

Mapping the Status of Bhutan's Renewable (Agricultural) Natural Resource

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Books

Regional Development and Cultural Landscape Change in the Alps: The Challenge of Polarization

Edited by Wolfgang Pfefferkorn, Hans-Rudolf Egli, and Antonio Massarutto. Geographica Bernensia, Series G "Basic Research." Berne, Switzerland: University of Berne, 2005. 212 pp. CHF27. ISBN 3-906151-84-0.

This neatly presented A5 format volume reports results of the European Commission's 5th Framework Research Programme project REGALP. Although this series is mostly published in German, the volume under review is in English and, on the whole, very good English, which suggests that the editors have a broader international audience in mind. The book carries 2 subtitles: one on the cover, reading "The Challenge of Polarization," and one on the inside front cover, "From Analysis and Scenarios to Policy Recommendations." These 2 subtitles flag up the authors' main concerns, which are polarization in the Alps, on the one hand; and interdisciplinary research, including scenario analysis, with a view to providing policy-relevant outputs and finding solutions to the problem, on the other.

Mountains are complex and fascinating places, and this is a complex and fascinating story of 8 pilot regions in France, Switzerland, Italy, Austria, Germany and Slovenia. The Alps, as described here, are characterized by a complex, small-scale mosaic of different development types. Over the past 30 years there has been a polarization between prosperous areas (alpine cities, conurbations and major tourist areas) and less favored areas (periurban and peripheral areas). Due largely to upgrading of transport infrastructures, especially roads, the Alps have become closely connected to the surrounding lowlands. Big cities exert a strong influence on adjacent alpine regions, leading to suburbanization, increased dependency, and loss of local identities. Recent changes in the Alpine cultural landscape, as elsewhere, have been characterized both by intensive land development and by extensification, marginalization and abandonment.

The authors argue that, while landscape-oriented policies are theoretically in tune with sustainable development, in reality their influence is modest due to deficiencies in implementation and coordination. For example, preservation of Alpine agricultural landscape may be considered a major policy impact in the Alps. Direct payments for farmers cultivating less favored areas, along with agri-environment measures, are designed to safeguard agricultural incomes and support the maintenance of environmentally sound extensive small-scale alpine agriculture. However, agricultural policy remains contradictory, innovative approaches fail to take hold, and policies reflect the prevailing conservative connotations of cultural landscape concepts. By contrast, spatial planning and regional development policy instruments are widely promoting the balanced and endogenous development of mountain areas-but this, too, suffers from insufficiency and implementation deficiencies. Transport policies have strong but ambiguous impacts on regional development and cultural landscapes. As a result, cultural landscapes urgently need policy integration.

REGALP used scenarios as a basis for deliberating on regional development and cultural landscape issues. An "inertial" scenario—I would call this a business as usual scenario—was based upon current trends and policies not specifically focusing on sustainability, while the "towards sustainability" scenario was, unsurprisingly, based

upon a greater consideration of sustainability policies. The authors are careful to point out that it was their intention not to suggest any "perfect pink" scenario at this point; both of the applied scenarios forecast a growing gap between prosperous centers and marginalized peripheral areas over the next 15 years to 2020. The key to policy relevance in this work, then, is to identify the shifts in policy required to nudge the future away from business as usual towards sustainability.

The authors followed a top-down analysis of the potential future of Alpine regions under the 2 scenarios, with workshops held in the pilot regions. In the workshops, regional stakeholders detailed their hopes and fears with regard to the future in terms of perceived threats and challenges, such as loss of diversity in the cultural landscape, inexorable forest regrowth, expanding urban sprawl, increasing external dependency of marginal villages, and the weak development of regional economies. Both scientists and stakeholders underlined the need for policy measures and projects to mitigate, if not combat, further polarization and create a more sustainable future for the less favored areas in the Alps.

The work concludes by defining 4 key directions towards sustainability in the Alps: (1) an emphasis on spatial balance, (2) integration of development and conservation approaches, (3) enhancement of intersectoral cooperation and regional governance, and (4) dissemination of an Alpine cultural landscape concept to a wide audience of stakeholders and policymakers. None of these recommendations is new; indeed, these findings essentially underline and repeat those of many other projects in the uplands, including BioScene (Mitchley et al 2006). What seems to be innovative here is the integrated research concept that underlies and permeates the whole project, and, especially, the very good practice example of including regional stakeholders from the general public as well as policy-makers, not just as a bolt-on at the end of the project for dissemination, but throughout the project.

