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CONFERENCE

Thirty-seventh Session

Rome, 25 June - 2 July 2011

Status of Implementation of the Global Plan of Action for Animal Genetic Resources

Executive Summary

This document provides an overview of activities undertaken by FAO, in collaboration with partners, under the guidance of the Commission on Genetic Resources for Food and Agriculture, in support of the implementation of the Global Plan of Action for Animal Genetic Resources since 2009.

Suggested action by the Conference

The Conference may wish to:

- 1) Welcome the progress made in the implementation of the *Global Plan of Action for Animal Genetic Resources* and encourage FAO and its Commission to continue its activities in support of the implementation of the *Global Plan of Action*;
- 2) Reiterate the importance of implementing 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 achieve Millennium Development Goals 1 and 7;
- 3) Encourage FAO to collaborate with other organizations and institutions in the implementation of policies aiming at the conservation and sustainable use of biodiversity for food and agriculture, including animal genetic resources, and, more specifically, to investigate possible institutional arrangements for IPBES, including possible legal, financial and administrative implications for FAO;
- 4) Appeal to all FAO Members and to 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 activities within the Strategic Priority Areas of the *Global Plan of Action*;
- 5) Request the Commission to continue overseeing the implementation of the *Global Plan of Action for Animal Genetic Resources*, and to report back at the 2013 Session of the Conference on the status of implementation of the *Global Plan of Action*.

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Annex

I. Introduction

1. The FAO Conference, at its last Session, stressed the urgent need for the implementation of the *Global Plan of Action for Animal Genetic Resources (Global Plan of Action)*, to contribute to global food security and sustainable rural development, to respond to global environmental challenges, in particular related to climate change, and to help achieve Millennium Development Goals 1 and 7. It stressed the essential role of FAO in supporting country-driven efforts to implement the *Global Plan of Action*, and encouraged FAO to continue updating and developing further technical guidelines for the management of animal genetic resources in support of the implementation of the *Global Plan of Action*. The Conference requested the Commission on Genetic Resources for Food and Agriculture (Commission) to continue overseeing and assessing the implementation of the *Global Plan of Action* and to regularly report back to the FAO Conference on the status of implementation.¹ This document provides an overview of activities undertaken by FAO, under the guidance of the Commission, in support of the implementation of the *Global Plan of Action* since 2009.
2. The Conference also noted the Report of the 12th Regular Session of the Commission and requested the Commission to report on its work to future sessions of the Conference.² As the Commission's 13th Regular Session will only take place in July of this year, the Commission will report the outcome of that Session to the next Session of the Conference.

II. Status of Implementation of the *Global Plan of Action*

3. 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 FAO languages and in several additional languages. Since 2007, more than 54 000 copies of printed versions of the *Global Plan of Action*, the *Interlaken Declaration* and the *State of the World* and related products in various languages have been distributed.
4. Pending the development of Country Progress Reports on the implementation of the *Global Plan of Action* for the 14th Session of the Commission, FAO undertook an informal survey on national implementation³. The responses indicate that the adoption of the *Global Plan of Action* has created an important momentum for the promotion of the wise management of animal genetic resources for the improvement of food security and sustainable development worldwide. Countries are taking important steps for the implementation of the *Global Plan of Action*, even though at different speeds and with different priorities (Table 1 in Annex). Country experiences indicate that countries have made strategic use of national, bilateral and multilateral resources to advance the implementation of the *Global Plan of Action*. Flexibility in national approaches while aiming at a common outcome is an inbuilt strength of the *Global Plan of Action*. While developing countries aim to strengthen the linkages between genetic diversity, livelihoods and food security, several developed countries highlighted the links between genetic diversity and landscapes, and focus their activities on development, labelling and marketing of high-value products. Several countries are currently revising their livestock or breeding policies and strategies (Table 2 in Annex). Regional organizations, for example in Africa, have included use and conservation of genetic resources in their newly developed strategic plans (AU-IBAR, 2009).
5. FAO focuses its support to the implementation of the *Global Plan of Action* on areas of strategic importance. One area is the development of technical guidelines to support countries in their implementation of the *Global Plan of Action*, for endorsement by the Commission and subsequent publication in several languages. The Commission's Intergovernmental Technical

¹ C 2009/REP, paragraphs 65-69.

