food security and develop their economies, especially their rural economies. Agricultural intensification is essential to feed a growing human population, but intensification must proceed with foresight - a long-term vision is needed and a planning framework that is based on sustainability must be established to guide development. In many ways intensification of animal genetic resources is at an important crossroads. Countries must decide on how best to use both locally adapted and exotic animal genetic resources; how best to achieve sustainable use of their production systems; what genetic resources need to be conserved; and what are critical capacity building needs for their animal genetic resources sector.

14. Decisions regarding the use of animal genetic resources taken over the next decade will have profound implications over a much longer period of time. A solid foundation of data on animal genetic resources to better understand their use and development, the available production environments, and the current country animal genetic resources management capacity, is essential to guide intensification efforts in the livestock sector. Institutional development is also important so that countries can better plan and use information and technologies. Training is essential to increase understanding of the available animal genetic diversity, of the potential to use and develop these resources within sustainable production systems, and of best management practices integrating traditional practices with new approaches and technologies. Meeting these challenges will require significant investments.

II. TOWARDS THE ENHANCED USE, DEVELOPMENT AND CONSERVATION OF ANIMAL GENETIC RESOURCES

15. The essential contribution of animal genetic resources to agricultural and rural development has long been recognized. However, it has also been recognized that enhanced efforts at the national, regional, and global levels are essential if the full potential contribution of animal genetic resources to food security and rural development is to be realized. FAO has been leading efforts to sustainably use, develop, and conserve animal genetic resources, and since 1993 has been engaged in the preparation of the Global Strategy for the Management of Farm Animal Genetic Resources. The Global Strategy is intended to serve as a strategic framework to guide international efforts in the animal genetic resources sector. Preparation of the *First Report on the State of the World's Animal Genetic Resources* has been initiated as an essential element of the Global Strategy.

16. At the Seventh Session of the Commission on Genetic Resources for Food and Agriculture (the Commission) in May 1997, the Commission agreed to establish a subsidiary Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture. The Working Group was given a mandate to provide recommendations to the Commission on the further development of the Global Strategy. The Working Group met for the first time on 8-10 September 1998, and recommended: 'That FAO co-ordinate the development of a country-driven *Report on the State of the World's Animal Genetic Resources*, that could provide an assessment of countries animal genetic resources programmes and the state of domestic animal resources.' In 1999, the Commission endorsed preparation of a country-driven *Report on the State of the World's Animal Genetic Resources*, indicating that the process should be consultative and cost-effective. The Commission also noted that the erosion of animal genetic resources was occurring, and was a threat to global food security, requesting the Working Group to investigate ways and means for international cooperation and collaboration to address the loss of animal genetic resources, and their better use and development.

Country Reports

17. The first critical step in the process for developing the first *Report on the State of the World's Animal Genetic Resources* will be the preparation of Country Reports. Countries, in March 2001, were invited by FAO to produce and submit government endorsed Country Reports. The overall objectives of the Country Reports, and ultimately of the First *Report on the State of the World's Animal Genetic Resources* are:

    - To report on the status and trends of animal genetic resources, and their current and potential contributions to food, agriculture and rural development.

    - To assess the state of the country's capacity to manage animal genetic resources in order to determine priorities for future capacity building.

    - To identify national priorities for action in the field of sustainable utilization and conservation of animal genetic resources and related requirements for international cooperation.

    The key outcomes that are being sought through the preparation of Country Reports and the first *Report on the State of the World's Animal Genetic Resources* are:

    - A detailed assessment of the state of genetic resources in the farm animal sector covering utilization and conservation, as well as the related techniques being used (state of the art), in the context of the diverse production systems and socio-economic conditions of each country. (While it is recognized that several taxonomic groups contribute to human survival and well being, the first *Report on the State of the World's Animal Genetic Resources* will address those avian and mammalian species that are at present significantly contributing to food and agriculture).

    - An analysis of the changing and growing demands on the farm animal sector and the implications for future national policies and programmes concerning the sustainable utilization and conservation of farm animal genetic resources.

    - A detailed review of the state of national capacities related to farm animal genetic resources, and an overall assessment of capacity building requirements.

