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# STRATEGIC PRIORITY AREA 1: CHARACTERIZATION, INVENTORY AND MONITORING OF TRENDS AND ASSOCIATED RISKS

### Actions undertaken during the past year

The "National Inventory", the "Central Documentation of Animal Genetic Resources in Germany" (*Zentrale Dokumentation tiergenetischer Ressourcen in Deutschland, TGRDEU*), comprises meanwhile a respectable time series of 10 years of stock figures for all domestic animal breeds in Germany that are organised in terms of breeding, including the species of horse, cattle, pig, sheep and goat. Among these altogether about 250 breeds, there is a special focus on the 63 indigenous breeds, particularly on those 52 that are endangered. Poultry and rabbit species play a major role too.

Complementary to the monitoring in the form of a mere stocktaking, methods of an extended monitoring are being implemented. For the regular acquisition of the data of individual animals of the indigenous livestock breeds, which is the requirement for a population genetic description of the condition of the individual breeds/populations that is precise and embraces several parameters, contracts have been awarded for the species of cattle and pig. In the framework of "surveys, stocktakings and non-scientific studies in the field of biological diversity" which are to be undertaken by the Federal Agency for Agriculture and Food (*Bundesanstalt für Landwirtschaft und Ernährung, BLE*), the infrastructure for a future regular acquisition of data of individual animals is presently established, an equivalent process for the species of sheep and goat is in preparation.

For the poultry species and breeds there is, also under the above-mentioned scheme, a survey of the stock figures at local level in preparation; presently, a mainly technical infrastructure is being created here. This involves that stock declarations regarding the individual breeds and varieties are in the future to be centrally recorded, via Internet, in a database by the local representatives of the German association of poultry breeders (*Bund Deutscher Rassegeflügelzüchter e.V., BDRG*). The data, which are collected throughout Germany and with a high survey density, will be available in an aggregate form immediately after the collection at the chosen time. For the species of rabbit, a procedure similar to that one for poultry is in preparation. At international level, a comprehensive system of monitoring of biological diversity in the framework of the SEBI 2010 process (Streamlining European 2010 Biodiversity Indicators) is in development or implementation. For this, the national TGRDEU documentation provided basic data including given evaluations from the field of livestock farming. This material was made available, amongst others, to the Dutch "Centre for Genetic Resources (CGN)" for its advancement to a global model measuring biodiversity (GLOBIO).

# Actions planned for the next year

The extensive monitoring measures require, also in this year and thereafter, further administrative, technical and content-related supervision and supplementation, which are carried out by the Institute of Farm Animal Genetics of the Friedrich-Loeffler-Institute and the Information and Coordination Centre for Biological Diversity (IBV) of the BLE. A major task will be especially to increase the involvement of relevant bodies (e.g. of the National Committee on AnGR and the Genetic-statistical Committee of the German Society for Animal Production) as well as of scientific and official institutions.

In addition, the monitoring methods for the species of horse are to be initiated, and of sheep and goat to be specified.

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Tasks in the future will also be to include, evaluate and document the data from monitoring. It is especially the monitoring of the cattle breeds that promises to provide a wealth of experiences, as here the most concrete, in terms of content, requirements regarding the population genetic parameters and criteria to be established were given. The results to be expected offer an important basis, both technically and quantitatively, for further discussion and development of monitoring.

Furthermore, besides revising the technical environment and Internet design of the TGRDEU, content-related updates and corrections are made. In this context, the transfer of data from the field of cryogenic resources will be pushed forward too.

The documentation on promotion measures for the breeding and farming of endangered livestock breeds under the Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) will likewise be revised.

## STRATEGIC PRIORITY AREA 2: SUSTAINABLE USE AND DEVELOPMENT

#### Actions undertaken during the past year

A primary target of the "National Programme on AnGR" is the preparation, formulation and implementation of breeding schemes within the breeders' associations that are markedly focused on maintenance. It is not least the livestock Breeding Act, amended in 2006, which spotlights this task and commits breeders and associations to it.

These requirements have been brought to discussion for numerous endangered breeds, and preparations for implementation in the articles of the breeders' associations have been made too. For the breeds of Murnau-Werdenfelser cattle, Thüringer Wald Ziege goat, Bentheimer Landschaf sheep and Buntes Bentheimer Schwein pig, concrete ways to establish such schemes become apparent, requiring, however, further talks between breeders and associations. Also regarding poultry (Vorwerkhuhn, Lachshuhn, Ostfriesische Möwe, Diepholzer Gans, Lippegans, Leinegans), structures (partly in the form of registered associations) of sustainable breeding are, for a longer time already, in implementation. In breeds of fowl, genetic maintenance is achieved by a yearly and continuously cyclical circulation of the breeding animals within the "breeding ring", while for geese a modified mating system for the reduction of inbreeding is applied.

At this point are also to be mentioned the altogether 74 promotion schemes of the Federal States which are realized under the Reg. (EC) No 1698/2005 (ELER Reg.) for 45 different breeds of the species of horse, bovine, pig, sheep and goat.

#### Actions planned for the next year

Presently, a draft of the "regulation on breeders' organizations", as another implementation of the amended livestock Breeding Act, is under discussion. The aim of this will be to incorporate in a targeted manner methods and structures of breeding and maintaining endangered breeds.

