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June 1998

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

Item 3 of the Provisional Annotated Agenda

COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

INTERGOVERNMENTAL TECHNICAL WORKING GROUP ON ANIMAL GENETIC RESOURCES FOR FOOD AND AGRICULTURE

First Session

Rome, 8 - 10 September 1998

IDENTIFICATION OF THE VARIOUS CONSTITUENTS OF THE GLOBAL STRATEGY AND PREPARATION OF A MULTI-YEAR WORKPLAN

CONTENTS

IDENTIFICATION OF THE VARIOUS CONSTITUENTS OF THE GLOBAL STRATEGY FOR THE MANAGEMENT OF FARM ANIMAL GENETIC RESOURCES

I. INTRODUCTION

1. FAO has, since the early 1960s , provided assistance to countries to identify their animal genetic resources and develop conservation strategies. More recently, this assistance has been in collaboration with UNEP. In 1990, FAO's Council recommended that the Secretariat prepare a comprehensive programme for the sustainable management of animal genetic resources at the global level. A meeting of experts in 1992, and subsequent sessions of FAO's governing bodies, provided the impetus to initiate the development of the Global Strategy for the Management of Farm Animal Genetic Resources (Global Strategy), in 1993. The signing of Agenda 21 and the ratification of the Convention on Biological Diversity further encouraged the development and design of the Global Strategy. In 1995, COAG reviewed the early development process and Council supported the strategy, accepting the need to involve the broad spectrum of stakeholders, and the need for additional funds from extra-budgetary sources to ensure its successful further development and implementation.

2. Within FAO, the mandate of the Commission on Plant Genetic Resources was broadened in 1995, beginning with animal genetic resources. In 1996, the importance of animal genetic resources and the Global Strategy was recognized at both the World Food Summit and the third meeting of Parties to the Convention on Biological Diversity. The Conference requested the Director-General to establish an *Ad Hoc* Group of Experts on Animal Genetic Resources, which met 7-9 January 1997, to prepare for the future work of an Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture. The *Ad Hoc* Group stressed the importance of establishing a strong intergovernmental mechanism to facilitate and promote better management of animal genetic resources at global, regional and national levels. At the Seventh Session of the Commission on Genetic Resources for Food and Agriculture, 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 Eighth Regular Session of the Commission in 1999, on the further development of the Global Strategy.

3. The purpose of this document is to facilitate discussions at the first session of the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture, and to assist it in identifying the various constituents of the Global Strategy that require intergovernmental involvement, in order to ensure their successful further development and implementation. A possible set of recommendations to the Commission, regarding the further development of the Global Strategy, is contained in the last section of the document, together with a work plan as *Appendix 1*, for consideration of the Working Group. This document also discusses the preparation of a first *Report on the State of the World's Animal Genetic Resources for Food and Agriculture*: a detailed proposal for this initiative is provided in the complementary document, CGRFA/WGAnGR-1/98/3.

II. BACKGROUND

4. Animal genetic resources have been contributing to food and agriculture for more than 12 000 years, resulting in increased meat, milk products, eggs, fibre, fertilizer for crops, manure for fuel and draught power. Farmers and breeders have been effectively using animal genetic diversity to develop breeds that are suitable for local environmental conditions, and animal products to meet human needs and wants. Domestication and breeding under different environments have resulted in approximately 4 500 breeds, produced from about 40 wild animal species. In addition to providing essential food and other products, animal genetic resources frequently also markedly reduce farmers' risk exposure, generate employment, and even out seasonal farm labour demands. Livestock have also become important cultural elements, and are essential in maintaining many traditional lifestyles. The total diversity of animal genetic resources available to farmers, and the resulting diverse products, make it possible for humans to survive in a wide range of production environments, *inter alia*, from the hot-humid tropics, to arid deserts, and extremely cold arctic or mountainous regions. Genetic diversity also makes possible livestock adaptation to diseases, parasites, wide variations in the availability and quality of food and water, and other limiting factors. It is estimated that directly and indirectly, domestic animals supply some 30 percent of total human requirements for food and agriculture.

