

FINAL REPORT **on the scientific workshop Socio-economic and Cultural Values of** **Farm Animal Breeds organised in Reykjavik, Iceland on the 7-9** **September 2011**

To The Research Networking Programme of European Science Foundation
Advances in Farm Animal Genomic Resources Network

Summary

NordGen-Nordic Genetic Resource Centre organised in collaboration with the Agricultural University of Iceland and MTT Agrifood Research Finland a scientific workshop on socio-economic and cultural values of farm animal breeds. The workshop was held in Reykjavik Iceland on the 7-9th of September 2011. The aims of the workshop were to strengthen and develop national and regional policies in the conservation and sustainable use of animal genetic resources, to increase the collaboration and networking between stakeholders and to identify new relevant and innovative topics for future research and development projects.

The workshop program was implemented in four sessions: 1) Human-animal relationships, 2) Conservation of endangered farm animal breeds in the frame of sustainable development, 3) Methodological approaches to value farm animals and local breeds and 4) Conservation policies and practices. There were five invited speakers. In addition an open call to submit abstracts to the workshop was launched. The workshop themes were also discussed in working groups and an excursion was organised on the final day.

The total number of presentations was 21. The workshop participants acknowledged the multidisciplinary approaches and studies presented at the workshop. In general, it was considered that the social sciences can add new dimensions to conservation of genetic resources and it is important to continue the networking, and to promote research. The implementation of approaches of social and cultural sciences in the conservation of farm animal genetic resources is a relatively new multidisciplinary field of research for natural scientists as well as for social scientists. The workshop participants recognized that scientists and stakeholders from both the field of social sciences and that of genetic resources and conservation should acquire better knowledge of the basic terminology and approaches applied in the different fields. This is a prerequisite for the development of multidisciplinary studies. Moreover, socio-economic and socio-cultural approaches for animal genetic resources could also be seen as a research field of its own. Nordic Genetic Resource Centre (NordGen) will establish an *'ad hoc'* working group of Nordic experts that will develop future activities and research projects on socio-economic and socio-cultural valuation of farm animal breeds and promote networking among stakeholders and scientists from the field of social sciences and that of genetic resources –conservation.

1. The scientific content of the Workshop

The workshop program was organised in four sessions: 1) Human-animal relationships, 2) Conservation of endangered farm animal breeds in the frame of sustainable development, 3) Methodological approaches to value farm animals and local breeds and 4) Conservation policies and practices. In addition, the workshop topics were discussed in a working group session.

There were five invited speakers. In addition open call for submission of papers for oral presentations was organised and in total 28 abstracts were obtained. Of these, the organizing committee of the Workshop selected 16 to be presented at the workshop, so the total number of presentations was 21.

1.1. Human-animal relationships

“Understanding human-animal relation in the past is a precondition for understanding those relations at present and in the future.”

The session on Human-animal relationships included eight presentations. The presentations addressed the domestication of animals and its biological, social, cultural and economic implications, temporal changes in human-animal relationships and human-animal relationships in the industrialized agriculture. The key-note speech ‘The ambiguous boundaries between the wild and the domestic’ was given by Karl Benediktsson, Professor of Human Geography from the University of Iceland. Two case studies were presented: one was dealing with historical importance of dairy cattle and dairying culture in Iceland and the other one focused on anthropological analysis on differences in traditions keeping cattle, horses and reindeer in the Yakutian region in Eastern Siberia.

The domestication of wild animal species led to many biological, social, cultural and economic implications and had remarkable effects on human lifestyle. The presentations of the session showed that the relationship between humans and animals (both domestic and wild ones) is clearly mutual. As pointed out in the key-note speech by Professor Karl Benediktsson, social scientists have in recent years paid a greatly increased attention to the often problematic relations between humans and non-human animals. The farm animals are interesting subjects for analyses of social sciences because they have retained closeness to ‘wild’ nature. The boundaries that separate the wild from the domestic are highly ambiguous (**Figure 1**). So called ‘feral animals’, such as untamed sheep flocks in some European countries or reindeer in Northern Europe, are example of populations crossing the border between ‘wild’ and ‘domestic’.

