



CGPRT

Flash

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Short Article

Renewable Energy and Poverty Alleviation

Improving access to reliable and affordable energy sources is an important measure to facilitate the achievement of the Millennium Development Goals (MDG). In the Johannesburg Plan of Implementation, committed in the World Summit for Sustainable Development (WSSD) in 2002, increased use of renewable energy is recognized as a means to improve access to energy services for sustainable development. By definition, renewable energy is constantly replenished and will never run out, unlike fossil fuels (NREL, 2004). Renewable energy includes hydropower, solar energy, biomass, etc.

The International Action Programme (IAP), an outcome of the International Conference for Renewable Energies, held in June 2004 in Bonn, consists of concrete actions and commitments by governments and other actors to further endeavor to enhance renewable energy use. For example, China committed that the installed capacity of renewable energy will account for about 10 per cent of China's total installed power generation capacity by 2010. The Philippines is trying to double the installation of generating capacity from renewable energy sources (Renewables, 2004).

The benefits provided by renewable energy differ among countries depending on the local situation. They are: enhanced security of energy supply, reduced threat of climate change, stimulation of economic growth, creation of job opportunities in rural areas, improved social equity, and protection of the environment. For example, introducing bio-gas generators in rural areas to produce methane from local biomass resources such as livestock droppings, may help the local people to secure the energy required for their kitchen, to live independently from costly kerosene, and to preserve neighboring forests which sometimes suffer over-logging for fuelwood. Small scale hydropower in mountainous regions can indirectly improve health care, education services and water supplies, all basic needs which can be restricted by a lack of energy provision.

Secondary crops such as soybean, maize, cassava and other starch or oil crops, can make a significant contribution to the provision of renewable energy through bio-fuel, which is fuel originating from biomass. This year, facing record high oil prices, several bio-fuel projects have emerged in Asia and the Pacific. China, which needs to meet an increase in domestic oil consumption due to its rapid economic growth, started

selling gasoline mixed with 10 per cent ethanol in major cities. Alternative fuels, including bio-fuel, which have only been used in a very limited way in terms of fuel consumption because of their higher price, have come under the spotlight in the era of "one barrel for forty dollars", the historically high price of oil (NIKKEI, 2004). Thai food groups plan to launch a US\$ 72 million biodiesel scheme, which includes a \$ 17 million palm oil refinery and a 3,200 hectare palm plantation, as the government promotes biofuel to lower its oil import bill (Reuters, 2004). To reduce air pollution due to emissions from public buses and trucks that run on diesel fuel, the Jakarta city administration in Indonesia plans to develop biodiesel fuel as an alternative to the fossil fuel burned in the diesel-fueled engines (Jakarta Post, 2004).

On the other hand, various mechanisms approved under the Kyoto Protocol will attract capital flow to developing countries for investment in renewable energy projects. The Clean Development Mechanism (CDM) is proposed as part of the 'flexibility mechanisms' of the Kyoto Protocol. CDM allows industrialized countries to fulfill their commitments to greenhouse gas emission reduction by contributing to its reduction in developing countries. Though developing countries have no obligation under the current protocol, if the industrialized countries assist them in reducing gas emissions, it can be counted as an achievement by the industrialized countries. The mechanisms are expected to promote investment to renewable energy.

Renewable energy has drawn attention many times since the first oil shock in the 1970s' but any boom has always disappeared as soon as the oil price returned to normal. However, the current boom seems to have larger potential since it is based on factors which couldn't be observed before such as the newly developed technology, global environmental issues as well as a saturated oil price. It is urgent for us to make efforts in good faith to realize poverty reduction through the development of renewable energy ■

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(References available upon request)

FlashBREAKING



More Than One Trillion Dollars Goes on Corruption

According to ongoing research at the World Bank Institute, more than \$ 1 trillion dollars (US\$ 1,000 billion) is paid in bribes each year. This US\$ 1 trillion figure is an estimate of actual bribes paid worldwide in both rich and developing countries implying that fighting corruption is a global challenge. The \$ 1 trillion figure, calculated using 2001-2002 economic data compares with an estimated size of the world economy at that time of just over US\$ 30 trillion, does not include embezzlement of public funds or theft of public assets.

