

International Conference - “*Reconciling poverty eradication and quality of the environment: What are the innovative solutions?*”

Co-organized by Veolia Environment Institute and Agence Française de Développement - June 27&28, 2011

Theme 1 - Poverty eradication and Climate change

Abstract, Sylvie Lemmet, Director, Division of Technology, Industry and Economics, UNEP

Breaking the vicious cycle of energy poverty and climate vulnerability. Lack of access to modern forms of energy and to the development options that electricity and cleaner fuels provide are persistent impediments to economic development in the world’s poorest countries. At the same time, the use of wood, dung, and charcoal as the most common forms of energy in poor developing countries leads to a vicious cycle of energy poverty, health hazards, deforestation and desertification, and growing climate vulnerability. Most affected are the 71% of the population of the least developed countries (LDCs) who live in rural regions and rely on traditional biomass as the only source of energy. Bringing modern and clean sources of energy to the rural poor is therefore one of the most important contributions to the fight against poverty, with additional benefits to climate change. Given rapid technological advances and corresponding decreases in costs, there is increasing evidence that decentralized forms of energy supply may offer poor countries the most effective approach to rural energy access.

Innovative approaches to energy supply are proving successful. Targeted and adaptable technological solutions combined with innovative and pro-poor financing mechanisms supported by appropriate policies can foster transformation in this area. UNEP’s experience with Rural Energy Enterprise Development in West and Southern Africa, Northeast Brazil and China’s Yunnan Province has shown that a combination of seed financing and business support can deliver an integrated business model to develop entrepreneurship in the supply and maintenance of clean energy products and services in developing countries. The financing models developed by Grameen Shkti in Bangladesh and similar organizations have enabled hundreds of thousands of low-income families to access solar home technologies, addressing end-user financing needs. At the policy level, renewable energy feed-in-tariffs have been introduced in more than 30 developed countries and in 17 developing countries to encourage investment in clean energy generation and distribution^[1]. Depending on pre-conditions and concrete design they have proven to be a successful instrument for grid connected solutions, including mini-grids. UNEP is carrying out a study examining the design elements that require adaptation to developing country preconditions, to allow for solid policy design.

There is much untapped energy and cost saving potential in poor countries. Policies aimed at increasing energy efficiency are very often the easiest and least expensive way to achieve greater energy security. The UNEP Initiative en.lighten is showing that a shift from energy-consuming incandescent lights to energy efficient lighting can save up to 70% in energy use and save millions for poor countries. For example, in a country such as Senegal, a net energy importer, a 100% replacement of installed incandescent lamps with compact fluorescent lamps (CFLi) at an estimated cost of US\$ 52 million, would lead to annual energy savings of 73% and cost savings of nearly US\$ 30 million per year^[2]. But also cleaner cooking options, including improved cookstoves and cooking fuels can help improve access to energy, reduce deforestation related to the use of firewood and charcoal and black carbon. UNEP has supported through its African Rural Energy Enterprise Development Programme,

^[1] AFREPREN/FWD Energy, *Environment and Development Network for Africa*. The Role of Feed-in Tariff Policy in Renewable Energy Development in Developing Countries, September. 2009.

^[2] en.lighten is a UNEP initiative supported by the GEF Earth Fund, OSRAM GmbH, Phillips Lighting, and the French Environment Energy Management Efficiency Agency (ADEME) - <http://www.enlighten-initiative.org/>

entrepreneurs who have successfully produced and deployed improved cookstoves. UNEP is a founding member of the Cookstove Alliance.

Clean energy offers promising options for jobs. The “*Green Jobs Report*” published by UNEP, the ILO and other partners in 2008 pointed to the significant job creation potential in clean energies, with over 2 million jobs accounted for then, and a potential for 20 million more jobs by 2030^[3]. The recently published UNEP report “*Towards and Green Economy: Pathways to Sustainable Development and Poverty Eradication*”^[4] indicates that an expansion of renewables and investments in energy efficiency could generate employment that is 20% higher than business as usual by 2050. Bioenergy is among the renewable energy sources that provide the highest job potential, largely in rural areas in the agricultural sector. If planned and implemented sustainably, modern bioenergy can be a cornerstone for a Green Economy.

A silent revolution in clean energy investment is taking shape. The year 2008 was a historical turning point as for the first time, global investments in renewable energy generating technologies surpassed investments in conventional power plants. Investments in clean energy were US\$180-200 bn in 2010, up from US\$46 bn in 2004^[5]. However, these investments remain confined to a few industrialized and emerging economies, and poor countries are yet to benefit. In 2009, Africa received only 1% of global investment in clean energy. Supporting poor countries to build the policy enabling conditions and investment infrastructure to attract greater investment in clean energy is an important area for development cooperation.

^[3] UNEP. 2008. *Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World*.

^[4] http://www.unep.org/greeneconomy/Portals/88/documents/ger/GER_synthesis_en.pdf

^[5] UNEP/SEFI. 2010. *Global Trends in Sustainable Energy Investment 2010: Analysis of Trends and Issues in the Financing of Renewable Energy and Energy Efficiency*. UNEP/SEFI (Paris, 2010)