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Item 4 of the Provisional Agenda

COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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

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PROGRESS REPORT ON THE FURTHER DEVELOPMENT OF THE GLOBAL STRATEGY FOR THE MANAGEMENT OF FARM ANIMAL GENETIC RESOURCES

CONTENTS

	<i>Paras.</i>
1. Introduction	1-8
2. Development and Implementation of the Global Strategy	9-62
3. Advice being sought from the Working Group	63
	<i>Page</i>
Annex 1: Communication and information dissemination	12-13
Annex 2: Collaboration with NGOs	14

PROGRESS REPORT ON THE FURTHER DEVELOPMENT OF THE GLOBAL STRATEGY FOR THE MANAGEMENT OF FARM ANIMAL GENETIC RESOURCES

I. INTRODUCTION

1. Recognition of the significant contribution that animal genetic resources make to agriculture globally, led the Food and Agriculture Organization of the United Nations (FAO) to initiate development of the Global Strategy for the Management of Farm Animal Genetic Resources (Global Strategy) in 1993. The Global Strategy consists of four main components: an Intergovernmental Mechanism; Country-based Planning and Implementation Infrastructure; a Technical Programme of Work; and Reporting and Evaluation. Each component includes a number of interrelated elements. Collectively, the components and elements assist countries and FAO to advance work on animal genetic resources.
2. FAO committed the Animal Production and Health Division as the Global Focal Point for Animal Genetic Resources to coordinate further development of the Global Strategy, and as having overall responsibility for the preparation of the first *Report on the State of the World's Animal Genetic Resources* (first *Report*), a key element of the Global Strategy.
3. While the Global Strategy began as a technical programme it quickly evolved as governments accepted it as a framework for deciding on priority global efforts for achieving the sustainable use, development and conservation of animal genetic resources. The Global Strategy was reviewed by the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture (Working Group), at its first Session, 8-10 September, 1998, and recommended to the Commission on Genetic Resources for Food and Agriculture (Commission) that FAO continue to shape the framework and to further develop the constituent elements.
4. The recommendation was accepted by the Commission at its Eighth Regular Session in April 1999. The Report of the Working Group was also endorsed by the FAO Committee on Agriculture (Report of the Fifteenth Session), prior to the meeting of the Commission. In considering the Report of Working Group, the Commission noted that animal genetic resources are of crucial importance in many production systems and are essential components in achieving global food security and rural development. It agreed that the Working Group should continue to assist FAO clarify the framework and better define and prioritize the constituent elements of the Global Strategy.

Second Session - Working Group Recommendations

5. The Working Group reviewed progress in the further development of the Global Strategy at its Second Session in September 2000, and made the following recommendations:
 - FAO should develop approaches, procedures, and tools to further assist countries that so require it, on the economic valuation and genetic development of locally adapted animal genetic resources, particularly for use in the sustainable development of low and medium input production systems;
 - FAO should investigate, in association with donor and recipient countries of animal genetic resources, guidelines for best practices, to more effectively plan livestock breeding programmes, and promote sustainable development and food security;
 - FAO should identify options for establishing a country driven early warning and emergency response mechanism for the animal genetic resources most at risk, including decision support tools, to be reviewed by the Working Group;

- FAO should collect existing information on ongoing research, and identify ways to enhance animal genetic resource characterization studies, in the light of new and emerging technologies, and investigate modalities for international cooperation and collaboration undertaking characterization research, including genetic distancing, in order, *inter alia*, to better use and develop animal genetic resources, and to assist countries to assign priorities for breeds that should be conserved;
- FAO should continue and enhance technical support to countries and regions, including: further development of guidelines; decision support and policy tools; enhanced networking; and providing training to support country efforts to better use, develop, and conserve animal genetic resources;
- FAO should continue to provide adequate support to maintain and further develop Domestic Animal Diversity-Information System (DAD-IS), given its increasing importance to countries for the better management of animal genetic resources, including analytical and decision support tools and the provision of data and information on molecular characterization;
- FAO should coordinate the preparation of an assessment of the impact on food security, rural development, and sustainable livelihoods of the current rapid loss of animal genetic resources;
- FAO should consider convening a panel of biotechnology experts in the Animal Sciences, to examine existing, new and emerging technologies and methodologies, to assess their potential impact on animal genetic resources and to identify their potential use for the cost effective conservation of animal genetic resources.

