



PEOPLE AND ANIMALS



TRADITIONAL
LIVESTOCK KEEPERS:
GUARDIANS OF
DOMESTIC ANIMAL
DIVERSITY



FAO INTER-DEPARTMENTAL
WORKING GROUP ON
**BIOLOGICAL
DIVERSITY**
FOR FOOD AND AGRICULTURE



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TRADITIONAL LIVESTOCK KEEPERS: GUARDIANS OF DOMESTIC ANIMAL DIVERSITY

EDITED BY
KIM-ANH TEMPELMAN AND
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A C K N O W L E D G E M E N T S

We wish to express our gratitude to all those who contributed articles to this publication. Their work allowed us to gather a unique set of case studies to recognize in a better way traditional livestock keepers as guardians of domestic animal diversity. Authors are individually acknowledged in each chapter.

Our warmest appreciation goes out to the pastoralist communities for receiving us with great hospitality and for their willingness to share their knowledge and experience.

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F O R E W O R D

Achieving food security for all is at the heart of the mandate of the Food and Agriculture Organization of the United Nations. The key role of agricultural biodiversity in meeting this objective was once more emphasized by the Secretary-General of the United Nations on World Food Day in 2004, when he urged for greater attention to the role of biodiversity in the fight against hunger.

By protecting and increasing the world's stock of genetic resources, small-scale farmers and herders are making an especially important contribution to food security. Their role as guardians of biodiversity has formally been recognized by the Convention on Biological Diversity (CBD) in article 8j. Furthermore, in Decision VII/3 the CBD invited all governments to mainstream agricultural biodiversity in their national plans, programmes and strategies with the active participation of local and indigenous communities. It also encouraged them to recognize and support the efforts of local and indigenous communities in conserving agricultural biodiversity.

The Commission on Genetic Resources for Food and Agriculture facilitates and oversees cooperation between FAO and the Conference of Parties to the CBD. It coordinates FAO's interaction and work with the CBD and with other international bodies, in the areas of conservation and sustainable utilization of genetic resources for food and agriculture, as well as the fair and equitable sharing of benefits derived from their use.

In collaboration with livestock communities, research centres, universities, governmental and non-governmental organizations (NGOs), FAO identified and documented 13 case studies on how communities manage their local animal genetic resources. These case studies demonstrate that local knowledge is crucial in preserving the equilibrium between farmers, their animals and the environment. However, livestock keepers' role in maintaining this balance and conserving biodiversity is under a great deal of pressure from changing land tenure policies to the benefit of the private sector and the expansion of natural reserves. Formal government involvement could significantly reduce farmers' exposure to these risks. This study aims to raise awareness and subsequently encourage decision-makers to include conservation and development of animal genetic resources in legal, regulatory and institutional planning.

Peter Kenmore

Chair

Inter-Departmental Working Group on

Biological Diversity in Food and Agriculture



I N T R O D U C T I O N

Domestic animal diversity is being lost at an alarming rate. Worldwide, local livestock breeds are being crossed or replaced with higher-yielding animals under the motto “exotic is better”. Furthermore, the native habitats of pastoralists and their animals are steadily disappearing, relinquishing their domain to agriculture, protected nature reserves and industrial activities. This trend is further encouraged by existing formal policy, short-term profit opportunities and a decreasing appreciation of the value of local breeds.

The present variety of farm animal species and breeds is the result of centuries of local knowledge-based selection by traditional livestock keepers. Through traditional farming systems a broad diversity of livestock breeds is being preserved and developed to provide meat, dairy products, eggs, fibre, fertilizer, manure and draught power. Consumers in both developing and developed countries benefit from this diversity since it offers them a wide choice of products for a varied and nutritious diet. Finally, livestock diversity represents future capacity to meet unforeseen needs and opportunities.

