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RESEARCH GROUP TACKLES WORSENING THIRD WORLD ENERGY PROBLEMS

by Zulf Khalfan

OTTAWA, IDRC -- Developing countries are doomed to perpetual poverty unless they make the transition to new energy sources, warns a 10-member group of Third World specialists looking into energy research, its administration and policy.

Known as the Energy Reserch Group (ERG) and consisting of energy specialists from Argentina, Brazil, Colombia, India, Kenya, the People's Republic of China, Saudi Arabia, Senegal, South Korea, and Sri Lanka, it says that for poorer countries to increase their productivity, they must switch from human power to new energy forms.

ERG was set up in June 1983. Its 10 members along with 13 other energy specialists from around the world, met for the first time in August at a seminar in Ottawa to propose research priorities for developing countries. ERG's other tasks will also include assessing developing countries' research capability and the relevance and accessibility of energy research being done in industrialized countries.

ERG is supported jointly by the International Development Research Centre (IDRC) and the United Nations University, Tokyo, with a budget of \$1.2 million (US).

Fast population growth in Third World countries is increasing the demand for firewood, the main source of energy in rural areas. Tree production, say ERG members, must be carefully planned or else replaced by other fuels.

In a paper presented to the meeting, ERG member Djibril Fall, director of

Senegal's centre for research on renewable energy, observed that oil-importing developing countries have severe balance-of-trade problems, while wood consumption has hit a critical level. "The development of the most barren rural areas is seriously compromised even where vigorous measures have been taken," he says.

Seminar participant Yves Lambert, of France, cited the problems of the Sahelian countries, where desertification and scarce firewood constitute a continuing threat to the people. He considered it important to determine the short- and long-term energy needs of regions such as West Africa and how renewable energy can help them.

By the beginning of the 1970s, most Third World countries were using oil, a fuel that is easily transported and stored. But in the past decade, rising costs and the threat of oil depletion have affected Third World's development prospects.

Brazil is a good example of a Third World country that, although beset with liquid fuel problems, has made at least one successful energy transition by creating and utilizing a substitute for oil. Relating his country's experience, Prof José Goldemberg, president of the Companhia Energetica de Sao Paulo, said although Brazil has ample reserves of hydroelectric energy and biomass, petroleum derivatives accounted for 45 per cent of total energy consumption in 1980. And imported oil costs climbed to 50 per cent of the country's export earnings, causing a balance of payments crisis and an unprecedented foreign debt.

The Brazilian government concentrated on developing liquid fuel substitutes. It set up programs for producing ethanol from sugarcane or through acid hydrolysis of wood, and methanol from gasification of wood.

The first of these, ethanol from sugarcane, employing 234 000 workers, has earned Brazil \$US 45 billion in foreign currency savings.

Goldemberg said he believes Brazil will successfully increase the use of biomass in liquid fuels so that by 1990 petroleum's share of the country's total

energy consumption will have fallen to 15 percent, down from 45 percent in 1980.

Dr Mohan Munasinghe, senior energy adviser to the President of Sri Lanka, estimated that in the next decade installed electrical generation and distribution capability will grow at three to four per cent worldwide. In the developing countries, however, it will roughly double, requiring investments exceeding \$65 billion (US) a year on average.

"Methods of measuring the costs to consumers from power shortages and the long-term effects of quality of supply and electricity demand need to be further studied," he said.

IDRC's contribution to ERG is derived from a \$10 million (CAN) energy research fund allocated to the Centre by the Canadian government and announced by Prime Minister Pierre Trudeau at the 1981 UN Conference on New and Renewable Sources of Energy, in Nairobi.

In expanding its support for research into energy problems, initially in forestry, postharvest production systems, information sciences, and energy policy studies, IDRC hopes developing states will better understand their energy problems and be better able to make relevant policy choices.

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