Review of Progress by the Commission – 2002

6. The Commission reviewed progress in the further development of the Global Strategy at its Ninth Regular Session in 2002, and expressed concern regarding the erosion of animal genetic resources. It agreed that further urgent action be taken, including training, technical support and research, and that the Working Group should continue to guide further development of the Global Strategy. The Commission stressed the important role of the DAD-IS, indicating that it should be further developed.
7. The Global Strategy has also been welcomed by Parties to the Convention of Biological Diversity noting the important role of the Global Strategy within their multi-year work programme on agricultural biological diversity (Decision V/5).

Purpose of this Document

8. The purpose of this document is to provide the Working Group with a progress report on the further development of the Global Strategy. The Report is primarily a review of activities undertaken by the Global Focal Point. FAO is considering means to efficiently report on activities that have been undertaken at the national and regional levels. A possible set of recommendations to the Commission on activities to advance the Global Strategy is contained in the section III of the current document.

II. DEVELOPMENT AND IMPLEMENTATION OF THE GLOBAL STRATEGY

9. While the primary focus of activity within the Global Focal Point for animal genetic resources over the past four years has been supporting the preparation of the first *Report on the State of the World's Animal Genetic Resources*, a number of other actions to advance the Global Strategy have been initiated or implemented. These are summarized below under the various components and elements of the Global Strategy.

The Intergovernmental Mechanism

10. **The Intergovernmental Mechanism** is essential in ensuring the further development of the Global Strategy. FAO Member Countries guide the development of the Global Strategy through the Commission and its subsidiary Working Group on Animal Genetic Resources. The Commission reviewed progress in the further development of the Global Strategy during its Ninth Regular Session in 2002; and FAO organized a Satellite Event on Biodiversity in Agriculture, Forestry and Fisheries during the Ninth Regular Session of the Commission. FAO also organized a side event during the 17th Session of the Committee on Agriculture in 2003, to inform members of the Committee on activities being undertaken to advance the Global Strategy, and another side event during the Committee for the Review of the Implementation of the Convention (CRIC 1) of the UN-Convention to Combat Desertification in November 2003 to inform about the integrated nature and adaptation of local animal genetic resources in dryland ecosystems.
11. Parties to the Convention on Biological Diversity have also supported the Global Strategy, and FAO has strived to keep them informed of implementation progress. Accordingly, a progress report was provided at the fifth Conference of Parties to the Convention on Biological Diversity in 2000. Also, a set of case studies on animal genetic resources was provided to the Seventh meeting of the Convention's Subsidiary Body on Scientific, Technical and Technical Advice (SBSTTA) in 2001, and a poster was specially prepared for a side event of that occurred during the meeting. Comments were provided for/to the Ninth meeting of SBSTTA and for/to the COP to the CBD meeting on Access and Benefit Sharing and Indigenous Knowledge in December 2003.
12. The interaction and collaboration of the Global Focal Point with NGOs is described in Annex 2.

Country-based Planning and Implementation Infrastructure

13. **The Global Focal Point.** FAO has continued to provide the Global Focal Point for the Global Strategy within the Animal Production and Health Division. The main activities of the Global Focal Point include: further developing and maintaining the information and communication structure; overseeing preparation of guidelines; coordinating activity amongst the regions; preparing reports and meeting documents; facilitating policy discussions; identifying training, education, and technology transfer needs; developing programme and project proposals; and mobilizing donor resources.
14. Funding for activities at the Global Focal Point includes a combination of both Regular Programme Funds and extrabudgetary contributions. Regular Programme funding has been provided for staffing at the Global Focal Points, which consists of half the time of a service chief, four professional officers and two support staff. Over the past four years, the Global Focal Points has also benefited from a visiting scientist from Austria; a Professional Officer from the Netherlands (provided for two-years to assist the further development of DAD-IS development); and an Associate Professional Officer, also from the Netherlands (2002-2005), to support preparation of the first *Report on the State of the World's Animal Genetic Resources*.
15. **Establishment and operation of National Focal Points for animal genetic resources** has continued as one of the most important and basic elements of the Global Strategy and significant progress has been made since the inception of the Global Strategy to establish them as part of a global animal genetic resources network. Most countries have now identified National Coordinators that are the main contact points for the Global Focal Point, and they have been instrumental in the preparatory process for Country Report leading to the development of the first *Report on the State of the World's Animal Genetic Resources*.
16. Some countries have not yet established National Focal Points for animal genetic resources, and some countries that have established them, are not sufficiently enabled to effectively communicate with the Global Focal Point. The process for preparing the first *Report on the State of the World's Animal Genetic Resources* is beginning to increase awareness of the

roles and values of animal genetic resources, and the need for their improved management at the country level. It is hoped that increasing level of awareness will lead to improved capability of National Focal Points that are not currently sufficiently enabled.

