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Item 3 and 4 of the Provisional Agenda

COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

WORKING GROUP ON ANIMAL GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Second Session

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REPORT OF THE PANEL OF EXPERTS ON THE DEVELOPMENT OF THE GLOBAL STRATEGY FOR THE MANAGEMENT OF FARM ANIMAL GENETIC RESOURCES

Third Session, Rome, Italy , 22 - 24 March 1999

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REPORT OF THE INFORMAL PANEL OF EXPERTS ON THE DEVELOPMENT OF THE GLOBAL STRATEGY FOR THE MANAGEMENT OF FARM ANIMAL GENETIC RESOURCES

I. INTRODUCTION

1. Animal genetic resources have been contributing to human needs for food and agricultural products for more than 12 000 years, providing meat, milk products, eggs, fibre, fertilizer for crops, manure for fuel and draught power. Domestication and breeding for different objectives under different environments have resulted in approximately 5 000 breeds, developed from about 40 wild animal species. In addition to providing essential food and other products, animal genetic resources have become important cultural elements and are essential to 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 utilize and survive in a wide-range of production environments, *inter alia* from hot-humid tropical environments, to arid dry deserts and extremely cold arctic or mountain regions. Genetic diversity also makes livestock adaptation to disease, parasites and other environmental limiting factors possible. It is estimated that directly and indirectly, domestic animals contribute 30 percent of total human requirements for food and agriculture.

2. Despite the major contributions of animal genetic resources to food and agriculture, to rural development and diversification, and the need to continuously respond to changing environmental and market forces, these resources are being rapidly lost. Rapid transformation of traditional agricultural systems and indiscriminate use of exotic animal genetic resources are the primary forces that are contributing to the loss of breeds of livestock. In many instances, replacement of locally adapted breeds with exotic breeds is not sustainable, and will have long-term negative implications for countries struggling to achieve food security and rural development. The best available information indicates that approximately 30 per cent of all livestock breeds are now at risk of extinction.

3. In 1990, FAO's Council recommended that the Secretariat prepare a comprehensive programme for the sustainable development 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 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. The World Food Summit's Plan of Action negotiated by most countries in November 1996, incorporates in its set of Commitments by signatory countries, the conservation and sustainable use of Animal Genetic Resources, recognising the contribution of these essential resources to sustainable food security.

4. FAO is well positioned to lead and co-ordinate country efforts to manage their resources, providing technical guidance and supporting capacity building, and in facilitating the discussion and debate of policy issues. Understanding, cost-effectively using, and developing in a sustainable manner the breeds of livestock which comprise these farm animal genetic resources, will be demanding on country technical and policy capacity, as the spectrum of management processes is complex and is currently undergoing rapid development for expanded practical use. FAO requires expertise from around the world to assist it to build a sound technical and policy foundation for the proper management of the irreplaceable animal genetic resources. This Informal Panel of Experts on the Development of the Global Strategy for Animal Genetic Resources (the Panel) is a critical component of the available expertise and will assist FAO in determining needs and priorities.

5. This Panel met for the first time in May 1996 and adopted the following terms of reference:

The Panel will:

- Evaluate the components and elements of the Global Strategy.
- Review progress in the implementation of the Global Strategy and consider options for its further development.
- Regularly consider the operational effectiveness of the Global Strategy.
- Advise the responsible officers and staff on the development of the Global Strategy.
- Arrange and conduct its programme of work, as agreed by the Director of the Animal Production and Health Division, to effect these terms of reference.

These terms of reference require Panel members to review progress and assist in identifying gaps and priority activities required for the successful development of the Global Strategy, and also to contribute to detailing the technical elements involved in the Global Strategy, by participating both in and out of session.

Opening of the Session

6. Mr. Sawadogo, Assistant Director General and acting Director of the Animal Production and Health Division of the Food and Agriculture Organization of the United Nations (FAO), opened the third session of the Informal Panel of Experts on the Development of the Global Strategy for Animal Genetic Resources, 22 March 1999. He stressed the importance of animal genetic resources to food security and rural development and the role that FAO is playing in leading, coordinating, and facilitating the further development of the Global Strategy for Farm Animal Genetic Resources. Full text of the opening address is provided in Appendix 1.

7. Mr. Sawadogo welcomed all Panel members noting that membership in the Panel had changed significantly to ensure regional balance and to ensure that the available expertise covered the major components and elements of the Global Strategy. He also welcomed the observers to the meeting, noting the important contribution they would make to the deliberations of the Panel. Panel membership and observers are provided in Appendix 3.

8. Mr. Sawadogo stressed the need for expert advice to guide the further development of the Global Strategy. He indicated past sessions of the Panel had made a significant contribution providing sound technical advice to advance the Global Strategy, and looked forward to the results of this session. He reminded the Panel of their terms of reference, which require Panel members to contribute to detailing the technical elements of the Global Strategy both in and out of session.