² C 2009/REP, paragraph 172.

³ CGRFA/WG-AnGR-6/10/Inf.10.

Working Group on Animal Genetic Resources for Food and Agriculture, at its 6th Session, reviewed five additional draft guidelines and recommended them for endorsement by the 13th Regular Session of the Commission. More information on existing and draft guidelines is given below.

6. FAO received an increasing number of requests for technical assistance, as exemplified by the list of projects (Table 3 in Annex) which does not include the several projects with which FAO has further collaboration. FAO and its partners contributed to operating or developing projects involving more than 100 countries. Over the past two years, FAO and partners organized 21 regional capacity-building activities with an average of 11 countries participating.

7. FAO and 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 on the storage of data in publicly accessible databases. Also the Domestic Animal Diversity Information System (DAD-IS) was further developed, as it serves as the Convention on Biological Diversity (CBD)-recognized Clearing-House Mechanism for animal genetic resources. The global breeds data base within DAD-IS is crucial for monitoring the resource indicator for the success of the *Global Plan of Action*. Work on targets and indicators has progressed.

8. FAO intensified its cooperation with the Convention on Biological Diversity, and collaborated with a wide range of partners on cross-cutting issues such as climate change and 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 breed sustainable use and conservation with natural resources management and carbon-sequestration.

III. FAO Support to the Strategic Priority Areas of the *Global Plan of Action*

9. The following paragraphs, providing some examples of FAO's activities, are presented in the order of the four Strategic Priority Areas of the *Global Plan of Action* and some cross-cutting areas.⁴

Strategic Priority Area 1: Characterization, inventory and monitoring of trends and associated risks

10. FAO and partners supported the genetic and phenotypic characterization of local breeds through various projects. Metastudies, involving other consortia and diversity studies, are envisaged. The Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture (AGE) 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.

11. To facilitate global analysis of breed diversity through molecular genetic characterization, FAO continued to promote the use of standard microsatellite marker sets for various species of livestock. Together with research consortia, FAO developed the contents of the *Draft guidelines on molecular genetic characterization*.

12. FAO continued the development of *Draft guidelines on phenotypic characterization* of animal genetic resources and their production environments. A module for geo-referencing the distribution of national breed populations and describing their production environments has been developed in DAD-IS.

⁴ For more detailed information see document, *Detailed FAO Progress Report on the Implementation of the Global Plan of Action for Animal Genetic Resources*, CGRFA/WG-AnGR-6/10/Inf. 2.

13. The Commission, at its 12th Regular Session, requested that status and trends reports on animal genetic resources be prepared by FAO every two years and that these reports include the relevant CBD headline indicator. In response, FAO prepared the document “Status and trends report on animal genetic resources – 2010”. Countries have increased their levels of activity in updating their national data. To aid member countries in their inventory and monitoring of trends and risks, FAO has produced *Draft guidelines on surveying and monitoring*.

Strategic Priority Area 2: Sustainable use and development

14. The Commission, at its 12th Regular Session, endorsed the guidelines *Breeding strategies for sustainable management of animal genetic resources*. FAO published the guidelines in English, French and Spanish and distributed them widely. Arabic and Russian versions are in preparation. The guidelines were used at regional training workshops and are in high demand.

15. FAO cooperated with the International Committee for Animal Recording to conduct a survey to assess the current status of animal identification and recording systems in 33 developing countries. Regional training workshops were held and guidelines for animal identification, traceability and performance recording in low and medium input production systems are under preparation.

