



**EUROPEAN LIVESTOCK BREEDS ARK AND RESCUE NET**  
KUTNA HORA, CZECH REPUBLIC, FEBRUARY 8 - 10, 2008

## Final Report

### Working Group 1: Rescue & Quarantine

#### Workshop February 9, 2008



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## **Introduction**

### **Overview**

The objective of the concerted action ELBARN, supported by EU Commission in the frame of Council Regulation 870/2004, is to establish a European Livestock Breeds Ark and Rescue Net concerned with the conservation and rescue of Rare Breeds. ELBARN is a pan-European project to motivate, document and network towards rescue, in-situ conservation and use of under-utilised agricultural genetic resources. In the form of an online database, places that already exist and can be used as “Ark and Rescue Centres” will be documented. The founding of new Ark and Rescue Centres shall be encouraged, where no existing centre is occurring. These centres will

- offer emergency places for endangered genetically important livestock
- offer isolation and quarantine places for rare breeds in case of epidemics
- keep core breeding groups
- offer breeding help for livestock keepers
- offer a place for the public to get informed about the animal genetic resources

The project deals with in-situ / on farm conservation. That means the active breeding of animal populations for food production and agriculture (including performance recording schemes and breeding programmes). In-situ conservation also includes: ecosystem management and use for the sustainable production of food and agriculture. Storage, collection and cryopreservation of genetic resources in the form of living semen, ova, embryos or tissues is not included.

### **Rescue and Quarantine**

Transnational expert opinion was pooled on the theme “Rescue and Quarantine” in Ark and Rescue Centres. Within the discussion, questions were worked out on

- General terms and definitions
- The process of rescue and quarantine (who, how and when)
  - Principles
  - Needs for successful rescue of rare breeds
  - Process of rescue
- Needs for Quarantine
  - Preventive Measures
  - Principles
  - Scenarios for cases of Isolation and Quarantine
- Conclusions





## ***Preface***

The following statements (worked out from the participants reports prior the workshop) found the consensus of the group:

- In-situ / on farm conservation is necessary for conservation of animal genetic resources. The objectives will vary from country to country depending on the state of the art, existence of conservation strategies, incentive programmes etc.
- A legislative and institutional framework needs to be taken into consideration.
- A multidisciplinary focus is required: interaction with breeder associations, interaction with integrated nature and habitat protection actions, interaction with scientific interests.
- Ark and rescue of domestic animal populations is essential as genetic reserve herds, point of reference and as cultural heritage
- Also rescuing the traditional knowledge linked to the local breeds and traditional management systems is necessary.
- Ark and Rescue Centres should be provided with qualified staff, well designed and adapted breeding selection work, appropriate zootechnical conditions incl. quarantine facilities, supervision and cooperation of expert services / institutions and a elaborated utilisation programme (with the local community).
- It should be a National Priority to have or to establish rescue centres

## ***Working definitions***

To avoid misunderstandings and to give an input into the fieldwork after the workshop, it was necessary to make clear definitions of some terms and objectives. This objective has close interdependencies to the working group “Characterisation” and in some cases to the working group “Breeding”. Therefore and despite the fact, that some concepts are still discussed internationally the definitions cannot be settled conclusively. The group discussed these definitions in detail and found the following consensus:

**Rare Breeds – Animal Genetic Resources (AnGR) corresponding to FAO Farm Animal Genetic Resources (ANGR):** those animal species that are used, or maybe used, for the production of food and agriculture, and the populations within each of them. These populations within each species can be classified as wild and feral populations, landraces and primary populations, standardized breeds, selected lines, varieties, strains and any conserved genetic material; all of which are currently categorized as Breeds.

**Breed:** either a sub-specific group of domestic livestock with definable and identifiable external characteristics that enable it to be separated by visual appraisal from other similarly defined groups within the same species, or a group for which geographical and/or cultural separation from phenotypically similar groups has led to acceptance of its separate identity.





**Locally adapted Breeds:** which have been in the country for a sufficient time to be genetically adapted to one or more of traditional production systems or environments in the country.

**Indigenous Breeds,** also termed autochthonous or native breeds and originating from, adapted to and utilized in a particular geographical region, form a subset of the Locally Adapted Breeds;

### **Domestic Animal Diversity**

The spectrum of genetic differences within each breed, and across all breeds within each domestic animal species

### **Endangerment of AnGR**

Depending on diminution of population, females in reproduction, crossbreeding and barely pure sire lines available.

EU regulation 1698/2005, article 14: farm animals of local breeds indigenous to the area and in danger of being lost to farming (comm reg. 1974/2006).