9. Mr. Sawadogo was pleased to describe some significant events that had taken place since the last session of the Panel. He stressed the importance of the first meeting of the Intergovernmental Technical Working Group on Animal Genetic Resources (ITWG-AnGR) held in September 1998, and welcomed the Chair of this Working Group, Dr. Martyniuk of Poland, to this session. Mr. Sawadogo acknowledged the essential need for intergovernmental involvement to further develop and implement the Global Strategy and advised the Panel that the report of the ITWG-AnGR would be considered by the Commission on Genetic Resources for Food and Agriculture at their next session in April 1999.

10. Mr. Sawadogo informed the Panel of another significant recent event, the release of Stage 2 of the Domestic Animal Diversity Information System (DAD-IS). This has greatly enhanced the use of this essential data and information management tool and will assist countries to better manage their animal genetic resources.

11. Mr. Sawadogo concluded his opening remarks by stressing that the advice of the Panel would be carefully considered by FAO in the further development of the Global Strategy, and that

the Panel report would be made available to the next session of the ITWG-AnGR. He then called on the Panel to elect their Chair.

Election of the Chair

12. The Panel elected Professor J. Stuart F. Barker to Chair the third session of the Informal Panel of Experts on the Global Strategy for Animal Genetic Resources.

Progress in the Development of the Global Strategy

13. Because most Panel members were new, the Panel was provided with several documents that described the progress that had been made since initiation of the Global Strategy. The Secretariat provided an overview of the progress stressing the following areas:

- The overall framework for the Global Strategy, which has been designed over the past five years, was presented to the Panel (see Appendix 2). The Global Strategy is an ambitious and comprehensive approach to achieve the wise management of animal genetic resources, covering four primary components and several related elements. The Global Strategy also provides for capacity building and a sound technical foundation. Panel members were asked to consider if the framework covered all of the important technical areas for animal genetic resources.
- The Secretariat explained that the comprehensive nature of the Global Strategy was necessary to consider all critical aspects of the management of animal genetic resources, including their use, development, characterization, conservation, access to them, etc. The Global Strategy must consider both technical and policy matters and be developed with an understanding of the multiple values of these essential resources, which provide food, draught power, income security, raw material for manufacturing, and support cultural diversity.
- The Secretariat informed the Panel of the many areas of work that had been initiated over the past several years. This included *inter alia*: initiating surveys of 26 farm animal species; publishing two editions of the World Watch List for Domestic Animal Diversity; development and distribution of guidelines to assist countries with various aspects of the management of animal genetic resources; development and release of Stage 1 and Stage 2 of DAD-IS, the data and information management system for the Global Strategy; various communication efforts to advance understanding of the important roles and values of animal genetic resources; initiating a donor and stakeholder mechanism; and advancement of the critical intergovernmental mechanism for animal genetic resources.
- The Secretariat informed the Panel of the progress that had been made in developing the Global Strategy at the regional and national levels. Panel members were advised that the progress had been greatest in Asia where the Government of Japan funded a 12-country project that made it possible to establish the Asian Regional Focal Point. Unfortunately, this focal point may not be sustained as funding to continue its operation has not been established. The Panel learnt that progress is being made in other regions. In the Americas, 10 National Focal Points had been established but no regional Focal Point has been initiated. Europe was well advanced having established National Focal Points in most countries and a temporary informal Regional Focal Point, which is located in France with support from the Government of France. The European database for animal genetic resources will continue to be maintained at the University of Hanover. In the Near East, FAO and the International Centre for Agricultural Research in the Dry Areas (ICARDA), have agreed to collaborate to establish and maintain the Regional Focal Point for this region. Eight countries in the region have now identified their National Focal Points and appointed National Coordinators. For the purposes of implementation of the Global Strategy in Sub-Saharan Africa, the region has been sub-divided into Southern Africa, West and Central Africa and Eastern and Central Africa. In Southern Africa,

funding to establish a Regional Focal Point has been provided through the United Nations Development Programme (UNDP) and the Regional Focal Point should be operational within the Ministry of Agriculture - South Africa, within the next few months. Funding from the Government of Norway has also been received for this sub-region and will support a pilot project to advance Geographic Information System (GIS) ground-satellite functionality in support of DAD-IS, in collaboration with 4 countries. Preparatory assistance to develop a project for West and Central Africa which would include the establishment of a Regional Focus and National Focal Points has been approved by UNDP, but the location of the Regional Focal Point has not yet been determined. Training programmes have been undertaken in the region involving scientists and policy makers. Funding for the Regional Focal Point for East and Central Africa has not yet been secured but is actively being pursued. The United Nations Environment Programme (UNEP) and the International Livestock Research Institute have provided funding for training programmes in this sub-region for technicians and scientists, and will support another session for policy makers in 1999.

