



AFGHANISTAN

NATIONAL **LIVESTOCK CENSUS** 2002-2003



FINAL REPORT 2006



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FOREWORD

This report provides the analysis of the four separate surveys conducted under the 2003 Livestock Census.

Livestock plays a fundamental role in Afghan economy and livelihoods. It has been accorded one of the highest priorities in the Master Plan of the Ministry of Agriculture, Irrigation and Livestock (MAIL). Over the past 30 years livestock population has fluctuated due to insecurity and drought in the country. Reliable, updated information and data on livestock numbers, products and production system of the country are scanty. Such data are needed for the appraisal, formulation and implementation of livestock development programmes and projects.

The 2003 Afghanistan National Livestock Census conducted by the Food and Agriculture Organization of the United Nations (FAO) and MAIL aimed to narrow the data and information gap on livestock. The census programme was designed by Professor Wolfgang Pittroff, University of California, Davis, United States of America and Dr Olaf Thieme, FAO. Census enumeration and assessment as well as data processing were done by FAO and MAIL staff. Fieldwork was supervised and managed by Dr Len Reynolds and the FAO national team.

My heartiest thanks are due to all institutions and persons involved in the conduct of the survey and in production of its results. First and foremost, I would like to thank the farmers and the villagers who provided data and information for the survey. The census would not have been successful without their wholehearted support. My special thanks are due to staff of FAO and MAIL for the questionnaire design, survey enumeration and assessment. I should like to acknowledge the financial support provided by the Government of Italy for this important activity through the *Italian voluntary contribution to ITAP 2002/2003 in Afghanistan* project (OSRO/AFG/212/ITA). This work would not have been possible without FAO's technical assistance and operational support.

H.E. Obaidullah Ramin
Minister of Ministry of Agriculture, Irrigation and Livestock (MAIL)
Kabul, Afghanistan
January 2008

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Clarification of district names and locations was undertaken with assistance from the Mol, the CSO and Dr Pinney from the Afghanistan Ministry of Reconstruction and Rural Development. Assistance from UN personnel across diverse projects in Afghanistan and Rome is acknowledged, including particularly Dr Majok, Dr Favre, Dr Crowley, Mr. Mack and Mr. Miagostovich.