5. International awareness of the essential role of animal genetic resources in food and agriculture is increasing. Genetic resources for food and agriculture have been discussed at meetings of Parties to the Convention on Biological Diversity. At their second meeting in 1995, by Resolution II/15, Parties recognized the special nature of agricultural biodiversity, its distinctive features and problems needing distinctive solutions. Agricultural biological diversity was the major theme for the third meeting of Parties to the Convention on Biological Diversity, in 1996. By Resolution III/11, Parties agreed to develop a programme of work on agricultural biological diversity; strongly endorsed the further development of the Global Strategy; and encouraged Parties to develop inventories and consider the status of farm animal genetic resources and measures for their conservation and sustainable utilization. In providing advice, by Resolution III/5, to the Convention's financial mechanism, the Global Environment Facility, Parties indicated that priority should be given to supporting efforts for the conservation and sustainable use of biological diversity important for agriculture. The Commission on Sustainable Development, in developing Agenda 21, has also emphasized the importance of promoting sustainable agricultural and rural development, and acknowledged the essential need to ensure the conservation and sustainable use of animal genetic resources for sustainable agriculture. A recent publication by the World Bank, entitled *"Biodiversity and Agricultural Intensification"*, describes the need for better conservation and breeding practices, to ensure that animal genetic resources continue to provide humans with high quality food and other products. But this increasing international awareness of the roles and values of farm animal genetic resources still needs to be translated into effective action within countries, and at regional and global levels, which is the purpose of the Global Strategy.

III. THE RATIONALE AND ROLE FOR THE GLOBAL STRATEGY

6. The Global Strategy provides a framework for establishing country, regional and global policies, strategies and actions, and can serve to facilitate and coordinate the activities of many independent organizations that have an interest in animal genetic resources within sustainable agricultural and rural development. Animal genetic resources provide a fundamental building block for food and agricultural production, and the Global Strategy provides a framework for both their shorter-term use and development, and their longer-term management, to ensure their

sustainable use, wise development and conservation. It aims to build awareness of the many roles and values of animal genetic resources; increase animal genetic resources management capacity, by recognizing the importance of adaptive fitness of genetic resources to achieving sustainable intensification of production environments, and by combining the best of modern and traditional farming practices; and to contribute to achieving global food security and rural development. The sustainable use and development of animal genetic resources requires country, regional and global involvement and commitment to increase national management capacity, especially in developing countries. Capacity-building needs are usually greatest in developing countries which have the most urgent requirements for food security and economic development. The Global Strategy, if successfully implemented, will assist countries to achieve all three objectives of the Convention on Biological Diversity, namely: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of their use.

7. Despite the major contributions that animal genetic resources make to food and agriculture, to rural development and diversification, and to continuously responding to changing environmental and market forces, these resources are being rapidly lost. Loss of animal genetic resources has been greatest in developed countries, which have often tended to concentrate on a few high-output breeds to the detriment of their locally adapted breeds. A high-input, high-output production strategy has often been possible in developed countries with favourable climates, because they have had the resources to maintain high levels of inputs, and adopt management practices that significantly reduce the impact of environmental variables. This concentration on a relatively few, high-input, high-output breeds has contributed significantly to increased total livestock production in developed countries. However, even in these countries, there is a growing awareness that genetic erosion increases vulnerability to changes in the environment, and reduces the potential of farmers to respond to changes in the market place. In developing countries, rapid transformation of traditional agricultural systems, often by the indiscriminate use of exotic animal genetic resources, is the primary force that is contributing to the loss of livestock breeds. In many instances, developing countries lack the resources (inputs) systematically to meet the requirements of high-input, high-output livestock breeds. In addition, important production environments, often involving very large areas of land used for food and agriculture production, are inherently medium to low-input systems. Consequently, replacement of locally adapted breeds with exotic breeds is not a sustainable livestock production strategy, and will have long-term negative implications for countries struggling to achieve food security and rural development. This is not to suggest that, in all cases, the use of exotic animal genetic resources is the wrong approach, but it is essential that systematic breeding strategies be developed that take into account local environmental and market conditions. The major role for the Global Strategy is to assist countries to develop their capacity to manage their animal genetic resources for food and agriculture, and to properly plan, design and implement sound livestock production systems, that are sustainable, and are cost-effective over time. Such systems need to take account of the potential of both locally adapted breeds, and exotic genetic resources where appropriate, in establishing and sustaining food security.

