

INFORMATION NETWORKS FOR ENERGY PLANNING:
ROLE OF UNESCO/ROSTA

A Abdinaser

INTRODUCTION

In many developing countries a double energy crisis has emerged as a result of the sharp increase in the real price of oil in the past few years and a growing shortage of traditional fuels such as wood. Consequently attention is increasingly being paid to possibilities for enhancing both the importance and use of new and renewable energy sources.

ENERGY POLICY FORMULATION AND PLANNING

The energy component of the Lagos Plan of Action, including the development and exploitation of both new and renewable sources of energy and non-renewable sources of energy, will have to be determined at national and multinational levels. Common to all aspects of energy problems in Africa are fundamental weaknesses and deficiencies which require concrete and urgent rectification at national, subregional and regional levels. These deficiencies include:

- a. The absence of national energy policies and development programmes integrated into national development plans.
- b. The insufficient capabilities, human and institutional, for drawing up and using inventories of all energy resources and particularly of non-renewable sources.
- c. The lack of capability for planning and the composite exploitation of all available energy resources taking into account projected development by sectors and changes of technology in the exploitation of different forms of energy.
- d. The lack of adequate manpower for the evaluation, extraction and processing of all forms of energy for the design (including standardisation), manufacture and marketing of equipment components and spare parts for R&D.
- e. The tendency to use technologies from industrialised countries.
- f. Inconsistencies in policies, planning and programme and project designs and execution, and a lack of information at national and multinational level on achievements made in the development and utilisation of non-renewable energy resources, possibilities of equipment using such sources, its limitations, etc.
- g. The need to orient energy development policies and therefore the mobilisation and redeployment of financial resources in favour of small-scale development projects especially to meet the needs of rapid development in the rural sector.
- h. The inadequacy of cooperation between technical institutions concerned with resources inventory and planning, and joint feasibility studies and multinational enterprises responsible for production, standardisation and marketing, R&D manpower development, market surveys, etc.

In the African countries, energy policies and planning must take into account the socio-economic duality created by the co-existence of modern and traditional sectors. This duality is characterised by different patterns of energy

consumption and supply: in the modern sector, life style and technologies resulting in energy use mostly based on petroleum; in the traditional sector, a subsistence economy based on low-energy intensity, dispersed demand and supply, but often threateningly high consumption of limited fuel-wood resources, which leads to accelerated degradation of ecosystem.

Obtaining information on the most recent research, application, case studies, manufacturers, expert consultants, or patents, about alternative energy etc, is not easy. This information has been collected for only a few developed countries, sometimes in only one field of alternative energy.

There is very little consolidated energy information either on or available to developing countries as a whole. Energy information is provided, in most cases and particularly in Africa, by a wide variety of institutions and individuals in many different fields, including the physical and environmental sciences, life sciences, engineering and economics. This diversity creates problems for locating, evaluating and using such information. At present, some developing countries lack even the framework and resources to collect information which could be useful to them. Ways of channelling information to groups of users are often inadequate. The absence of standardisation prevents comparison of standards.

THE CONTRIBUTION OF UNESCO

UNESCO has accepted the challenge of helping to manage the world's energy information, especially as regards new and renewable sources of energy for developing countries. The purpose of its programme is to put the right information in the right hands at the right time. Launched in January 1981, the Energy Information Programme of UNESCO is conducted in association with UNESCO'S General Information Programme. This deals with scientific and technological information, libraries and archives and promotion of information systems and services at the national, regional and international levels and which includes UNISIST (Intergovernmental Programme for Co-operation in the Field of Scientific and Technological Information).

UNESCO is also supporting a Cooperative International Network for Training and Research in Energy Planning (CINTREP) which aims at the achievement of a set of stable inter-disciplinary and interactive academic centres in developing countries, which include training activities at different levels, and research on the technical, economic, social, environmental, international and related problems of the energy system of the countries or region.

While only one African Centre (ENDA) is currently participating in this Network, it is hoped that, other African centres will participate in the future.

One of the major programme activities of UNESCO with regards information on energy is the establishment of regional projects for enhancing existing information services and encouraging the sharing of information resources in an effort to link organisations in an international network. Pursuant to this overall objective, sub-regional and regional pilot projects are being launched in five regions of the world. In Africa, two sub-regional pilot projects on non-renewable energy resources information sharing networks have been established by UNESCO: one for Eastern and Southern Africa and the other for Western Africa.

An African Regional Symposium on Solar Energy was organised by UNESCO in November 1983 in Nairobi, Kenya. This symposium was a prelude to the formation of the Solar Energy Society of Africa (SESA).