The value of policy-relevant research is not confined to policy recommendations generated by a project, but lies, to a substantial degree, in the diffusion of these recommendations into the policy process, and, ideally, to the heart of it. This is an increasingly important, albeit difficult and challenging aspect of academic research (Lowe and Phillipson 2006). It is not possible to judge from this volume whether the researchers of REGALP have come any closer to this science-into-policy grail than have others. There are clear signs of good practice and innovation to aid this process, such as stakeholder workshops, a conference of the regions, school projects, radio and TV broadcasts, and newspaper articles. However, rather scant information is given, for example, on the nature and identity of the stakeholders, as well as when exactly and in what capacity they were involved. Who were the REGALP stakeholders? Did they contribute to the project formulation? If so, how? What did they contribute to the results and to the recommendations? What did they think of the project? Indeed, some short commentaries on the project experience by members of the regional stakeholder groups, both the general public and policymakers, would have been enlightening (and a further innovation). I would also like to know how REGALP interacted with other mountain projects funded by the European Commission, such as GLOCHAMORE, GLORIA and TRANSHUMOUNT. And did the authors work with mountain research and policy organizations such as Euromontana in Brussels or the Centre for Mountain Studies in Perth, Scotland? And, if so, what were the experiences? Finally, what

kind of relationship was forged with the European Commission itself?

Criticism may be made of the limited citation of relevant scientific literature, especially from the refereed journals. This makes the work appear to have been carried out in an academic research vacuum, which it obviously was not. For example, Chapter 6 ("Scenarios") contains no reference to the wide literature on scenario analysis in environmental research (eg Peterson et al 2003). Equally, in the cursory treatment of the nature of interdisciplinary and transdisciplinary research (p 17), there is no reference to the paper on interdisciplinary research in the FW5 programme (Bruce et al 2004). There are minor criticisms that I could level at the presentation in terms of the scant space given to important and complicated maps, conceptual diagrams, and tables. As I presume there were no space restrictions in a volume of this kind, why cram several valuable diagrams on one page when they could be spread over a whole page or even a double page in the case of complex GIS maps (eg Figures 2-4)?

Even though my criticisms have rather piled up at the end, my overall reaction to this volume is favorable. Integrated research is difficult and not always popular, for a variety of reasons (eg Campbell 2005). It is good to see a volume such as this providing examples of good practice in interdisciplinary research, as well as practical and policy-relevant outputs towards sustainable development in the Alps.

REFERENCES

Bruce A, Lyall C, Tait J, Williams R. 2004. Interdisciplinary integration in Europe: The case of the Fifth Framework Programme. *Futures* 26:457–470.

Campbell LM. 2005. Overcoming obstacles to interdisciplinary research. Conservation Biology

Lowe P, Phillipson J. 2006. Reflexive interdisciplinary research: The making of a research programme on the rural economy and land use. Journal of Agricultural Economics 57:165–184. Mitchley J, Price MF, Tzanopoulos J. 2006. Integrated futures for Europe's mountain areas:

Reconciling biodiversity conservation and human livelihoods. *Journal of Mountain Science* 3:276–286.

Peterson GD, Cumming GS, Carpenter SR. 2003. Scenario planning: A tool for conservation in an uncertain world. Conservation Biology 17:358–366.

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Shifting Cultivation and Sustainable Development of North-Eastern India: Tradition in Transition

Edited by P.S. Ramakrishnan, K.G. Saxena, and K.S. Rao. New Delhi, India: Oxford and IBH Publishing Co. Pvt. Ltd., 2006. xxviii + 495 pp. Rs 950. ISBN 81-204-1625-2.

Edited volumes are often difficult to review, as they comprise chapters by different authors who, no matter how thorough the editors' oversight, are unlikely to achieve the coherence of a single writer; and the larger the book, the more difficult. So at 495 pages and 29 contributors, I expected Shifting Cultivation and Sustainable Development of North-Eastern India to be a challenge. It is invidious to select for comment 3 or 4 chapters from several—in the case of this volume 20—probably on no other grounds than that they discuss issues of particular interest to the reviewer. I know how irritating it is to be one of the omitted contributors. Yet to attempt a comprehensive review, particularly of a book this size, invariably means a glancing engagement with the issues.

The volume's tight focus on Arunachal Pradesh and the topic of shifting agriculture, locally called *jhum*, make the task more manageable. The fact that the first-named editor is the single

author of 5 chapters, accounting for about one-third of the entire book, lends further coherence, stamping the volume with his view of issues central to shifting cultivation and sustainable development of northeastern Indiafields to which he has made notable contributions over many years. The topics include land-use and vegetation-cover changes in the North-Eastern Hills; the need for an agroecosystems analysis of jhum, along with what he calls a socioecological system view of the landscape; research into the patterns and processes of forest fallow secondary successions; and the need to view village ecosystems within their landscapes, which, he thinks, offers a way of seeing farming integrated with forest.