8. In addition to promoting and building capacity sustainably to use and develop animal genetic resources, the Global Strategy also promotes the establishment of cost-effective approaches to conserving animal genetic resources, which are not currently of interest to farmers. The rationale for conserving animal genetic resources not currently of value to farmers and breeders is that environmental and market changes will continue to occur. Having access to a broad base of animal genetic resources is an insurance policy for food security, which allows farmers and breeders to respond to unforeseen environmental and market changes. The best available information indicates that approximately 30 per cent of all livestock breeds are now at risk of extinction, and conservation strategies must therefore be developed, if these animal genetic resources are to be maintained for future use.

9. Modern technologies, global communications and markets have made it possible rapidly to change agricultural practices, especially to distribute exotic genetic resources widely, often with the consequence of replacing locally adapted genetic resources. Such improvements have tended to focus on increasing production, often of only one product, rather than also considering total lifecycle productivity, the sustainability of farming systems, and the roles of traditional farming systems. In most cases, analysis of the long-term implications of the rapid replacement of local breeds and traditional farming systems has not been undertaken. A new approach to the long-term use and development of farm animal genetic resources is required. Sustainable intensification of livestock systems must be based on both realistic achievable sustainable production levels, and on best utilizing available inputs, thereby also increasing productivity. Intensification must be guided by an understanding of the limitations and opportunities of the production environment, and use and development of animal genetic resources must be based on a comprehensive understanding of the roles and values of both locally adapted and exotic breeds. Such a level of understanding is important, in realizing sustainable intensification throughout the broad range of production environments, but is especially critical in the use and development of animal genetic resources in the low-input to medium-input production environments, that are common in the developing world. Continued indiscriminate use of exotic animal genetic resources will have long-term negative implications, and in many instances, reduce countries' food security, not secure it.

IV. DEVELOPMENT OF THE GLOBAL STRATEGY TO DATE

10. Since 1993, development and implementation of the Global Strategy have primarily taken place at two levels: at the global level, and through a Regional Pilot Project in Asia. A Global Focal Point was established at FAO Headquarters in Rome, to develop the framework for the Global Strategy, and to initiate development of its essential constituents, such as the country-based global infrastructure, the information and communication system, the Early Warning System, and animal genetic resources management guidelines. The Global Early Warning System for Farm Animal Genetic Resources inventories and describes 3882 breeds, comprising 28 species, using information received by the end of 1995. This information was used to produce *the World Watch List for Domestic Animal Diversity*, as a public record of domestic animal diversity. Two editions of the *World Watch List* have now been produced, the latest in 1995.

11. In 1993, a five-year project, "Conservation and Use of Animal Genetic Resources in Asia and Pacific", involving twelve countries, was established, with generous financial support from the government of Japan. This project has demonstrated the essential role of Regional Focal Points, by coordinating regional activities, and by providing technical support to countries. The project has increased the awareness of the roles and values of animal genetic resources in the Asian region, and has supported the initiation of eleven country action plans for the improved management of animal genetic resources. However, the Asian Regional Focal Point will not continue past October 1998, unless further extra-budgetary financial resources are secured.

12. Progress is being made in establishing other Regional Focal Points and National Focal Points throughout the world. In Europe, 37 countries have identified their National Focal Point, and three workshops for National Animal Genetic Resources Coordinators have been conducted. For purposes of the implementation of the Global Strategy, Sub-Saharan Africa has been divided into three sub-regions, in accordance with the existing regional organization. The Southern African Focal Point will be established in 1998, with funding provided by the United Nations Development Programme (UNDP) and Norway. Regional Focal Points for West and Central Africa, and East and Central Africa, will be established, as soon as funding is found. National Focal Points are being established throughout Africa. A Latin American and Caribbean regional workshop was held in 1996, and now eleven National Focal Points have now been identified in the Americas region. In 1997, an agreement was reached between FAO and the International

Centre for Research in Dry Areas (ICARDA), by which they collaborate in establishing and maintaining the Near East Regional structure. A Near East regional workshop was held in 1997, and seven countries in the region have now identified their National Focal Points.