17. **Establishment and operation of Regional Focal Points for animal genetic resources.** despite the high value placed on regional focal points by the Working Group, the Commission, regions and individual countries, mobilization of financial resources for their establishment and maintenance has proved to be extremely difficult. FAO does not have the resources to establish and maintain regional focal points for animal genetic resources from the Regular Programme. Thus, regional focal points, where countries indicate their need, must be established through extrabudgetary support provided to FAO, or through direct funding from within the region, such as is the case in Europe.
18. Where they have been established, regional focal points have proven invaluable in facilitating regional communications; providing technical assistance and leadership; coordinating training, research, and planning activities amongst countries; initiating development of regional policies; assisting in identifying project priorities and proposals; and interacting with government agencies, donors, research institutions and non-government organizations.
19. **The Asian Regional Focal Point** was the first regional focal point to be established and operated under a five-year regional project between 1993 and 1999, involving 12 countries, with financial resources being provided by the Government of Japan. Since then, the Animal Production and Health Commission for Asia and the Pacific (APHCA), and the FAO Regional Office through the Regional Animal Production and Health Officer, have attempted to maintain the network that was developed. Additional resources are required to fully re-establish the Asian Regional Focal Point for animal genetic resources.
20. **The European Regional Focal Point for animal genetic resources.** The Secretariat for the European Regional Point is elected from among the National Focal Points to serve for a limited period. Up to now, the secretariat is provided by the Government of France, with additional financial contributions from 10 countries from within the region, which enables the undertaking of projects, and provides support to countries within the region that require it to participate in regional meetings. The Regional Focal Point assists with coordinating activities and communication among the regions 39 established National Focal Points.
21. Countries in the European Regional Focal Point share experiences and expertise in the management of animal genetic resources. A number of projects have been initiated or are planned, and a brief description of them will be made available to the Working Group during its third Session. A thorough review of the establishment of the European Regional Focal Point is published in the 2002 volume of the Animal Genetic Resources No.32. The European Regional Focal Point outlined the steps used to develop the Regional Focal Point in information document (CGRFA/WG-AnGR-3/04/3 inf. 1) as a contribution to the implementation of the Global Strategy. Advice is sought from the Working Group on whether countries like to have guidelines on how to develop Regional Focal Points.
22. **The Regional Focal Point for Southern Africa** involving the 14 Southern African Development Community Countries began as a UNDP-funded Project (RAF/97/032), hosted within the Ministry of Agriculture of South Africa. A Chief Technical Advisor was in place from 1999 to 2002, and a Regional Steering Committee was formed. Way and means to continue operation of the Regional Focal Point for Southern Africa are currently being investigated.
23. **The Stakeholder Involvement Mechanism** is an extremely important element of the Global Strategy as it establishes a forum to inform stakeholders of progress in implementing the Global Strategy, and enables and promotes their involvement. The Mechanism also provides an opportunity for FAO to convey their extrabudgetary financial needs to potential donors and partners, and to seek their advice on modalities for securing the necessary resources.