## **STRATEGIC PRIORITY AREA 3: CONSERVATION**

#### Actions undertaken during the past year

An organisational and structural model for the creation of a "National Cryobank" is currently being coordinated.

In this regard issues relating to sponsoring, rights of property and disposal as well as administrative matters of the levels of governance, but also questions of breeding, veterinary hygiene and legislation are subject to clarification. Especially the National Committee on AnGR and the Institute of Farm Animal Genetics of the Friedrich-Loeffler-Institute in Mariensee play a leading role here. A web-based database system (Cryo-Web) was developed to which all **Διαγράφηκε:** d

information on the cryogenic material to be stored including individual information on the donor can be added.

## Actions planned for the next year

In preparation for the establishment of the National Cryobank, a stock research of the potentially available cryogenic reserves in Germany is carried out first. This research is to include especially asking breeders' associations, insemination and embryo transfer centres as well as scientific institutes for any contributions to a National Cryobank.

The meeting of the National Committee on AnGR in October 2008 will focus again on this topic, choosing, not least for this reason, one of the most renowned insemination centres in Germany, the *Besamungsstation Neustadt a.d.* Aisch e.V. insemination centre, as location.

The further preparation and formulation of breeding schemes markedly focused on maintenance is on the agenda for many breeders' associations, not least due to the explicit stipulation of the amended Breeding Act.

## STRATEGIC PRIORITY AREA 4: POLICIES, INSTITUTIONS AND CAPACITY BUILDING

## Actions undertaken during the past year

The professional and political highlight of the past reporting year was the participation of a German delegation in the 1<sup>st</sup> International Technical Conference on Animal Genetic Resources in Interlaken (Switzerland).

By the new Breeding Act adopted in December 2006, "genetic maintenance" became a priority issue for breeders and breeders' associations. The obligations arising from it and the regulations that are based on them enable, regarding the endangered indigenous breeds, targeted breeding focused on maintenance within the existing breeding and organization structures. Especially, the commitment to a population genetic monitoring is incorporated in the Act and thus expresses the necessity to make data of individual animals available for the purpose of monitoring. Since 1<sup>st</sup> January 2008, the ways to promote animal genetic resources are more clearly formulated in the joint task of the Federal Ministry of Food, Agriculture and Consumer Protection (Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz, BMELV) for the improvement of "Joint Task for the Improvement of Agricultural Structures an Coastal Protection" (Gemeinschaftsaufgabe Verbesserung der Agrarstruktur und des Küstenschutzes, GAK). In this context, the aim of this is also to create promotion options for breeders' associations to support pedigree breeding, maintenance activities and the keeping of herd books. The National Committee on AnGR convened for two meetings (Feb. 2007 / Feb. 2008). During the second meeting the "List of Animal Genetic Resources for Food and Agriculture in Germany - Inventory of Indigenous Livestock Breeds with Classification into Categories of Stock Endangerment" was revised, and the classification of the individual breeds was checked and corrected. The current classifications were published by the IBV of the BLE as "Red List of Endangered Indigenous Livestock Breeds in Germany" in the form of a brochure, and provided with basic information regarding this topic.

Subject to fundamental revision was also the Genetic Resources Information System "GENRES" of the IBV. (www.genres.de)

On the Spring Market in Bonn, serving as thematic correlate of the Conference of the Parties (COP 9) on the UN Convention on Biological Diversity, the IBV stand of the BLE presented the topic of biological diversity to a wide audience.

In connection with the presence on the occasion of the COP 9, among other things, printed publications on endangered livestock breeds were issued by the IBV of the BLE. These include the "Red List of Endangered Indigenous Livestock Breeds in Germany", already mentioned, and the updated version of the "National Programme on AnGR".

Publications in German on this topic (Global Plan of Action, Report on the State of the World's Animal Genetic Resources) were issued in cooperation with the FAO, Switzerland and Austria.

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On the occasion of the International Green Week in Berlin in January 2008, the "Society for the Conservation of Old and Endangered Livestock Breeds" (*Gesellschaft zur Erhaltung alter und gefährdeter Haustierrassen e.V., GEH*) presented the Bronzepute turkey as breed of the year. Furthermore, the GEH is re-organising the Ark Farms. These Ark Farms, which are committed mainly to the organised breeding of endangered domestic animal breeds, serve not only the GEH, but in general as a representative undertaking highlighting the relevance of this issue. The national branch of the Slow Food movement (*Slow Food Deutschland e.V.*) focuses increasingly also on animal genetic resources. Currently, 10 endangered indigenous livestock breeds are listed as "passengers of the ark of taste", thus attracting special attention (Angler Rind cattle, Angler Sattelschwein pig, Buntes Bentheimer pig, Diepholzer Moorschnucke sheep (= Weiße Hornlose Heidschnucke sheep), Glanrind cattle, Hinterwälder Rind cattle, Murnau-Werdenfelser Rind cattle, Rhönschaf sheep, Weiße Gehörnte Heidschnucke sheep).

#### Actions planned for the next year

For the next years, the IBV is planning the conception, organisation and realisation of films on Agrobiodiversity, starting with a film on "Agricultural Biodiversity in Germany". The purpose of this film is to familiarize a wider audience with this topic in a comprehensible manner.

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