



Globaldiv

GLOBALDIV NEWSLETTER

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EDITORIAL

Dear Friends,

Welcome to the first issue of the **GLOBALDIV** newsletter - the bimonthly electronic newsletter of the **GLOBALDIV** project funded by the European Commission under the Agri Gen Res Programme on March 2007.

The newsletter will comprise different re-curring sections:

The first one - **NEWS** - dedicated to the most important facts related to the **GLOBALDIV** project and partners.

The second section will briefly report on articles related to biodiversity with a link to the full content.

A calendar of upcoming events will close and recap each issue.

The newsletter will be circulated via e-mail as PDF format, as well as posted on the **GLOBALDIV** web-site: www.globaldiv.eu

If you wish to send us your comments/suggestions/links please send them to newsletter@globaldiv.eu

We hope that you will enjoy reading it!

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Paolo Ajmone Marsan



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GLOBALDIV PROJECT ABSTRACT

The **GLOBALDIV** project is being coordinated by Università Cattolica del Sacro Cuore in Italy and participated by Faculty of Veterinary Medicine, University of Utrecht (UU-FDG, The Netherlands), Institute for Animal Breeding Federal Agricultural Research Centre (FAL, Germany), European Association for Animal Production (EAAP, Italy), additional partners without EC funds MICROGIS (Switzerland), International Livestock Research Institute (ILRI, Kenya), Universidade Estadual Paulista (UNIESP, Brazil).

The overall objective of **GLOBALDIV** is to disseminate current advanced and integrated methodologies for the characterization, evaluation prioritization and conservation of livestock genetic resources.

This includes the secondary objectives of exploiting and disseminate experience of past EU biodiversity projects; reviewing methods of meta-analysis of datasets and integration of databases, to obtain a global view of diversity; promoting the formation of interdisciplinary working groups of experts reviewing key aspects of conservation; reviewing methods and software for integration of specialist knowledge from disciplines as different as husbandry, genetics, sociology, economics and geographic analysis; identifying perspectives for future actions and research priorities; training technical and scientific personnel involved at various level in FAnGR characterization and conservation; disseminating the results widely to all relevant stakeholders in the Livestock Farming Sector.

The proposed project consists of a series of Working Groups (WGs) working on specific topics related to FAnGR. Meetings will be organised for coordination of WG activities and events (6 internal meetings, 2 summer school short courses and 2 workshops) organized from 2007 to 2010 to disseminate the results of WG activities. Meetings and events will be held in four different venues in Europe (Switzerland, Germany, Austria and Italy), with each event held during September and March of each year.

WG TOPICS

WG2 – Characterization of FAnGR diversity

The aim of WG2 is defined as follows: WP2 concerns the characterisation of FanGR in the environment in which they are raised, defining recommendations and guidelines for sampling and collection of information on FanGR. In addition it reviews new advances in molecular tools applied to characterise FanGR. New methods will be compared with established ones, to detect advantages and limits of different marker types in the investigation of FanGR characteristics, populations genetics parameters and distinctiveness.

The activities of each WG in the **GLOBALDIV** project are

- 1) to publish papers in peer-reviewed journals that review the state of the art where the conservation of farm animal genetic resources is concerned, and



- 2) to organize seminars and workshops where the main findings of the reviewing process are presented and discussed. Additionally, for WP2 there is a third activity: To revise and suggest extension of the current FAO reference guidelines for conservation of farm animal genetic resources.

WG3 – Meta analysis of diversity

WP3 focuses on statistical methods and protocols to join information produced in independent local, national or international studies in order to obtain a Global-wide coverage via a meta-analysis approach. This WG is expected to deliver information on datasets already available, breeds or regions for which no molecular data is available, and identification of key breeds that would facilitate a combined analysis of datasets. Information on validation of different meta-analysis methods and a proposal for an international standardization of a SNP panel for future diversity studies.

WG4 – Socio economic aspects of conservation

WP4 addresses specific topics related to the economic aspect of the Conservation of FAnGR. This WG is expected to deliver information on evaluation of efficiency and economic aspects of *in-situ* and *ex-situ* conservation a strategies at the project, country, sub-regional (e.g. EU, countries with similar agro-ecologic and social conditions) and global levels. Case studies of sustainable conservation that are relevant to other countries. Analysis of current CAP and structural fund programs and information and national evaluation data on the economic efficiency of national *in-vivo* conservation programmes.

