

Approaches and experiences in Animal Genetic Resources conservation in the Central European countries - the Polish case

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I. Introduction - a historical perspective

The need for conservation of Animal Genetic Resources was recognised in Europe in the 60s when number of countries already initiated programmes to maintain their native, endangered breeds. The first conservation programme in France, with the Solognote sheep was started in 1969 (Pinguet, 78 after Audiot et al., 1992) while in the next decade in the British Islands the Rare Breeds Survival Trust and the Traditional Livestock Foundation have initiated their activities (Alderson, 1995).

In the Central and Eastern Europe before 1990, several countries developed mechanisms for governmental support for endangered native breeds. A direct financial support was provided for stock owners or threatened resources were protected through research and educational institutions. Hungary was able to preserve all their native breeds which survived after the second World War, including Hungarian Grey Cattle, Racka and Cikta sheep, ancient horses and many others (Bodo, 1995). In Poland, a successful conservation programme started in 1975 resulted in reconstruction of almost extinct Polish Heath Sheep. Preservation was also successful in the case of primitive Swinarka sheep, Hutsul horses and Polish Konics. Poultry Gene Bank, "Genotoque", established as state financed institution in 1969 in Romania preserved an unique collection of chicken populations. In 1990, the Bank contained 36 breeds with 94 strains (Draganescu, 1992).

When in 1980, through the Working Group on Animal Genetic Resources of the European Association for Animal Production, the first concerted action on inventory and characterisation of Animal Genetic Resources was initiated, the countries of Central and Eastern Europe participated in the conducted survey, having their representative, Prof. Bodo (Hungary) as the Working Group member.

Political and economical changes which took place in the Central and Eastern Europe in the last decade, introduction of market economy, civil wars and ethnic conflicts suffered by countries of former Republic of Yugoslavia very much affected activities on conservation of Animal Genetic Resources. The breakdown of public sector in agriculture, low profitability of animal husbandry and financial constrains of the state experiencing transformation hardship created the most unfavourable economical conditions for conservation of local, rare breeds.

II. The CBD context

The Convention on Biological Diversity which was signed and ratified by all Central Eastern European countries imposes on every Contracting Party responsibility over conservation and sustainable use of their genetic resources, including those resources which are of importance for food and agriculture. Such an obligation has provided an additional justification for enhancement of activities on conservation and sustainable utilisation of native breeds of farm animal species. National Strategy and Action Plans on Biological Diversity, developed under the CBD, should take into consideration issues on management of agrobiodiversity, including maintenance of indigenous breeds with their unique gene pool. Most of European countries, have got the breeding law, which addresses conservation on AnGR, directly in the main bill or in specific regulations (Martyniuk and Planchenault, 1998).

III. Project Identification Mission

When in 1994, FAO invited Central Eastern European countries to participate in the special survey on the current status of AnGR, aiming to identify conservation priorities within countries and the whole sub-region, the response was very good (Glodek and Ochs, 1995). Out of 15 invited countries, 14 took part in this Project Identification Mission which resulted in collecting data on 454 breeds within 7 mammals and 4 fowl domestic species, out of which 179 breeds were described as indigenous ones. The Mission prepared 41 projects; although most of them were breed conservation projects (31), some production promotion and educational or training projects were also submitted.

The analysis of animal genetic diversity in the Central and Eastern Europe showed two separate trends, which have resulted in exceptionally high number of breeds, kept in those countries. Socialist agriculture, characterised by isolation and restricted economic competition secured maintenance of large reservoirs of locally adapted but low producing, unimproved breeds and varieties. On the other hand, political changes and opening of borders brought into the CEE countries high performing Western breeds which are expanding rapidly, pushing away local breeds.