The book is helpfully divided into 6 sections, partly by region and partly by topic. These deal with land-use and land-cover changes in the North-Eastern Hills; a review of current knowledge regarding the region's landscape under jhum farming; various issues relating to Namdapha National Park in Arunachal Pradesh; the situation in the West Kameng and Tawang regions of Arunachal Pradesh; comparative issues in other mountain regions of India; and, finally, a section entitled "Reconstructing the fractured cultural landscape."

The section on Namdapha National Park opens with a discussion of land-use and vegetation changes in the Park. It includes several chapters dealing with biodiversity conservation based on protected areas, on the one hand, and a field station at Chessa that undertakes botanical-garden-like ex situ conservation, on the other. A particularly interesting chapter discusses ethnobotany in the Park's buffer zone. The other theme in this section is agriculture, with a chapter discussing Chakma cultivation practices from an ecosystems perspective and another dealing with

socioeconomic issues related to the exploitation of secondary forest by communities living around the Park.

The section on the West Kameng and Tawang regions begins with a discussion of land tenure and the upland *jhum* farming regime. Other chapters discuss the role of livestock in the local farming regime, the involvement of local communities in forest management, and the role of non-timber forest products in rural livelihoods. The section on other mountain regions includes chapters on shifting cultivation in the Central and Eastern Himalayas from a landscape ecology perspective; integrated natural resource management and socioeconomic issues in the Sikkim Himalayas; and land-use change, conservation, and related natural resource management issues in the Western Ghats of Kerala.

The concluding section opens with a chapter by the volume's senior editor where he attempts to pull together the various chapters using the concept of "cultural landscape," which, he claims, is an emerging paradigm integrating ecology, economics, and culture to address development and conservation issues. The final chapter is a brief discussion about communicating the scientific view of development issues to "stakeholders."

The volume includes some valuable ethnographic and ecological data and discussion of issues relating to development and conservation in the North-Eastern Hills region of India. It is excellent, so far as it goes. As noted above, achieving an integrated edited volume is no easy task; some of the chapters in this book perhaps have too much the air of project reports submitted to the agency funding the research: UNESCO New Delhi under the Man and the Biosphere Programme with support from the MacArthur Foundation. This signals, in some senses, a missed opportunity.

A symptom of the report-like structure is the fact that, while this volume addresses in admirable detail issues relating to both the environmental and cultural dimensions of shifting cultivation, as well as related problems of development and conservation in Arunachal Pradesh, it misses the opportunity to situate these in the context of discussions of similar farming regimes and associated issues in other parts of the world. There are comprehensive studies of shifting cultivation from Latin America, Africa, New Guinea, and Indonesia that might help to throw a novel comparable light on the problems and issues in Arunachal Pradesh. We know that this way of farming is not necessarily as environmentally degrading as some assume, particularly those working in development, and that under appropriate conditions it is not only sustainable but an integral part of the natural environments that we see today and that have been subject to generations of human interference and management. Another symptom of the book's narrow focus is that it addresses issues relating to development and conservation almost in a vacuum, disregarding the fact that there is now a vast literature on participation in development, local (indigenous) knowledge and community involvement in conservation schemes that could usefully inform and deepen discussion.

In conclusion, this book will prove a valuable resource to those who wish to know more about *jhum* shifting cultivation in northeastern India, both its cultural and ecological aspects, and issues relating to development and conservation.

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Mapping the Status of Bhutan's Renewable (Agricultural) Natural Resource

Edited by Isabella Kassignana Khadka, A. Beatrice Murray, and Dharma R. Maharjan. Kathmandu, Nepal: Ministry of Agriculture, Royal Government of Bhutan and International Centre for Integrated Mountain Development, 2006. Free download at http://books.icimod.org. Hardcopy: US\$20 (developed countries), US\$15 (developing countries), US\$10 (ICIMOD member countries). vii + 147 pp. ISBN 92-9115-011-8.

Overall, this is an excellent publication that will usefully support renewable natural resources (RNR) development in Bhutan and will also be of interest as a case study to those involved in agricultural and rural development in other countries. It has resulted from a joint initiative between the Ministry of Agriculture (MoA) of the Royal Government of Bhutan (RGoB) and the International Centre for Integrated Mountain Development (ICIMOD) to analyze and classify the RNR of Bhutan, with special emphasis on agriculture and livestock. Bhutan has a predominantly agricultural economy, with more than threequarters of its population engaged in agriculture and related activities; agriculture (including livestock and forestry) is the single largest contributor to the country's GDP, providing 33% of the total.