    - Identification of the priorities for the development of an enhanced national programme of sustainable utilization and conservation of animal genetic resources in the farm animal sector. National priorities may cover diverse fields of activity, animal species and breeds, as well as short term and long-term needs for institution building, research, information system development, policy development, legislation, and regulations.

- Recommendations for international co-operation, the areas, levels and modes of co-operation that the country would wish to pursue, and proposed country contributions and requirements.

The Process

18. A well-designed process is necessary to prepare Country Reports and to facilitate the synthesis of data and information from countries and from invited organizations to prepare the first *Report on the State of the World's Animal Genetic Resources*. Participation of countries from all regions of the world is essential to gain a comprehensive understanding of domestic animal diversity, production systems, livestock management systems, and country capacity building needs in the farm animal sector. Opportunities for stakeholder participation must be provided throughout the process. A coordination mechanism, training, and a reporting tool are required. The following sections describe the key steps that have been, taken to promote and enable the preparation of Country Reports, and the First *Report on the State of the World's Animal Genetic Resources*:

    - At the global level, FAO has committed the Global Focal Point for Animal Genetic Resources to coordinate overall preparation of the first *Report on the State of the World's Animal Genetic Resources*, and to support preparation of Country Reports. In consultation with experts, including National Coordinators for Animal Genetic Resources from all regions, FAO has developed Guidelines for Country Reports. The Guidelines, and an accompanying set of Background Questions have been designed to ensure that Country Reports go beyond description of the resources. The Guidelines provide a framework for evaluation and analysis, providing countries with an important opportunity to look to the future to predict their needs, demands, trends, and national capacity building requirements in all aspects of the management of animal genetic resources. The Guidelines also promote assessments of the underlying policies that affect animal genetic resources and the capacity to manage them.

    - FAO has also initiated efforts to increase awareness of the process involving Country Reports and the first *Report on the State of the World's Animal Genetic Resources* preparatory activities. One important aspect of the communication initiative is an FAO publication called Animal Genetic Resources Information Bulletin. The Bulletin has been used to effectively inform and update a diverse readership of progress in the overall development of the Global Strategy, and now serves as a key instrument in informing readers of progress in the preparation of the first *Report on the State of the World's Animal Genetic Resources*. Issue 30 will contain the Guidelines for Country Reports in four official languages of FAO.

    - FAO in consultations with experts has made significant advancements within the Domestic Animal Diversity Information System (DAD-IS) (http://www.fao.org/dad-is/) to provide countries with an information

management and communication tool that promotes and facilitates the preparation of Country Reports. A *State of the World Module* has been developed within DAD-IS to facilitate planning and preparation of Country Reports. Suggestions on report formats and data and information that would be desirable to be included in the Country Report are provided in the Module. Existing relevant information held by FAO will be provided to countries as background information to support development of their Country Reports. Translation of relevant documents, guidelines, and other material into the five official working languages of FAO has been initiated, and will be available through DAD-IS.

- FAO is strongly encouraging the use of the DAD-IS *State of the World Module*. Use of the Module not only supports preparation of Country Reports, it will greatly facilitate global distribution of Country Reports, and will make it possible in a reasonable period of time to cost-effectively undertake the necessary synthesis at regional and global levels to produce the first *Report on the State of the World's Animal Genetic Resources*. Countries using DAD-IS will obtain ongoing assistance through direct access to the DAD-IS Moderator during the Country Report preparatory process.

- Training is essential to enable countries to prepare their Country Reports. FAO has developed training programs and materials (The Training Pack) and established a cadre of facilitators to support the conduct of regional consultations and training in the use of Guidelines, Background Questions, and the DAD-IS *State of the World Module.* A set of definitions has been developed and distributed to promote and achieve universal use of key terms. The cadre of expert facilitators is currently conducting regional training workshops and is providing, as required, in-country assistance in the preparation of Country Reports.