13. Further development and implementation of the Global Strategy will depend on a combination of FAO Regular Programme funding and extra-budgetary support. Both Regular Programme funds and extra-budgetary resources are required to maintain the Global Focal Point: to date, extra-budgetary support for the Global Focal Point has been provided from the Governments of France, Germany, the United States of America, the Netherlands, and UNEP. Visiting scientists from Canada, Egypt, Germany, Ghana and Spain have also made significant contributions to the development of the Global Strategy at the Global Focal Point. The continued establishment and maintenance of Regional Focal Points depend entirely on extra-budgetary support, and direct country and donor contributions. Implementation of the Global Strategy at country level will depend largely on national commitment. Countries both support the establishment of their National Focal Points, and provide financial resources to implement projects. They have also developed project proposals, to secure donor funding to increase their livestock management capacity, and to implement specific projects.

V. CONSTITUENTS OF THE GLOBAL STRATEGY

14. The Global Strategy has been designed to provide a comprehensive framework for the management of farm animal genetic resources. It consists of several inter-related components and elements. The major components are: an **Intergovernmental Mechanism** to ensure direct government involvement and continuity of policy advice and support; a **Planning and Implementation Structure**, providing the enabling framework for country action and regional and global support; a **Technical Programme of Work,** aimed at supporting the effective management of animal genetic resources at the country level; and a **Reporting and Evaluation** component to provide the critical data and information required for guidance, cost-effective planning and action, and to report on the state of diversity, the state of country capacity and the state of the art, to ensure that development and implementation of the Global Strategy is successful.

15. The following paragraphs describe the key components and elemements of the Global Strategy that require consideration by the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture, in order to ensure their successful further development and implementation. These constituents are also listed in Table 1.

16. The first essential component of the Global Strategy requiring consideration by the Working Group is the **Intergovernmental Mechanism**, which is essential to ensure governmental and stakeholder involvement in the further development, implementation and monitoring of the Global Strategy. The Commission on Genetic Resources for Food and Agriculture is the intergovernmental mechanism for the Global Strategy. The FAO Council, by Resolution 3/95, gave the Commission the coordinating role for policy, sectoral and cross-sectoral matters relating to the conservation and sustainable use of food and agriculture. The Statutes of the Commission, adopted by Council Resolution 1/110, provide for the establishment of sectoral working groups, and, in 1997, the Commission accordingly established its

Table 1. Constituents of the Global Strategy for the Management of Farm Animal Genetic Resources

Components:	Inter-governmental Mechanism	Country-based Planning & Implementation Infrastructure	Technical Programme of Work	Reporting & Evaluation
Elements:	The Commission on Genetic Resources for Food & Agriculture	Global Focal Point	National Management Plans for AnGR	First Report State of the World's AnGR
	Inter-Governmental Technical Working Group on Animal Genetic Resources	Regional Focal Points	Sustainable Intensification	Country Reports
	National Governments	National Focal Points	Characterization	Country & Global Monitoring
			Conservation	
			Communication	
		Donor & Stakeholders Involvement Mechanism	Emergency Plans & Response	
		DAD-IS		World Watch List - Early Warning System

Capacity Building:	Training & Education	Guidelines	Data & Information Management
	Technology Transfer	Research	Communications & Coordination

Technical Assistance:	FAO Experts	Informal Panel of Experts	Cadres of Experts
	Expert Meetings	Advanced Data & Information Software	
	Research		

subsidiary Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture. Sectoral working groups review the situation and issues related to agrobiodiversity in areas under their respective competencies, advise and make recommendations to the Commission on these matters, consider progress made in implementing the Commission's programme of work, and address other matters referred to them by the Commission. The preparatory work required and the conduct of the Commission's activities are funded from Regular Programme Budget sources.

17. **The Working Group may wish to consider the role of the intergovernmental mechanism, and, in particular, recommend tasks which the Commission may wish to give it in the 1999-2001 biennium.**

18. The next key component of the Global Strategy is the **Country-Based Planning and Implementation Infrastructure**, which includes five key structural elements: the Global Focal Point, Regional Focal Points, and National Focal Points, the donor and stakeholder involvement mechanism, and the Domestic Animal Diversity Information System (DAD-IS).