### **Ark- and Rescue**

#### **Ark Centre / Ark Station**

An Ark Station or Ark Centre is an existing farm where one or more local breeds are kept

#### **Rescue Centre / Rescue Station**

any centre / station with free space for hosting rare breeds (for a certain number of animals of a certain species) in a short time period for emergency reasons

#### **Rescue operation**

Emergency action to save individuals of highly endangered local breeds or varieties to avoid extinction. This action may need one or more rescue centres where the animals can be kept temporary





## ***The process of rescue and quarantine***

### ***Principles***

#### ***Rescue is a temporary act***

This means that action takes place in cases of emergency. Rehabilitation of a breed includes a long term breeding programme, informative advertising, promotion of products and services.

#### ***Professional accomplishment***

Rescuing should act in a most professional way. Therefore a net of experts and stakeholders is needed for identification of the needs, knowledge of the breeds and varieties taken into consideration, planning and implementation.

#### ***Set up emergency funds***

Emergency funds are necessary during a monitoring process in a country or region, but also in countries where the conservation structure is doing well. Here also cases of emergency can take place, e.g. when a breeder gives up breeding and keeping, in case of natural disasters or diseases. Here money currently available for culling animals in cases of outbreaks of diseases could be used for emergency measures.

#### ***Verification of the rescued breed***

The breed needs to be verified. In some cases there might not be time for verification. An expert should make a kind of first identification. An exact verification should take place as soon after the rescue action as possible.

#### ***Ex situ conservation (in gene banks)***

Ex-situ conservation (storage, collection and cryopreservation of semen, ova, embryos etc.) are required in all circumstances as last resort and insurance.





## **Needs for successful rescue of a rare breed**

### **Preventive action**

It is important to act before a rescue action is necessary: Breeds should be defined and monitored per country and/or per region as soon as possible. A decentralized system for identification of local breeds and varieties is necessary. For characterisation morphologic, genetic, functional and cultural aspects need to be taken into consideration.

### **National Committee**

Identification of the breeds and varieties should be done by a *National Committee* for AnGR. The composition of this committee needs to be multidisciplinary, including the officially appointed National Coordinator for the Management of AnGR by each country, NGO stakeholders, stakeholders of nature conservation and cultural heritage organisations. This committee should be in interaction with ELBARN.

### **Reference point**

A National (or regional) reference point or contact person is needed, with all available information of breeds and varieties of a country. This point should be communicated also to veterinarian / sanitary services and the public. This reference point should be in close interaction with ELBARN.

### **Training of veterinarians**

Veterinarians should be educated in terms of rare breeds to be able to identify such breeds and to give some information to the public.

### **Conservation Value**

The conservation value of the farm animal sometimes cannot be verified immediately. Therefore a verification of the conservation value is necessary as soon as possible after the rescue action.

### **Threshold for a rescue action**

The lowest threshold for an action needs to be defined. This cannot be done within a general definition. Different factors have an influence in the threshold for a need of action. In case of rare breeds, extinction takes place before the last remnants are dead. For the lowest threshold also factors like situation of the herd and their keepers, numbers of males and females in reproduction, natural, historical and cultural factors are playing a role. Therefore the above mentioned National committee and or the National reference point are important decision maker units.

### **Rescue Centres – requirements**

As it was defined before, a Rescue Centre is any centre / station with free space for hosting rare breeds (for a certain number of animals of a certain species) in a short time period for emergency reasons. This places need to be identified to re-place a breed, a herd or a group of rare farm animals.





*Requirements are:*

- Free space (stable, pasture, paddock)
- Flexibility in term of sanitary status, possibilities for isolation
- Readiness for collaboration - agreement
- Registration as a rescue centre

A rescue centre should have the character of e.g. an ark farm with free facilities. Officially running farms like state farms, university farms etc. often have space for hosting. This information needs to be stored in the ELBARN database in the net of responders. There is a need for a written agreement with the rescue centre. This agreement should include requirement to inform about any changes in status, availability of places and so forth. A sample agreement could be worked out by ELBARN (within the area actions).

The official sanitary status of the rescue place as a whole could be endangered in case of hosting animals with an unknown sanitary status. This is important in several cases of diseases like Maedi Visna, CAE, Brucellosis, Tuberculosis etc. The related authorities for sanitary rules and –management must be included in the process. Also the related authorities for the starting of the rehabilitation process should be identified (breeder association, governmental authorities)

After the rescue operation, the re-integration process of the breed into e.g. a breeding programme should start immediately after valuation.