WG5 – Integrating data and setting priorities for conservation

This WG is expected to deliver information on the tools available for integrated analysis and prioritization and recommendations on their use as decision aids. Decision aids help decision makers understand the consequences of alternative courses of action and to decide upon optimal allocation of finite resources available for conservation, but cannot substitute human decisions.

This WG will disseminate new methods for a comprehensive characterization of FAnGR in their physical and socio-economic environments, allowing the development of methods and tools for establishing priorities under different scenarios.

All WGs will merge at M24 = February 2009 so that the WG6 – Future needs and perspectives will be started. The main deliverable of this WG is the definition of recommendation for future actions and future research.



NEWS

GLOBALDIV 1st Working Group Expert

The GLOBALDIV project has organized the 1st Working Group (WG) of Experts in Rome at FAO premises on October 2nd and 3rd, 2007.

20 experts with different experiences in FanGR met to discuss and review the state of the art of GLOBALDIV topics.

The outcomes has been some review papers that will be written during the remaining project lifetime.

RECENT RELEVANT PUBLICATIONS RELATED TO BIODIVERSITY

1. Kaeuffer *et al.* 2007. Detecting population structure using STRUCTURE software: effect of background linkage disequilibrium. *Heredity* 99:374-380.
2. Tadano R., Nishibori M., Nagasaka N., Tsudzuki M. Assessing genetic diversity and population structure for commercial chicken lines based on forty microsatellite analyses. *Poult Sci.* 2007 Nov; 86(11):2301-8.
3. Wayne R.K., Ostrander E.A. Lessons learned from the dog genome. *Trends Genet.* 2007 Oct 24; [Epub ahead of print].
4. Zhang TJ, Li HF, Chen KW, Chang H, Tang QP, Zhang JX. Genetic Diversity and Systematic Evolution of Chinese Domestic Ducks Along the Yangtze-Huai River. *Biochem Genet.* 2007 Oct 16; [Epub ahead of print].
5. Granevitze Z., Hillel J., Chen G.H., Cuc N.T., Feldman M., Eding H., Weigend S. Genetic diversity within chicken populations from different continents and management histories. *Anim Genet.* 2007 Oct 11; [Epub ahead of print].
6. Sechi T., Usai M.G., Miari S., Mura L., Casu S., Carta A. Identifying native animals in crossbred populations: the case of the Sardinian goat population. *Anim Genet.* 2007 Oct 11; [Epub ahead of print].
7. Taberlet P., Valentini A., Rezaei H.R., Naderi S., Pompanon F., Negrini R., Ajmone-Marsan P. Are cattle, sheep, and goats endangered species? *Mol Ecol.* 2007 Oct 10; [Epub ahead of print].
8. Naderi S., Rezaei H.R., Taberlet P., Zundel S., Rafat S.A., Naghash H.R., El-Barody M.A., Ertugrul O., Pompanon F; for the Econogene Consortium. Large-scale mitochondrial DNA analysis of the domestic goat reveals six haplogroups with high diversity. *PLoS ONE.* 2007 Oct 10;2(10):e1012.



9. Kumar S., Nagarajan M., Sandhu J.S., Kumar N., Behl V. Free Full Text Phylogeography and domestication of Indian river buffalo. *BMC Evol Biol.* 2007 Oct 4;7(1):186 [Epub ahead of print].
10. Lawson Handley L.-J. , K. Byrne, F. Santucci, S. Townsend, M. Taylor, M.W. Bruford and G.M. Hewitt. Genetic structure of European sheep breeds. *Heredity* (2007) 99, 620–631, 2007.

CONFERENCES AND CONGRESSES

Many events concerning different issues related to **GLOBALDIV** project will take place in the coming months. Here is a selection of conferences and other events sorted by date:

- 4th IUCN Congress - World Conservation Congress 5-14 October 2008, Barcelona: www.iucn.org/congress/2008/congress.htm
- WCAP 2008 - The 10th World Conference on Animal Production 23-28 November 2008, Cape Town: www.wcap2008.co.za
- Plant & Animal Genome 16th Conference (PAG-XVI). January 12-16, 2008 Town & Country Convention Center in San Diego, California. www.intl-pag.org

COURSES

- Biology with Conservation and Biodiversity (undergraduate course) University of Sheffield, Animal and Plant Sciences Dept. www.shef.ac.uk/aps/prospectiveug/courses/biolcons/index.html
- PhD in Evolutionary Biology and Biodiversity Conservation. University of Torino: http://biologia.campusnet.unito.it/cgi-bin/home.pl/View?doc=dott_BiolEvol_CBS_eng.html





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