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para la  
Alimentación y la  
Agricultura

# COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

## Item 3.1 of the Provisional Agenda

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

#### Seventh Session

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### IMPLEMENTATION OF THE *GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES AND THE INTERLAKEN DECLARATION*

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## **IMPLEMENTATION OF THE *GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES* AND THE *INTERLAKEN DECLARATION***

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### **I. INTRODUCTION**

1. The Commission on Genetic Resources for Food and Agriculture (Commission), at its Thirteenth Regular Session, welcomed progress reached in the implementation of the *Global Plan of Action for Animal Genetic Resources*<sup>1</sup> (*Global Plan of Action*), requested FAO to assign due priority in its budget and appealed to all FAO Members and relevant international mechanisms, funds and bodies, to give due priority and attention to the effective allocation of predictable and agreed resources for the implementation of the *Global Plan of Action*.<sup>2</sup>

2. The present document reports on FAO activities since the Commission's Thirteenth Regular Session.<sup>3</sup> The activities are grouped according to their relevance to the four strategic priority areas of the *Global Plan of Action*. More detailed information is provided in the document, *Detailed FAO progress report on the implementation of the Global Plan of Action for Animal Genetic Resources*.<sup>4</sup>

### **II. STATUS OF IMPLEMENTATION OF THE *GLOBAL PLAN OF ACTION***

3. There are different ways to assess the status of implementation of the *Global Plan of Action* which is implemented by different stakeholders in varying ways, under varying conditions and with varying priorities. The Commission, at its Twelfth Regular Session, agreed to assess the status of implementation of the *Global Plan of Action* through process and resource indicators.<sup>5</sup> Countries, regions and international organizations report on processes initiated to implement the *Global Plan of Action*. In addition, countries report through the Domestic Animal Diversity Information System (DAD-IS) on the status of their national breed populations. This section provides a brief summary of the Country Progress Reports, reports received from regions and international organizations and reports on the status of breed populations. It also provides some recent evidence of the policy impact of the *Global Plan of Action* at country and regional level.

#### **A. Progress reporting by countries, regions and international organizations**

4. In response to the Commission's request<sup>6</sup>, FAO initiated the preparation of Country Progress Reports, Regional Progress Reports and reports from international organizations on the implementation of the *Global Plan of Action*. FAO received 85 Country Progress Reports, 4 Regional Progress Reports and 11 reports from international organizations,<sup>7</sup> reflecting a high level of interest in the implementation process. More details on and an analysis of these reports are contained in the document, *Synthesis progress report on the implementation of the Global Plan of Action for Animal Genetic Resources – 2012*<sup>8</sup> (Synthesis report).

5. Analysis of the impact of the *Global Plan of Action* at country level reveals that substantial improvements have been made since 2007. However, the Country Progress Reports indicate that the state of implementation of the various elements of the *Global Plan of Action*, and the extent to which progress has been made since 2007, vary substantially among countries and regions, although some

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<sup>1</sup> CGRFA-13/11/Report, paragraph 75.

<sup>2</sup> CGRFA-13/11/Report, paragraph 73.

<sup>3</sup> CGRFA-13/11/15.

<sup>4</sup> CGRFA/WG-AnGR-7/12/Inf.2.

<sup>5</sup> CGRFA-12/09/Report, paragraph 38, 39.

<sup>6</sup> CGRFA-12/09/Report, paragraph 38.

<sup>7</sup> [http://www.fao.org/ag/againfo/programmes/en/genetics/Reporting\\_system.html](http://www.fao.org/ag/againfo/programmes/en/genetics/Reporting_system.html)

<sup>8</sup> CGRFA/WG-AnGR-7/12/Inf.3.

caution is needed in interpreting the regional figures because of the uneven coverage of the reporting. Implementation is generally at a high level in Europe and the Caucasus and North America, at a medium level in Asia, and at a low level in other regions. However, individual countries from all developing regions have reached high levels of implementation in some aspects of the *Global Plan of Action*. Likewise, some countries from developed regions have reached only low levels of implementation in some aspects. For the world as a whole, the indicator for Strategic Priority Area 4 (Policies, institutions and capacity building) shows a lower level of implementation than the indicators for the other three strategic priority areas. However, for several developing regions, it is Strategic Priority Area 3 (Conservation) that has the lowest indicator scores.