24. A Second Ad Hoc Session of International Stakeholders in Animal Genetic Resources was convened in 2001. The focus of the meeting was to inform stakeholders of the process for preparing the first *Report on the State of the World's Animal Genetic Resources*. Stakeholders stressed the need for the full involvement of the diverse range of interest in animal genetic resources to be included in the process, and indicated their support for the initiative. They also suggested a number of thematic studies be undertaken by FAO as part of the preparation of the first *Report*.
25. **Donor support** as previously indicated, donor support is essential to the operation of the Global Focal Point, and over the past four years extrabudgetary support has enabled preparation of Country Reports, and has been extremely important in contributing to the further development of DAD-IS.
26. The Government of Germany through the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) is providing funding for a thematic study on gene flow, which will contribute to the first *Report on the State of the World's Animal Genetic Resources*. GTZ, in collaboration with FAO, have supported workshops in various aspects of animal genetic resources. The workshops include: Generating Benefits through Sustainable Use and Conservation of Farm-Animal Genetic Resources in the SADC Region: A workshop to explore the Legal and Regulatory Frameworks for Farm Animal Genetic Resources, Maputo, Mozambique, 20-24 May 2003; Guidelines for the Development of Regional and National Policy on the Management of Farm Animal Genetic Resources, Luanda, Angola, 2002; Community-Based Management of Animal Genetic Resources, Mbabane, Swaziland, 7–11 May 2001; and Incentive Measures for Sustainable Use & Conservation of Agrobiodiversity, Lusaka, Zambia, September 11 – 14, 2001. Proceedings of these workshops have been produced and widely distributed.
27. GTZ, in collaboration with FAO, the Southern African Development Community (SADC) and the Technical Centre for Agricultural and Rural Cooperation (CTA), is preparing a synthesis document of the proceedings of each of the workshops.
28. GTZ, in collaboration with FAO's Interdepartmental Working Group on Biodiversity, and with financial support of the FAO-Netherlands Partnership Programme, organized a Sub-regional Workshop on Agricultural Biodiversity in West Africa in Mali, December 2003, bringing National Coordinators for PGR, AnGR and those responsible for the implementation of the CBD and the CCD together.
29. The results of these various workshops will be brought to the attention of the Working Group in information document (CGRFA/WG-AnGR-3/04/3 inf. 2).
30. Additional donor support is being provided through a Government of Japan Trust Fund to develop a Farm Animal Encyclopedia, and will assist in reviewing information contained in national databases for animal genetic resources and updating DAD-IS.
31. **Further development of the DAD-IS as a key element of the Global Strategy.** DAD-IS provides the primary means for ongoing communication between National Focal Points and the Global Focal Point, and is being used as a tool for teaching and training. DAD-IS is increasingly used by National Coordinators as a means to communicate among themselves. It also provides a tool for establishing a national database on animal genetic resources, within DAD-IS.
32. As recommended by the Working Group and the Commission, the functionality of the DAD-IS has progressed over the past 4 years. With financial support from the Government of the Netherlands, FAO, in consultation with experts, further enabled the System (<http://www.fao.org/dad-is/>) to provide countries with an information management and communication tool to support the preparation of Country Reports.
33. FAO is involved with a European Union funded project called European Farm Animal Biodiversity Information System (EFABIS). The project aims at becoming a Europe-wide

information system for farm animal breeds, their populations, adaptation and locations. FAO provides, through DAD-IS, core data and database structure. EFABIS is based on an open-source approach and will serve as a data-collection tool for DAD-IS. The project could benefit other regions, and lead to further developing the existing structure of DAD-IS.

34. Development and maintenance of DAD-IS is a priority need in the further development of the Global Strategy, to assist countries, particularly developing countries, to better manage their data and information. Several priority areas for development have been identified by experts, including, updating of the breeds database as a result of information collected during the preparation of Country Reports; enhancing the functionality of DAD-IS as a communication and networking tool; and further development of the module for collecting and analyzing information on production environments.
35. Funding from the Government of Netherlands for a software engineer has ended, and there is an urgent need to replace this position. Improvements to DAD-IS will continue only if extrabudgetary resources can be mobilized. The Working Group may wish to indicate the priority they believe should be given to enhancing the functionality of DAD-IS, and provide advice on possible sources of funding to enable its further development.

The Technical Programme of Work

36. **Preparation of National Management Plans for Farm Animal Genetic Resources is a key element of the Global Strategy.** FAO is continuing to increase awareness of, and distribute in both soft and hard formats, the *Primary Guidelines for Development of National Farm Animal Genetic Resources Management Plans*. The *Guidelines* assist by providing a framework for planning national activities for animal genetic resources.
37. **The Sustainable Intensification Element** is perhaps the most important element of the Global Strategy, as the improved use and development of animal genetic resources is essential to maintain and enhance the contributions of farm animals to food security and rural development.
38. As recommended by the Working Group and the Commission, FAO has taken steps to advance the sustainable intensification element. Significant planning and capacity is required to realize sustained genetic improvement and, more generally, sustained livestock development. Aware of the many challenges FAO, following considerable research and interaction with a broad spectrum of applied technicians with direct experience in developing and developed countries, and with an understanding of the range of species and farming systems, has determined that development of an advanced decision support system is not only needed, but is technically feasible to produce.
39. Accordingly, FAO has initiated development and progressed substantially in prototyping such support system to support sustained genetic improvement, which has been called the *Decide system*. A broad-based working group of experts was convened to critically evaluate and provide the initial proofing of the approach and to contribute to the further development of the *system*. The experts provided a set of recommendations directed at completing the development and field-testing of the prototype system prior to general release. They recommended development of comprehensive guidelines to accompany the *system* and simple-to-use tools to help overcome the problems of planning and executing sustainable genetic improvement programmes particularly in lower-input, developing-country farming systems.
40. The expert group stressed that the decision-support system should be comprehensive in covering the spectrum of genetic options and important animal species, and indicated that the system should also provide a set of specific tools that promote technically and operationally sound planning and execution of each of the range of sub-elements of successful livestock improvement activity, including genetic improvement. Finally, they concluded that the system must be attractive to use by applied technicians whether they are

