Mountain Population and Employment

Discussion Paper Series

MANAGEMENT OF RESOURCES FOR DEVELOPMENT IN QUXU COUNTY, TIBET, CHINA

**Zhang Mingtao, Qi Yachuan,
Yo Chengqun and Li Gaoshe**

MPE Series No. 7

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FOREWORD

The discussion paper presented here by Professor Zhang Mingtao and colleagues, entitled "Management of Resources for Development in Quxu County, Tibet, China," constitutes one of six case studies initiated by ICIMOD in conjunction with the Programme on Organization and Management of Rural Development.

This Programme focused primarily on the organisational resources and their relationship to the management of natural resources for sustainable development and increased productivity in mountainous areas. Across the Hindu Kush-Himalayan Mountains, rural development projects are relying on different strategies for the achievement of the above goal. These strategies are being implemented within a given macro-institutional and legal framework, presumably with adequate attention given to the sociocultural context. The framework and the context limit, as well as offer, possibilities to development agencies. The purpose of the case studies was to examine innovative institutional strategies implemented in projects (carried out by governmental agencies or nongovernmental organisations) and also to analyse and assess the utility and effectiveness of indigenous resource management systems.

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International Centre for Integrated Mountain Development
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I would like to thank the Aga Khan Foundation for the partial financial support in running the programme. I am also grateful for the assistance we received from the Nepal-Australia Forestry Project, the Dhading District Development Project, the Aga Khan Rural Support Programme and the Pak-German Self Help Project. The programme execution from ICIMOD's side was carried out by Dr. Anis Dani (now with AKRSP) and Dr. Deepak Bajracharya.

ICIMOD was also fortunate to have engaged in collaboration with professionals from various national institutions and project implementing agencies in China, Nepal, and Pakistan. Mutual consultations were held at various planning workshops and orientation sessions in Kathmandu and at the project sites. The participating researchers eventually agreed on the methodological framework and the set of questions that they would try to address. Sufficient flexibility was left, so that, at the discretion of researchers, responses could be made to site-specific situations.

Research Methods. A combination of techniques was used during the course of the research that lasted between six months to one year.

- o Collation and analysis of existing data from government and project records.
- o Selected open-ended interviews with relevant government officials, project personnel, and key resource persons from the region.
- o Field investigations in 8-12 villages within each project area, selected purposively to cover the various strata, the variable impact of development activities, and a range of resource management activities; rapid appraisal techniques were developed and each village was visited two or three times, altogether for about 7 days, to obtain details of specific components after preparation of an initial village profile.
- o Participant observation of project activities.

The key questions that the researchers were trying to address included the following:

- o Under what circumstances do existing resource management systems undergo institutional innovations?
- o What elements of existing resource management systems can intervening agencies build on: tenurial arrangements? property relationships? organizational structures? functionaries?
- o How do different kinds of interventions compare in terms of their ability to generate sustainable development and sound environmental management?
- o How does the user group internalize the benefits and costs of using the resource? How are risks shared? If benefits are not equally distributed, how are the losers compensated?
- o How does the user group ration a scarce resource?
- o How does the user group respond to development opportunities and entrepreneurial endeavours?

Influencing Factors. In addition, the following set of questions, which emerged from the reviews and research already conducted by ICIMOD, were also proposed for investigation during the course of the study:

- o Is the propensity of user investment in future returns related to the resource value, i.e., to the perceived value of the resource?
- o Does the tenurial security of the resource to the user influence the time horizon of local resource management?
- o If actual users have more responsibility for management decisions over their resources, are the resources more likely to be managed for long-term productivity at less cost to the supporting agencies?
- o Does increased equity in distribution of resource benefits encourage greater participation by user groups?
- o Will a resource management function be performed more efficiently if the performer is accountable to the local user group?

Women's Role in Resource Management. A third set of key questions, which appear to be of critical importance, deals with the role of women in resource management. These are:

- o What role do women have in resource management?
- o Is the role of women of particular importance in the use of certain resources, e.g., forests, grasslands, and water? If so, do they have any role in decision-making about, and the management of, those resources?
- o What are the constraints on women's involvement in resource management?
- o How do women perceive their own role in regard to resource management? How do they feel their participation can be improved?

While the study presented here looks into many of the preceding issues, all of them have not been treated equally. The subject matter focuses primarily upon organisation and management of production in Tibetan villages based upon the observations in nine selected villages of Quxu County. Particular attention is given to the "Contractual Responsibility System" in the early 1980s. The analysis undertaken has underlined the relevance of the findings to the wider rural community. I am confident that the readers will find the approach both understanding and enlightening, especially in light of the conclusions and recommendations drawn by Professor Zhang Mingtao and colleagues.