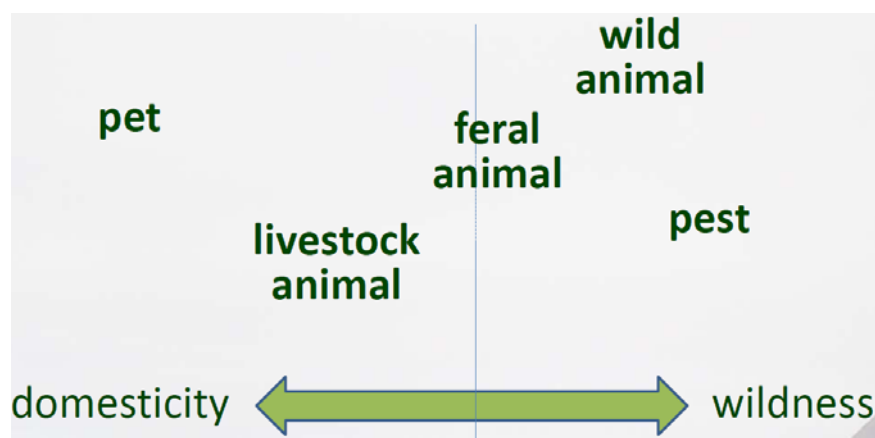


Figure 1. Animal populations can be divided according to their tameness and wildness.

1.2. Conservation of endangered farm animal breeds in the frame of sustainable development

“Conservation of farm animal breeds should be understood within wider socio-ecological and cultural systems that should sustain”

The session *Conservation of endangered farm animal breeds in the frame of sustainable development* comprised four presentations which provided examples of national *in situ* and *ex situ* –conservation actions and motivations for them.

The key-note speech was given by Professor Leo Granberg from University of Helsinki, Finland on diversity in ecology, in society and in the relationships between humans and animals. The presentation discussed the concept of system in sociological tradition and presented suggestions to reconnect society into the debate on biodiversity. The challenge to connect social system and ecosystem was analysed, and socio-diversity was suggested to be the precondition for conserving bio-diversity in ecosystem, including farm animal genetic resources.

The conservation of genetic resources is typically based on their *instrumental* or economic stance: genetic resources are seen as something that is needed to conserve in order to protect the variations of (human) forms of life (tradition, culture, aesthetics, and economy). However, diversity is valuable in itself even if it has no use for humans (*intrinsic* value of diversity). In conservation practice the instrumental and intrinsic value types intersect and are subsumed to each other at multiple levels of the conservation process.

Two practical presentations on *in situ* conservation issues were given. In Norway, 51% of the cows of the six native and endangered cattle breeds are currently kept as suckler cows although originally all these native breeds have been dairy breeds. The problems, challenges and opportunities related to this conservation method to maintain native cattle genetic resources were discussed. In addition, branding activities of native sheep and chicken in north-eastern Italy were presented. The branding program, which is co-ordinated by Veneto Agricoltura and which links a native breed to regional, traditional products, has run several years. The (critical) evaluation of strengths and weaknesses of the program was presented.

1.3. Methodological approaches to value farm animals and local breeds

“Variety of theoretical and methodological approaches is needed for understanding socio-cultural values of farm animal breeds.”

The session *Methodological approaches to value farm animals and local breeds* included four presentations, two of which were key-note talks given by Principal Research Scientist, Dr Katriina Soini from MTT Agrifood Research Finland and University of Jyväskylä, Finland and Professor Eija Pouta from MTT Agrifood Research Finland, Finland.

Katriina Soini has studied a typology and profiles of European farmers keeping local cattle breeds. The data have been collected in the EU-funded Agri Gen Res Project ‘EURECA’ and analysed qualitatively. Three main types of farmers were identified: 1) production oriented, 2) product and service oriented and 3) hobby oriented farmers, which differed from each other in particular by their economic orientation towards breeds and their keeping. These main types were further divided into seven subtypes: sustainable farmers, opportunists, multi-users, brand-makers, traditionalists, pragmatists, and new-comers. The results indicate that there is a diversity of farmers who keep local cattle breeds in Europe. This can be considered as strength for the future of local breeds

but also as challenge when developing effective and sustainable policy measures for *in situ* conservation.