- The Secretariat presented a set of *Criteria and Indicators* that had been agreed to at the second session of the Informal Panel of Experts in March of 1998, to assist in evaluating progress in the further development and implementation of the Global Strategy. Use of the criteria and indicators for the first time helped to identify gaps in data and information and also provided valuable information to the Panel to assist them to evaluate progress. It also helped to identify some obstacles in terms of the available data and information, and raised questions regarding what aspects of the observed progress can be directly attributed to the Global Strategy.

II. THE OVERALL ASSESSMENT

14. The Panel was pleased to receive the reports and documents presented by the Secretariat that outlined the progress that had been made since initiation of the Global Strategy. Based on the progress presented by the Secretariat, the Panel recommends that:

- a) The comprehensive design and approach detailed in the framework Global Strategy be retained. The components and elements of the Global Strategy consider all of the major technical and policy areas that must be addressed to ensure the wise management of animal genetic resources. The Panel acknowledged that not all components and elements could be developed at the same time or the same rate, given the available human and financial resources, and that implementation of some elements are prerequisites to advancing other elements.
- b) The Conceptual Rationale for the Global Strategy for the Management of Farm Animal Genetic Resources be updated (as previously recommended by the Panel at its first session) to provide a sound technical document to explain the basis of the Global Strategy – targeting technical experts directly or indirectly involved in animal genetic resources, be further developed. Panel members will assist the Secretariat in this updating).
- c) Data and information on domestic animal diversity continue to be updated and improved to support management activities. Panel members stressed the need to continue to advance DAD-IS as a data and information management tool to provide the global basis for collecting and reporting on data and information on domestic animal diversity. The Panel endorsed further development and publication of the World Watch List for Domestic Animal Diversity, as this document is extremely valuable in increasing awareness of the loss of animal genetic resources.
- d) Priority continue to be given to developing the Breed Database component within DAD-IS, including adding the capacity to enter data and information on production environment parameters. The Panel noted the importance of being able to collate

data and information from national sources to prepare regional and global reports and undertake analysis. However, they stressed the need for flexibility in the development of national and regional data and information systems to allow for local needs and conditions.

- e) Priority continue to be given to development and distribution of secondary guidelines to assist countries with various management activities that are required to ensure the use, development, characterization, and conservation of animal genetic resources. Panel members stressed that these are important working documents and must be designed for specific target audiences, with separate documents produced for technicians and policy makers. They also stressed that more cost-effective ways must be found to produce and distribute these documents.
- f) Priority continue to be given to the establishment and maintenance of Regional Focal Points ensuring that each Regional Focal Point is designed and maintained in a way most appropriate to serve the needs and priorities of countries in its region. The Panel stressed that Regional Focal Points have become even more important in the further development of the Global Strategy than anticipated. They are essential for regional coordination, communication, facilitation and project and policy development. They also provide assistance in establishing National Focal Points, supporting capacity and institutional building, and facilitating interaction with donors.
- g) FAO continue to pursue financial resources to maintain the Asian Regional Focal Point for animal genetic resources. The Panel noted its extreme concern that the Regional Focal Point for Asia would not be maintained as result of a lack of financial resources. The Panel had also voiced its concern for the loss of the Asia Regional Focal Point at its second session in 1998. Loss of the Regional Focal Point in Asia is considered to be a significant setback to the Global Strategy, especially in an area so rich in animal genetic resources.
- h) The Panel stressed the need for FAO to continue to find opportunities to link Regional Focal Points with existing government and non-governmental organizations to ensure their sustainability over the long term. Panel members observed that linkages within regions would be essential to report on the State of the World's Animal Genetic Resources.
- i) In the establishment of Regional Focal Points, every effort should be made to involve scientific and non-government organizations that are involved with animal genetic resources, in addition to the appropriate government departments. Several Panel members stressed the critical roles and contributions to the management of animal genetic resources of scientific and non-governmental organizations, and emphasized the importance of ensuring their involvement in further developing the Global Strategy.
- j) FAO increase its efforts to establish donor support for Regional Focal Points, recognizing that significant financial investments are required to establish and maintain Regional Focal Points and that these investments are far beyond the current financial capability of the Global Focal Point for Animal Genetic Resources. The Panel stressed that the Global Focal Point must continue to play a key role in supporting Regional Focal Points by providing *inter alia*; common tools, assisting with training, further developing the data and information system, mobilizing financial and human resources, and supporting the work of the intergovernmental mechanism.
- k) FAO increase efforts to develop a more streamlined approach to reporting on progress in the further development of the Global Strategy. The Panel acknowledged the difficulty and effort that is required to develop progress reports,

but indicated that a system that better integrated data and textual information is essential to allow the Panel to evaluate progress. They also expressed the need for future progress reports to better attribute improvements in the management of animal genetic resources specifically to the Global Strategy, and that efforts to evaluate actual measures of impact that result from the Global Strategy be developed. The Panel suggested that future progress reports provide a framework or set of goals and objectives to provide a context for evaluating progress.

- l) FAO provide all papers and documents for Panel sessions to Panel members at least two weeks prior to the session.