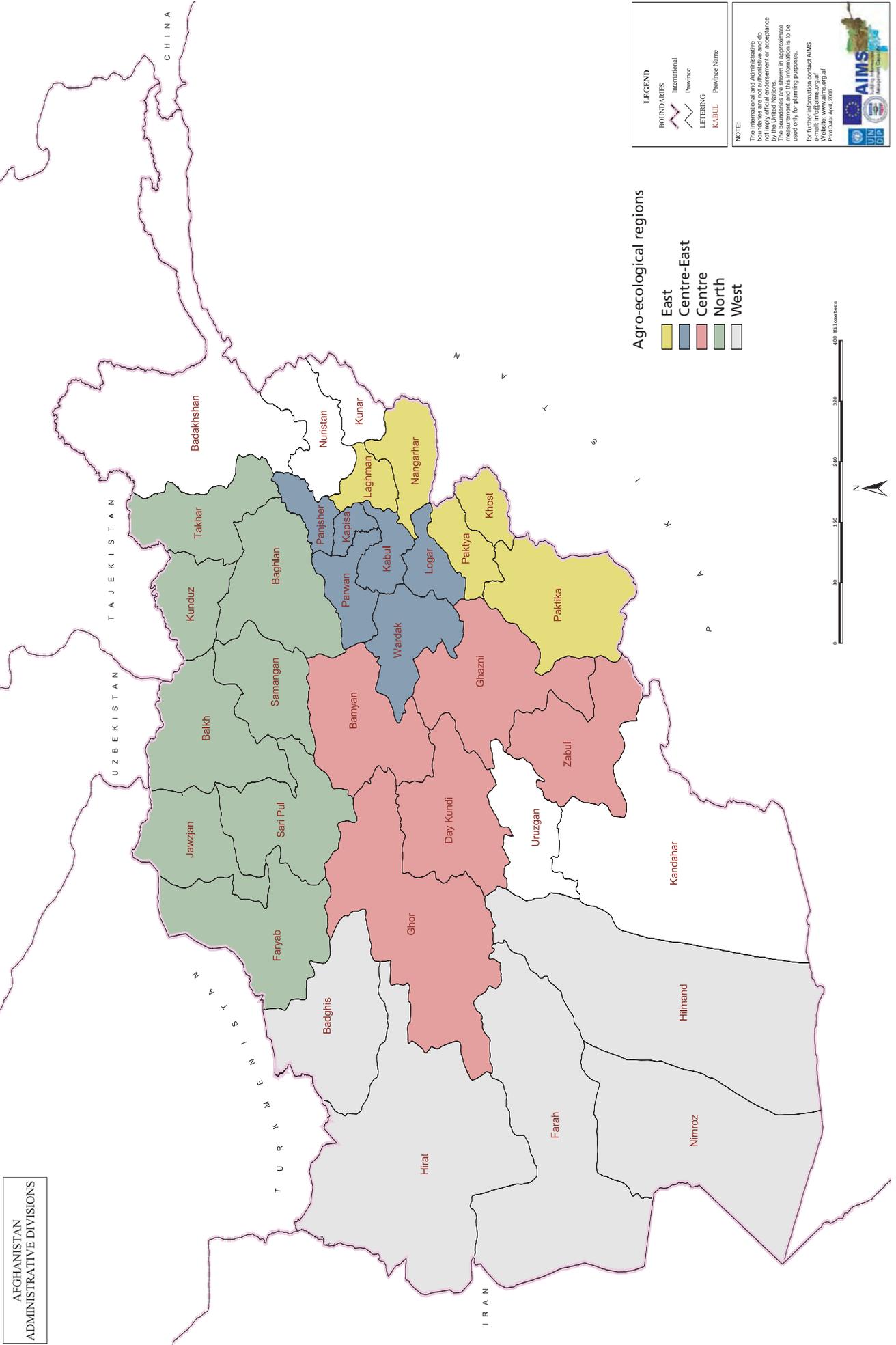
The Afghanistan National Livestock Census was designed by Prof Wolfgang Pittroff, University of California, Davis, and Dr Olaf Thieme, FAO. Field work was managed by Dr Len Reynolds and Dr Habib Nawroz.

Data were analysed by Prof Wolfgang Pittroff (University of California, Davis), Dr Olaf Thieme (FAO) and Prof Fred Dahm (Texas A&M University, College Station, United States of America).

The preliminary report was published in 2003. A long period of in-depth analysis of the massive amounts of data collected in the census followed, especially focusing on Level 2 and Women Livestock Resources Surveys. Data analysis iterated in numerous rounds with post-hoc data clean-up and clarification for all Levels and Surveys. Particularly important was a comparative analysis of Level 1 and Level 2 data using advanced statistical methods. Given the need for a reliable base line data set and the enormous logistical demands faced by nation-wide census operations in Afghanistan, this extraordinary additional effort seemed to be well justified. Some minor modifications of certain summary statistics published in the preliminary report resulted, but all conclusions remained the same.

The final report was written by Prof Wolfgang Pittroff and Dr Olaf Thieme, assisted by Dr Len Reynolds, Dr Nawroz and Mr. Haroon Nessar.

The project team hopes that the hard work of nearly a thousand people summarized in this report will contribute to the reconstruction of Afghanistan.



2. EXECUTIVE SUMMARY

1. After decades of warfare and a devastating drought it was reported that the numbers of livestock in Afghanistan had fallen dramatically. In early 2002, the Ministry of Agriculture and Animal Husbandry of the Transitional Islamic State of Afghanistan requested FAO to organise a national livestock census.
2. The work started in Afghanistan in October 2002 with funding from the Government of Italy and field work was completed by April 2003. Every village in Afghanistan was visited, with the exception of Barmal District in Paktika Province because of insecurity, and parts of Ghor Province because of lack of accessibility over the winter period.
3. A team of 28 supervisors, 24 female surveyors and 821 enumerators were employed for data collection; 14 data entry personnel and 10 data checkers undertook data entry and proofing.
4. Livestock numbers, limited herd structure data and change in ownership during drought were determined by total enumeration in Level 1 of the census. Total enumeration was conducted at the community level in every village in Afghanistan (with the exceptions mentioned above).
5. Level 2 of the Census consisted of a detailed production system analysis designed to survey a representative cross-section of Afghan livestock producers. These data were collected by supervisors from 1 284 selected representative households in randomly chosen villages. The data give detailed information about production practices, production calendars, key production bottlenecks, and suggestions for interventions.
6. In order to ascertain the role of women in livestock production in Afghanistan, a detailed survey focusing on gender role in work responsibility, decision making and producer goals was conducted by female enumerators interviewing 2 899 women in livestock producer households. The data give a detailed picture of gender role in livestock production in Afghanistan, and in addition to Level 2 data, show where successful interventions for livestock development should be directed.
7. Given the historic significance and current potential for value-added livestock production, a survey was conducted to gather information specific to the Karakul sector. Detailed information on Karakul sheep production systems was collected from 132 producers. The data are a snapshot of current production practices and provide, for the first time, background information about this potentially important value-added sector. It should be followed up by a market analysis.
8. The collected data covered 3 044 670 families in 53 214 communities across 36 724 villages. Some communities were unable to state the number of existing families.
9. The total number of cattle in Afghanistan was 3.72 million, and there were 8.77 million sheep, 7.28 million goats, 1.59 million donkeys, 0.18 million camels, 0.14 million horses, 12.16 million chicken, 0.42 million ducks and 0.60 million turkeys.
10. The number of cows kept per family was low, with only Khost, Kunar, Laghman and Nuristan Province reporting more than 1.5 cows per family. The data on number of calves suggests that in many areas, restocking of depleted cattle herds would not be possible at the current reproduction rates.
11. Similarly in many areas reported numbers of young sheep and goats appear low and rebuilding of herds will be slow.
12. The numbers of families without livestock have increased during the years of drought from 11.4 families to 14.4 families per community. However, at the same time numbers of family per community has increased
13. There are no pre-drought livestock census data which could be used for direct comparisons. However, earlier survey results combined with the information from the present census indicate that stock holding per family have decreased sharply.
14. Information from the Level 2 and Women Surveys clearly show that feed and forage production are the major bottleneck for livestock production development in Afghanistan. Future livestock development activities should fully consider these findings and make fodder production an integral part. There is also an urgent need for projects that integrate crop production and livestock development and further animal health programs must be evaluated and planned in conjunction with interventions that are aimed at improving the feed situation.
15. Generally, the farmers' responses after the drought broke in 2003 indicated an optimistic outlook. It was also the time when the new Government took office which might have partly influenced

the positive views about the future. However, Afghanistan is part of the largest drought-prone region in the world and drought will remain a recurring phenomenon. Watershed rehabilitation and drought preparedness must accompany the reconstruction of the Afghan livestock sector to make it more resilient in the future.

16. Three areas in livestock production appear to be most relevant for interventions: Forage production, dairy production, and poultry production. Clearly, cattle are the livestock species which is most important to farmers, and dairy cows are their most important animals. The biggest effect on increased production, improved livelihoods and more food security could be achieved by helping farmers with suitable forage production, ideally well integrated into field crop rotation schemes. Farmers are keenly interested in market integration with dairy products – the potential benefits for small scale commercial dairy development appear to be substantial. Further, a large proportion of women surveyed reported a keen interest in poultry production with a clear focus on egg sales. This seems to be the most effective intervention directly benefiting women in rural Afghanistan, but also in urban centres and should receive appropriate attention by development workers.
17. Wealth distribution data show that Afghan livestock producers are extremely poor by international standards. However, social stratification exists and is regionally differentiated. The regional differentiation is also a result of the 1998-2002 drought, which was of variable severity in different parts of the country. The census shows that the western region has the highest number of farmers with no livestock at all. This was the region most affected by the drought.
18. There appears to be potential for income generation from intensified small ruminant, especially sheep production. Most settled owners of small ruminants have cattle as well and often belong to the wealthier part of the population. The nomadic Kuchi population who keeps a large part of the small ruminants was not included in the present surveys but pre-drought information exists from another FAO (1999) study. Opportunities to develop sheep production are more promising for farmers with access to irrigated land supporting greatly improved forage production. Further analysis of the sheep sector seems indicated, since opportunities for value-added, possibly stratified production appear to exist.
19. Level 2 surveys on feed supply and problems and constraints faced by producers provided much insight into the state of natural resources supporting livestock production in Afghanistan. Livestock owners make substantial efforts to supplement the feeding from natural pastures and crop aftermath with cultivated fodder crops. Feeding of concentrates is very common, but the quantities are usually low and fed mainly during the winter months.
20. The length of the feeding period in the harsh climate of Afghanistan commonly exceeds six months in most locations. Thus, available resources for supplemental feeding and winter forage determine the number of animals that can be kept. This 'Winter Feed Gap', the major constraint of livestock production in most parts of Afghanistan, must be addressed with great care, however. Although no systematic data are available, the aspect of rangeland conditions appears to be poor to catastrophic in many areas of the country. An expansion of livestock numbers, especially small ruminants, facilitated by improved forage resources for the winter feeding period will likely further increase pressure on already stressed rangelands. For small ruminants forages harvested or grazed from pastures and rangelands appear to be quantitatively the most important feed resource. Rangeland conservation, accordingly, is a task of national priority.
21. The average time to reach markets was about two hours, a surprisingly low figure considering the road conditions in Afghanistan. It is possible though that more villages were selected for the Level 2 survey which was nearby the market centres. Farmers did not seem to be overly concerned about access to markets. In light of the other critical issues identified (nutrition, low reproduction, farmer concerns about veterinary health care) markets are not an issue of highest priority.
22. The analysis of distribution of work load and decision making clearly suggests that women are responsible for most livestock-related work at the homestead, while children and to a lesser degree men handle livestock tasks outside the home compound. Since dairy animals are mostly fed at the homestead, cattle forage programs should consider gender in their design. Decision making in livestock production is the domain of men, but for some of the important decisions (purchase or sale of cattle) women share responsibility in the decision making process. Women decide milk and wool sales; therefore, milk collection schemes must explicitly consider the views and involvement of women.

23. Women from rural households provided a wealth of answers on questions related to problems of livestock production and desirable improvements. They overwhelmingly selected cattle as their most important species, and opted for milk production for sale as the most important development activity for cattle production. For women the second most important species was chicken, with the aim of egg production for sale. Future survey work in preparation of livestock interventions should further pursued these questions by asking the questions to both men and women.
24. Karakul sheep production for pelts was in the past an economically very important livestock production in Afghanistan and is still practised. Farmers reported lower sales in pelts and wool compared to the previous year, but expected to sell more the following year. Much, if not most of the Karakul output enters the international markets. More research on the international markets for Astrakhan pelts is therefore needed to judge the potential future of Karakul sheep production in Afghanistan.
25. The census was designed with two levels of sampling intensity. Level 1 as total enumeration census, designed to determine the total number of livestock in the country, and to provide an assessment of livestock losses caused by a catastrophic drought. Level 2 was a survey designed to describe production systems and markets, based on a detailed questionnaire to selected farmers. The data analysis process revealed that sufficient well-trained personnel for checking of data consistency during the census are the key to timely and accurate census execution and analysis. Only stringent quality control exercised during the census allows the use of sophisticated statistical methods for in-depth consistency checking.



photo by: Thieme