Although none of submitted project proposals was granted financial support through the FAO channels, so the main objective, implementation of priority projects wasn't completed, the Mission resulted in additional side effects. Most of all it provided incentive to update population data, especially on status of endangered breeds, and enabled identified Country Contacts to initiate country networks on AnGR. Preparation of country project proposals provided opportunities for further involvement of larger number of interested individuals and organisations who, in the same time, were introduced to the FAO initiatives in the field of AnGR and the Global Strategy. It created a valuable incentive for further work in the field of AnGR on country level. Additionally, Country Contacts from the region had chance for acquaintance, personal contacts, exchange of information and experience.

IV. National Focal Points

Global, Regional and National Focal Points are key components of the country based planning and implementation infrastructure of the FAO Global Strategy for the Management of Farm Animal Genetic Resources. National Focal Points, identified by each country on invitation of the FAO include National Coordinating Institution and National Coordinator, responsible for development and implementation of Animal Genetic Resources Action Plans. All countries of the Central Eastern Europe identified their National Focal Points. Most of NFPs is situated at Universities or Research Institutes but in a few cases they are located in the Ministry of Agriculture.

Since 1995, the successive workshops for National Coordinations from European region have been organised by the FAO in collaboration with the EAAP, and in connection with annual EAAP meetings. Contribution to this workshops, e.g. submission of country reports and personal participation of NCs varied significantly between countries. There are few countries from Central-Eastern Europe which continue to contribute, like Czech Republic, Hungary, Slovenia, or Poland while others have participated in some of the workshops only. Bulgaria is the one country which never sent its National Coordinator to these meetings.

Usually, 6 to 8 countries out of 15 of the Central Eastern Europe participate in the National Coordinators workshops. This can be explained by severe financial constrains faced by NCs and lack of specific budget for NFP activities. It also underlines the differences between Western and Central Eastern Europe as regards the level of activity and advancement in the management of the Animal Genetic Resources. The most of Western European countries have sufficient capacity and resources (financial, technical and human) to develop and implement their National AnGR Management Action Plans. The relevant education is available, breeders societies and other non-governmental organisations are in place and civil society is appreciative to the need of conservation of indigenous breeds, as a part of their national heritage.

Contrary, in majority of the CEECs there are many constrains to successful management of AnGR; national programs and action plans are at early stage of development, there is lack of formal and informal education on all possible levels, the breeders organisations are still relatively weak and focused on the improvement of active populations and finally, society is poorly informed about importance of the issue. And above all, a difficult economical situation is a limiting factor both for higher state support for conservation programmes as well as for development of private charity initiatives and contributions.

The ongoing discussions on establishment of the European Regional Focal Point haven't been concluded yet also because of diverse needs of countries of the region (Report on the 4th Workshop for NCs, 1998). For Western European countries a light structure facilitating communication, information exchange and providing possibility to compile data for regional analysis is sufficient, while most of the Central Eastern European countries require substantial assistance to advance their activities on AnGR management. Such assistance, when successfully completed, will enable these countries to fully contribute to the AnGR network, established through the European Regional Focal Point.

V. The Polish case

National Focal Point for AnGR was established in Poland in August 1996, in the Central Animal Breeding Office (CABO), the organisation in charge of performance recording, breeding value evaluation and artificial insemination in most of domestic animal species. The National Coordinator and members of the Advisory Board were nominated by Minister of Agriculture and Food Economy.

The Advisory Board is supported by 8 Working Groups on species or groups of species (cattle, horses, sheep and goats, pigs, poultry, fur animals, bees and fish) called into being by Director of the CABO. The Advisory Board, being a subsidiary body to the Director of the CABO is requested to provide advice on strategy on conservation and sustainable use of AnGR and on conservation priorities as well as to evaluate progress in the activities of the NFP.

VI. National Focal Point: Tasks and Activities

- Monitoring and inventory of AnGR

Since 1996, the NFP has been collecting data on breed and varieties of livestock kept in Poland. The data on large active populations were obtained from official performance recording scheme, carried out by the Central Animal Breeding Office itself, Polish Sheep and Goat Breeders Society and Polish Horse Breeders Society. In the case of population at risk, all herds are monitored individually and their data are stored in the National Data Base. The responsibility over providing data and additional information to the NFP rely on the members of Working Groups.