The Report of the First Session of the Intergovernmental Technical Working Group on Animal Genetic Resources

15. The FAO Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture held its first session September 8-10, 1998 in Rome, Italy. Dr. Elzbieta Martyniuk, who was elected Chair of the Working Group, presented the report of the Working Group to the Panel.

16. Dr. Martyniuk stressed that the Intergovernmental Technical Working Group had conducted its debate and discussion in a positive manner and was able to arrive at several important recommendations. She summarized the recommendations found in the Report of the Working Group as follows:

- That FAO continue to shape more clearly the framework, and further develop the global strategy using core programme budget support and also seek extra-budgetary support;
- That Countries should identify their National Focal Points and where appropriate, Regional Focal Points; and
- That FAO should coordinate the development of a country-driven Report on the State of the World's Animal Genetic Resources.

17. Dr. Martyniuk also noted that several countries had commented on the composition of the Informal Expert Panel on Animal Genetic Resources, expressing the view that the Panel should have greater regional balance in its membership.

18. Dr. Martyniuk informed the Panel that the Report of the Working Group had been considered at January 1999 session of the FAO Committee on Agriculture. The Committee on Agriculture endorsed the Report and fully supported its recommendations. The Committee agreed that the Global Strategy would provide the framework for international cooperation on animal genetic resources and agreed on the urgent need for guidelines to be prepared in consultation with countries, to be used in the preparation of the Report on the State of the World's Animal Genetic Resources. Dr. Martyniuk informed the Panel that the FAO Commission on Genetic Resources for Food and Agriculture would consider the Report of the Working Group in April 1999.

19. Dr. Martyniuk expressed her appreciation for being invited to participate in the Panel's session, and noted that interaction between the Panel and the Working Group was essential to address both technical and policy matters related to the further development of the Global Strategy.

20. The Panel expressed their gratitude to Dr. Martyniuk for presenting the Report of the Working Group.

The Panel:

- Strongly endorsed all of the recommendations contained in the Report of the Intergovernmental Technical Working Group on Animal Genetic Resources, and volunteered to assist the Working Group with its activities.

- Recommended that the Intergovernmental Technical Working Group develop strong linkages with non-governmental and scientific organizations that are involved with animal genetic resources in order to effectively advance the development and implementation of the Global Strategy.

III. TECHNICAL ACTIVITIES CONSIDERED

Guidelines for Action Planning

21. The Global Strategy provides for the development of a user-friendly, comprehensive set of guidelines for use by countries to assist them to develop and implement policies, plans and technical operations necessary to effectively manage animal genetic resources. Guideline development is a key area of work for the Global Focal Point as guidelines for the management of animal genetic resources are lacking, although they provide cost-effective tools for countries to advance the management of these essential resources. Guidelines are distributed using both electronic and hard copy formats to maximize distribution and reduce costs.

22. The Secretariat informed the Panel of the guidelines that had been produced to date and described the process for developing and distributing guidelines. The Secretariat presented their priorities for developing future guidelines and asked the Panel to comment on the process for developing guidelines and to indicate what they considered priority areas for future guideline development.

23. The Panel was impressed with the range of guidelines that had already been produced and the quality of guidelines. Some members of the Panel indicated that the guidelines could be produced at reduced costs if the formats of the documents were improved, and less expensive covers and material were selected. They emphasized that the guidelines were working documents of most value to animal genetic resources specialists and the emphasis needed to be on the content, not visual aspects of the documents.

24. After reviewing the process for developing guidelines and discussing priorities for future guideline development,
the Panel recommended that:

- The open and transparent process for developing guidelines be retained and could be enhanced by increasing the involvement of National Coordinators and others most likely to use the guidelines in the design and development of future guidelines.
- Individual Panel members also should be involved in the production of specific guidelines, depending on their expertise.
- While the Secretariat must consider many factors in determining priorities for developing guidelines, the following areas should be given high priority:
 - Guidelines to assist countries to survey and monitor their animal genetic resources, including analytical tools to provide a sound and common basis for assessing the status of animal genetic resources;
 - Integration of production environment parameters with the Breeds Database in DAD-IS, to guide collection of this critical data and information and to make regional and global analysis and reporting possible and cost-effective;
 - Guidelines to assist countries better develop their breeding strategies;
 - Guidelines to assist countries to collect and analyze data and information required to prepare the first Report on the State of the World's Animal Genetic Resources; and
 - Guidelines to assist countries develop effective policies to support the use, development and conservation of animal genetic resources. This was viewed as an

essential activity as policies in the past have tended to favor the importation of exotic animal genetic resources without adequate consideration of alternative approaches and the long-term consequences. There are also several policy issues where guidance is required, for example related to intellectual property rights and other aspects of the Convention on Biological Diversity.

- Data and information on production environment parameters should be collected using hard copy formats until the electronic format is available on DAD-IS. Panel members felt that this data and information should be collected as breed surveys are already underway in many locations, and data and information on production environments could be captured during these surveys and later entered into the electronic data and information system when it is developed.