6. In all regions, the indicators for the state of collaboration and for the state of funding show a lower level of implementation than those for the strategic priority areas themselves. Financial constraints are also the most frequently mentioned obstacles to the implementation of the *Global Plan of Action*.

7. Regional Progress Reports on the state of implementation of the *Global Plan of Action* present a mixed picture. Several regions of the world do not yet have a Regional Focal Point or regional network. Activities are most advanced in Europe, the region with the longest-established Regional Focal Point, where a range of activities are reported across all the strategic priority areas of the *Global Plan of Action*. A more limited range of activities is reported by the Regional Focal Point for Latin America and the Caribbean and the Animal Genetic Resources Network – Southwest Pacific. The Sub-Regional Focal Point for West and Central Africa, launched only in June 2011, has established regional priorities for action in the various strategic priority areas of the *Global Plan of Action*.

8. A small number of international organizations continue to make an important contribution to the implementation of the *Global Plan of Action*, often via innovative, efficient and participatory programmes and projects. The activities of these organizations span the four strategic priority areas of the *Global Plan of Action*.

9. Overall, despite the significant impact of the *Global Plan of Action*, the task of improving the management of the world's animal genetic resources management remains far from complete. The reason for this lies mainly in a lack of sufficient financial resources, but also in low levels of collaboration between countries, a lack of established policies and legal frameworks, and a lack of strong institutional and human capacity for planning in the livestock sector. Decision-makers are encouraged to use the country-level indicators presented in the Synthesis report as a means of identifying strategic priority areas and strategic priorities where action is particularly required.

## **B. Reporting on breed populations**

10. The number of countries which updated national breed data in the Domestic Animal Diversity Information System (DAD-IS) increased with 28 countries in 2012, as compared to 7 countries which updated their national breed data in 2011. Since 2010, the percentage of breeds for which population data are available has improved slightly; data are now available for 48 percent of avian and 57 percent of mammalian breeds. Based on these data, a total of 1881 breeds (23 percent) are classified as at risk. The latest *Status and trends report on animal genetic resources – 2012* has been made available by FAO.<sup>9</sup>

11. Global summaries of breed risk status have again been affected by corrections to breed inventories and by some improvements in the reporting of data on breed population sizes. However, with the currently available data and updating tools, no reliable conclusions can be drawn with regard to global trends in breed risk status. If future status and trends reports are to provide meaningful inputs to decision-making in animal genetic resources management, reporting, including the frequency of reporting, on the size of national breed populations need to

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<sup>9</sup> CGRFA/WG-AnGR-7/12/Inf.4.

improve considerably. National Coordinators for the Management of Animal Genetic Resources should also enter historical data in DAD-IS, as these will help to provide a more complete picture which will allow to identify and analyze trends in breed population size and structure.

12. DAD-IS is crucial for monitoring the implementation of the *Global Plan of Action*. DAD-IS also serves as Clearing-House Mechanism for animal genetic resources recognized by the Convention on Biological Diversity. A module that enables the geo-referencing of the distribution of national breed populations and the description of their production environments has been developed for DAD-IS. In response to requests by the FAO Conference and the Commission<sup>10</sup>, DAD-IS has been maintained and further developed through voluntary contributions. However, no such funds are available as of 2013; the future of DAD-IS is therefore not secure.

### C. Policy impact

13. Since its adoption in 2007, the *Global Plan of Action* has become a key instrument for the conservation and sustainable use of animal genetic resources at global, regional and national levels. *The State of the World's Animal Genetic Resources for Food and Agriculture* and the *Global Plan of Action* have been published in all official languages of FAO. Countries have translated the *Global Plan of Action* into eleven additional languages<sup>11</sup> and further translations are under preparation. FAO continues distributing these publications and assists with the preparation of translations.

14. The *Global Plan of Action* has inspired regional strategies on animal genetic resources. The Strategic Plan 2010–2014 of the African Union Interafrican Bureau for Animal Resources contains a programme on “Enhancing Africa’s capacity to conserve and sustainably use its animal resources and their natural resource base”.<sup>12</sup> Similarly, the Economic Community of West African States, in its Strategic Action Plan for the Development and Transformation of the Livestock Sector in the ECOWAS Region (2011–2020), includes programmes on evaluation and harmonization of the management of genetic resources and facilitation of the development of regional centres of excellence and genetic value addition to local breeds, as well as on capacity building.