19. The Country-Based Planning and Implementation Infrastructure is necessary to communicate and coodinate effectively, set priorities, develop and implement strategies, plans and projects, and for reporting. The Global Focal Point at FAO Headquarters leads the planning, development and implementation of the overall Strategy; develops and maintains the information and communication system; oversees preparation of guidelines; coordinates activity amongst the regions; prepares reports and meeting documents; facilitates policy discussions; identifies training, education, and technology transfer needs; develops programme and project proposals; and mobilizes donor resources. Regional Focal Points facilitate regional communications; provide technical assistance and leadership; coordinate training, research and planning activities amongst countries; initiate development of regional policies; assist in identifying project priorities and proposals; and interact with government agencies, donors, research institutions and non-government organizations. The Asian Regional Focal Point is the most advanced. National Focal Points lead, facilitate and coordinate country activities, identify capacity-building needs, develop project proposals, assist with the development and implementation of country policy, and interface with the range of country stakeholders, including the country focus for biological diversity, and with the Regional Focal Point and the Global Focal Point.

20. The Donor and Stakeholder Involvement Mechanism mobilizes the range of stakeholders, providing broad-based support for the Global Strategy. The Global Focal Point seeks to ensure stakeholder involvement in all major aspects of the Global Strategy, using a variety of communication means. For example, an informal *Ad Hoc* Meeting of Donors and Stakeholders was convened at FAO Headquarters in Rome in 1996, and resulted in commitments to ensure that the Global Strategy is linked to other relevant international initiatives, such as Agenda 21 and the Convention on Biological Diversity. The stakeholder mechanism provides added opportunity for non-governmental contribution to the development of the Strategy. At national level, each country will need to determine what mechanisms it requires to involve its stakeholders, public and private sector, in the management of its animal genetic resources.

21. The Domestic Animal Diversity Information System (DAD-IS), functions as the Clearing House Mechanism for the Global Strategy. It is a widely available and easily accessible global data and information system. Development and use of such a global facility is far more cost-effective than if countries independently developed their own systems, and makes it possible effectively to share data and information among countries. DAD-IS is an advanced communication and information tool, that allows the rapid and cost-effective distribution of guidelines, reports, and meeting documents; and provides a mechanism to exchange views and address specific information requests, by linking farmers, scientists and policy makers. DAD-IS also provides countries with the "virtual structure" for developing and implementing the Global Strategy. A key feature of the DAD-IS is that it provides country-secure storage and communication of animal genetic resources data and information. DAD-IS Stage 1 operated until

April 1996 as a pilot project, using the Internet. Stage 2, improved in response to country needs, will be made available on the Internet, and off-line in a multi-language CD-ROM format. Stages 3 and 4 are already planned, with the assistance of the Informal Panel of Experts, and will be implemented when funding is secured, and as National Focal Point experience in use of the system is gained. DAD-IS directly supports country capacity-building and participation in the Global Strategy. Database standards facilitate the sharing of data and information, on approval by countries. The DAD-IS breeds database is the basis of the Early Warning System for Animal Genetic Resources, makes it possible to produce the World Watch List for Domestic Animal Diversity, and enables countries to use their data and information in an effective and efficient manner. DAD-IS also enables ongoing active involvement of the range of other stakeholders in the development and implementation of the Global Strategy.

22. **The Working Group may wish to recommend to the Commission measures for further developing the Country-based Planning and Implementation Infrastructure. Advice on how to further advance the establishment of Regional and National Focal Points is particularly important, as is advice on potential sources of funding to establish and maintain focal points, and to ensure that DAD-IS is functional in all participating countries.**

23. The **Technical Programme of Work** is the next essential component of the Global Strategy. Elements of the technical programme of work requiring further development are described in the following paragraphs.

24. Preparation of National Management Plans for Farm Animal Genetic Resources, is a key element of the Global Strategy, as the management of a country's animal genetic resources is technically complex, and requires the participation of farmers and breeders, policy-makers, local and indigenous communities, and other stakeholders. Preparation of National Plans will help countries to: further establish directions for sustainable livestock development for their important food and agriculture production systems; assess their needs and priorities; increase awareness of the roles and values of farm animal genetic resources, including locally adapted genetic resources; better target and increase the cost-effectiveness of management activities; and, for developing countries, provide a basis for donor assistance. To assist countries in preparing their national strategies and action plans, the Global Focal Point has prepared a document with *Primary Guidelines for Development of National Farm Animal Genetic Resources Management Plans*. The Global Focal Point will continue to develop and enhance guidelines to support development of country animal genetic resources management strategies and plans. Regional Focal Points will provide technical assistance to countries and coordinate training and other activities related to the development of country management strategies and action plans.