Valuation of Animal Genetic Resources

25. The importance of understanding the values of animal genetic resources was discussed at the first and second sessions of the Panel, where Panel members expressed the view that improved understanding of the value of animal genetic resources would serve as a basis for better management of animal genetic resources, including the development of policies that support the wise use of these resources. In March of 1999, FAO and ILRI jointly sponsored a workshop on valuation. The purpose of the workshop was to: advance understanding of the current state of the art of valuation; establish a strategic approach to enhancing methods to advance valuation of animal genetic resources; to establish the extent to which market and policy failures affect the management of animal genetic resources; and to establish work plans for both FAO and ILRI in the field of valuation.

26. Professor Robert Mendelsohn presented the results of the workshop to the Panel. He informed the Panel that valuation methods had not been adequately developed for animal genetic resources and thus, significant research and testing were required. Professor Mendelsohn described briefly a range of valuation tools that workshop participants considered to have potential for measuring values, and the need to test these tools in a variety of locations using a variety of domestic animal species. The workshop report provides specific recommendations for a strategic research program on valuation and a program of work to begin to investigate policies and technical issues associated with the valuation of animal genetic resources.

27. The Panel welcomed the results of the workshop on valuation and considered this as a very important step to improved valuation of animal genetic resources. Based on the report and presentation by Professor Mendelsohn,
the Panel:

- Strongly endorsed the recommendations contained in the valuation workshop report and encouraged FAO and ILRI to advance work on valuation as soon as possible.

DAD-IS - Use and Development

28. The Domestic Animal Diversity Information System, (DAD-IS), is a key element of the country-based planning and implementation component of the Global Strategy. The Secretariat described the process for designing and testing Stage 1 of DAD-IS over a three-year period, 1993-1996. DAD-IS was developed primarily from extra-budgetary financial resources with support from the core-funding base. DAD-IS was rapidly accepted and used, especially by National and Regional Coordinators and others directly involved in the management of animal genetic resources, and is also being used by many other users with direct and indirect involvement with animal genetic resources.

29. The Secretariat provided several documents on DAD-IS, which describe its role and progress that have been made to advance this essential tool. The Secretariat emphasized that DAD-IS consists of two basic components: 1) a communication and information management

tool; and 2) a source of information including data on animal genetic resources, project reports, guidelines and other essential information that can assist countries to manage their animal genetic resources.

30. The Secretariat outlined the benefits of DAD-IS to countries. The primary benefit is that DAD-IS provides countries with a low cost, advanced communication and information system for secure country use, which will significantly assist them to manage their animal genetic resources. The secondary benefit is that the system will provide a mechanism for transboundary coordination and facilitation of elements of the Global Strategy; including databanking functions; training, research; capacity building, characterization, policy development and reporting at all levels.

31. The Secretariat described the evolution of DAD-IS, noting that Stage 1 provided an Internet access system with a range of functionality including: databases to assist in the collection and use of essential animal genetic resources data; an action planner, guidelines, a bulletin board; an electronic library, hotlinks to other relevant web sites, and lists of contact persons and organizations in the field of animal genetic resources.

32. Stage 2 of DAD-IS was released in September of 1998, introducing many improvements. It is now an on-line and off-line system and is a multi-language system (French, English and Spanish), with some demonstration capacity in Arabic and Chinese. It contains a dynamic updating and validation system of the Breeds Databank and the capacity to partition databanks by country and region.

33. The Secretariat outlined some of the next recommended developments to DAD-IS and provided an indication of the human and financial resources that are required to maintain the system at the Global Focal Point in order to serve Regional and National Focal Points. There is currently insufficient core funding to either further develop DAD-IS or provide adequate moderation and support to Regional and National Focal Point development and use of DAD-IS.

34. The Panel acknowledged the critical role of DAD-IS in the further development and implementation of the Global Strategy. The Panel expressed concern that there were not sufficient financial resources available to further develop DAD-IS nor to maintain adequate support for maintenance and moderation functions at the Global Focal Points to serve Regional and National Focal Points.

The Panel recommends:

- The further development of DAD-IS to enhance country capacity to manage their animal genetic resources, and stressed that adequate financial support must be found for the system at the Global Focal Point through increased core funding to the animal genetic resources programme, and by continuing to seek extra-budgetary financial resources. The Panel recognized that provision of financial resources was not a technical issue, however, they expressed the view that existing financial resources were not adequate to support further technical work, and thus concluded that addressing financial issues was within their mandate. The Panel stressed that the issue of financial resources must be resolved in the immediate future as use of DAD-IS is growing and the system is increasing its functionality and must continue to do so. Adequate support for the system is required to support country and regional use of this essential tool.
- That FAO continue to use the open and transparent processes that it had been using to design, test and evaluate DAD-IS, and stressed that stakeholder involvement in the future development of DAD-IS would need to be increased to accommodate specific national and regional requirements.
- That FAO and countries needed to develop clear policies to ensure that DAD-IS users understand the conditions of use and their roles and responsibilities. Panel members stressed the need for flexibility in developing aspects of DAD-IS to allow for regional and country differences but also emphasized the need for standards and protocols to

ensure effective sharing of data and information. Panel members stressed that while it was desirable and necessary to allow regional data and information systems to evolve to meet local needs, compatibility between systems must be maintained, which would ensure a global data and information system for animal genetic resources.