The book has a clearly defined purpose that is well served by a logical and systematic structure. The volume is divided into 4 parts: an introduction, an overview of Bhutan, a series of maps with supporting data summaries, and a final part containing a summary and conclusions. Throughout the book, text and tables complementing the maps are clear and concise. The contents

clearly deliver what the title suggests.

The rationale and objectives of the study are well articulated in Part 1. Geoinformatics tools have been used to organize and analyze RNR databases (from an agricultural census carried out in 2000) and to present visual representations of data and information in order to assist development-planners and policymakers by enhancing understanding. Part 2 provides a brief overview of Bhutan and gives descriptive information relating to the country's geophysical characteristics, climate conditions, agroecological zones, vegetation, land use and land cover, national protected areas and biological corridors, economy, development vision and policy, and developments in the RNR (agricultural) sector. A very useful presentation of information on countrywide characteristics is provided in a series of high-quality 1:250,000 maps with a separate acetate overlay showing country and district boundaries.

In Part 3 a series of thematic maps highlights various aspects of Bhutan's agriculture, including agricultural land use characteristics, cereal production and yields, agricultural inputs, horticultural production, livestock population and production and agricultural marketing. The subsection on major constraints to farming provides some of the most immediately revealing information. For example, information is given on destruction of crops by wildlifeincluding the statistic that 36% of farm households have reported losses directly caused by wild boar. Farmers also experience constraints related to labor shortages, lack of irrigation facilities and limited access to markets.

One of the specific objectives of the study was to characterize the districts of Bhutan based on simple RNR indicators. In Part 4, a set of 11 indicators are listed and clearly and succinctly described. One, for example, is the percentage of

households owning wetland (chushing)—which essentially shows the distribution of paddy fields. Another is the percentage of households owning 3 or more acres of arable land, a good indication that a household is self-sufficient and has a stable food production. Maps show a ranking of districts based on selected RNR indicators, as well as an overall ranking based on a sum of the rank positions of individual indicators for each district. These indicators are used to explore the limitations and potential for agricultural development.

Five-year plans are the basis for development-planning in Bhutan. The 9th Five Year Plan (2002–2007) introduced planning at the level of the Geog (a group of villages forming an administrative subdivision of a Dzongkhag or district), giving greater autonomy and independence to communities and their elected representatives in the planning and implementation of development activities. In the 10th Five Year Plan, poverty reduction will constitute the country's main development objective. This plan will also see the development of a more rational and mutually agreed method of resource allocation to facilitate better prioritization of plans and balanced regional development. This atlas has the potential to contribute to the achievement of the RNR sector's objectives throughout the 10th Five Year Plan period and beyond. Further analysis of (ideally updated) RNR census data that enables a Geog level resolution could be a useful step on from this study in order to reveal the variations within districts. It might then enable targeting of specific technical support and help to inform and verify problem analysis by district and subdistrict stakeholders. Also, some further examination of physical and socioeconomic factors that have shaped the distribution and productivity of various agricultural systems would be useful.

To have converted the survey data in this way is a considerable achievement. The book provides a detailed snapshot of agricultural resources and activities, and this rich source of information will help decision-makers and the donor community in supporting the RGoB in its efforts towards sustainable development. In this respect, it is a significant contribution to the field, successfully providing a baseline description that will prove useful for charting change over the coming years and decades. Clearly, the preparation of the document has been a valuable learning exercise and the production of this first edition will facilitate the production of subsequent updated versions. Trend data will be valuable to monitor developments and evaluate various programs and projects.

An interactive CD-ROM has been produced for use in Bhutan, to complement the printed atlas. This is a useful user-friendly resource which enables viewing of maps equivalent to those in the book. It has simple GIS functionality that allows the user to browse and query.

The value of a publication such as this is clearly in its application. If you are involved in rural/agricultural project planning and implementation in Bhutan, you should have a copy. It will also prove useful to development practitioners and students of rural development elsewhere, as a country case study illustrating an approach to national census, presentation, analysis and application of data. If you simply have an interest in rural Bhutan, this publication will provide a fascinating insight into agricultural life.

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Persistence and Transformation in the Eastern Hindu Kush: A Study of Resource Management Systems in Mehlp Valley, Chitral, North Pakistan

By Fazlur-Rahman. Bonner Geographische Abhandlungen 118. St. Augustin, Germany: Asgard, 2007. vii + 314 pp. €25. ISSN 0373-0468.

The Hindu Kush mountains are among the most isolated parts of the mountain system that covers Afghanistan, Pakistan, China, and Nepal, and includes the Pamir, Karakorum and Himalayan ranges. Chitral itself, ranging from 1000 to more than 4000 m in altitude, is made up of a series of isolated valley systems, the whole being surrounded by high mountain passes. Its biodiversity is unusual. The geography is dominated by river systems flowing through broad and narrow valleys, and the region is prone to episodic flash floods and earthquakes. Until the 1960s, the people of Chitral were ruled by a mehtar who wielded almost absolute power. The human communities live either in the main valley of the Khunar River, or in the extremely isolated side valleys, including the Mehlp Valley.