Eija Pouta discussed the economic valuation of genetic resources where both use and non-use values should be considered. It has been argued that non-use values may be more important for animal than plant genetic resources. The valuation of genetic resources requires the use of valuation methods designed for estimating non-market benefits typically with the concept of willingness to pay. Practical examples of studies on valuation of farm animal genetic resources were given and results of meta-analysis summarizing the results of 22 previous empirical valuation studies presented.

The two other presentations of this session focused on a quantitative SWOT analysis to identify strategies for the conservation of farm animal breeds and the future of the native and culturally unique Icelandic Cattle. The quantitative SWOT analysis applied in the development of conservation strategies finds factors that will finally drive to the definition and selection of sound conservation strategies. The SWOT approach was developed in the EURECA project. In Iceland, a debate is ongoing on the selection of the most optimal dairy cattle breed for dairy production and if farmers should be allowed to import a foreign commercial dairy breed, which would replace the native breed in farming. Cost reduction analysis of breed preference analysis was presented.

1.4. Conservation policies and practices

“Scientific knowledge and exchange of best practices are needed for developing conservation and preservation programmes.”

Three presentations (one of the original four was cancelled) were given in the session *The Conservation policies and practices*. The key-note speech was given by Daily Leader of Farmer’s market Aina Bartman from Norway. She talked about the ways in which consumer alliances and direct sales from farmers to consumers can strengthen local breeds and their conservation. She pointed out that local breeds can be efficient in making use of marginal resources and strengthen the economy in rural areas through diverse strategies based on local countryside and culture. Farmer’s Market organizes possibility for local farmers to sell their products directly to the consumers. The consumers meet producers face to face at markets and get the story behind the food they buy.

Two examples of conservation activities were presented: one from Finland and one from Serbia. In Finland, several small- and medium-scale enterprises are interested in branding of the Finish native cattle breeds. The differences in milk processing properties in cheese making and milk’s biochemical composition (e.g. fatty acids in milk) between the native and commercial cattle breeds are investigated to promote the branding and conservation through utilization of native breeds’ genetic resources. In Serbia, wool of endangered sheep breeds is used to weave traditional carpets in the Stara Planina Region in the north-eastern part of Serbia. The weaving tradition, which is important in terms of social development, maintenance of local culture and conservation of sheep genetic resources, has been renewed recently.

1.5. Excursion, 9th of September 2011

An Excursion to visit Icelandic Cattle and Icelandic Horse farms and to explore “*Göngur og réttir*” - Roundup of the sheep – was organised. Roundup of the sheep is old Icelandic tradition in sheep husbandry to sort sheep after collection from the common grazing areas in late summer and autumn (mid-September).

2. Assessment of the results and impacts on the future direction of the field

The workshop participants acknowledged the multidisciplinary approaches and studies presented at the workshop. In general, it was considered that the social sciences can add new dimensions to the conservation of genetic resources and it is important to continue the networking and discussions and promote research. It was mentioned that the workshop was a start for further future activities, like joint publications and research and development projects. The workshop supported the capacity-building of institutions and organizations co-ordinating the national gene conservation activities. In addition, a state-of-art scientific knowledge on valuation of genetic resources was disseminated by incorporating social and cultural issues in conservation policy. Furthermore, knowledge on the conservation and sustainable use of animal genetic resources was strengthened by promoting innovations through network of experts with different professions. The participants realized that many countries face similar challenges the in situ conservation. Therefore formal and informal exchange of knowledge and experience is extremely useful. The implementation of approaches of social and cultural sciences in the conservation of farm animal genetic resources is a relatively new multidisciplinary field of research.

However, the workshop participants recognized that scientists and stakeholders from the field of social sciences and that of genetic resources - conservation should know better the basic terminology and approaches applied in these two different fields. This is a prerequisite for the development of multidisciplinary studies while currently there is in many cases a lack of “the same language”. On the other hand, it was felt that this kind of common effort, as this workshop, assist in finding common angles and approaches. The workshop also brought forth that diversity of theories and methodologies are needed for examining socio-economic and cultural values of the farm animals. In addition, a ‘huge’ gap was found between theoretical discussions and the current (not only future) needs in the development and implementation of policies which promote conservation and sustainable utilization of farm animal genetic resources. Several new research topics were suggested, such as method development in valuation of farm animal genetic resources, temporal and spatial variation in human-animal relationships, and analysis of social life in rural areas (particularly among farmers) reflecting the changes in the farming practices. Also possibilities for joint publications and establishment of COST network were discussed. In addition, a workshop was suggested to be held on the topic ‘feral animal populations and their importance in terms of eco-services and gene resource conservation’.