- That FAO examine alternative measures to further develop and maintain DAD-IS in light of inadequate financial resources, including releasing responsibility of further development of DAD-IS to regions and countries, or releasing the source codes into the public domain to allow for further development by research institutions and private sector interests.
- The further development of DAD-IS in other FAO official languages be undertaken as financial resources allow. The Panel acknowledged the value of having DAD-IS available in multiple languages but also understood that this involved significant design and translation costs, and suggested that FAO investigate establishment of partnerships to assist with translation services and design costs.
- That the evaluation of DAD-IS Stage 2 and the Breeds Database prepared by Pardeep Vij, as well as feedback from the primary users be given careful consideration in further development of DAD-IS. Panel members agreed to provide detailed comments on ways and means to further develop DAD-IS out of session.
- That future development of DAD-IS give high priority to the following areas: integrating the Breeds Database with environmental production parameters; maintaining and enhancing the database on breeds of livestock; and ensuring that DAD-IS can be used by countries and regions to support their participation in the preparation of the first Report on the State of the World's Animal Genetic Resources.

Communications

35. Effective communication is required to further develop and implement the Global Strategy, enhance public awareness of the roles and values of animal genetic resources, and to mobilize financial resources. The Secretariat provided several communication products to the Panel including: a Draft Communication Strategy, an Evaluation Report of the draft Communication Strategy; a recently produced video on animal genetic resources in Asia; a sample of the Animal Genetic Resources Information Bulletin; a recently produced Executive Brief for the Global Strategy; the Rationale for the Global Strategy; and DAD-IS on CD-ROM.

36. Panel members were satisfied with the communications products that FAO had developed over the past year. However, they stressed that communication efforts need to be enhanced as communication was key to increasing donor awareness of the roles and values of animal genetic resources, and the need to increase investments in the management of these resources. To advance communication efforts,

the Panel recommends that:

- High priority be given to revising the draft Communication Strategy taking into consideration the Evaluation Report and recommendations provided by the Panel at their second session. The Panel stressed that the Communication Strategy should identify key target audiences, recommend specific communication products and means of distribution, consider means to enhance corporate identity for the Global Strategy, and suggest options to monitor use of products.
- FAO evaluate options to reduce the costs of producing communication products and distributing them. Some Panel members felt that cost could be reduced by increasing distribution of communication products by electronic means and changing the format of publications.
- The video on animal genetic resources be produced and widely distributed as soon as financial resources are available. The Panel stressed that financial sponsors such as cable

networks may provide an effective means to distribute the video. The Panel also stressed the need for the video and its shooting location characterisation to be documented in a searchable electronic format to make it possible to derive other products from this valuable resource.

- The Executive Brief for the Global Strategy, which was requested by the Panel at their second session in 1998, be widely distributed to increase understanding of the Global Strategy, especially among non-experts in the field of animal genetic resources. All Panel members agreed to assist the Secretariat identify target audiences and means of distribution.
- The Conceptual Rationale for the Global Strategy for the Management of Farm Animal Genetic Resources be updated to provide a sound technical document to explain the basis for the Global Strategy - targeting technical experts directly or indirectly involved in animal genetic resources. All Panel members agreed to assist the Secretariat in this review and updating.
- To increase awareness of the FAO/ISAG (International Society for Animal Genetics) list of recommended microsatellite markers for several of the major domestic animal species, FAO should pursue publication in a recognized journal such as *Animal Genetics* (as previously recommended by the Panel at its second session). The Panel accepted that a review of the microsatellite markers may be required.
- Priority be given to producing a guide for policy makers to increase awareness of key policy issues related to the management of animal genetic resources. Management is meant here in its broadest sense, so that future policy development related to animal genetic resources, would take place with an understanding of all policy issues. This would include for example, examining the legal framework for animal genetic resources to ensure consistency with international agreements.
- Publication of the Animal Genetic Resources Information Bulletin continue, but that an Editorial Board be instituted to assist the Editors. Some Panel members suggested changes to the Bulletin while others appreciated its current style and content. The Panel concluded that the role of the Bulletin needed to be determined as part of the overall communication strategy, prior to any significant changes to the publication.