Strategic Priority Area 3: Conservation

16. FAO prepared *Draft guidelines on cryoconservation*; guidelines on *in vivo* conservation are in preparation. FAO undertook a global survey on current arrangements for regional storage systems, including existing health and other relevant regulations for the exchange of genetic materials among countries. The majority of countries expressed willingness to participate in multi-country gene banks for animal genetic resources, but frameworks for formal collaboration are required in order to address issues such as ownership of germplasm, differences between countries in technical capacity and health and sanitary standards, and funding.

Strategic Priority Area 4: Policies, institutions and capacity-building

17. The Commission, at its 12th Regular Session, endorsed the guidelines, *Preparation of national strategies and action plans for animal genetic resources*. Supporting *Draft guidelines on development of the institutional framework for the management animal genetic resources* have been developed. Training on the development of national strategies and action plans was provided to National Coordinators at several regional workshops attended by participants from more than 60 countries, which also aimed to initiate the establishment of new (Sub-)Regional Focal Points for Animal Genetic Resources.

18. FAO contributed to a range of cross-cutting initiatives related to biodiversity, biotechnology and nutrition. It prepared scientific contributions on the interactions between animal genetic resources and climate change and other environmental issues.

19. The Commission’s *Strategic Plan 2010-2017 for the implementation of the Multi-Year Programme of Work* (Strategic Plan) foresees a progress report on international organizations’ contributions to the implementation of the *Global Plan of Action*. FAO invited more than 400 international organizations to report on their activities in this field. A progress report presenting the findings is being prepared for the Commission’s next session.

20. The 36th 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*. In response, FAO prepared and widely distributed the publication “Livestock keepers – guardians of biodiversity” and, in collaboration with two NGOs, piloted biocultural community protocols and tested their potential for strengthening indigenous communities’ stewardship of animal genetic resources and their ecosystems. Biocultural protocols

aim to create a link between Articles 15 and 8(j) of the CBD and the *Global Plan of Action*. A booklet summarizing experiences with the first four protocols was widely distributed and results presented to the CBD.

IV. Collaboration

21. FAO continued its interaction with various scientific organizations and the breeding industry. It hosted several research-project workshops, organized joint sessions at scientific conferences and continues to operate DAD-Net as an informal forum for discussion of issues relevant to the management of animal genetic resources. FAO also prepared 28 scientific and 30 conference papers on related issues that established FAO as a recognized technical player in the field and increased awareness of the *Global Plan of Action* in the scientific community. As one of the partners in the 2010 Biodiversity Indicators Partnership Project, FAO convened an expert meeting, which produced recommendations on the development of the CBD headline indicator. FAO also contributed to the CBD publications “Biodiversity indicators & the 2010 Biodiversity Targets: outputs, experiences and lessons learnt from the 2010 Biodiversity Indicators Partnership”, to the 2010 issue of the “Global Biodiversity Outlook”, and to the CBD Good Practice Guide “Pastoralism, nature conservation and development”.

22. In welcoming the Commission’s *Strategic Plan 2010-2017*, the 10th meeting of the Conference of the Parties to the CBD, in Decision X/34 also welcomed the adoption of the Funding Strategy for the implementation of the *Global Plan of Action*, and invited Parties and other Governments to take into account the inter-disciplinary and inter-sectoral nature of these publications in their implementation of the programme of work on agricultural biodiversity.

23. On 20 December 2010, the United Nations General Assembly, at its 65th session, called on the United Nations Environment Programme (UNEP) to take the necessary next steps to establish an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). The Platform may also be relevant to FAO’s future work in the field of animal genetic resources for food and agriculture and, more generally, to the work of FAO on biodiversity for food and agriculture and its Commission. IPBES is expected to strengthen the science-policy interface for biodiversity and ecosystem services and act as an independent intergovernmental body administered by one or more existing United Nations organizations, agencies, funds or programmes. In the light of FAO’s mandate as well as its experience and long-standing role in relation to periodic assessments of the state of the world’s genetic resources for food and agriculture and other assessments relevant to biodiversity and ecosystem services, representatives of Governments participating in the IPBES consultations have identified FAO as an important player and possible key partner for IPBES. The governing bodies of FAO may therefore wish to further consider FAO’s role in this process.