## III. FAO SUPPORT TO THE STRATEGIC PRIORITY AREAS OF THE GLOBAL PLAN OF ACTION

15. FAO concentrates its support to the implementation of the *Global Plan of Action* on areas of strategic importance, such as the development of technical guidelines to support countries in their implementation of the *Global Plan of Action*. This section provides some examples of FAO’s activities in the four strategic priority areas of the *Global Plan of Action* and some cross-cutting areas. More detailed information is provided in the document, *Detailed FAO progress report on the implementation of the Global Plan of Action for Animal Genetic Resources*<sup>13</sup>.

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<sup>10</sup> CGRFA-12/09/Report, paragraph 39; CGRFA-13/11/Report, paragraph 76; C 2009/REP, paragraph 68.

<sup>11</sup> <http://www.fao.org/docrep/010/a1404e/a1404e00.htm>

<sup>12</sup> [http://www.au-ibar.org/index.php?option=com\\_flexicontent&view=items&cid=85&id=170](http://www.au-ibar.org/index.php?option=com_flexicontent&view=items&cid=85&id=170)

<sup>13</sup> CGRFA/WG-AnGR-7/12/Inf.2.

### **A. Strategic Priority Area 1: Characterization, inventory and monitoring of trends and associated risks**

16. FAO, in collaboration with partners, continued to pursue the standardization of methods for molecular and phenotypic characterization of animal genetic resources, a prerequisite for cross-country comparisons and meta-studies, and for the storage of data in publicly accessible databases. The genetic and phenotypic characterization of livestock breeds received support through various projects. Capacity-building workshops on characterization, inventory and monitoring were held in Estonia and Tunisia, and an expert meeting was convened in Togo. The Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture (AGE) is supporting several related projects and has developed a web-accessible database for storage and exchange of molecular data. The data generated through AGE projects are being utilized to identify genes that could have economic or environmental importance.

17. To facilitate global analysis of breed diversity through molecular genetic characterization, FAO published and widely distributed the guidelines, *Molecular genetic characterization of animal genetic resources*<sup>14</sup>, which had been endorsed by the Commission at its Thirteenth Regular Session. The guidelines promote the use of standard microsatellite marker sets for various species of livestock. FAO continues to collaborate with the International Society for Animal Genetics, through their Advisory Group on Animal Genetic Diversity, and monitors new biotechnological developments for their utility in the characterization of animal genetic resources.

18. FAO published the guidelines *Phenotypic characterization of animal genetic resources*<sup>15</sup>. The guidelines provide guidance as to how to conduct a well-targeted and cost-effective phenotypic characterization study that contributes to the improvement of animal genetic resources management in the context of country-level implementation of the *Global Plan of Action*.

19. FAO also published and widely distributed the guidelines, *Surveying and monitoring of animal genetic resources*.<sup>16</sup> The Commission requested that status and trends reports include the relevant Convention on Biological Diversity headline indicator and requested its Working Group on Animal Genetic Resources to work further on the definitions of breed categories for potential use in calculating indicators. To assist in this process, FAO undertook informal surveys and collected relevant information from other sources. Conclusions are summarized in the information document, *Report of a consultation on the definition of breed categories*.<sup>17</sup>

### **B. Strategic Priority Area 2: Sustainable use and development**

20. The Commission requested FAO to continue capacity-building and training in the management of animal genetic resources for food and agriculture, and to extend these activities to more regions and sub-regions. During the period under review, FAO supported technically and financially various research projects and capacity-building activities related to the sustainable use and development of animal genetic resources, in cooperation with other stakeholders, including breeding industry organizations, universities, research institutes and non-governmental organizations.

21. Several countries received support through Technical Cooperation Projects, administered by FAO and the Joint FAO/IAEA Division (AGE) that focused on a range of issues, including livestock development, animal identification and traceability, breed improvement and reproductive technologies. In addition, technical support was provided to two projects sponsored by the Global Environment Facility, in Southeast Asia and West Africa.