developing policy, operational plans or providing technical backstopping, each of which is critically important to preparing successful genetic improvement action.

41. While progress has been made in initiating the decision support systems, further significant elaboration of the *Decide system*, and testing and training is required. This will require substantial efforts to achieve. Activities include further design and development of the decision support core; undertaking field testing, refining the guide based on the results of testing, and regional training workshops. Significant extrabudgetary financial resources are required to undertake all essential activities.
42. FAO is involved with the International Livestock Research Institute (ILRI) in the preparation of a Global Environment Facility sponsored project on the development and application of decision-support tools to conserve and sustainably use genetic diversity in indigenous livestock and wild relatives in four Asian countries. It is expected that the *Decide system* will be further developed and tested as a result of this project.
43. **Characterization**, or understanding the extent, distribution, basic characteristics, comparative performance, value and current state of animal genetic resources, remains as an essential element of the Global Strategy. The 1993 expert group report (guidelines), *Measurement of Domestic Animal Diversity* (MoDAD), has been made widely available, including through DAD-IS, to encourage greater coordination among researchers in diversity studies.
44. To define standards for individual species, the International Society for Animal Genetics (ISAG) and FAO formed the ISAG/FAO Standing Committee on Animal Genetic Resources, which has established a list of microsatellite markers for cattle, chicken, sheep and pigs.
45. FAO recently commissioned a review of genetic diversity studies in domestic animals during the past ten years, to evaluate the actual application of the MoDAD recommendations. The report was reviewed by the ISAG/FAO Standing Committee in August 2003. They agreed that the original guidelines required updating and revision, with more details being provided on sampling methods to be included. They also recommended that the original lists of microsatellite markers for cattle, sheep, pigs and chickens be revised in the light of experience and work published, and additional lists be prepared for goats, camelidae, yak, horse/ass, and buffalo. The Committee noted that for duck, rabbit, turkey and geese, where little work has been done, only reference to these publications should be provided in the guidelines, until more experience is gained. The ISAG/FAO Standing Committee report will be made available to the Working Group as information document (CGRFA/WG-AnGR-3/04/3 inf. 3).
46. FAO is involved in the preparation of two GEF projects, under the leadership of ILRI, on Characterization of Endemic Livestock in West Africa, and on Development and Application of Decision-support tools to Conserve and Sustainably Use Genetic Diversity in Indigenous Livestock and Wild Relatives in Asia.
47. An FAO/ International Atomic Energy Agency - Coordinated Research Project on Gene-based Technologies in Livestock Breeding: Phase 1 – Characterization of Small Ruminant Genetic Resources in Asia was announced in September 2003. The first phase will provide an opportunity for scientists in National Agricultural Research Systems to acquire the capacity to define the genetic characteristics of their small ruminants. The second phase will focus on small ruminant genetic resistance to helminth parasites, a trait that is known to exist in many indigenous breeds, and likely to be an important resource in ensuring sustainability of production systems.
48. **Conservation of animal genetic resources** is one of the most important elements of the Global Strategy, especially in light of the ongoing erosion of these resources. FAO continues to make available the *Secondary Guidelines for the Development of National Farm Animal*

Genetic Resources Management Plans Management of Small Populations at Risk, to assist countries to advance their conservation planning and implementations.