V. Implementation and Financing of the *Global Plan of Action*

24. The 36th FAO Conference encouraged the implementation of the *Funding Strategy for the implementation of the Global Plan of Action for Animal Genetic Resources* (Funding Strategy), adopted by the Commission and urged FAO to support the implementation of the *Funding Strategy* as part of a consolidated and coherent programme.

25. The Funding Strategy sets out procedures for the use of funds received through an FAO Trust Account for the Funding Strategy and details steps to be taken by the Commission, the Working Group and the FAO Secretariat during a two-year project cycle that includes the issuing of calls for proposals, submission of concept notes, approval of project proposals, and project monitoring and evaluation. The Call for Proposals under the Funding Strategy will assure a competitive and transparent process of project development, implementation and monitoring for the implementation of the *Global Plan of Action*.

26. The FAO Trust Account established by FAO for the implementation of the Funding Strategy received so far donations from the governments of Switzerland and Norway. Discussions with other donors are ongoing, and FAO hopes to be able to raise additional funds for the Trust Account. The Trust Account could reach the threshold of USD 500 000 for the issuance of the first Call for Proposals before the 13th Regular Session of the Commission. The coverage of FAO's administrative costs in managing this competitive process is not yet agreed and is the subject of ongoing discussions with the donors.

27. In FAO's Medium Term Plan 2010-13 and Programme of Work and Budget 2012-13, animal genetic resources-related activities at FAO headquarters are covered by Unit Results under Organizational Results B03 – *Better management of natural resources, including animal genetic resources, in livestock production*, F03 (*Policies and programmes are strengthened at national, regional and international levels to ensure the conservation and sustainable use of biological diversity for food and agriculture and the equitable sharing of benefits arising from the use of genetic resources*) and F05 (*Countries have strengthened capacities to address emerging environmental challenges, such as climate change and bioenergy*). In addition, the majority of decentralized offices have established Unit Results or products related to the implementation of the *Global Plan of Action*, based on the requirements of each region. The FAO-wide planned regular programme funding for the 2010-2011 biennium adds up to about USD 4.1 million, as detailed in Table 1 below.

Table 1: Global Plan of Action Resource Summary – 2010-11 Biennium (USD millions)

	Strategic Objective B (livestock)	Strategic Objective F (natural resources)	Total
Headquarters (including AGE)	2.0	1.2	3.2
Decentralized Offices	0.9	-	0.9
Total	2.9	1.2	4.1

28. Under FAO's Strategic Framework, animal genetic resources-related activities are also covered by the Impact Focus Area on *Global standard setting and implementation into national policies and legislation* (IFA-SNL) meant to attract specific donor funding. In the 2010-2011 biennium, animal genetic resources-related elements were included in several trust funds, and partnership programmes. The resources under these programme cooperation agreements help FAO to provide catalytic funds for special activities at all levels. FAO is also associated with several European Commission-funded projects that provide stipends for developing-country participants and support the generation and dissemination of knowledge⁵. FAO has also developed a multi-donor trust fund programme to facilitate the implementation of the *Global Plan of Action*.

⁵ CGRFA/WG-AnGR-6/10/Inf.2.

Annex

Table 1: Country activities undertaken to implement Strategic Priority Areas of the *Global Plan of Action*

	Strategic Priority Area			
	1 Characterization, inventory and monitoring of trends and associated risk	2 Sustainable use and development	3 Conservation	4 Policies, institutions and capacity building
Research and capacity-building	73%	77%	73%	63%
Institutional and technical support	53%	60%	70%	70%
Awareness raising and information	63%	57%	60%	67%

Source: FAO informal questionnaire: responses from 30 countries, multiple replies allowed.

