and technologies. The concept of performing such assessments is well under way in many developed and developing countries. Planning methodologies which are flexible enough to accommodate the needs and aspirations of individual countries need to be better developed. To accomplish the degree of flexibility required along with the necessary expertise often means strengthening existing institutions, creating new institutions where required, and ensuring that the numbers of qualified people necessary to operate in local circumstances are available. (See Annex B for an outline of tasks involved in integrated energy planning).

Although much of what is needed to be done to plan for a non-conventional fuel future for developing countries will have to be done by those countries themselves, there is considerable scope for mutually advantageous cooperation between some of them and developed countries. Common elements among certain developing countries make it not only possible but also desirable for them to co-operate, to share experiences and even to develop coordinated R and D programmes, both bilateral and multilateral.

3.4.2 Institutional Problems

The lack of energy delivery infrastructures in many developing countries constitutes a real constraint not only to the development of appropriate technologies but also to their extension and acceptance. Technologies that are of immediate relevance in developing countries are now available and, while improvements may be required in individual cases, especially to reduce production costs, the hardware for harnessing alternative energy sources is relatively well known and reliable. What is required is therefore an appropriate institutional infrastructure capable of planning and implementing a coordinated programme at all levels and of mobilizing community support for it at the economic levels where it would be implemented. An adequate institutional framework might include institutional capacities.

For surveying energy potentialities and planning;

For R and D to indentify appropriate technologies, to adapt available types to suit local conditions, to introduce innovations and to develop prototypes;

For field testing of prototypes for suitability as well as compatability with local customs and tastes;

For studying the competing demands on the resource base in order to provide the information needed for making sound development decisions;