## Process of rescue

The process of rescue depends on the needs and facts discussed above. An ideal scenario looks like this:

Somebody finds a herd of special exterior.

This person calls e.g. a veterinarian.

The veterinarian calls the national contact point and uses the ELBARN database for more information and a first verification, if this is an endangered breed.

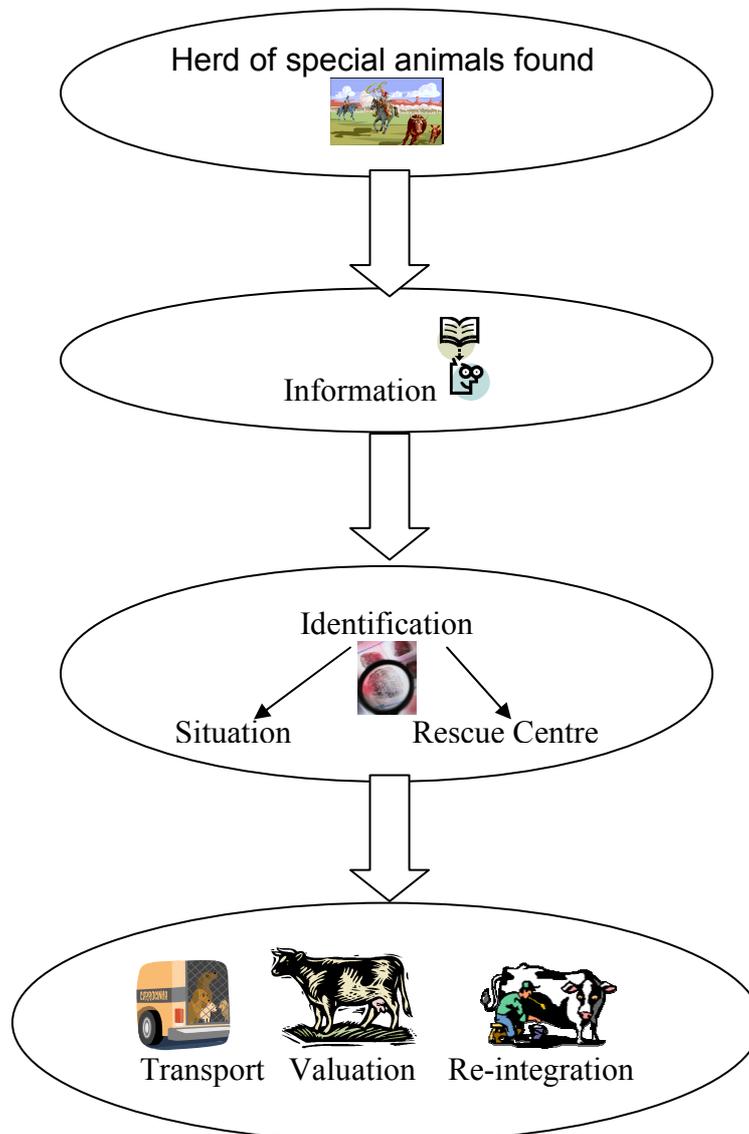
The situation will be made more clear.

If a Rescue action is needed, the best Ark- and Rescue Centre nearby will be identified and an agreement with the farmer will be made.

The herd can be re-placed.

Afterwards, a precise valuation follows and a permanent place needs to be found.

A herdbook will be established and the re-integration process can start. Possibilities for herdbook keeping and data collection should be available.





## **Needs for Isolation and Quarantine**

- There are several international agreed regulations like the OIE disease protocols and the OIE terrestrial animal health code. Provisions of e.g. culling measures for the exemption of rare breeds are included in several EU Council Directives. The Member State shall ensure, that appropriate bio-security measures are taken to protect such animals from infection. The “breeding nucleus of animals of susceptible species indispensable for the survival of a breed” must be **established and registered in advance**.
- **Isolation and Quarantine:**  
**Isolation** is the separation and restriction of movement of ill animals to stop the spread of that illness to others.  
**Quarantine** in contrast (lat. 40 days) applies to animals which have been exposed to a contagious illness and may be infected but are not yet ill. Quarantine means all operations associated with prevention of importation of unwanted organisms into a territory or that exportation from it e.g. the holding of imported material in isolation for a period to ensure freedom from diseases and pests.