- Extrabudgetary support to advance preparations of Country Reports and the First *Report on the State of the World's Animal Genetic Resources* has been acknowledged as essential by both the Commission on Genetic Resources for Food and Agriculture, and its Intergovernmental Technical Working Group on Animal Genetic Resources. FAO is spearheading efforts to achieve the necessary financial resources to undertake the essential activities. A stakeholders meeting was convened in June 2001, and various discussions are taking place bilaterally. Phase one of the initiative requires about US $ 12.2 million. FAO has committed US $ 4.0 million from the regular programme funding, and about US $ 650,000 have been provided, with generous contributions from the Governments of Finland, The Netherlands, France, and from the Nordic Council of Ministers.

- At the regional level, key personnel responsible for coordinating the preparation of Country Reports are being involved in 6 to 8 day training workshops. Following the workshops, Regional Focal Points for Animal Genetic Resources, where they have been established, are supporting on an

ongoing basis and as resources permit, country efforts to prepare their Country Reports.

- At the national level, countries have been requested by FAO to appoint a National Coordinator to oversee development of the Country Report, and act as the official contact point for communication between the Country and FAO. Establishment of a National Consultative Committee has also been recommended to identify the primary areas and issues that need to be addressed in the Country Report, and to ensure opportunities for stakeholder input throughout the preparation of Country Reports.

- FAO is also inviting special studies on selected topics from organizations that are involved in the management of animal genetic resources. These studies, along with the Country Reports, will form the basis for a first draft of the *Report on the State of the World's Animal Genetic Resources*. A Strategic Priorities Report will be prepared and presented to the Commission on Genetic Resources for Food and Agriculture in 2003.

III. THE CONTRIBUTION OF THE FIRST *REPORT ON THE STATE OF THE WORLD'S ANIMAL GENETIC RESOURCES* TO THE AGRICULTURAL BIOLOGICAL DIVERSITY PROGRAMME OF WORK

19. At its 5th conference, Parties to the Convention of Biological Diversity endorsed the multi-year work programme on agricultural biological diversity. The four elements of the Programme of Work: Assessments, Adaptive Management, Capacity Building, and Mainstreaming, are to be implemented building upon existing international plans of action, programmes, and strategies.

20. The Agricultural Biological Diversity Programme of Work specifically notes the need to build on the Global Strategy for the Management of Farm Animal Genetic Resources. As a key element of the Global Strategy, the First *Report of the State of the World's Animal Genetic Resources* will significantly contribute to the Agricultural Biological Diversity Programme of Work. The anticipated contributions are described in the following sections:

Agricultural Biological Diversity Programme Element 1 - Assessments

21. Assessing the status and trends of the world's avian and mammalian animal genetic resources for food and agriculture is the most direct contribution that the first *Report on the State of the World's Animal Genetic Resources* will make to the Agricultural Biological Diversity Programme of Work.

These assessments will contribute to Element 1 of the Programme of Work by:

- Establishing the first comprehensive assessment of the roles and values, status and trends of animal genetic resources for food and agriculture.

- Examining the underlying causes of the erosion of animal genetic resources, including socio-economic causes.

- Enhancing understanding of the roles and values of traditional and local knowledge related to the management of agricultural resources.

- Providing valuable experience in developing and implementing methods and techniques for assessing, monitoring, and reporting on the status and trends of the animal genetic resources.

- Assisting in establishing agreements on definitions and classification systems, which will contribute to the development of indicators of agricultural biodiversity.

- Establishing a permanent data and information system for animal genetic resources that will support cost-effective long-term monitoring and reporting on the status and trends of these resources.

- Advancing FAO's Domestic Animal Diversity Information System as the Clearinghouse Mechanism for animal genetic resources.

Agricultural Biological Diversity Programme Element 2 - Adaptive management

22. Adaptive management is an essential element in efforts to achieve sustainable agriculture and rural development. Environmental conditions and consumer demands for agricultural products are changing, and not always predictably. Regulations, technologies and methodologies are constantly evolving, as well as understanding of their application. Therefore, those engaged in agriculture must develop adaptive management approaches so that they have the knowledge and tools to ensure that they can quickly and effectively respond to changing conditions and requirements.