49. Development of guidelines for surveying and monitoring of animal genetic resources has been initiated with the International Livestock Research Institute (ILRI) undertaking a pilot breed survey in Zimbabwe, which is being repeated in other countries in Southern Africa. Together with NGOs and research institutions, FAO has been documenting the role of traditional livestock keepers, and their individual and community-based practices in animal genetic resources management, particularly in low-input and pastoral production systems in Asia, Latin America and Africa, as also described in para 67 of this document.
50. An advanced course was jointly organised by FAO and the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), held in 2003, in Zaragoza, Spain. The course addressed the use of reproductive technologies and molecular markers in conservation. The European Regional Focal Point for Animal Genetic Resources, sponsored a technical workshop on Cryopreservation of Animal Genetic Resources in Europe, February 2003. FAO has distributed copies of the proceedings to National Focal Points for animal genetic resources.
51. The Stakeholder meeting had asked FAO to prepare a study on valuation of animal genetic resources. Economic analysis can play an important role in ensuring an appropriate focus for conservation efforts. In this regard, important tasks include, *inter alia*: 1) determining the economic contribution that AnGR make to various societies; 2) supporting the assessment of priorities through the identification of cost-effective measures that might be taken to conserve domestic animal diversity; and 3) assist in the design of economic incentives and institutional arrangements for the promotion of AnGR conservation by individual farmers or communities. A background study paper on the valuation of animal genetic resources has been produced by ILRI.
52. As a result of the priority given to the preparation of the first *Report on the State of the World's Animal Genetic Resources*, FAO has not been able to devote human or financial resources to identify options for establishing a country driven early warning and emergency response mechanism for animal genetic resources most at risk, as was requested by the Working Group in 2000. Extrabudgetary resources are required to undertake this work, and to identify options for overall monitoring system for animal genetic resources.
53. FAO has also not been able to undertake preparation of an assessment of the impact on food security, rural development, and sustainable livelihoods of the current rapid loss of animal genetic resources, as also requested by the Working Group during its second Session.
54. **Technical assistance to countries.** The Global Focal Point has been involved in a number to technical activities related to the better management of animal genetic resources. Projects include: Design and Legalization of a Livestock Identification and Recording System (Malawi); Animal recording (request, Zambia); Strategy for Active Conservation of Multiple Tsigai Sheep (Slovak Republic, Hungary, Serbia and Montenegro, and Romania); and A Strategy for the Active Conservation of the Dual Purpose Pinzgau Cattle Breed in Europe (Slovak Republic, Austria and Romania).
55. During its Second Session, the Working Group considered a document entitled "Modern Biotechnology and the Management of Animal Genetic Resources." During that same Session, the Working Group requested that "FAO consider convening a panel of biotechnology experts in the Animal Sciences, to examine existing, new and emerging technologies and methodologies, to assess their potential impact on animal genetic resources and to identify their potential use for the cost effective conservation of animal genetic resources".
56. The panel of experts in animal sciences and biotechnology has not yet been convened. FAO is now recommending to the Working Group that a study on developments in biotechnology be undertaken to determine current and potential applications for utilization and

conservation of animal genetic resources, and to determine barriers for developing countries in acquiring and using the available biotechnologies. The study will provide the basis for the convening of an expert panel in animal science and biotechnology. If this approach is acceptable to the Working Group, FAO will pursue the necessary extrabudgetary resources to undertake the study and convene the expert panel.

57. The Global Focal Point has been involved in the preparation of the State of Food and Agriculture (SOFA) 2003/2004 on Agricultural Biotechnology: Meeting the Needs of the Poor? FAO and the International Atomic Energy Agency jointly sponsored an International Symposium on Applications of Gene-based Technologies for Improving Animal Production and Health in Developing Countries, held in October 2003.¹ The objectives of the Symposium were to: create an interactive environment to discuss the roles and future potential of gene-based technologies for improving animal production and health; to identify constraints in the use of gene-based technologies in developing countries and to determine how to use these technologies in a practical way; to identify and prioritize specific research needs; to explore the possibility of international co-ordination in the area of gene-based technologies in animal agriculture; to examine ethical, technological, policy and environmental issues and the role of nuclear techniques in the further development and application of gene-based technologies with respect to livestock; and to develop a plan to translate the Symposium recommendations into actions. The results of the Symposium will be made available to the Working Group during its third Session.
58. **Developing and implementing a cost-effective communication strategy is a key element of the Global Strategy.** The Global Focal Point has undertaken a variety of communication functions to improve awareness of Global Strategy activities and of the roles and values of animal genetic resources in contributing to food security and rural development. Activities include: preparation of technical reports, brochures and publications; attendance and presentations at scientific meetings and conferences, and organizing and participating in a variety of workshops. Some example of the specific communication activities are listed in annex 1.
59. The preparation of Country Reports to underpin preparation of the first *Report on the State of the World's Animal Genetic Resources* has generated increased awareness of the important contribution of animal genetic resources to agriculture. However, enhanced and sustained communication about the important role of livestock production for food security and income generation, and particularly the roles and values of animal genetic resources in agriculture is necessary. Convening of a first international technical conference for animal genetic resources will provide a venue and opportunity to initiate a broader global communication and awareness effort.