25. Guidelines are an essential aspect of the Global Strategy, and provide a basis to directly support country efforts. They provide an effective means to identify issues, and offer options for addressing them. In addition to the *Primary Guidelines*, detailed technical *Secondary Guidelines* have been initiated to assist countries in surveying and other aspects of characterization, such as better describing primary production environments for each breed of domestic farm animal; the Measurement of Domestic Animal Diversity (MoDAD); sustainable intensification of animal genetic resources, including through animal recording for breed improvement in low- to medium-input production systems; breeding objectives and breeding strategy development; and animal genetic resource conservation, such as through the management of small populations at risk. These guidelines will be developed, incorporated in DAD-IS, and otherwise distributed, as rapidly as financial resources allow.

26. **The Working Group may wish to recommend to the Commission that countries that have not already begun preparation of Management Plans for Farm Animal Genetic Resources should initiate this activity over the next three to five years, with a view to having completed National Plans development within the next ten years.**

27. **The Working Group may also wish to provide advice to the Commission on the financial needs for the further development and distribution of all necessary guidelines, and accompanying training programmes, to enhance countries' capacity to manage their animal genetic resources.**

28. Characterization, or understanding the extent, distribution, basic characteristics, comparative performance, value and current state of a nation's animal genetic resources, is an essential constituent of the Global Strategy. Global and regional coordination, and significant within-country capacity-building are required to characterize the world's animal genetic resources. Necessary activities include: identification and inventory of the different breeds; a detailed description of each breed, and of the production environments to which it is adapting and in which it is being developed; comparative breed descriptions for the main performance and adaptive traits; evaluation of the global importance of breeds; and monitoring changes in breed populations. In addition to these activities, comparative molecular descriptions, incorporating portfolios of standard molecular markers, are required reliably to assess breed genetic diversity, to assist in better targeting conservation efforts, and to contribute to establishing a sound basis for breeding strategies. The Global Focal Point has initiated the preparation of a detailed proposal for measuring domestic animal diversity which is called *project MoDAD, the Measurement of Domestic Animal Diversity.* Global coordination for project MoDAD would be provided by the Global Focal Point, with staff in the Regional and National Focal Points participating in field activities, research coordination and training.

29. Active, sustainable use and development of livestock breeds is the single most important element of the Global Strategy concerning food security. Sustainable Intensification of farm animal genetic resources requires significant capacity-building, especially for developing countries that are struggling to achieve food security and alleviate poverty. Capacity-building aspects of the Global Strategy include, *inter alia*; training and education; technology transfer; data and information management; research; communications and coordination of available human resources; and the use of guidelines.

30. The recording and evaluation of animal performance, and the development of breeding objectives and of breeding strategies, are necessary to support effective decision-making by farmers and all levels of government, for realizing rapid sustainable intensification of animal genetic resources. Methods and institutional mechanisms for animal recording and breed development are well established within high-input production systems of the developed world. However, animal performance recording systems and breeding strategies for the medium-input to low-input production systems that are common in developing nations, are generally absent, or poorly developed. To assist in the development of animal performance recording systems, the Global Focal Point has prepared a draft report *Animal Recording for Medium-Input Production Environments,* dealing with the establishment and management of animal recording schemes, and the principles governing the development and maintenance of animal recording in such production systems.

31. Conservation of farm animal genetic resources that are in danger of becoming extinct, is another key element of the Global Strategy. One-third of all breeds of livestock are estimated currently to be at risk, these mostly being located only in developing countries and surveys indicate that there are few managed conservation programmes in place for these resources at risk. The Global Strategy identifies the need for several conservation activities, including, *inter alia;* maintaining the *World Watch List for Domestic Animal Diversity,* to provide a global inventory and Early Warning System for Animal Genetic Resources; implementing appropriate *in situ* and *ex situ* conservation activities, including the maintenance of live animals and storage of germplasm; enhancing efforts to identify unique and vulnerable animal genetic resources, to assist in setting conservation priorities; improving understanding of the roles and values of available locally adapted animal genetic resources and the capacity to conserve and better use these resources. Draft Guidelines for the *Management of Small Populations at Risk* have been developed, to assist countries identify options and technical requirements for the management of

populations at risk of extinction. The Global Focal Point will continue development of guidelines for cost-effective conservation, and identify and promote the development to practical field use of new and emerging technologies of higher utility. Regional Focal Points will be responsible for coordinating conservation training and preparation of regional conservation plans, and providing technical assistance to countries. National Focal Points will be responsible for developing and implementing their national conservation plans.