- National Data Base

Development of National Data Base was initiated in 1997. The design of species specific parts of the Data Base was elaborated by Working Groups; a compatibility with DAD-IS Breed Data Base was provided for, to ensure collection of data required by the Global Focus. Development and testing of the software was concluded this year. At present the National Data Base is being completed based on questionnaires provided by Working Groups members, who are responsible for data collection. At first stage, data on indigenous breeds are entered, in the next stage also commercial breeds will be included.

The Data Base contains following modules: View Analysis, Printout, Data input, Administration and Information on Data Base. Within Data input there are sections on: breed name, general information, breed characteristics, population data, conservation programmes (in-situ and ex-situ), export/stock exchange, research, references and herd register.

What is new in our Data Base in comparison with DAD-IS? Firstly, description of research projects and references are directly connected with given breed, as information on stock exchange outside the country borders. The important new element is a herd register, which provides management tool for implementation of in-situ conservation programme. This section is utilised only for breeds with small population size. It contains information on

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individual herds, their origin, owner, age structure of the stock, participation in conservation programmes, research projects, average performance level, profitability and perspectives for future development. The special attention was devoted to development of database for animal species which are not included yet in DAD-IS like fur animals, fishes and bees.

- National AnGR Conservation Programme

The programme was developed following discussion at two days workshop conducted in June 1999 attended by members of Advisory Board and Working Groups, numerous observers representing Breeders Societies, CABO technical divisions and Polish Society on Animal Production. At present, the programme is being evaluated by the Ministry of Agriculture and Rural Development.

The programme is based on analysis of the current status of AnGR, it defines programme objectives and its dimension, conservation methods, organisation of programme implementation and its popularisation. The estimated costs of programme implementation and proposed efficiency evaluation methods are also included. Programme indicates conservation priorities within all species (categories: 1-3) and the maximum number of females to be covered over the years (Table 1). This were agreed as a compromise between needs to maintain genetic variability and foreseen opportunities to increase population size in given breed and species.

Table 1. Summary of data on populations included in National AnGR Conservation Programme

<i>Species</i>	Number of breeds/varieties included		
	Total	First Priority	Maximum (desired No of females)
Cattle	1	1	750
Pig	3	2	500
Horse	2	2	250
Sheep	13	8	1500
Goat	-	-	-
Chicken	10	7	550
Duck	13	6	200
Goose	15	10	200
Fox	1	1	200
Polecat	1	1	150
Rabbit	1	1	100
Chinchilla	1	-	100
Bee	4	4	200 families
Carp	6	4	100 families
Trout	2	2	100 families
TOTAL	73	49	

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The National Programme creates a strategic framework for specific Breed Conservation programmes. A common design was developed to ensure similar approach in individual breed programmes as well as infusion in the programme information required to implement EU Regulation 2078/92 (or entering into force EU Regulation 1257/99), if such possibilities arise in the future.

The breed programme has to contain the following elements: history and origin of the breed, justification for its conservation and detailed objectives of the programme, breed standard, traits to be measured and recording methods, breeding value estimation and selection methods, the demands for ex-situ storage of genetic material, the rules for genetic material utilisation and access, incentive and additional conservation measures, organisational infrastructure and responsibility over programme, implementation phases, preliminary budget structure, effectiveness evaluation and references.

At present, the Working Groups are involved in preparation of individual breed conservation programmes, some programmes are already completed while others are at initial stage of consultation with interested parties.

- Specific NFP tasks in connection with the CBD process

The National Coordinator was included in Polish delegation to the third and fourth Conference of the Parties to the CBD. Poland was contributing to the work on agricultural biological diversity representing CEE countries in the working groups which prepared draft decisions on agrobiodiversity.