Fazlur-Rahman describes the entire ecosystem of the Mehlp Valley, including its history, land ownership and use, agriculture, and current and past village organization. This is a massive undertaking. His account is detailed, extremely well written, and contains a wealth of information. He begins by describing the conceptual and methodological framework of his research. The remote sensing methodology is state-of-the-art, involving panachromatic IKONOS satellite images of the area, acquired in April 2001, at a 1-meter spatial resolution, with a horizontal

accuracy of 50 meters. Fazlur-Rahman conducted fieldwork during summer 2001 and, in April 2002, consulted the records of the India Office Library, London, including correspondence between the India Office and political agents in Chitral from 1895 onwards. He makes the interesting comment that, by contrast with other valleys in Chitral, there is little information on the Mehlp Valley. One wonders why this is so.

The second chapter reviews the physical and anthropological characteristics of the Mehlp Valley. It covers the ecology and the physical and resource potentials of the valley, along with its climate and natural vegetation. The history of the valley, and of Chitral more generally, is also discussed. Furthermore, the author describes valley settlement patterns—which are heavily influenced by natural hazards, especially landslides—and informs us that approximately one-third of the jeepable road is prone to landsliding and requires regular repair. Many villagers have 2 or even 3 houses at different altitudes, necessitated by the changing annual weather cycle and the need for access to summer pastures. As in many isolated valleys in the area, there has been outwards migration of people who are unable to live there because conditions are too difficult. The historical causes of these permanent migrations are inability to pay land taxes, incurring the pleasure or anger of local rulers, land development in nearby areas, and the purchase of arable land in other parts of Chitral.

In Chapter 3 Fazlur-Rahman discusses the Mehlp Valley's resources, including ownership, utilization and management mechanisms. He begins by defining property rights in terms of the original Latin connotations (pp 47–49) and makes the important statement that, in the Mehlp Valley, there appears to be little or no written evidence of ownership rights: the

whole system is operated through orally transmitted traditional knowledge. He then provides a detailed breakdown of village resources in terms of land, water and human resources. There is considerable difference between the amount of arable land at different altitudinal levels, and local tenancy systems and responsibilities are well defined. The author also discusses changes in land tenure, differences between villages in land ownership, and the utilization of land for food and fodder crops and irrigated grass. We were fascinated by the subsequent accounts of roads, paths and animal passageways, and of the design of houses, including room layout and roof construction. The remainder of the chapter consists of 3 other interesting topics: clan level distribution and management of Prangos pabulata, a perennial fodder plant growing at about 2900 m; irrigation water; and controlled sheep and goat grazing.

Chapter 4 describes traditional livelihood systems and collective sustenance strategies. The yearly cycle is organized around agriculture. In early spring, the villagers increase the rate of thawing by covering snow with earth, moving higher up as the season progresses. Detailed information is provided on the use of oxen for plowing and harrowing. Seeding-first of barley, then of maize and potato—as well as subsequent irrigation follow carefully planned sequences that involve considerable cooperation between the families. Chemical fertilizer is applied regularly. The inhabitants of the Mehlp Valley also cultivate willow and seabuckthorn, which are both used in village and household activities. Threshing of cereal crops is well organized, and the floor of the threshing room is very carefully prepared using soil and water. Threshing is conducted by 7 to 9 animals tied together and walking in a circle, led by a donkey or ox at the center (pp 134–135). These descriptions are followed by an

account of cattle and milk cow grazing practices and arrangements for goat grazing. Yaks are also grazed, although this has become less frequent. Finally, the author describes wool and hair processing, the making of rugs and ropes, and gender division of labor at the household level.

The final chapter discusses recent changes and their impacts on the valley's village system. There have been significant changes in agriculture, arable land ownership, crop rotation and cropping patterns. Modern agricultural innovations have included the use of chemical fertilizers, although most families in the village can now no longer afford them. In the 1970s, government subsidies allowed a progressive increase in exogenous food supplies, including wheat grain, sugar, rock salt, and cooking oil. Chemical fertilizers and kerosene were subsidized as well. However, subsidies were later reduced and eventually abolished. Currently, wheat grain is the most important material trucked in. Changes have also taken place in livestock ownership and grazing arrangements for sheep and goats. House design and construction have been modified, especially in guest rooms, and access doors to the animal quarters have been re-sited.