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<sup>14</sup> [www.fao.org/docrep/014/i2413e/i2413e00.pdf](http://www.fao.org/docrep/014/i2413e/i2413e00.pdf)

<sup>15</sup> [www.fao.org/docrep/015/i2686e/i2686e00.pdf](http://www.fao.org/docrep/015/i2686e/i2686e00.pdf)

<sup>16</sup> <http://www.fao.org/docrep/014/ba0055e/ba0055e00.htm>

<sup>17</sup> CGRFA/WG-AnGR-7/12/Inf.7.

22. FAO cooperated with the International Committee for Animal Recording and the Pan-American Dairy Federation to organize a regional workshop on animal identification and traceability in Latin America and the Caribbean. Guidelines for animal identification, traceability and performance recording in low and medium input production systems are under preparation.

23. Several on-going projects aim at assessing ecosystem services that local breeds provide and exploring the potential of payments for ecosystem services. One project in China is developing a method to assess the sequestering of soil carbon through improved grazing management, thereby facilitating the access of small-scale herders keeping local breeds to carbon markets. Capacity development on adding value to products from local breeds is ongoing.

### **C. Strategic Priority Area 3: Conservation**

24. At its Thirteenth Regular Session, the Commission endorsed the guidelines, *Cryoconservation of animal genetic resources*,<sup>18</sup> which will be published before the end of 2012. In accordance with the Commission's request that FAO continue updating and further developing technical guidelines supporting the implementation of the *Global Plan of Action*,<sup>19</sup> FAO prepared the document *Draft technical guidelines for the implementation of the Global Plan of Action for Animal Genetic Resources*.<sup>20</sup> Guidelines for review by the Working Group are contained in the document, *Draft guidelines on in vivo conservation of animal genetic resources*.<sup>21</sup>

25. Exchange of animal genetic resources for the purpose of multi-country management activities was among the topics addressed at a regional workshop on legal and institutional arrangements for *ex situ* conservation of animal genetic resources held in Croatia in May 2012. However, insufficient resources and time constraints have so far precluded the extension of the discussion to the global level.

26. Practical constraints, such as a lack of regular access to liquid nitrogen, limit the possibilities to conserve animal genetic resources through cryo-conservation at national level in some regions. These constraints could be addressed by regional initiatives, including regional genebanks. However, such regional initiatives may require an agreement on the conditions of which material may be stored and possibly transferred to third parties.

### **D. Strategic Priority Area 4: Policies, institutions and capacity-building**

27. The Commission, at its Thirteenth Regular Session, endorsed the guidelines, *Development of the institutional framework for the management animal genetic resources*, which have been published and widely distributed.<sup>22</sup>

28. FAO and its partners contributed to the development and/or implementation of 37 projects involving more than 45 countries. Over the past two years, FAO organized with partners 19 regional capacity-building activities with an average of 14 countries participating.

29. FAO contributed to a range of cross-cutting initiatives related to biodiversity, biotechnology and nutrition, including scientific papers on the interactions between animal genetic resources and climate change as well as other environmental issues and sustainable diets. The fiftieth volume of the journal *Animal Genetic Resources* was published in 2012. With its more than 400 papers published over a period of nearly 30 years, the journal continues to be a key publication for the sector and an important supporting tool for the implementation of the *Global Plan of Action*.

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<sup>18</sup> CGRFA-13/11/Report, paragraph 79.

<sup>19</sup> CGRFA-12/09/Report, paragraph 41; CGRFA-13/11/Report, paragraph 79.

<sup>20</sup> CGRFA/WG-AnGR-7/12/3.

<sup>21</sup> CGRFA/WG-AnGR-7/12/Inf.6.

<sup>22</sup> <http://www.fao.org/docrep/014/ba0054e/ba0054e00.htm>

30. FAO collaborated with National Coordinators and other regional stakeholders to establish a single Sub-Regional Focal Point for West and Central Africa. The final agreement was reached at a workshop held in Gabon, in June 2011, which culminated in the signing of the “Libreville Declaration”. FAO prepared a regional TCP project with the objective of strengthening the Sub-Regional Focal Point for West and Central Africa and launching activities for the establishment of a Sub-regional Focal Point in Eastern Africa. FAO continued its collaboration with the Regional Focal Points for Europe and for Latin America and the Caribbean.