¹ <http://www.iaea.org/programmes/nafa/d3/mtc/synopses.pdf>

Reporting and Evaluation Component

60. Progress in the preparation of the first *Report on the State of the World's Animal Genetic Resources* and preparation of **Country Reports** is provided in Document CGRFA/WG-AnGR-3/04/02.
61. **The World Watch List for Domestic Animal Diversity.** Distribution of this document continues and remains as an important publication and reporting element of the Global Strategy. It serves an important role in communicating the diversity of farm animals and warns of their rapid erosion. The Third Edition was published in Dec 2000 and is distributed in both hardcopy and electronic formats.
62. The World Watch List is undergoing an independent review by Rare Breeds International through an agreement with FAO. The intent of the review is to ensure that information on global animal genetic resources is presented with maximum effectiveness. At the present time, there are no plans to produce a fourth edition of the World Watch List. Updating, validating and publishing requires considerable human and financial resources that are not currently available. Improved information on domestic animal diversity resulting from the preparation of Country Reports could provide the rationale for producing a fourth edition in the coming years, should financial resources become available.

III. ADVICE BEING SOUGHT FROM THE WORKING GROUP

63. Acknowledging the progress that has been made in the further development and implementation of the Global Strategy, the Intergovernmental Technical Working Group may wish to recommend to the Commission that:
 - i. Countries continue to establish and strengthen their national focal points for animal genetic resources to enhance participation in the further development of the Global Strategy, including implementation of strategic priorities identified in the Country Reports, and consider maintaining their national consultative committees as appropriate to ensure stakeholder support and participation in the Global Strategy at the national level;
 - ii. Countries, with the support of FAO, continue to investigate ways and means to establish and maintain regional networks for animal genetic resources and regional focal points where appropriate, especially to build on the experience gained from the regional focal point initiative for southeast Asia and the continuing operation of the European Regional Focal Point;
 - iii. Countries update the DAD-IS breeds database, considering the information gathered during the preparation of the Country Reports;
 - iv. FAO undertake a comprehensive review of the DAD-IS to determine country use of the System, and its strengths and weaknesses in order to provide a basis for its further development, subject to extrabudgetary resources being made available, as requested by the Commission during its Ninth Session;
 - v. FAO commission a study on recent developments in biotechnology, and current and potential use of biotechnologies with a view to understand constraints for developing countries in acquiring and using available biotechnologies relevant to animal genetic resources use, development and conservation;
 - vi. Countries further develop with FAO and other Organizations, Technical Cooperation Projects that involve the sustainable intensification and conservation of animal genetic resources, in light of strategic priorities identified in Country Reports;
 - vii. FAO, based on the results of the Country Reports and the *Report on Strategic Priorities for Action*, prepare a proposal for ongoing country based monitoring of animal genetic resources, and in particular, those resources most at risk of being lost, and identify options for establishing a country-driven early warning and response mechanism;

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- viii. Donors further support development of the Global Strategy, especially to enable regional training in sustainable intensification, and the necessary development and field testing of the *Decide system* to provide developing countries with improved capacity to use and develop their animal genetic resources; and
 - ix. FAO continue to develop the Global Strategy, and that the Working Group meet in 2006 to review progress in its further development.