The NFP was invited to contribute to development of National Strategy and Action Plans on Biological Diversity. The work was coordinated by the National Foundation on Environmental Protection. The strategic document on AnGR conservation and sustainable use was incorporated into the National Strategy which is still discussed in the Ministry of Environmental Protection, Natural Resources and Forestry.

The NFP was participating in two projects, managed by the Institute of Environmental Protection “Biodiversity Data Management” and “Upgrading of the Polish contribution towards the Clearing House Mechanism under the CBD” which resulted in establishment of national database on all institutions and organisations in the country which activities involve biodiversity issues and later on preparation of the homepage on Biological Diversity in Poland (<http://valis.ci.uw.edu.pl/alf/biodiversity>).

The Ministry of Agriculture and Food Economy, facilitating pre-accession preparatory process has established relevant Working Groups, focused on analysis of specific EU Regulations. The NFP is participating in the work of one of such groups, analysing agro-environmental policy of the EU. The NFP prepared evaluation report on possibility to implement such policy, supporting conservation of AnGR in Polish conditions and identifying possible areas of negotiation.

- Cooperation with different institutions and Non-Governmental Organisations

The areas of cooperation with NGOs both in Poland and abroad is systematically increasing. The cooperation on day-to-day basis with breeders societies is crucial, both in population

monitoring process, data collection and solving problems, which require consultation and approval of breeders.

In recent years cooperation with other NGOs has been greatly enhanced. It allows to combine specific goals of these organisations with possibility to utilise valuable AnGR within their projects. As an example, the NFP was invited to advice *Barka Foundation on Mutual Assistance* to develop animal production on their farm. It resulted in establishment of a new in-situ conservation herd of 50 sows of Zlotniki Spotted pigs, the breed at risk of extinction. The project, financed by GEF-SGP was very successful, meat production developed at Foundation's farm helped in the same time preservation of this rare, valuable breed. The further exploitation of high meat quality of Zlotniki Spotted pigs and introduction of labelled product on local market is considered.

The NFP contributed to preparation of five Tele-Food projects, one of which, development of rabbit production as poverty alleviation measure was financed. Four new flocks of the only one Polish breed of rabbit, Popielno rabbit, were established to secure meat production in villages of HIV positive people. So support directed to feed the poorest was also utilised to conservation of rare rabbit breed. The project is progressing extremely well, thanks to a real enthusiasm of these small communities which were provided with initial financial and technical assistance.

The NFP is currently involved in developing of proposal to be submitted for GEF Medium Grant Programme "Conservation of biodiversity in the region of Upper Narew River" proposed by PTOB (Bird Conservation Society of Northern Podlasie). The project aims to arrest most undesirable changes which are observed in Upper Narew Valley and which were affected by abandoning farming and especially grazing in the valley bottom. It resulted in changes of flora composition and decreased value of this habitat as hatching area for many rare bird species. Vegetation management is necessary to restore biological value of Narew Valley. Reintroduction of large herbivores, especially Polish Red cattle, which lowland variety used to be kept there, and Polish Koniks will enable rehabilitation of natural environmental conditions in this area.

Similar demands, to utilise grazing as vegetation control was expressed by Directors of several National Parks and the NFP was invited to participate in preparation of a project focused on introduction of controlled grazing to the National Parks, which might be financed by Ekofundusz (EcoFund). Utilisation of local breeds of farm animals, if possible endangered ones, should be promoted in providing landscape management services, especially in protected areas.

Whenever possible, utilisation of rare AnGR, which production level is not competitive in commercial sector, should be combined with other specific values or services such resources could contribute to, what will increase their future sustainability.

The NFP is also cooperating with international NGOs, like SAVE or Rare Breeds International.

- Cooperation with the Food and Agriculture Organisation

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Polish National Focal Point continues to contribute to the Breed database in DAD-IS, updating data and information on AnGR kept in Poland. NFP was also participating in beta testing of DAD-IS stage II and other FAO activities within the scope of the Global Strategy, like International Workshop on the Development of Programmes for Co-operation AnGR Management in Poland, the Baltic and the Nordic countries.