The final part of this chapter covers a number of very important sociological changes. "The traditional system of barter, reciprocity and exchange of products has totally changed, and money has become the single means of transformation in the village" (p 215). There have been major changes in patterns of male migration out of the valley, and of migrants into the valley: the latter are mainly permanent employees of governmental and non-governmental organizations. Seasonal labor migrants out of the valley include young males who temporarily migrate to Islamabad, Peshawar and Karachi in winter, engaging in ad hoc employment,

before returning to the valley in spring. There is also a developing international migration to the Gulf States for periods of 2 or more years. In the Mehlp Valley, unlike other parts of the Northern Areas, international remittances from migrants to their families in the valley are an important source of income. The chapter closes by drawing attention to the developing role of village and women's organizations, especially through the Aga Khan Rural Support Programme. This initiative's efforts include development of irrigation infrastructure and construction of jeepable roads and a micro-hydroelectricity plant.

Fazlur-Rahman's appendices are remarkable, providing household-by-household and village-by-village data on which much of his book is based. The final colored maps are a delight to the eye.

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Poverty and Inequality among Chinese Minorities

By A.S. Bhalla and Shufang Qiu. London and New York: Routledge, 2006. xx + 202 pp. US\$160. ISBN10: 0-415-30840-2; ISBN13: 9-78-0-415-30840-3.

This short book presents empirical evidence on the impacts of post-Mao Zedung economic reform in China upon poverty and inequality amongst Chinese minorities. It mainly covers the period of 1978–1998, which means that it is already somewhat dated. Minorities are numerous and diverse throughout China, but their main settle-

ments, as noted in the preface, are found in either hilly or mountainous terrain. Around 60% of the land is occupied by minorities, who in turn represent 40–50% of the absolute poor in China. There is emphasis on data from southwest China, despite the existence of large ethnic minority populations in other regions of China.

A major criticism of the book is that it often relies on generalizations about mountain life that ignore the heterogeneity of mountain areas in China. For example, the analysis of dualisms like "plain/hilly" masks inherent geographical disparities that are present throughout China. The authors accept that perceptions of minorities and their levels of poverty may in part be culturally and idealistically determined, particularly amongst the Han majority, but what group do they come from, and how much does their background cloud their views of minority/Chinese history? For example, the Bai have farmed the upland plains in the Dali region for reasonably long historical periods, which counters the authors' assumptions about minority behavior (p 40).

This is a book with many tables, but too few maps or figures. A map of provinces and autonomous provinces would have proved most useful. The authors frequently use the Chinese Academy of Social Sciences (CASS) household survey data to support statistics from the Chinese government; however, by their own admissions, there are methodological limitations to using these data to measure poverty. The reader must be cautioned against the representative nature of the data based on minorities living inside and outside autonomous areas, which are the chosen unit of measurement. At the smallest scale, the authors analyze intracounty differences, but do not point out microvariations in environment that may be important factors influencing poverty within these counties. The comprehensiveness and consistency of data are sometimes questionable: for example, in Table 2.8 the Dali Bai autonomous prefecture is not included, yet Table 2.10 lists the Bai as the second largest minority group. Other criticisms relate to switching the unit of analysis from individual to household, and omitting religion from analysis.

The book starts with a general discussion about the meanings attached to definitions of absolute and relative poverty, and provides a good review of poverty indicatorsalthough European examples are used rather than Chinese. How relevant are 19th century classes of poverty in the UK to China? Later countrywide comparisons with contemporary development in India are somewhat more useful. The following chapter shows that income inequality has grown, with the rich getting richer. Minorities have sometimes fared better than the Han majority: for example, income grew much faster among minorities (33%) in Guizhou and Yunnan than among the Han majority (9%) from 1988 to 1995 (p 67). This is attributed to space, tourism, border trade, a reduced educational gap between Han and minorities, and increased non-farm activity. Economics, rather than culture and ethnicity, are said to explain poverty; this finding counters the official stereotypical Chinese view that different cultural and social views provide the preconditions for poverty and "backwardness" (a term I dislike).

Chapter 4, on literacy and basic education, looks at Tibet, which has the biggest disparity in rates of literacy between Han Chinese and minorities. It fails, however, to acknowledge that some minorities do not have a written language. A policy shift that de-emphasized non-formal education schools, coupled with increased privatization, has influenced minorities' education. Living in rural areas and remote rural areas in the mountains reduces effective literacy and denies access to information, thus preventing development. However, it

appears that geographical factors have a relatively weak influence on educational attainment, even though the approach to poverty programs in impoverished regions has been ineffective. The data confirm that gaps in educational attainment have widened, despite affirmative action, and the authors touch on the sensitive subject of how the spread of minority education, whilst increasing earning potential, also has the political danger of spreading ethnic demands.

