

Reviews

JÜRGEN CLEMENS, *Ländliche Energieversorgung in Astor: Aspekte des nachhaltigen Ressourcenmanagements im nordpakistanischen Hochgebirge* (Bonner Geographische Abhandlungen, 106). Sankt Augustin: Asgard Verlag, 2001. XIV, 206 pages, 19 figures, 26 tables, 4 plates and 9 maps, € 19.00. ISBN 3-537-87656-4

Pressing environmental problems such as global warming, air pollution, and deforestation are caused by energy consumption and indicate the manifold and complex relations that energy use establishes between human societies and their environment. Jürgen Clemens explores these linkages in a study of rural energy supply in the mountainous environment of the Northern Areas of Pakistan with the aim of assessing the sustainability of local resource management for energy use. The book is one of a number of highly relevant studies that have been produced in recent years within the context of the Pakistan-German Research Project "Culture Area Karakorum" (CAK). It is based on an extensive literature survey and field research that was carried out in the course of several visits between 1992 and 1994.

The study begins with a comprehensive survey of rural energy supply in Pakistan and in the Northern Areas. The analysis of the contribution of the various traditional and commercial energy sources to the domestic energy supply – mainly natural gas, hydropower and firewood – shows clearly that firewood is still the most important source of energy for cooking and heating in rural households throughout Pakistan and even more so in the mountainous periphery of the Northern Areas. The case study of energy use in the Rupal and Chichi Gah – valleys between 2500 and 3340 m in the Astor region south of Nanga Parbat – therefore concentrates on firewood consumption and on the sustainability of utilization and management of forests as the most important source of firewood in this region.

The author comes to the conclusion that the management of forest resources for energy in the area is not sustainable. For one thing, the quantity of firewood consumed was found to be in excess of any published data for the whole of Pakistan. Evidence in the field, moreover, provided clear indications of forest degradation as a result of overuse, but as firewood was still in ample supply up to the date of the author's empirical surveys, no attempt had been made on the part of the village communities to regulate forest use. Disputes between neighbouring communities over access to forest areas can, however, be regarded as an indicator of an emerging awareness of resource scarcity. The book ends with a survey of the practice and potential of farm forestry, which has a long-stand-

ing tradition in the Northern Areas, as a strategy to supplement the dwindling supply of firewood from natural forests. The practice of farm forestry is not as firmly established in the study area as in other parts of Pakistan; the author, however, argues that a development of the farm forestry potential is more likely to meet the energy demands of rural households within the short or medium term than the development of hydropower, which, in his opinion, will not provide an alternative to the use of biomass fuels for the foreseeable future.

Jürgen Clemens' work is a painstaking and diligent study, which shows effectively the potential of geography for a study of the complex relations between humans and their environment within the framework of energy use. The author's specialization is in the field of social and economic studies; environmental aspects are, however, competently dealt with by taking recourse to excellent sources such as the vegetation map of the Nanga Parbat region by Carl Troll and by incorporating the findings of studies on human impact and forest degradation by other members of the CAK project. The author's carefulness in procuring data, which I rate as one of the outstanding qualities of this book, can be exemplified by his approach to the study of firewood consumption. The reliability of firewood consumption surveys is often compromised by the enormous variation of quantitative data. Variation is to a large extent due to the fact that estimates of firewood consumption are often made on the basis of questionnaire surveys alone, which produce results of doubtful quality because of imprecise questions or the inability of respondents to give a correct quantitative answer on the spur of the moment. The author has therefore opted for a more labour-intensive combination of participant observation and actual measurements of firewood consumption. A most interesting and valuable contribution are his studies of territoriality and seasonality of firewood supply given in map 8 on p. 115. The book is well endowed with maps and diagrams, and the maps are, on the whole, of a very good quality. Map 7 a, however, which shows exposure and vegetation cover in the Chichi Gah, would have benefited from the use of contour lines.

My reservations are few. The author's style is a bit laboured, and a comparison with studies on forest resource use from other parts of the Himalaya-Hindu-kush region would have been helpful in placing the study in a larger context. Nonetheless, I rate Clemens' study as a very valuable contribution to the field of human environment studies.

Dietrich Schmidt-Vogt

ALAIN LEFEBVRE, *Kinship, Honour and Money in Rural Pakistan. Subsistence Economy and the Effects of International Migration*. (Nordic Institute of Asian Studies Monograph Series, 78). Richmond: Curzon Press, 1999. 303 pages, £ 40.00. ISBN 0-7007-0984-3

Labour migration is an eminent factor of economic and social change in Pakistan. At times the remittances Pakistani workers abroad sent home were the most