National Coordinator was representing Poland at various FAO meetings, e.g. sessions of the Intergovernmental Technical Working Group on Animal Genetic Resources, Committee on Agriculture and Commission on Genetic Resources for Food and Agriculture, and contributed to several FAO technical workshops.

Since the third NCs Annual Workshop held in Vienna in 1997, Polish NC is assisting the French NC, Dr Planchenault acting as informal, temporary Regional Coordinator. This cooperation included conducting a survey on situation and activities of NFPs in countries of European region, preparation agenda for annual NCs Workshops and contribution to discussion on establishment of permanent Regional Focal Point.

- Education and public awareness

Development of strategic programmes has to be conducted in participatory way which enables involvement of all stakeholders, allows broad consultation and encourages bottom-up initiatives. In order to adopt such approach in preparation of National Biodiversity Strategy, two seminars were organised by the NFP to discuss how AnGR issues should be addressed within this Strategy. Both seminars provided also opportunity to introduce participants to the FAO activities in the area of AnGR.

Lack of civil society understanding, involvement and appreciation of AnGR conservation efforts is a common problem in the CEE countries. NFP should enhance activities in this field, as in the long term they will support implementation and development of the national AnGR conservation programme. It is a difficult task, as it requires substantial financial and human resources if the scale and impact of such activities have to be meaningful.

Polish NFP has very limited resources, nevertheless some actions were undertaken also in this field. The most successful initiative to increase public awareness was organisation of a separate Exhibition of Native Breeds at National Animal Show in 1998, in Warsaw. The exposition was very well received both by visitors and breeders. It provided an comprehensive picture of most of native breeds which are included in conservation programme, allowed direct interactions between breeders and the public, enabled distribution of educational materials and encouraged other breeders to join the programme.

NFP edited and published two booklets, one on the FAO Global Strategy and the second presenting native breeds and varieties of the livestock. Other initiatives included occasional presentation of specific issues in agricultural TV programmes, interviews and publications in magazines.

A gradually increasing area of NFP activities is devoted to providing assistance to many individuals and organisations seeking contacts or expertise in specific matters connected with AnGR management.

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- Legislation and financial support for AnGR conservation

The new breeding law, which came into the force in April 1998, does not include specific paragraphs regarding conservation of AnGR but in the preamble it is stated that the law regulates issues connected inter alia with animal breeding and conservation of Animal Genetic Resources. In specific regulations on implementation of this breeding law, like Regulation on Breeding Programmes, issues on conservation of AnGR are directly addressed.

When the National AnGR Conservation Programme is approved by the Ministry, it will provide an official strategic framework for all activities concerning conservation of AnGR. It is suggested that both programmes, on Animal and Plant Genetic Resources could be combined together and constitute a main part of the national program of work on agricultural biological diversity.

The financial support for in-situ conservation, including direct payment for breeders and subsidy to the performance recording scheme has been provided by the Ministry of Agriculture and Food Economy for many years. The breed premium, covering about 30-50% of average costs of maintenance of a breeding female provides a substantial, however not always sufficient incentive to participate in conservation programme. For example, in 1999, the premium for Polish Red cow included in conservation programme amounted 1000PLN, for sow of native breed 430 PLN, and for ewe 100 PLN. The total spending on direct support of in-situ conservation herds was about 1. 624 618 PLN and the budget for NFP activities amounted 127 440 PLN.

VII. Conclusions: National Focal Point - SWOT analysis

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Officially recognised	Insufficient cooperation with breeders and breeders organisations	Coordinates all AnGR conservation activities within country	Continuing transformation in animal breeding
Acting within State obligations under the CBD	Limited human and financial resources	Initiates cooperation with different organisations, also on general biodiversity conservation issues	Unclear future and organisational structure of the CABO
Well developed AnGR network	NFP activities covers only use and conservation of native resources - not all AnGR	Provides reference contact point for all parties interested in AnGR	Lack of profitability in animal production sector

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