Chapter 5 addresses minorities' health status and services. Rather surprisingly, living in hilly areas is found to have no statistically significant effect on access to clean drinking water. Households in the plains are said to have much higher probabilities of access to clean drinking water than those living in the hills, who have access roughly on a par with households in mountainous areas, a point that emphasizes the need for better conceptual development of these broad terms to understand such differences.

Chapter 6 appraises the role of 3 anti-poverty policies and programs-the food-for-work, microcredit and rural labor mobility programs operating in Sichuan-even though Yunnan has the greatest proportion of poverty counties. These policies are found to be biased in favor of minority administrators in terms of central government budgetary fund allocation; however, widening gaps in poverty are explained by poor policy implementation, a lack of commitment towards betterment of minorities, or inadequate resources for this purpose. A conflict of interest between subsidized loans and microcredit schemes is exposed, with the Poor Areas Development Office and the Agricultural Development Bank both favoring the non-poor. The preference for rural credit cooperatives to prefer financial deposits as a guarantee on loans, rather than land as collateral, clearly prejudices mountain

dwellers from obtaining formal credit. The authors view this as a failure caused by targeting poor areas rather than poor people. Concluding remarks are that food-forwork programs are more successful and beneficial to minority poor people than the subsidized loan scheme and microcredit.

The last chapter discusses specificities of anti-poverty programs in Guizhou, which seems a strange choice for the conclusion of the book. Part of the justification for writing this comes from the lack of western literature on the province, yet there is insufficient reference to Chinese, Taiwanese, or Japanese academic literature throughout the book. It is also surprising that there is no discussion of the potential of IT initiatives to overcome physical hurdles leading to poverty. The authors conclude that minorities are not targeted by anti-poverty programs, and that the most remote areas are missed out from existing anti-poverty programs, just like minorities who do not live in autonomous areas.

A general remark on the concluding comments of this and all other chapters is that they rarely offer greater insight or explanation into the causes of poverty. Indeed, this book poses as many questions as it answers! It contains many assumptions about mountain life that are not justified. Despite some of my reservations about the book, readers of Mountain Research and Development may find it of interest not least because, as the authors claim, this is a much needed contribution towards improving our understanding of minorities living in mountainous environments—a subject that is often ignored.

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The Shan: Culture, Art and Crafts

By Susan Conway. Bangkok, Thailand: River Books, 2006. 212 pp. U\$\$50. ISBN 974-9863-06-2.

First of all, The Shan: Culture, Art and Crafts is a surprising book. This may be due to the fact that its appearance and title, at a first glance, suggest a descriptive, somewhat museumizing approach to the subject. The author takes her readers on a journey through the eventful history of the Shan States in inland Southeast Asia, which, even at present, comprise nearly a quarter of the country known today as Myanmar. The wealth of historical photographs and beautiful pictures of crafted artifacts in this lavishly illustrated book evoke stories of legendary exotic countries in a distant past. At the same time, it promises a deep insight into the arts and crafts of bygone cultures. And indeed, the volume nourishes fascination and scientific interest alike. Susan Conway-a British artist and Research Associate at the School of Oriental and African Studies in London-has compiled a highly differentiated collection of art treasures and expert knowledge about cultural artifacts.

At the core of the book, Chapters 3 to 6 deal in detail with the art and crafts of the Shan. "Male Dress in the Shan States" and "Female Dress in the Shan States" (Chapters 3 and 4) consider the dress of both villagers and royalty in the 19th and early 20th centuries. Conway points out how the Shan royalty, in particular, modified their dress to suit prevailing political and economic circumstances. Moreover, clothing and textiles were closely associated with sumptuary laws—a fact that is particularly evident in dress worn to lavish ceremonies at the Burmese court. Chapter 5, "Princes and Palaces," highlights royal customs and lifestyles, as well as palace architecture and regalia, which,

much like dress, reflect the local hierarchies and influences of surrounding powers at any given point in time. "Shan Art and Crafts" (Chapter 6), finally, presents the Shan craftspeople, who have always been considered legendary by their neighbors, along with their astounding palette of products, including Buddhist mural paintings, textiles, furniture, lacquer ware, silverware, pottery, and basketry.