Readers might be interested in knowing that all the six case studies mentioned above, including the one presented here, are brought out in the Discussion Paper Series of the Mountain Population and Employment Division (i.e., MPE Series No. 6 through 11). We would be happy if you would write to us with your comments and suggestions and join in the discussion on these important issues. ICIMOD is organising an International Workshop on the Role of Institutions in Mountain Resource Management, 1-4 May 1990, in Quetta, Baluchistan, Pakistan, to discuss many of the issues brought out by the case studies and provide a forum

for interaction among researchers, development practitioners, and policy makers. The results of the Workshop are forthcoming shortly after the event takes place. ICIMOD is hopeful that these efforts would be useful in generating dialogues on organisational and institutional issues of integrated mountain development.

E.F. Tacke
Director

For publication in its present form, Dr. Deepak Bajracharya and Ms. Greta ICIMOD were most helpful in reorganising and editing the text. We are grateful for their efforts. We would also like to express our appreciation to ICIMOD for the opportunity to do this interesting research.

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Socio-Economic Characteristics

Land and Property
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PREFACE

The Commission for Integrated Survey of Natural Resources (CISNAR) and the Institute of Geography, Beijing, were entrusted by ICIMOD to undertake the research on the organisation and management of rural development in Quxu County of the Tibetan Autonomous Region, China. The four researchers of the Project were specialists in the field of agro-economics, resource economics, geography and water resources. The analyses were based on field investigations in nine selected villages, and also survey of irrigation works and energy projects in the region. Potentials of improving on farming, animal husbandry, and forestry were also explored.

The Project team was formed in July, 1987. The team arrived in Lhasa City in mid-August and started the consultation with the Tibetan Autonomous Government by introducing the objectives and content of the research. We were grateful for the support of the Government in terms of the supply of staff, research materials, and transportation facilities. At the beginning of September, the team arrived in Quxu County and consulted with various bureaus of the County Government, such as Agriculture and Animal Husbandry, Finance, Statistics, Food Supply, Education, Trade and Commerce, and the Economic Planning Committee. Following an understanding of the agricultural, economic, and other aspects of the County, nine villages were selected on the basis of our research criteria. Survey of the villages were conducted from September to November. The data were subsequently sorted out and a preliminary report written. After several revisions, the draft of the current report was completed and translated into English in March, 1989.

For publication in its present form, Dr Deepak Bajracharya and Ms. Greta Rana at ICIMOD were most helpful in reorganising and editing the text. We are grateful for their efforts. We would also like to express our appreciation to ICIMOD for the opportunity to do this interesting research.

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The county is part of the administrative area of Lhasa City, and its county town, Quxu (Xue-Chun) is situated near the Yalongzangbu River at an altitude of 3,160m and a distance of 61 km from Lhasa. An important bridge spanning the Yalongzangbu river is located in the county, making it an important crossroads to southern Tibet and to other regions.

Topographically, the highest areas are in the north and the lowest in the south. The highest point is Darichoulaxhuo Mountain, 5,912m high, bordering Dullongdequing County, and covered with glaciers for almost the whole year. Altitudes decrease southwards down to the valley of the Yalongzangbu (3,380m) with two terrace steps at 3,400m and 4,700m. The total altitude range is from 2,300m in the south to 5,912m in the north.

Quxu County lies in the Lhasa-Lingzhi middle-acidic rock belt. There is a wide distribution of igneous throughout the county which was formed partly in the Mesozoic Era and at the beginning of the Cenozoic Era. The middle-acidic rock layer (diorite, granite diorite, and granite) constitutes the main stratum of the bottom layer (geologically) with a sequence of forceful land movements creating the current terrain of high mountains alternating with wide valleys.

The county has a continental monsoon climate in the valley region. The average annual temperature is 7.3°C, ranging between 15.5°C in June, as the hottest month (the maximum recorded being 29.4°C) and -2.2°C in January as the coldest month (the minimum recorded being -16.5°C). The annual frost-free period is 133 days, and the period during which the temperature reaches more than 0°C is 277 days. Quxu enjoys 3,022 hours of sunshine, and the annual solar radiation average is 190 cal/cm² which is higher than the average in the eastern plains of China. Annual precipitation is 444 mm, annual evaporation 2,199 mm (five times the average of rainfall), and the relative humidity 35 per cent (see Table 1.1).

Dry and wet seasons are clearly defined (Table 1.1), the dry season being from October to April when the precipitation is only 12.6 mm (3 per cent of the annual total). However, during this same period, evaporation is 1,076 mm (49 per cent of the total). The dry season is windy, and the average wind speed is 17 m/sec. The windy period lasts for 32 days from January to April. The wet season is from May to September and the precipitation during that period is 431 mm (97 per cent of the annual total). Occasionally hailstorms are experienced (6 days). The solar