## **Preventive Measures**

- Best measures are preventive measures like spreading the breeding group, collect data and information (breed lists and list of breeders)
- Conditions for an approved centre are laid down in EU Council Directive 92/65 Annex C:
  - clearly demarcated and separated from its surroundings or the animals confined and located so as not to pose a health risk to agricultural holdings whose health status might be jeopardised
  - have adequate means for catching, confining and isolating animals and, have available adequate quarantine facilities and approved procedures for animals coming from non-approved sources;
- Sanitary services and animal welfare services should be connected for urgent actions. Sometimes these services obstruct the smooth work flow of each other.
- Also sanitary and veterinary services need to be well briefed in advance as they may interpret regulations differently.
- Before a case of emergency happens, the conditions for isolation and quarantine need to be defined (clarify the different technical problems, depending on countries).

## **Principles**

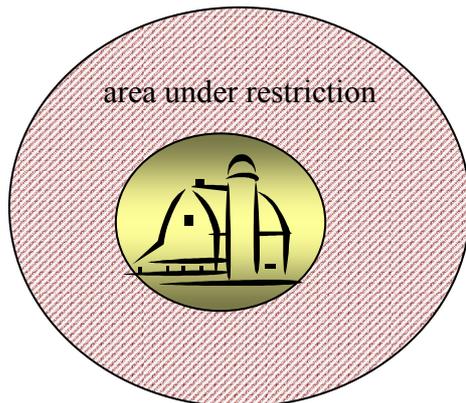
- Place and breed must be defined and accepted in advance by government.
- A Rescue Centre usable for cases of isolation and quarantine should be in an isolated area
- Technical problems etc. must be discussed within the national committees.
- Quarantine facilities according to the national sanitary regulations should be in place
- Movement of animals depends on disease and country regulations. (check different ban situations).
- Divide the population and place it on different stations, if possible.



## Scenarios for cases of Isolation and Quarantine

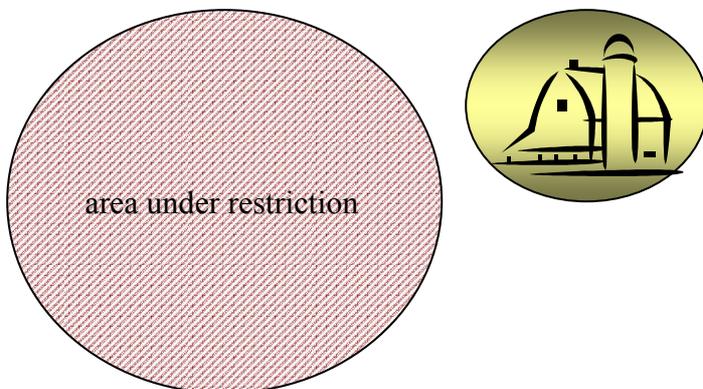
To make clear the process and to clarify problems, scenarios of cases in which a quarantine or purely isolation is necessary were developed:

1. Livestock unit keeps uninfected animals of one or more rare breeds and the ark- or rescue-centre is in an area under sanitary restrictions:



To avoid culling (negotiate in advance appropriate protocols of veterinary authorities) appropriate biosecurity (isolation) measurements have to be installed.

2. Livestock unit keeps uninfected animals of one or more rare breeds and the ark- or rescue-centre is close to an area under sanitary restrictions:



In this case it is difficult to give any suggestions. Probably the animals should be replaced until restriction in the neighbourhood is over.

3. It is supposed, that it is impossible to transport any animals out of a restricted area to avoid culling.

4. In cases of other diseases like Tuberculosis etc. the regular measures have to be adopted.

The gaps in knowledge present in this section need to be closed through close contact with the appropriate regulating bodies



## **Conclusions**

Some principle (working) definitions and needs for the process of rescue endangered animal genetic resources could be worked out.

Further some facts necessary in the whole process were stated:

- Identification and acceptance of rare breeds and varieties should be managed by a national interdisciplinary committee.
- Ark and Rescue Centres are of national interest of the countries
- Ark and Rescue Centres should be identified and accepted in advance.
- A national or regional reference point or contact person is needed (ELBARN)
- Sanitary and veterinary services shall be connected and well briefed in advance.
- Requirements of a Rescue Centre are comprehensive. It is important to make a written agreement with each Rescue Centre.

## **Gaps in knowledge**

**Legal Basis:** the legal basis for Isolation and Quarantine is not clear yet. There are a lot of regulations, directives and protocols for each case of disease. Therefore it is difficult to find out an overall guideline for AnGR.

It was stated that there is a big need to discuss the subject “isolation and quarantine” separately with disease experts to find out which general or regional rules can be used to keep at least a breeding nucleus of animals of susceptible species indispensable for the survival of a breed.