    Adaptive management requires that any response to changes in the livestock sector be planned to ensure the sustainable use, development, and conservation of animal genetic resources. Countries must be aware of, and able to use advanced technologies and methodologies, and also understand and monitor the short-term and long-term impacts and implications of their decisions and policies, so that they can readily adapt them to achieve desired outcomes, and prevent or mitigate undesirable outcomes. Adaptive management also requires an understanding of broader landscape objectives, and current and emerging environmental objectives and issues. Integration of environmental and agricultural objectives is essential to ensure that policies and programmes are non-conflicting, and where possible, mutually supportive.

    Country Reports and the first *Report on the State of the World's Animal Genetic Resources* will contribute directly to establishing a framework for adaptive management for the animal genetic resources component of Agriculture Biological Diversity contributing to Element 2 of the Programme of Work by:

- Assessing traditional management practices and examining opportunities to integrate traditional and modern practices to promote the positive impacts, and prevent or mitigate the negative impacts of agriculture on biodiversity (domestic and non-domestic animal and non-animal species that support animal-based agro-ecosystems).

- Providing opportunities to enhance the dissemination of best management practices within and among countries using the Domestic Animal Diversity Information System.

- Improving awareness at the national, regional, and global levels of the status of breeds of livestock, especially the status of breeds that are currently not of interest to farmers and endangered, and wild relatives of domesticated animals that are at risk of being lost.

- Increasing awareness and understanding of the wider ecosystem services that are provided by livestock and their production systems.

- Identifying and furthering utilized and under-utilized species supporting animal-based agro-ecosystems, such as pasture and forage species, nitrogen-fixing soil biota, gut and rumen flora, dung beatles, fungi and other decomposers, medicinal plants for parasite control, pollinators, etc. and identifying opportunities to enhance their contribution to food and agriculture.

Agricultural Biological Diversity Programme Element 3 - Capacity-building

23. Better understanding of animal genetic diversity and the capcity to use, develop, and conserve animal genetic resources in support of efforts to achieve global food security and advance rural economic development are the most fundamental objectives for preparing Country Reports and the first *Report on the State of the World's Animal Genetic Resources*. To achieve this objective, capacity building is essential, as many developing countries lack the capacity to fully realize the potential of available animal genetic resources and the capacity to optimize use of their available production environments. They also lack the capacity to plan and implement conservation initiatives.

    Capacity building must be strategically planned to be cost-effective and to meet the individual needs of countries. Country Reports and the first *Report on the State of the World's Animal Genetic Resources* will result in a solid foundation for setting priorities for capacity building contributing to Element 3 of the Programme of Work by:

    - Identifying gaps in the capacity of public and private institutions to manage animal genetic resources, to develop and implement strategies, plans, and policies for the livestock sector, and gaps in research capacity.

    - Enhancing communication and networking among farmers, breeders, government agencies, farm organizations, development organizations, and other stakeholders in animal genetic resources.

- Increasing public awareness of the multiple roles and values of animal genetic resources, thereby increasing support for capacity building efforts in agriculture biodiversity.

- Motivating and encouraging farmers, breeders, local and indigenous communities, and other stakeholders, to become involved in the development and implementation of national animal genetic resources strategies, policies, plans and programmes.

- Identifying emerging issues related to the management of animal genetic resources, especially in relation to animal welfare, animal health, and impacts on the environment.

- Assisting farmers and breeders to identify animal genetic resources that are not currently being utilized but have potential to contribute to sustainable agriculture production.

- Promoting respect for local and indigenous knowledge as well as the different roles of men, women and children in animal genetic resources management.

Agricultural Biological Diversity Programme Element 4 - Mainstreaming

24. The country-driven process of producing the national reports and the first *Report on the State of the World's Animal Genetic Resources* will provide a foundation for developing or modifying existing national strategies and action plans for animal genetic resources, and will contribute to Element 4 of the Programme of Work by:

    - Supporting relevant institutions to conduct assessments of the status and trends of animal genetic resources.

    - Facilitating countries to undertake consultations with stakeholders in the animal genetic resources sector to support various mainstreaming activities.

    - Enabling countries to routinely conduct assessment of the impacts of sectorial and cross-sectorial policies, programmes and actions on animal genetic resources.

