

# Introduction

**E**nsuring that the world's livestock biodiversity is sustainably managed and that the options these resources provide remain available for the future calls for concerted and well-informed action at both national and international levels. *The State of the World's Animal Genetic Resources for Food and Agriculture* is the first global assessment of these resources and of capacity to manage them (see Box 1 for details of the reporting process). This summary presents the main findings of the full report. Part 1 outlines the state of agricultural biodiversity in the livestock sector – origins and distribution, current population size and structure, trends in risk status, and uses and values of genetic resources, along with a discussion the significance of genetic resistance in disease control strategies, and an analysis of threats to genetic diversity. Part 2 considers the livestock production systems of which animal genetic resources form a part, how they are changing, and what this means for the management of livestock biodiversity. Part 3 – largely based on the 148 Country Reports available for analysis in July 2005 – is an assessment of institutional and human capacity in the field of animal genetic resources management, structured breeding programmes, conservation measures, the use of reproductive biotechnologies, and relevant policy and legal frameworks. Part 4 presents the state of the art in terms of the methods available for the management of animal genetic resources: characterization, genetic improvement, economic analysis and conservation. Part 5 draws together the evidence from the other four parts of the report to provide an assessment of priority needs and challenges in the management of animal genetic resources.

**BOX 1**

***The State of the World's Animal Genetic Resources for Food and Agriculture reporting process***

In 1999, the FAO Commission on Genetic Resources for Food and Agriculture agreed that FAO should coordinate the preparation of a country-driven report on the state of the world's animal genetic resources for food and agriculture. In March 2001, FAO invited 188 countries to submit Country Reports assessing the state of animal genetic resources at the national level. Between 2003 and 2005 a total of 169 Country Reports were received.

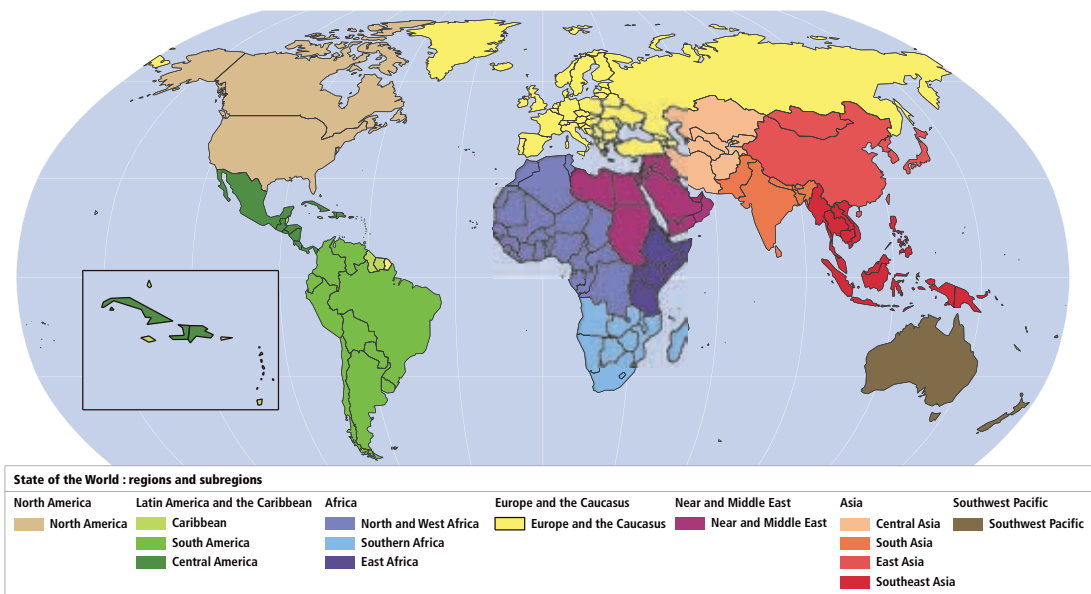
A further important source of information was FAO's Domestic Animal Diversity Information System (DAD IS<sup>1</sup>) – a system that enables countries to report on the characteristics, size and structure of their breed populations.

The report also draws on submissions from international organizations, specially commissioned thematic studies, FAO's statistical database (FAOSTAT<sup>2</sup>), and wider literature and expert knowledge. The various sections of the report went through a process of review by international experts. The first full draft was reviewed by the Commission's Inter-governmental Technical Working Group on Animal Genetic Resources at its fourth session in December 2006. The report was finalized based on the comments and proposals put forward by member countries of the Commission on Genetic Resources for Food and Agriculture. The regional and subregional assignment of countries for the purposes of the report is shown in Figure 1.

<sup>1</sup> <http://www.fao.org/dad-is>

<sup>2</sup> <http://www.fao.org/faostat>

**FIGURE 1**  
Assignment of countries to regions and subregions





# The state of agricultural biodiversity in the livestock sector

- Today's livestock biodiversity is the result of thousands of years of human intervention.
- The countries and regions of the world are interdependent in their use of animal genetic resources.
- A global total of 7 616 breeds has been reported.
- Twenty percent of breeds are classified as at risk.
- Almost one breed per month was lost during the last six years.
- Population data is unavailable for 36 percent of breeds.
- The world's livestock production is increasingly based on a limited number of breeds.
- Genetic diversity within these breeds is also in decline.
- The roles of multipurpose breeds are often undervalued.
- Genetic resistance is increasingly important for the control of animal diseases.
- Important threats to animal genetic resources include:
  - the rapid spread of homogenous large-scale intensive production;
  - inappropriate development policies and management strategies;
  - disease outbreaks and control programmes; and
  - various types of disasters and emergencies.
- Improved knowledge of breeds and production systems, forward planning, and greater awareness at the policy level are essential if genetic erosion is to be minimized.