32. The Working Group may wish to provide advice to the Commission on the establishment of a mechanism to identify global animal genetic resources conservation priorities; and how to respond to situations where breeds are in imminent danger of extinction.

33. Developing and implementing a cost-effective Communication strategy is a key element of the Global Strategy, that requires targeting key audiences, in order to communicate effectively with farmers, breeders, local and indigenous communities, scientific and technical people, non-experts, policy-makers, research institutions, intergovernmental organizations and non-government organizations, to keep them interested, and informed about the Global Strategy; and assisting these stakeholders to achieve increased coordination of scarce human resources and of activities within and amongst countries. The Global Focal Point will continue to communicate with and encourage communication amongst stakeholders using a variety of means including the *Animal Genetic Resources Information Bulletin*, newsletters, meetings, electronic conferencing, fact sheets, CD-ROMs and DAD-IS on the Internet. It will also produce a publication that describes the Global Strategy, and use this publication to enhance general awareness of the need for the Strategy.

34. The final component of the Global Strategy is to put into place **mechanisms to evaluate progress in the implementation of the Global Strategy** and to monitor and report on the status of animal genetic resources. FAO asked the Informal Panel of Experts on the Development of the Global Strategy for Farm Animal Genetic Resources to evaluate progress in implementing the Global Strategy. The Panel therefore prepared an initial set of criteria and indicators on which to base their first evaluation of the Global Strategy, which are presented in *Appendix 2* of document CGRFA/WG-AnGR-1/98/Inf.1. The Panel also recommended that a periodic *Report on the State of the World's Animal Genetic Resources for Food and Agriculture* be prepared, to provide a basis from which to evaluate progress in the improved use, development and conservation of animal genetic resources, drawing on the Domestic Animal Diversity Information System (DAD-IS), as a cost-effective mechanism to monitor and periodically report on the status of the world's animal genetic resources. Detailed proposals for the nature and content of such a *Report* are presented in the complementary document, CGRFA/WG-AnGR-1/98/3.

35. **The Working Group may wish to make recommendations to the Commission on the establishment of a process to evaluate implementation of the Global Strategy, including the possible role of the Working Group in this task**. **The Working Group may also wish to provide advice on the initiation of a periodic *Report on the State of the World's Animal Genetic Resources for Food and Agriculture*.**

VI. ADVICE SOUGHT FROM THE WORKING GROUP, AND POSSIBLE RECOMMENDATIONS FOR THE EIGHTH SESSION OF THE COMMISSION

36. In reviewing the Global Strategy, and its constituent parts, as well as the Work Plan, for their further development and implementation, as presented in *Appendix 1* to the present document, the Working Group may wish to advise, if necessary, on any further information that the Eighth Regular Session of the Commission may need in this regard.

37. **The Working Group may also wish to recommend that the Commission**:

a) Consider for endorsement the Global Strategy for the Management of Farm Animal Genetic Resources, and its constituent parts;

b) Consider for endorsement the Work Plan for the further development and implementation of the constituent parts of the Global Strategy, and provide guidance on priorities *(Appendix 1)*;

c) Decide on a timetable for receiving reports on, and monitoring the implementation of the Global Strategy (para. 34);

d) Request FAO to initiate the preparation of a country-based, periodic *Report on the State of the World's Animal Genetic Resources for Food and Agriculture*, as a basis for its policy guidance and monitoring role, with the first such *Report* to be presented to the Commission at its Tenth Regular Session in 2003, if the Commission wishes, as part of a wider *Report* that also covers other components of genetic resources for food and agriculture (para. 34, and CGRFA/WG-AnGR-1/98/3);

e) Task the Working Group, in the period until the Commission's Ninth Regular Session, in 2001, to:

   i) continue monitoring and guiding the implementation of the priority constituent parts of the Global Strategy (para. 14-35); and

   ii) in particular, to oversee the initiation of the *first Report on the State of the World's Animal Genetic Resources for Food and Agriculture* (CGRFA/WG-AnGR-1/98/3);