Table 2: Countries that are developing and implementing national strategies and action plans for the management of animal genetic resources

Status	No.	Countries
Not yet planned	5	Burundi, Costa Rica, Ghana, Tunisia, Zimbabwe
Planned	15	Bangladesh, Bolivia (Plurinational State of), Cambodia, China, Iran (Islamic Republic of), Lao People's Democratic Republic, Myanmar, Nepal, Papua New Guinea, Poland, Philippines, Republic of Moldova*, Rwanda, Sri Lanka, Viet Nam
Under development	21	Belgium, Bhutan, Burkina Faso, Chile*, Colombia*, France, India, Kenya, Malawi, Malaysia, Mongolia, the Netherlands, Nigeria, Oman, Peru*, Russian Federation, Slovakia, Syrian Arab Republic, Togo, Turkey, Ukraine
Endorsed	7	Armenia*, Denmark, Finland, Iceland, Norway, Romania, Sweden
Being implemented	9	Albania*, Austria, Canada, Czech Republic, Germany**, Montenegro, Spain, United Kingdom**, United States of America

Source: FAO informal questionnaire and technical reports.

* with FAO support as TCPF or TCP.

** developed during the State of the World process prior to endorsement of *Global Plan of Action*.

Table 3: Projects, FAO and in collaboration with partners, by Strategic Priority Area

Project topic	SPA	Donor	List of countries participating
Promoting strategies for prevention and control of HPAI; genetic characterization of local poultry breeds and production systems	1,4	FAO-GCP-Germany	Cambodia, Egypt, Uganda
Characterization of local pig and poultry breeds	1,4	FAO-MUL-Australia	6 Southwest-Pacific countries
Characterization of small ruminant genetic resources	1,2	AGE-CRP	Bangladesh, China, Indonesia, Islamic Republic of Iran, Pakistan, Saudi Arabia, Sri Lanka, Viet Nam
Genetic variation on the control of resistance to infectious diseases in small ruminants	1,2	AGE-CRP	Argentina, Bangladesh, Brazil, Burkina Faso, China, Eritrea, Ethiopia, Indonesia, Islamic Republic of Iran, Mexico, Nigeria, Pakistan, Saudi Arabia, Sri Lanka
Characterization of animal genetic resources	1	AGE-TCP	Burkina Faso, Morocco, Sri Lanka Zambia
Genotyping of indigenous cattle breeds	1	AGE	Austria, Bulgaria, Kenya
2010 Biodiversity Indicators Partnership project	1	GEF	International
GLOBALDIV A global view of livestock biodiversity and conservation	1,3	EC	International
Farm Animal Biodiversity Information System Network	1	EC	13 European countries
		FAO-TCP	Republic of Moldova
Development and application of decision support tools to conserve and sustainably use genetic diversity in indigenous livestock and wild relatives	2	GEF	Bangladesh, Pakistan, Sri Lanka, Viet Nam
<i>In situ</i> conservation of endemic ruminant livestock	1,2,3,4	GEF, AfDB	Gambia, Guinea, Mali, Senegal
Dairy cattle improvement	2	FAO-TCP	Mongolia
			Nepal
			Myanmar
		Sri Lanka	
		FAO-GCP Turkey	Azerbaijan, Kyrgyzstan, Tajikistan, Uzbekistan
Cattle breeding	2	AGE	Regional, 13 Asian countries
			Regional, 22 African countries
Development of the animal identification and traceability system	2	FAO-TCP	India
			United Republic of Tanzania
National policy and strategy for the management and the improvement of animal genetic resources	2,4	FAO-TCPF	Armenia
			Burundi
Formulation of National Strategy and Action Plan	4	FAO-TCPF	Peru
			Colombia
			Chile
Establish a Sub-regional Focal Point, develop National Strategy and Action Plans		FAO-GCP Turkey	5 countries of Central Asia, Azerbaijan, Turkey

SPA = Strategic Priority Area.

CRP = Coordinated Research Project.

TCPF = Technical Cooperation Project-Facility.

TCP = Technical Cooperation Project.

AGE = Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture.