

Foreword

The grasslands of Mongolia and northern China are among the most iconic grasslands in the world. Steeped in history and culture, they are the resource base for the livelihoods of millions of herders and provide a vast array of environmental and ecological services. Managing these grasslands in a way that sustains herder livelihoods and provision of these services is of the utmost importance to Mongolian and Chinese society.

The Australian Centre for International Agricultural Research (ACIAR) is a research funding agency supporting collaborative research between agricultural scientists in different countries, with a focus on research for development. Investing in research that provides the knowledge base to tackle issues such as grassland degradation typifies these investments. Indeed, ACIAR's first forays into China in the late 1980s were to support collaborative research between Chinese and Australian grassland scientists in the north and west of China.

For the following two decades, Chinese and Australian researchers working on a series of ACIAR projects in pastoral areas of China examined a range of issues from livestock disease and management, to pasture and forage management, ruminant livestock product markets and industry development, grazing management systems and industry policy. The research provided a wealth of information in tackling technical, economic and environmental issues associated with grazing systems in China. It was also instrumental in raising awareness and attention to grassland degradation by Chinese officials, attention that ramped up markedly in the 2000s.

Despite the advancement in knowledge about Chinese grasslands, the pressures on grassland systems and actors dependent on these systems, means that an ongoing research agenda is needed to inform sustainable management of the grasslands. In the study that provides the primary research for much of the analysis in this book, the focus is on building on the body of previous technical, industry and grazing system research to provide policy-relevant information, and on identifying how incentives can be strengthened to improve grassland condition.

ACIAR began investing in research with Mongolia in 2015, although many of the authors in the book have been doing grassland research with Mongolia for a much longer period. The study behind research in

the book is ACIAR's first project with Mongolia, and as in China over two decades previously, focused on grassland research. A large number of non-governmental organisations and some development agencies have been involved in development activities on Mongolian grasslands and livestock industries. The focus of the ACIAR activities is on research, and in particular on providing policy-relevant information of use to Mongolian officials in dealing with declining grassland conditions. The project in Mongolia did not have a comparable extensive body of research to draw upon as was the case in China. Targeted technical, social and market research has been undertaken to underpin the policy analysis in the study.

Many of the typical and desert steppe areas in Mongolia and the Inner Mongolia Autonomous Region have similar agro-ecological conditions, and many of the herders have similar ethnic backgrounds. There are, however, important economic, institutional and other differences between Mongolia and China. This current study, involving both Mongolia and the Inner Mongolia Autonomous Region in China, allowed for more direct interaction between Chinese, Mongolian and Australian grassland scientists and, through their networks, with grassland scientists in other countries.

A key feature of this current study is its genuine interdisciplinary nature. Socio-ecological research identifies herder goals and attitudes, and underpins the choice modelling analysis of herder policy preferences and their contingent behaviour in response to alternative policies. Targeted biophysical research and livestock marketing research then provides information used in bioeconomic models to determine changes in grassland attributes and environmental outcomes associated with different grazing practices, enabling the estimation of opportunity costs to herders of alternative policies and practices. In turn, the information on change in grassland attributes associated with alternative grassland policies provided by these bioeconomic models can be combined with choice modelling analysis of residents' valuations of changes in the grassland attributes, to enable comparison of the environmental benefits of alternative policies. Institutional analysis in the project then allows for an estimate of the transaction and resource costs associated with the alternative policies, along with an idea of their political feasibility.

Research of this nature involves primary data collection from focus groups, choice modelling surveys of herders and urban residents, surveys of other grassland actors such as livestock traders, interviews with officials at all administrative levels, and ongoing seasonal monitoring and reporting of select herder households. The willingness and active participation of all of these grassland actors is essential for an accurate understanding and representation of attitudes, preferences and behaviour so crucial to the

analysis of policy incentives. The willing participation of herders, officials and other grassland actors in the research is gratefully acknowledged.

While this study forms the basis for much of the analysis in this book, it also draws on other research by the authors as well as from their interactions with other grassland scientists and insights from previous studies. The authors and ACIAR would like to thank collectively the other grassland scientists for the informal conversations, inspiration and other interactions that have contributed to ideas in this book.

The intention of the policy analysis reported here is to contribute to the ongoing research agenda needed to sustain these iconic grasslands, so that they can continue to support the livelihoods and culture of herder households, and the provision of key environmental services in these regions and beyond. It is hoped that this in turn will spawn a new generation of research and ideas to support the grasslands and the herders dependent on them.

Andrew Campbell
Chief Executive, ACIAR
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