31. A project funded by Turkey aiming at strengthening National Focal Points; establishing a Sub-regional Focal Point for Central Asia, Turkey and Azerbaijan and developing National Strategy and Action Plans by each participating country is currently being implemented.

32. The Thirty-seventh Session of the FAO Conference stressed the importance of addressing the particular needs of small-scale livestock keepers and pastoralists, custodians of much of the world’s animal genetic resources, and encouraged their full and effective participation in the implementation of the *Global Plan of Action*.<sup>23</sup> The working document *Roles of small-scale livestock keepers in the conservation and sustainable use of animal genetic resources*<sup>24</sup> describes the current status. A study, *Invisible guardians – women manage livestock diversity*, published by FAO in 2012 concludes that it is mainly women that act as guardians of the remaining locally adapted livestock breeds, due to their responsibility for shouldering the reproductive economy and their tendency to favour risk-avoiding livelihood strategies.

#### IV. COLLABORATION

33. The FAO Conference, at its Thirty-seventh Session, requested FAO to continue partnerships with other organizations in the implementation of the *Global Plan of Action*.<sup>25</sup> FAO continued its interaction with various scientific organizations, non-governmental organizations and the breeding industry. It organized joint sessions at scientific conferences and continues to operate DAD-Net as an informal forum for the discussion of issues relevant to the management of animal genetic resources. FAO’s scientific contributions further increased awareness of the *Global Plan of Action* in the scientific community.

34. With a wide range of partners on cross-cutting issues such as climate change, value addition and identifying co-benefits of better animal genetic resources management. For example, animal identification, performance recording and traceability link animal breeding to the health sector, while improved grazing management links sustainable use and conservation of animal genetic resources to natural resources management and carbon sequestration.

#### V. IMPLEMENTATION AND FINANCING OF THE GLOBAL PLAN OF ACTION

35. Details of the status of implementation of the Funding Strategy, including the FAO Trust Account, are presented in the document, *Review of the Funding Strategy for the implementation of the Global Plan of Action for Animal Genetic Resources*.<sup>26</sup> The document also reports on the resources FAO contributed to the implementation of the *Global Plan of Action*, under its regular programme and voluntary contributions, and through its technical cooperation programme.

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<sup>23</sup> C 2011/REP, paragraph 70.

<sup>24</sup> CGRFA/WG-AnGR-7/12/6.

<sup>25</sup> C 2011/REP, paragraph 70.

<sup>26</sup> CGRFA/WG-AnGR-6/10/4.

## VI. GUIDANCE SOUGHT

36. The Working Group may wish to recommend that the Commission:

- Welcome the progress made in the implementation of the *Global Plan of Action for Animal Genetic Resources* and encourage FAO to continue its activities in support of the implementation of the *Global Plan of Action*;
- Call upon countries to implement the *Global Plan of Action for Animal Genetic Resources*, in order to contribute to global food security and sustainable rural development, and in particular to help achieving Millennium Development Goals 1 and 7;
- Request countries to characterize their breeds and describe production environments, and to collaborate with regional and international organizations in meta-analyses of transboundary breeds and local breeds with genetic similarities to breeds in other countries;
- Request FAO and IAEA to continue their joint efforts to establish a genetic resources database (with open access) to support national animal genetic resource programmes;
- Stress the need for countries to regularly update their national data and information in DAD-IS or FABIS-net in order to ensure that decisions on the implementation of the *Global Plan of Action* are informed by the most up-to-date data and information available;
- Stress the importance of DAD-IS as the international clearing house mechanism for animal genetic resources and request FAO to provide long-term regular programme staff support for the maintenance and continued development of DAD-IS;
- Encourage FAO and countries to collaborate with regional organizations, civil society and the private sector in the improved management of animal genetic resources;
- Request FAO to assist countries in the establishment and operation of regional or sub-regional focal points for the management of genetic resources and to invite countries to take full advantage of opportunities provided by new and existing focal points;
- Request FAO to continue pursuing partnerships and alliances with other international mechanisms and organizations to enhance mobilization of financial resources for implementation of the *Global Plan of Action*.