Nordic Genetic Resource Centre (NordGen) will establish an ‘*ad hoc*’ working group of Nordic experts which will develop suggestions for future activities and research projects on socio-economic and socio-cultural valuation of farm animal breeds and promote networking among stakeholders and scientists from the field of social sciences and that of genetic resources –conservation.

The Workshop abstracts have been published in the Abstract Book edited by Juha Kantanen and Benedicte Lund. The Abstract Book and all presentations are available on the NordGen’s Internet pages:

<http://www.nordgen.org/index.php/en/content/view/full/1563>

FINAL PROGRAM

The workshop program is implemented in four sessions: 1) Human-animal relationships, historical perspectives, 2) Conservation of endangered farm animal breeds in the frame of sustainable development, 3) Methodological approaches to value farm animals and local breeds, and 4) Conservation policies and practices.

Program

Tuesday, 6 September

Arrival of participants

Wednesday, 7 September

Session I: Human-animal relationships

Chairman: Emma Eythorsdottir

09:00-09:20	Opening (Director of NordGen Árni Bragason)
09:20-09:40	Introduction to the Workshop themes (Katriina Soini)
09:40-10:10	Ten thousand years of coevolution (Juha Kantanen)
10:10-10:30	Coffee break
10:30-11:00	A Country Built on Milk. Thousand years of domestic animal history in Iceland (Árni Daníel Júlíusson)
11:00-11:45	Key note I: The ambiguous boundaries between the wild and the domestic (Karl Benediktsson)
11:45-12:45	Lunch break
12:45-13:15	Cattle, reindeer and horse: the wild and domestic in Northern Siberia (Sakha Republic – Yakutia) (Emilie Maj)
13:15-13:45	Animals in the changing society –domestic animals in Finland from Bronze Age onwards (Auli Tourunen)
13:45-14:15	Compassion in livestock keeping (Hilde Buer)
14:15-14:30	Coffee break

Session II: Conservation of endangered farm animal breeds in the frame of sustainable development

Chairman: Eva-Marie Stålhammar

14:30-15:15	Key note II: Ecosocial approach: systems and diversity in society and ecology (Leo Granberg)
15:15-15:45	Genetic resources and the values of national conservation (Sakari Tamminen)
15:45-16:15	Dairy production or suckler cow production – what is the most future oriented production system for traditional dairy breeds? (Nina Sæther)
16:15-16:45	Supporting local breed conservation through the linkage with traditional products (Valerio Bondesan)

Closing Day 1

Thursday, 8 September

Session III: Methodological approaches to value farm animals and local breeds

Chairman: Juha Kantanen

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| 09:00-09:45 | Key note III: Socio-cultural approach: A typology on farmers raising local breeds (Katriina Soini) |
| 09:45-10:30 | Key note IV: Socio-economic approaches in the conservation of farm animal genetic resources (Eija Pouta) |
| 10:30-10:45 | Coffee break |
| 10:45-11:20 | Exploring SWOT analysis to identify strategies for conservation and development of local cattle breeds (Daniel Martin-Collado) |
| 11:20-12:00 | A case study: The Icelandic Cattle (Dadi Mar Kristofersson and Emma Eythorsdottir) |
| 12:00-13:30 | Lunch break |

Session IV: Conservation policies and practices

Chairman: Leo Granberg

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| 13:30-14:15 | Key note V: Story-telling on Farmer's Markets: How consumer alliances and direct sales can strengthen local breeds (Aina Bartman) |
| 14:15-14:45 | How research can enhance the utilization of local farm animal breeds in food markets? A case study of native cattle breeds in Finland (Tuomo Tupasela) |
| 14:45-15:00 | Coffee break |
| 15:00-15:30 | Importance of Zackel sheep breeds in development of Pirot and Chiprovtsi Kilim brand in the Stara Planina region (Sergej Ivanov) |
| 15:30-16:30 | Group work |
| 16:30-17:00 | Final discussion and conclusions (Leo Granberg) |
| 19:00 | Dinner |

Friday, 9 September

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| 09:00 | Excursion (Emma Eythorsdottir) |
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Saturday, 10 September

Departure