    - Establishing a reliable and accessible information system on the status of animal genetic resources providing the basis for an early warning and response system.

    - Promoting the conservation of animal genetic resources, including their wild relatives.

    - Enhancing general public awareness of the goods and services provided by animal genetic resources and the value and importance of such diversity for society.

- Enhancing country capacity to better respond to international agreements and commitments regarding the conservation of biological diversity and the sustainable use of biological resources, including the Convention on Biological Diversity, Agenda 21 and the World Food Summit Plan of Action.

IV. COUNTRY REPORTS:

SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

25. Country Reports are being prepared to support the preparation of the first *Report on the State of the World's Animal Genetic Resources*, and will contribute to efforts to achieve sustainable agriculture and rural development in each participating nation's livestock sector. The objective for preparing Country Reports as listed in section II of this report, and the anticipated contributions of Country Reports to the Agriculture Biological Diversity Programme of Work described in Section III, illustrate the important roles that Country Reports will play in establishing a vision, and a long-term strategic planning framework for animal genetic resources. The most important overall objective for preparing Country Reports is to enable countries to strategically plan the better use, development, and conservation of their animal genetic resources for all of their available production systems, in order to maintain and enhance the contribution of domestic animals to food security and rural development.

    As strategic frameworks, Country Reports will make several significant and direct contributions to efforts to achieve sustainable agriculture and rural development, including:

    - Providing a comprehensive analysis of the status and trends of animal genetic resources and the underlying causes for the erosion of these resources.

    - Establishing a country secure data and information system and network for animal genetic resources that will significantly enhance the planning and implementation of national livestock development plans.

    - Establishing a framework for adaptive management for the animal genetic resources sector that will enable countries and their farmers to recognize and apply the most appropriate practices to respond to changing consumer demands, market forces, and environmental conditions.

    - Assessing current country capacity to manage animal genetic resources and evaluating future needs for this sector.

    - Significantly enhancing the capacity of countries to develop national strategies and action plans for animal genetic resources, thereby promoting their mainstreaming and integration in sectorial and cross-sectorial plans and programmes.

- Establish forums enabling stakeholders to discuss and debate the management of animal genetic resources and opportunities for future development and creating partnerships for various animal genetic resources activities.

V. SUMMARY

26. Preparation of the first *Report on the State of the World's Animal Genetic Resources* has been initiated to guide and support the further development of the Global Strategy for the Management of Farm Animal Genetic Resources. The Global Strategy will guide international efforts to achieve the better management of animal genetic resources as part of efforts to achieve food security and rural development.

27. Lack of capacity has prevented or limited advancement in breeding strategies in many regions of the world, preventing farmers and local and indigenous communities to fully realize the potential of their locally adapted breeds and the potential to optimize the use of all available production environments.

28. Conservation of animal genetic diversity is a global issue, as all countries benefit from the use and development of domestic animals and their many products. Conservation of animal genetic diversity over the long-term, will enable countries and their farmers to better respond to changing environmental conditions and consumer preferences, to pursue new economic opportunities and to reduce their vulnerability to food shortages.

29. Conservation and sustainable use of animal genetic resources are essential to support and inform the biotechnology industry and other industries that are dependent on genetic resources. Technological developments are increasingly improving our capacity to use and develop genetic resources, and thus, it is imperative that the current rapid erosion of animal genetic resources is addressed.

30. Country Reports and the first *Report of the State of the World's Animal Genetic Resources* will provide a strategic planning framework for the animal genetic resources component of agricultural biological diversity, supporting the development and implementation of national, regional, and global polices and programmes for this sector.

31. The Programme of Work on Agricultural Biological Diversity has been prepared to promote the objectives of the Convention on Biological Diversity in the area of agricultural biological diversity. The Programme of Work, Country Reports and the first *Report on the State of the World's Animal Genetic Resources* are complementary and mutually supportive initiatives. They will contribute to food security, and to sustainable agriculture and rural development, benefiting all nations of the world, and supporting the work of Parties to the Convention on Biological Diversity and the Commission on Genetic Resources for Food and Agriculture.