



## **Book Review: Ländliche Energieversorgung in Astor: Aspekte des nachhaltigen Ressourcenmanagements im nordpakistanischen Hochgebirge**

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Source: Mountain Research and Development, 22(3) : 311-312

Published By: International Mountain Society

URL: [https://doi.org/10.1659/0276-4741\(2002\)022\[0311:B\]2.0.CO;2](https://doi.org/10.1659/0276-4741(2002)022[0311:B]2.0.CO;2)

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**Ländliche Energieversorgung in Astor: Aspekte des nachhaltigen Ressourcenmanagements im nordpakistanischen Hochgebirge**

By Jürgen Clemens. Bonner Geographische Abhandlungen 106. Sankt Augustin, Germany: Asgard-Verlag, 2001. xiv + 210 pp. €19.00. ISBN 3-537-87656-4.

This book, whose title may be translated as "Rural Energy Supply in Astor: Aspects of sustainable resource management in the northern areas of Pakistan," is written in German. But all captions for the 26 tables and 19 figures in the text, the 8 tables and 9 photographs in the appendix, and the 4 maps on 2 additional color pages are also provided in English. Moreover, summaries have been provided in English as well as in Urdu, one of the local languages.

The book builds on Jürgen Clemens' PhD thesis and is there-

fore written in a scientific style. A large number of footnotes—comprising a marvelous aggregate of information—make it difficult to read. This is true for the whole book, except for the small summaries in some of the chapters, and Chapter 6, entitled “Final reflections and the study’s relevance for developmental policy.” This last chapter is a very good summary of the most essential parts of the book.

Chapter 1 is devoted to a brief discussion of sustainability in mountain regions. Chapter 2 is about energy supply in Pakistan and the northern areas, which are clearly described as different because of their very special geographic and political conditions. A description in Chapter 3 of the case study area—Churit in Rupal Gah in the Astor area—is followed by Chapter 4, the primary content of the book, about firewood collection and use. It explains in detail the weighing of wood loads and the measuring of firewood consumption by different cooking processes. Chapter 5 discusses the means of producing additional firewood, mainly on private land.

Clemens shows in detail how household wood consumption can be estimated by taking into account the number of donkey loads needed to carry firewood cut and collected only by men. The consumption is calculated on a household basis. Different aspects are taken into account, such as summer and winter consumption, demand for different meals and fireplaces, dryness and type of wood. The author’s final calculation of annual consumption by a household is 9500 kg of firewood. This is more than what was estimated by the farmers themselves and in other studies on firewood consumption made in earlier surveys of the northern areas.

On page 104, Clemens mentions that women also collect firewood—small pieces that may not be considered in the calculation. He also points out that women were not allowed to talk to foreigners accord-

ing to Moslem rules and that this was an unfortunate limitation for his research. The estimate of consumption may, therefore, need to be corrected by including women’s and children’s contribution to firewood collection. This may in turn modify the total amount of consumption as calculated on the basis of donkey loads. My experience in the high mountains of eastern Nepal indicate that a household’s entire consumption can consist of the collection of twigs and branches, especially in poorer families.

The information that male farmers are not aware of the scarcity of firewood—expressed very clearly in the book—explains why firewood is consumed without sophisticated conservation practices and concerns about production. According to the comparison Clemens makes between the current results and those of earlier investigations, as well as the data collected by Schickhoff (2000), the forests seem to be depleted. It is not clear, however, whether this really results from cutting firewood or, as mentioned several times, from the use of timber for commercial sale and construction of houses.

It is important to note that local management committees or “Forest Protection Committees” do not have sufficient rights and that the Forest Department is more concerned with forest protection than with sustainable use and recovery. The book addresses this issue and is, therefore, also of political value. Possibilities are shown regarding tree species that could be planted to produce firewood and other outputs (eg, fruit and fodder trees). The author is convinced that the use of wood as a community resource is possible and would be successful, as is the case of other community resources such as pasturing and water. He offers a vision of how these systems could be used to organize joint actions for forest protection and tree nurseries, and states that this is only possible if the

farmers have more rights and responsibilities in the field of community forestry. Clearly, an awareness of the scarcity of forest resources must also exist.

Bringing together energy supply and sustainable management of mountain forests is more of a theoretical exercise in the book. Reality shows that sustainable management depends much more on property rights, interhousehold cooperation, and legal decisions (also presented in the book) than on the exact firewood consumption per se—especially because it seems that much more wood is needed to construct houses than to keep families warm or cook food.

The title of the book would have matched its contents better if it had been something like “Consumption Measures and Actions Needed for a Sustainable Firewood Supply for Households in the Northern Areas of Pakistan,” because it considers other energy options only marginally. The potentials of kerosene, gas, and renewable energy technologies such as solar and hydropower also need to be examined in this area. Moreover, rural energy supply includes much more than firewood consumption: it includes human and animal power, passive solar heating and drying, water power for transport, etc. These aspects are completely missing from a field study that describes a very special situation. It is, therefore, a very valuable case study on fuel wood consumption for heating and cooking, the main energy supply of rural households, with detailed and valuable descriptions of firewood measurements and means of production.

#### REFERENCES

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