Annex 1: Communication and information dissemination

Examples for developing and implementing a cost-effective communication strategy as a key element of the Global Strategy undertaken by the Global Focal Point:

- Continuing to publish the *Animal Genetic Resources Information Bulletin*,
- Publication of a brochure on the first *Report on the State of the World's Animal Genetic Resources* aimed for decision-makers. The brochure is available in five languages with approximately 20,000 copies having been distributed. A revised brochure has been produced, and is being printed and distributed.
- A Special Issue of *Ecological Economics on Valuing Animal Genetic Resources* has been produced. Copyright © 2003 Elsevier B.V. All rights reserved, Volume 45, Issue 3, Pages 315-517 (July 2003), Edited by Adam G. Drucker, Riccardo Scarpa. FAO purchased and distributed through the global network.
- A special fact sheet titled “Domestic Animal Diversity: Arising Needs - Strategy Adopted” was developed for inclusion in a folder on agricultural biodiversity and published electronically within the DAD-IS library. Communication 3 was produced in December 2002 and was widely disseminated in hardcopy to all FAO Permanent Representatives in each country and to the “official technical network” consisting of National Coordinators, the Chair and the Technical Secretary of the National Consultative Committees. Names and contact details of the Chair and the Technical Secretary of the National Consultative Committees are being made available electronically within DAD-IS as well.
- Continued distribution of two videos with the same title “Farmers, their animals and the environment”. One video is focused on Asia, the other on Southern Africa.
- The Global Focal Point participated in the 7th World Congress on Genetics Applied to Livestock Production, and organized a FAO Symposium on Sustainable Breeding Programmes, August 2002, Montpellier, France. This led to a set of recommendations that are available within the DAD-IS library². FAO, in collaboration with the Congress, acquired 500 CDs of the proceeding and distributed them to the global network on animal genetic resources.
- The SADC workshop proceedings (see para 26 of this document) have been widely distributed in hard copy and electronically³

The Global Focal Point participated at various scientific conference and reported on the progress of the Global Strategy or its technical components:

- XXVIII International Conference on Animal Genetics, organized by the International Society for Animal Genetics (ISAG), Goettingen, Germany, August 2002.
- 7th World Congress on Genetics applied to Livestock Production Montpellier, France, August 2002.
- 5th Congress of the Spanish Society for Animal Genetic Resources, Spain, Sept 2002.
- European Regional Focal Point Symposium on Cryopreservation of Animal Genetic Resources in Europe, Paris, France, February 2003.
- XV Congress of International Union for Anthropological and Ethnological Sciences on “Man/Humankind: Past, present, future”, particularly the sessions on “Anthropology and its applications” and “Nomadic Peoples”, Florence, Italy, July 2003.

² <http://dad.fao.org/en/refer/library/guidelin/7WCGALP.pdf>

³ <http://dad.fao.org/en/refer/library/reports/swazilandproceedings.pdf>

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- FAO/International Atomic Energy Agency International Symposium on Applications of Gene-based Technologies for Improving Animal Production and Health in Developing Countries, Vienna, Austria, October 2003.
 - 9th World Congress of Animal Production, Porto Alegre, Brazil, October 2003

Annex 2: Collaboration with NGOs

The Global Focal Point maintains continuous working and publishing relationships with the World Association for Animal Production (WAAP), the European Association for Animal Production (EAAP), the Rare Breeds International (RBI), and the International Committee on Animal Recording (ICAR). FAO also closely collaborates with the League of Pastoral Peoples, the International Association for the Conservation of Animal Breeds in the Danubian Region (DAGENE), the Intermediate Technology Development Group (ITWG) and the Safeguard for Agricultural Varieties in Europe (SAVE) Foundation.

The Global Focal Point participated at the following NGO/CSO events:

- NGO/CSO Forum for Food Sovereignty during World Food Summit – Five Years Later, Rome, June 2002.⁴
- Side event during the Committee for the Review of the Implementation of the Convention (CRIC 1) of the UN-Convention to Combat Desertification in November 2003 on Pastoralists: Custodians of Drylands, discussing strategies and policies related to pastoral development.
- Workshop organized by League of Pastoral Peoples and other NGOs on Participatory Methods for Community-based Management Of Farm Animal Genetic Resources. A Workshop for Animal Breeding Experts and Rural Development Professionals from Asia in Sadri, India, October 2003, with involvement of National Coordinators of 9 Asian countries. The workshop stressed the importance of the recognition of the role of local livestock breeders and their knowledge for AnGR use, development and conservation.
- International Meeting of Indigenous Livestock Breeders' workshop organized by League of Pastoral Peoples and other NGOs in Karen, Kenya, October 2003, with representatives of livestock keeping communities from developing countries. It called on governments and relevant international bodies to commit themselves to the formal recognition of the historical and current contribution of pastoralists and pastoralism, and other livestock keepers, to food and livelihood security, environmental services and domestic animal diversity.

⁴ http://www.forumue.de/pdfs/ws_livestock_engl_fin.pdf