The most surprising quality of the book lies in the way Conway succeeds in imparting to her readers a deep understanding of how artifacts obtain their place, interpretation and meaning within a culture. This is reflected in the chapter sequence: the central chapters described above are framed by 2 introductory and 2 final chapters. The introductory chapters unravel the historical background up to modern times, describing societal changes and, in particular, the intense interactions between the Shan and the surrounding, usually dominating, powers. Chapter 1, "Setting the Scene," provides an introductory analysis of the cultures, traditions and economies of the Shan States in the context of their ethnic fabric. Over time, hill and valley dwellers established, modified and resolved complex family networks and political alliances that enabled them to interact socially, politically and economically, and, at times, to fight and go to war. "The Shan States: History" (Chapter 2) traces the formation of the Shan States and describes how the Shan elites succeeded in preserving their culture alongside the surrounding powers that dominated them—Burma, China, and the colonial powers of England and France—until 1962, when the Burmese military regime forced the Shan elites into exile and shattered the cultural and social interaction patterns developed over the centuries. The first of the closing chapters, "Trade" (Chapter 7), deals with long-distance and petty trade in the

Shan States, with particular reference to textiles, dress and raw materials. This is followed by a brief "Conclusion" examining the state of the Shan culture in the current political climate.

Conway thus attaches great importance to the social and political dynamics that form the backdrop for the artisan and artistic expression of the ethnic groups subsumed under the term Shan. She points out that, for centuries, the Shan States formed a marginal region between the centers of power of Burma and China, and, later on, the colonial powers. The border along the Mekong river that separates Myanmar from China and Thailand was established only at the end of the 19th century, under British rule. Before, borders had not been understood as fixed lines. but rather shifted in accordance with the expansion or diminution of the dominant political powers' realms of influence. By means of alliances and intrigues, as well as war and trade, the Shan royalty succeeded in playing off the surrounding powers against each other and maintaining a certain degree of independence. The backbone of their sophisticated culture was highly productive rice cultures—sufficient to sustain not only the religious and political elites, but also a class of craftspeople—along with a natural environment rich in gemstones, precious metals and precious woods. Surrounding powers repeatedly failed to annex the area due to its poor accessibility and controllability. Thus, the Shan States took on the function of a buffer zone, as well as that of a connection along which, in good times, trade flourished. Openness and interaction with the surrounding cultures were important preconditions for the development of an autonomous Shan culture. However, it would be wrong to assume that the common people had any choice in this regard. The constant need for manpower in the sparsely populated

country led to resettlement of farmers and forced recruitment of craftspeople from abroad. These, along with slavery, war and trade, were the actual drivers of interaction. Conway calls attention to the activeness and also the pragmatism with which people in this dynamic environment continuously adapted and recreated their cultural heritage, while at the same time successfully maintaining their cultural identity. Interaction between the different groups of hill and valley dwellers was a central integrative power, employing culture and cultural elements as strategic means for building identity, forming alliances, and modernizing the country.

Wherever there is a need for proof that neither culture and tradition, nor ethnicity can be dealt with as static concepts; that, on the contrary, they are constantly subject to change and adaptation, this is certainly a book to refer to. In this regard, Conway presents a deeply ethnological piece of work. And despite its complexity, it is an enthralling read from the first page to the last. Its structure is a great benefit, as it enables experts to use the book as a reference work. Much detail and expert knowledge may confuse lay readers; however, these sections can be skipped without substantially interrupting the flow of thought. A minor drawback of the chosen structure and chapter sequence may be that it inevitably leads to certain redundancies. The only major shortcoming of the book is the absence of high-quality cartographic material. Given the significance of geographical interrelations, detailed maps would have provided a helpful means of orientation and an aid in structuring the wealth of information provided throughout the volume.

A review of the history and culture of the Shan could not have been more timely. The recent events in Burma have reminded the global population of the tragedies taking place in this almost entirely isolated

country. Today, Burma is one of the world's poorest states. The splendor, wealth and power of the past have been lost, and the various ethnic groups are suffering oppression and fragmentation. One may well share Conway's hopes for a future revival of the Shan culture and craftsmanship under more favorable political conditions in Burma. However, her records also imply that it is nearly impossible to assess how much of the Shans' knowledge, skills and local craftsmanship has been preserved, or how they have been handed down from generation to generation. Even if the Shan States should recover the freedom of interstate mobility, dialogue and open interaction, local producers would face unfavorable conditions. With the exception of marginal areas, local craftsmanship was already destroyed towards the end of the 19th century, when foreign goods such as cotton began to invade the markets. Today, markets are flooded with cheap Chinese mass products. Craftspeople do not have sufficient purchasing power to buy raw material for their products. Secular buildings are being left to decay, art treasures have been stolen, and the decline of craftspeople and artists is progressing along with the deprivation of ethnic minorities and their cultures. In the long run, tourism and niche production of high-quality art and crafts may prove a potential—but only if knowledge and skills are not entirely lost. This is where the strength of Conway's book comes in. As a comprehensive collection of art treasures preserved both in Burma and abroad it contributes substantially to the struggle against oblivion. When time comes, it will help to revive remaining integrative forces.

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