

Conclusions

The severity of energy problems in the fragile mountain environment of the Hindu Kush-Himalaya suggests that drastic measures need be taken immediately. A major commitment on the part of all concerned is necessary to move beyond the present rhetoric. Sufficient realisation of the need to do "something" exists, but readiness to face the challenge of alternative approaches does not. The nominal attempts until now have not had significant impact in alleviating problems.

Decentralised energy planning and management have the potential of overcoming many of the constraints faced in the mountain region. The idea is geared towards addressing location-specific problems in the heterogeneous mountain environment and building local capacity to absorb new alternatives for increasing energy inputs, as well as adopting energy conservation practices. Furthermore, the scheme dovetails with the growing awareness in the Region that principles of decentralisation will have to be revitalised and implemented as part of development programmes. To the extent that the revival of interest in decentralisation within the Region provides opportunities, a serious and concerted effort by all those concerned would be worthwhile. Action is required now to confront the crisis. In spite of the limited nature of current technological knowhow and planning approaches, the question is whether the limited political will that exists today is sufficient to put the available technologies and planning approaches into practice. Refinement and further development are possible as lessons are learned from field experiences based on action and research.

In this connection, financial inputs have to be increased. Donors as well as government decision makers should be encouraged to divert their attention from preoccupation with conventional measures that favour commissioning large-scale projects. A new approach to monitoring and evaluation is necessary for making investment designs, if small-scale decentralised projects are to have a chance. Moreover, it is important to bear in mind that the mountain region has until now been so neglected that investment needs to go into a learning process before definitive and replicable plans and programmes are possible.

A combination of action and research that goes towards developing more refined plans and policies has to be promoted. Flexibility is a necessary ingredient in this process.

Another important aspect is the question of coordination. Establishment of a coordinating agency for energy planning and management is clearly a necessity. However, this is only part of the answer. An innovative approach is also necessary to promote a holistic outlook for assessing energy demands from various sectors in an integrated fashion, and to supply energy by careful analyses of conventional as well as new and renewable sources.

It has been emphasised that the principle of energy planning is to achieve development goals. Given the current thinking on integrated rural development programmes, decentralised energy planning and management fits in well. It is now important to provide incentives for encouraging government officers from related sectors in assessing present as well as projected demands, based on ongoing and planned development activities in their sectors. Academic institutions and private sector agencies must also be encouraged to participate, particularly in generating innovative ideas for supplying energy to meet the demands. The concept of partnership is clearly relevant. The beneficiaries (i.e. the district residents) must play a central role in that process, while making assessments of energy supply and demand.

Coordination must also exist, not only within the particular district, but at all levels of the administrative structure for policy making, planning, and implementation. Different roles and responsibilities can be distributed to people at various levels (e.g. the service centre, block, district, state, and national levels, as in the case of India). As suggested in the multilevel spatial planning approach described earlier, the distribution of responsibility can be mutually supportive. The tasks include, for example, establishment of rural energy demonstration units, supply of inputs, supervision of field activities, administering of training programmes, formulation of annual plan targets, monitoring and evaluation, and coordination with national plans and policies. A built-in mechanism must exist for continuous refinement of approaches through interaction among people at various levels.

Given the complexity of the subject, compounded by extremely limited experiences in the mountain region, a strong case can be made that decentralised energy planning and management should be tried out in a few selected districts of the Region. An emphasis on selected districts makes good sense because of the limited data base and the constraints on manpower availability. This would give the opportunity to test systematically many of the approaches advocated here, and to refine the associated methods. Based upon on-site experiences, mechanisms of extension can be suggested on more realistic grounds. The type of manpower and technical support required in the district, and the form of liaison with other levels of the administrative structure, as well as research and development

institutions, can be better assessed from such experiences. Guidelines and training programmes can be developed in a more relevant fashion to support the expansion of the programme to other districts. Furthermore, an important dimension will be provided by the sharing of experiences among countries with different sociopolitical and biophysical conditions.

The emphasis on a few districts may appear to be an anomaly from the perspective that a quantum jump is needed to avert problems in the mountains. Yet, this attempt should be seen as a part of the continuing process for which long-term commitments are required. A quick-fix approach will not work. Systematic, deliberate, and sustained efforts, that may be gradual at first, are needed to face the enormous problems in the Hindu Kush-Himalaya Region. Careful consideration must be given to radical alternatives for diversifying the economy and creating employment and income-generating opportunities through additional inputs of energy.