37. The Panel reviewed a set of definitions and terms that had been produced during the second session of the Panel in 1998. Common definitions and understanding of terms is essential for effective communication. Thus, the Panel agreed to continue to develop the definitions and terms out of session – with this work to be coordinated by Professor Barker. The Secretariat was requested to begin to ensure that documents they produced used the definitions and terms that had been developed and agreed

First Report on the State of the World's Animal Genetic Resources

38. Dr. Martyniuk briefly described the recommendations contained in the Report of the Intergovernmental Technical Working Group that were related to the First Report on the State of the World's Animal Genetic Resources. The Working Group recommended *that FAO coordinate the development of a country-driven Report on the State of the World's Animal Genetic Resources, that would provide an assessment of countries' animal genetic resources programmes and the state of farm animal genetic resources.*

39. If the Commission accepted the recommendations of the Working Group, preparation of the State of the World's Animal Genetic Resources could begin as soon as financial resources were secured.

40. At its second session, the Panel strongly endorsed preparation of the State of the World's Animal Genetic Resources, and recommended that the process for developing the Report be open

and transparent.

The Panel:

- Reaffirmed the important role that the first Report on the State of the World's Animal Genetic Resources would play in advancing the further development and implementation of the Global Strategy.
- Committed themselves to assisting FAO prepare guidelines to assist countries participate in efforts to prepare the first Report on the State of the World's Animal Genetic Resources.
- Recommended that communication messages and products be developed to explain the rationale for the Report on the State of the World's Animal Genetic Resources, using documentation provided to the first session of the Intergovernmental Technical Working Group on Animal Genetic Resources, and other sources of information, and agreed to assist the Secretariat produce these materials.

Global Early Warning System

41. The Global Strategy provides for development and maintenance of an Early Warning System and Emergency Planning and Response for animal genetic resources. Since 1988, efforts have been directed at improving global collection and recording of data and information on the status of animal genetic resources. Currently, the databank includes information on more than 5 300 populations from 35 domestic species, spanning 173 countries. National Focal Points for animal genetic resources are able to view, edit and update animal genetic resources data directly via the Internet or on stand alone CD-ROMs.

42. Through a partnership between FAO and UNEP, the data and information collected on animal genetic resources have been used to produce two editions of the World Watch List for Domestic Animal Diversity, with a 3rd edition being prepared. Analysis of the data and information contained in the World Watch List indicated that of the 3 882 breeds contained in the database at that time, 19% were considered to be at high risk of being lost.

43. While the World Watch List has increased awareness of the potential and rapid loss of animal genetic resources, resources to develop an effective Global Warning and Response System have not been made available.

44. Panel members expressed their concern for the rapid loss of animal genetic resources and stressed the need for a global early warning and response system. The system must track populations at risk, assist in identifying unique characteristics and propose options to ensure the cost-effective conservation of breeds at greatest risk of being lost. The Panel stressed the need for FAO to begin to develop an early warning and response system as soon as possible and

the Panel recommended that:

- FAO develop a detailed proposal for an early warning and response system for animal genetic resources for consideration at the next meeting of the Panel.

IV. WORK PLANS AND FUNDING

45. The Secretariat presented to the Panel its proposed plan of work for the period 2000-2001 and the next two biennia. The planned essential core activity for the next two biennia at the Global Focal Point is based on 46% of the funding coming from the Regular Programme budget with the rest being provided through extra-budgetary resources. While Regular Programme funding remains relatively stable, less resources are available for activities as a result of salary increases and the costs of operating the Intergovernmental Technical Working Group meeting, which consumed a significant amount of the operating budget for the 1998/99 period.

46. The Panel found the proposed work plan to be comprehensive and logical to advance development and implementation of the Global Strategy. However, the Panel also expressed concern that the work plan was extremely ambitious given the available human and financial resources. Given the importance of animal genetic resources to food security and rural development and the need to further develop and implement the Global Strategy to assist countries manage these valuable resources,

the Panel recommends:

- Increased funding from the Regular Programme Budget to support priority activities necessary to advance development and implementation of the Global Strategy.
- FAO host a donor and stakeholders meeting as soon as possible to increase extra-budgetary support for the Global Strategy, including preparation of the first Report on the State of the World's Animal Genetic Resources.
- FAO continue to pursue partnerships to assist in the development and implementation of the components and elements of the Global Strategy.
- The Secretariat take into consideration the priority activities identified by the Panel in the further development of their work plans.

V. PANEL *Modus Operandi*

47. Following their review of the *Modus operandi*

Panel members:

- Indicated their willingness to assist the Secretariat with areas of the Global Strategy in which they have expertise, between sessions of the Panel.
- Suggested that there be increased communication between the Secretariat and members of the Panel between sessions of the Panel and that both the Secretariat and Panel members contribute agenda items for future sessions.
- Endorsed their expanded membership and congratulated FAO for the significant effort they had made to achieve regional balance in the makeup of the Panel; and for ensuring that there was expertise in the many subject areas that needed to be addressed to advance the Global Strategy.
- Elected Professor Eildert Groeneveld to chair the next session of the Panel.
- Thanked Professor Barker for chairing the meeting in a fair and efficient manner and for his efforts to bring discussions to meaningful conclusions.

