

SUMMARY OF PROCEEDINGS OF THE
INTERNATIONAL SEMINAR ON SMALL HYDRO POWER
12-14 December 2007: Trivandrum, India
Presented at the Closing Session on 14 December 2007

The three day International Seminar on Small Hydro Power, organized by Govt. of Kerala, Energy Management Centre and United Nations Industrial Development Organization (UNIDO) and sponsored by the Department of Industrial Policy and Promotion (DIPP), Govt. of India, Ministry of New and Renewable Energy Sources (MNRE), International Network on Small Hydro Power, Hangzhou, China, Power Grid Corporation of India Ltd., Indian Renewable Energy Development Agency (IREDA), Kerala State Electricity Board, Agency for Non Conventional Energy and Rural Technology (ANERT) and Kerala State Power and Infrastructure Finance Corporation, is concluding successfully today in Trivandrum. The Seminar had 70 delegates from 10 countries from Asia and Africa and had the benefit of 25 learned presentations from researchers and practitioners of SHP from the participating countries in 8 technical sessions and three Plenaries, chaired by an International Presidium for each session.

The Seminar after deliberations took note of the acute shortage of modern energy services, especially in the rural areas of many of the participating countries and identified this as the main barrier for development of the least developed nations and economies in transition. For remote rural areas, renewable energy and in particular small hydro power resources were considered appropriate in terms of suitability, affordability, ease of construction and speed of completion.

Case studies from China, India, Kenya, Nepal, Nigeria, Sri Lanka and other countries highlighted several viable approaches that have started giving results, against the existing barriers in the respective countries.

The delegates were given insights into how capacity building is carried out at the International Centre on SHP in China, UNIDO Regional Centres in Trivandrum and Abuja, including the design and development of a micro hydro cross flow turbine and control device in Trivandrum RC, as well as training and demonstration projects jointly with UNIDO for almost all the countries in Africa, Asia, Latin America and Pacific region.

The Seminar recommends the need for support for SHP development from policy makers at the top level and community mobilization at the bottom level, if they are to give the full-intended benefits. In between, the technology issues as well as integrated planning of these projects to achieve the Millennium Developments Goals of UN are vital and need increased efforts from UNIDO, various academic institutions in the regions as well as the two UNIDO Regional

Centres for solving them and imparting capabilities for the local people of remote communities to involve fully in these exercises from conception to completion and beyond, like managing the stations and the energy service.

Further, the presentations at the Seminar brought out clearly the regional/country status of hydropower development and the different policy structures prevailing in the countries represented here, highlighting success, failures and lessons learned with the impacts of policies in focus. Many developing country presentations were concerned about realizing the Millennium Development Goals of poverty alleviation and employment generation through provision of energy to rural areas. Also highlighted were, the need to upgrade the traditionally built hydropower plants and the water mills in Asia and Africa which are used for grain grinding as a cost effective step to take up more hydropower projects – small and Micro/Pico and as a means to provide cleaner and reliable modern energy to these communities as well as to meet their development aspirations in full. These would go in line with the proposed massive project on Lighting up Africa and would help in creating and maintaining energy markets in developing countries, especially in the rural communities. The experience of China in this respect was considered worth emulating, with the needed regional adaptations.

The papers presented extended further to a variety of other technical and managerial issues specific to small hydropower, such as voltage stability, combining energy efficiency efforts, use of LED lighting, legal issues covering a broad spectrum of hydropower activities including power sector reforms. Discussed at length were the need to assess the impact of small hydro projects on the served community through effective feed back and socio-economic interaction while such community oriented projects are taken up. In the context of the increasing Global warming trend, unleashed and amplified by human activities, the seminar underlined the need to have careful considerations at planning and implementation stages for protecting the natural environment and to develop as much SHP as possible to relieve the energy crunch so as to qualify these projects to attract CDM carbon credits and make them economically sustainable too.

Specifically, the Seminar requests:

1. The continued Capacity Building activities, including skills for managing rural SHPs, to the several countries in the South by the International Centre in China and in the respective Regional Centres of UNIDO for Asia and Africa, through on-site and institutional training and hand holding programmes.
2. The dissemination of know-how for integration of energy services in remote rural areas with appropriate community development activities, starting the process from concept stage itself be strengthened

3. Efforts to identify the potential SHP projects, which could deliver more socio-economic benefits through expert contributions and help, to upgrade such projects.
4. Policies and Financing mechanisms in many developing countries are yet to evolve into effective support structures for promotion of SHP, including expeditious completion of projects. The UNIDO Centres need to interact more closely with the respective governments in promoting best practices both in terms of policies and implementation.
5. The Regional Centres and the International Centre on SHP be strengthened for greater out reach.

All the members of the presidium, authors and the institutions and the respective Governments involved, as well as the organizers did an excellent job in getting so many countries and other stakeholders to participate and to have a wide spectrum of issues discussed at the Seminar and the participants thank all those who have made this interaction possible.