f) Recommend that governments take the necessary practical measures, at national and regional levels, to ensure effective implementation of the Global Strategy, including by:

   i) the identification and enabling of National Focal Points (para. 18-19);

   ii) preparation of National Strategies and National Work Programmes for Farm Animal Genetic Resources management (para. 23-27);

   iii) the use of information systems capable of enabling the rapid exchange of data and information on management modalities, and with capacity to facilitate communication, within countries, regionally and among regions (para. 18, 21-22, 25, 33, 34);

   iv) development and implementation of relevant livestock management projects, and capacity-building projects, with both national and donor

resources, based, *inter alia*, on the Global Strategy Guidelines (paras. 24-33);

g) Recommend that donor countries and organizations provide financial support, in particular to developing countries, to implement the Global Strategy and its constituent parts, according to the priorities established by the Commission para. 24-33) ; and

h) Request countries to report regularly to the Commission on the state of animal genetic resources for food and agriculture, on activities they have undertaken to implement the Global Strategy, and on national funds and donor support that has been engaged in this context, and, in particular to provide regular updated information on the indicators for the implementation of the Global Strategy agreed by the Commission (para. 34-35).

Appendix 1

DRAFT FIVE-YEAR WORK PLAN (1999-2003) FOR DEVELOPING THE GLOBAL STRATEGY FOR THE MANAGEMENT OF ANIMAL GENETIC RESOURCES[1]

ACTIVITY	PLANNED COMPLETION
1. Development and support of the country-based planning and implementation infrastructure	
1.1 Focal Points for Farm Animal Genetic Resources established and trained in 120 countries of five regions; and the Global Focus fully operational	2000
1.2 DAD-IS, (the information and communication system), developed and maintained, for country use, and for regional and global monitoring, coordination, evaluation, planning and reporting of animal genetic resource management activities	
• DAD-IS stage 2.1 implemented[2]	1999
• DAD-IS stage 3, developed and implemented[3]	2000
• DAD-IS stage 4, developed and implemented[4]	2002
1.3 Donor and Stakeholder mechanisms fully established, to support communication, funding mobilization, research and development, and reporting	2001
2. Development of the Technical Programme of Work	
2.1 Primary and Secondary Guidelines, to support countries in developing National Management Plans[5]	
• Detailing completed	2000
• User-friendly tool kit, for use by all levels of decision-making, released	2003
2.2 Country assistance, to develop and implement national Management Plans for Animal Genetic Resources[6]	2003
2.3 A system for surveying breeds and monitoring genome banks developed and maintained	2000
2.4 A system for technology monitoring, evaluation, adaptation and transfer, developed	2003
2.5 A comprehensive communication strategy for the management of Farm Animal Genetic Resources, prepared and implemented	2000
3. **Development and maintainance of a comprehensive system for reporting and evaluation**[7]	
3.1 Updated World Watch List for Domestic Animal Diversity	
• Third edition	2000
• Fourth edition	2003
3.2 Evaluate and report to the Commission on progress in the further development and implementation of the Global Strategy	2001
3.3 First *Report on the State of the World´s Animal Genetic Resources* presented to the Commission[8]	2003

[1] Based on the availability of both Regular Programme and adequate extra-budgetary funding.

[2] Multilingual databases and DAD-IS off-line system (CD ROM); and moderator appointed to assist in system usage, including data gathering, analysis and reporting, for the first *Report on the State of the World's Animal Genetic Resources.*

[3] Incorporating provisions for characterizing production environments in terms of breed adaptive fitness; a genome banking database; the first major upgrade of the breeds database; development of Arabic and Chinese language versions of DAD-IS; completion of the prototype Action Planner; and the introduction of country-level customization of DAD-IS databasing systems.

[4] Including the first release of computer-aided training and research design and analyses modules, for capacity-building.

[5] Comprehensive guidelines on all key areas of the characterization, sustainable intensification and conservation of animal genetic resources, and for emergency planning and response.

[6] Utilizing the guidelines prepared under 2.1, above.

[7] Building on DAD-IS, wherever feasible.

[8] The detailed workplan for the preparation of the *Report* is in *Appendix 1* to document CGRFA/WG-AnGR-1/98/3.