*Appendix 1***INFORMAL PANEL OF EXPERTS ON THE DEVELOPMENT OF THE GLOBAL STRATEGY FOR THE MANAGEMENT OF FARM ANIMAL GENETIC RESOURCES****Third Session****Rome, 22 - 24 March 1999****INTRODUCTION BY DR. SAWADOGO
ASSISTANT DIRECTOR-GENERAL, AGD
(OFFICER IN CHARGE, ANIMAL PRODUCTION AND HEALTH DIVISION)
22 March 1999**

The governing bodies of FAO have identified as a priority activity the development of the Global Strategy for the Management of Farm Animal Genetic Resources. FAO will lead, co-ordinate, facilitate and report globally on the Strategy's further development. The November 1996 Decision III/11 by the governing Conference of Parties to the Convention on Biological Diversity (CBD) also strongly supports the development of the Global Strategy and recognised FAO's lead role in this. Hence, this area of work, developing the Global Strategy, is an important part of FAO's follow-up to the United Nations Conference on Environment and Development (UNCED). A consequence is that the Strategy must provide for the three primary objectives of the CBD, inter alia, conservation of biological diversity, sustainable use of biological resources and the sharing of benefits arising from the use of genetic resources.

The World Food Summit's Plan of Action negotiated by most countries also in November 1996, incorporates in its set of Commitments by signatory countries, the conservation and sustainable use of Animal Genetic Resources, recognising the contribution of these essential resources to sustainable food security.

Understanding, cost-effectively using, and developing in a sustainable manner the breeds of livestock which comprise these farm animal genetic resources, will be demanding on country technical and policy capacity, as the spectrum of management processes are complex and are currently undergoing rapid development for expanded practical use.

FAO is well positioned to lead and co-ordinate country assistance providing technical guidance and supporting capacity building, and in facilitating the discussion and debate of policy issues. The Organization also has ready access to the best available expertise, to assist it to build a sound technical and policy foundation for the proper management of the irreplaceable animal genetic resources. This Panel is a critical component of the available expertise and will assist FAO in determining needs and priorities.

This Panel met for the first time in May 1996 and adopted the following terms of reference: The Panel will:

1. Evaluate the components and elements of the Global Strategy.
2. Review progress in the implementation of the Global Strategy and consider options for its further development.
3. Regularly consider the operational effectiveness of the Global Strategy.
4. Advise the responsible officers and staff on the development of the Global Strategy.
5. Arrange and conduct its programme of work, as agreed by the Director of the Animal Production and Health Division, to effect these terms of reference.

These terms of reference ask that you not only review progress and assist in identifying gaps and priority activities required for the successful development of the Global Strategy, it ask you to

also contribute to detailing the technical elements involved in the Strategy, which will involve your commitment to work both in and out of session.

Membership in this Panel has changed significantly to reflect the need for regional balance and the need for the broad spectrum of expertise that is required to address the interrelated components and elements of the Global Strategy. This was strongly endorsed by countries at the first session of the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture. I would like to welcome the many new members of the Panel and express to you by belief that this mixture of new and old members is ideal for ensuring both continuity and bringing new ideas to this important initiative.

Some significant events have taken place since the last meeting of the Panel. The Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture held its first session in September of last year. We are fortunate to have the Chair of the Working Group with us today, Dr. Martyniuk from Poland. The holding of the first session of Working was very significant in terms of beginning the transfer and ownership of the Global Strategy to countries.

The Intergovernmental Technical Working Group for Animal Genetic Resources made several key recommendations to advance the Global Strategy, including enhancing functionality of DAD-IS; and recommended to the Commission on Genetic Resources for Food and Agriculture that a Report on the State of the World's Animal Genetic Resources be initiated. The Commission will consider the recommendation of the Intergovernmental Working Group in April of this year. This will represent the first time that animal genetic resources, which underpin livestock production globally, will be substantively considered by the member countries of the Commission on Genetic Resources for Food and Agriculture

The second key event that occurred since the last meeting of the Panel, was the release of Stage 2 of DAD-IS. This has greatly enhanced the use of this essential data and information management tools and will assist countries to better manage their animal genetic resources.

I would like to assure you on the onset of this meeting, that your advice will make a significant contribution. It will be used by FAO to advance our work in animal genetic resources and will be made available to the next session of the Intergovernmental Technical Working Group for Animal Genetic Resources.

Finally, I would like to say a word about your Chair. Professor Barker has served as the Chair for the past two meetings of the Panel and has agreed, if acceptable to all Panel members, to chair this session. The Panel would then choose their Chair for the next session of the Panel.

Thank you for your commitment to participate in this Panel. You have an extremely challenging agenda and I hope that your discussions are fruitful. I look forward to your valuable contributions.

Appendix 2

Table 1. Constituents of the Global strategy

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

Appendix 3

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