With the help of pastoral communities, case studies on traditional livestock farming systems using local breeds were compiled in order to understand and establish:

- > how communities manage local animal genetic resources;
- > local knowledge and good practices;
- > how animal genetic resources interact with their environment;
- > how communities cope with threats to their local animal genetic resources;
- > long-term solutions and sustainability of strategies.

Pastoral communities that live in similar ecosystems in very different regions of the world adopt comparable farming strategies, so the chapters of this publication have been classified according to ecosystems. Each chapter briefly describes the challenges faced by livestock keepers in a specific ecosystem, while the case studies illustrate how communities have dealt with these challenges.

The main lessons to be drawn from the case studies are:

- 1.** Technical and political decision-makers are often unaware of the far-reaching impact of their decisions on the conservation and sustainable use of livestock genetic diversity; consequently, raising awareness and teaching are essential elements.
- 2.** Communities in general have identified the challenges they face in making their farming systems profitable enough to support their livelihoods. Such knowledge should be consolidated by decision-makers, who have huge potential to contribute to solving problems related to the loss of livestock diversity faced by farming communities.
- 3.** Connecting people with others who have already addressed, or are addressing, similar problems generates new ideas and solutions. It also empowers people to formulate solutions serving both their own and common situations and to take appropriate action.

I N T R O D U C T I O N

BRIEF DISCUSSION OF THE DRIVERS OF CHANGE FRAMEWORK

The Drivers of Change framework (see Figure 1) which is derived from a Report of the Conceptual Framework Working Group of the Millennium Ecosystem Assessment published in 2003, summarizes and effectively introduces the reader to the underlying dynamics of the relatively complex case studies. This framework is derived from 13 case studies spanning five continents.

Changing land tenure policies is one of the key drivers of change in livestock farming systems based on transhumance. Large areas of previously common land are either privatized or used for other purposes such as afforestation and wildlife conservation. In most cases, these lands are no longer accessible to livestock keepers, forcing them to find new migration routes and to compete for the remaining communally available grasslands. This often leads to conflict among livestock keepers and between them and sedentary farmers. Moreover, the animal density on the accessible lands increases above sustainable levels, resulting in permanent serious pasture degradation. Ultimately, farmers either have to adapt their management strategies drastically or, when this is not an option, abandon livestock farming altogether.

