

is useful in involving the reader in the difficulties of those who work in the field.

Reviewed by Joe Hampson, School of Social Work, Harare

Integrated Rural Energy Planning, edited by Yehia ElMahgary and Asit K Biswas, Butterworth, 1985 (no price quoted).

This volume is the proceedings of a workshop organised by the United Nations Environment Programme and the International Society for Ecological Modelling. As such, the ten country case papers presented reflect the stage of progress in the countries concerned, progress which is bound to be uneven. The difference in their approaches to development range from one which reduces the recipient population to the status of passive consumers of carefully controlled amounts of a specified form of energy (Senegal) to the engagingly 'suck it and see' approach of an Indian experimental/demonstration village.

Two of the studies describe well developed purpose-built village systems which integrate several renewable energy sources; the well-known Xinbu energy village in south China and UNEP project in Sri Lanka. The purpose of the workshop may well have been to review the applicability and progress of the 'Xinbu model', but the emphasis seems to have moved from 'integrated rural energy systems' to 'integrated planning of rural energy systems' and this shift will make the findings of the workshop more useful.

Three case reports deal with what are primarily desk exercises in national planning (in Colombia, Nigeria and Indonesia), while a couple more focus on the village use of one particular technology. I found those which reported on the integration of more than one renewable energy technology into an existing community or region the most interesting, and the paper on Dodoma region, Tanzania, sounds chords which will strike echoes throughout the savanna and semiarid regions of sub-Saharan Africa.

The 'Xinbu model' may only be possible with the degree of community organisation and the low income differentials of China. The Sri Lanka case study suggests that, apart from the cost of the resident expert staff, the capital expense involved in installing equipment for some of the technologies concerned can only be recovered in regions as densely populated as south Asia, and outside these regions this equipment could hardly be adequately maintained. This applies to all but the simplest solar photovoltaic systems and possibly to the community use of a network of biogas digesters.

Few of these papers address the broader reasons for promoting the use of renewable sources of energy, and the Sri Lanka study, which does so in most detail, pursues an argument which risks slowing the drive to develop these sources. This argument emphasises the high price of petroleum products, which applied from 1979 until about the date of this workshop, but the reason for switching to renewable sources should surely not be that oil prices will continue to rise, but that oil is effectively a nonrenewable resource and must be replaced eventually. Letting short-term economic considerations, like the recent drop in world oil prices, govern the rate of development of alternative sources is to risk being unprepared when there finally is no choice but to turn to renewables.

The final chapter of this volume, guidelines for planning, is timely and even were it for this chapter alone the book should find a place on the shelves of the growing number of people who are focusing on this area.

Reviewed by Brian MacGarry, Silveira House, Harare, Zimbabwe.