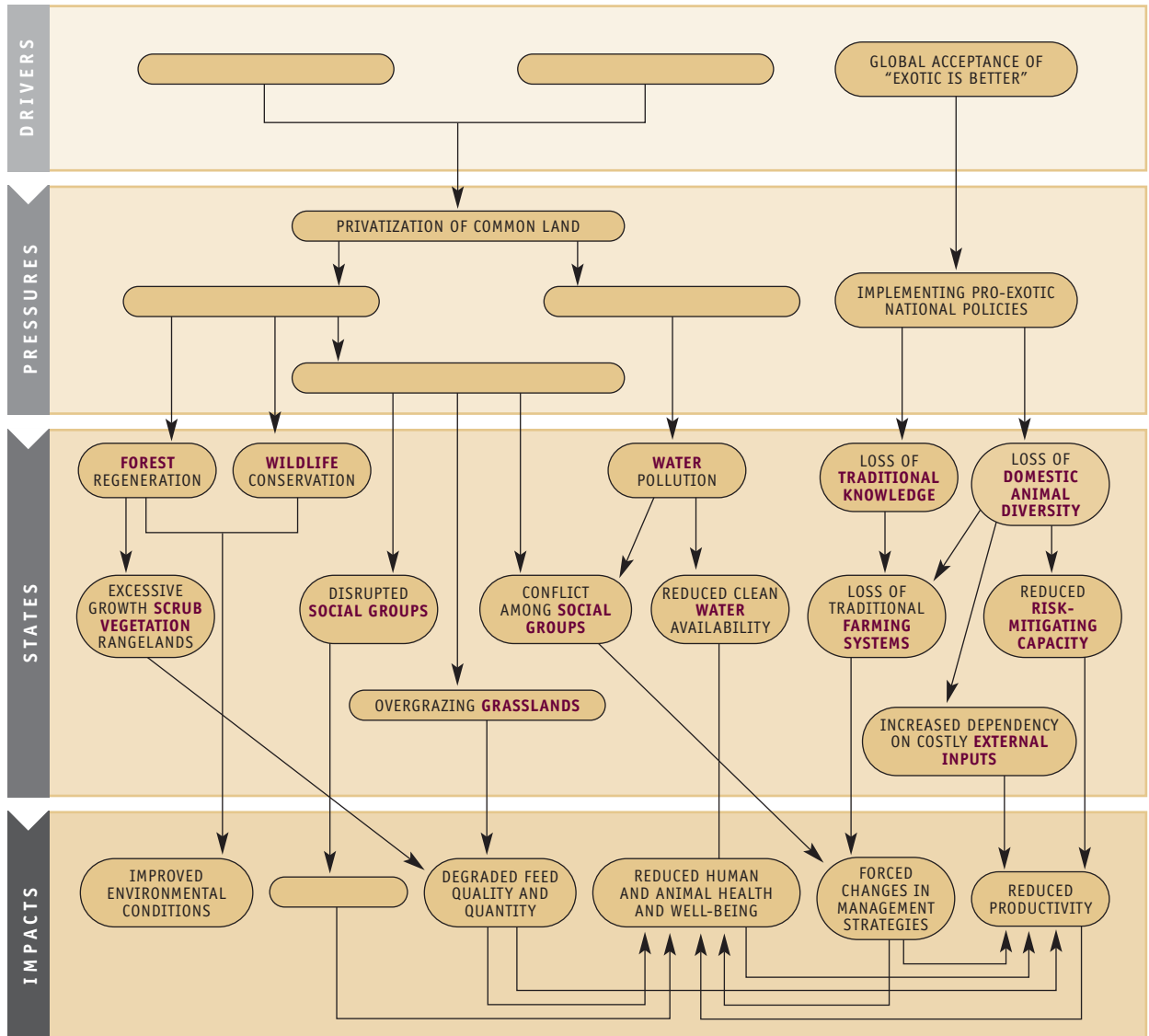
With governments encouraging foreign investment, industrialization is expanding rapidly in developing countries. In one case study, a major driver of change is the polluting mining industry. Foreign mining companies have invaded an area where local communities have been sheep herders for generations. Water sources in the region are currently highly polluted with toxic heavy metals and acid-forming minerals. If improperly managed, contaminants in mine waste can spread in surface and groundwater causing serious pollution that may last for many generations. Availability of clean water has become limited and both human and animal health and well-being have been seriously affected.

The idea that exotic livestock breeds have a higher production performance than local breeds is still widely accepted, yet few efforts are being made to explain in what context this statement is valid. Policies favouring the distribution of exotic breeds are common in many countries. By replacing local livestock with exotic breeds, traditional knowledge becomes superfluous and livestock diversity, as a whole, is drastically reduced. Farmers wishing to raise exotic livestock breeds are forced to abandon their traditional way of farming. They become increasingly dependent on costly external inputs, such as manufactured feed and vaccinations. Moreover, local breeds often serve as savings for rural households. In difficult times, they can easily be sold to generate the extra income needed. By replacing local breeds with exotic ones, this risk-mitigating capacity is being lost.

Numerous responses to the changes described above have been put forward by the authors of the case studies; these are highlighted at the end of each case study and summarized in the last chapter of this publication. Once again, the framework is only a summary of the key drivers of change as identified in the case studies and more detailed explanations can be found in the text.

I N T R O D U C T I O N

FIGURE 1. DRIVERS OF CHANGE FRAMEWORK



REFERENCE

A Report of the Conceptual Framework Working Group of the Millenium Ecosystem Assessment. 2003. *Millenium Ecosystem Assessment. Ecosystems and Human Well-being. A Framework for Assessment.*