World Bank, 2004. The Costs of Corruption, Feature Stories, <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0>, (8 April 2004).

Cassava Market Expanding in 2004

Prospects for world cassava production in 2004 are favorable and output is likely to remain around last year's record of 192 million tons. International trade in cassava products is forecast to expand, mainly due to a significant increase in Thai exports of pellets and chips. Over the period of January-April 2004, the price of pellets exported to the EU was on average 36 per cent higher than for the same period in 2003. The outlook for cassava products for the remainder of the year is predicted to be stable or to slightly rise.

FAO, 2004. Cassava, Favorable Production Outlook for 2004, Food Outlook, No. 2, June 2004.

Progressive Pro-Poor Policies in Viet Nam

The combination of rapid economic growth and strong pro-poor policies accounted for a significant part of the reduction in poverty in Viet Nam, according to the World Bank. In 1993, 58 per cent of the population lived in poverty, compared to 37 per cent in 1998 and 29 per cent in 2002. Progress was also substantial in non-income indicators, from education enrollment to infant mortality. Poverty will be reduced to 15 per cent by 2010 if the seven per cent growth experienced during the 1990's is maintained.

Cord, Louise and Rama, Martin, 2004. Viet Nam Development Report 2004, Poverty Economic Development, The World Bank Group, East Asia and Pacific, <http://info.worldbank.org/etools/bspan/PresentationView.asp?PID=1112&EID=572>.

The Dangers of Export Specialization in Poor Countries

World Vision using data from 84 developing countries found a higher risk associated with export specialization. A ten per cent increase in export concentration is associated on average with a five per cent increase in terms of trade volatility and higher volatility in the purchasing power of exports. The average change in terms of trade volatility from one four-year period to the next is almost 28 per cent, which is associated with average growth rates 15 per cent lower than would otherwise have been the case.

Parris, Brett, 2003, Export Concentration, Foreign Investment and Policy Conditionality, World Vision, <http://www.global-poverty.org/PolicyAdvocacy/pahome2.5.nsf/gereports/>.

New Generation of Secondary Crop Origin Biodegradable Plastics

A technological breakthrough in biodegradable plastics originating from secondary crops has been observed in Japan. The Research Institute of Innovative Technology for the Earth (RITE), a Kyoto-based research organization has developed a new process for succinic acid production, which is used as a new type of raw material for biodegradable plastics with rich flexibility. RITE uses genetically modified corynebacterium, which has high succinic acid metabolization abilities. The microorganism can synthesize succinic acid mainly from saccharide originated from maize. The productivity of the new process is fifty times higher than conventional methods. Showa Kobunshi, Japanese polymer producer will begin succinic acid production with this new technology. Biodegradable plastics made from succinic acid have better flexibility and the application is far wider than other biodegradable plastics. It can be used as shopping bags, greenhouse sheets, automotive interiors and electrical parts. The price of law succinic acid can be 80 yen/kg (US\$ 72 cents) under the new production technology, which means the price of biodegradable plastics can be approximately 200 yen/kg (US\$ 1.8), the same or cheaper than conventional plastics ■

Based on Juunan-na seibunkaise-plastics (Development of Flexible Biodegradable Plastics), NIKKEI, 19 April 2004.

Biotech and Secondary Crops: Important but Neglected

Biotechnology holds great promise for agriculture in developing countries but so far, only farmers in a few developing countries are reaping these benefits. Biotechnology can provide farmers with disease-free planting materials and develop crops that resist pests and diseases, reducing the use of chemicals that harm the environment and human health. It can provide diagnostic tools and vaccines that help control devastating animal diseases and can improve the nutritional quality of staple foods such as rice and cassava and create new products for health and industrial uses. However, poor farmers can only benefit from biotechnology products if they have access to them on profitable terms. Basic food crops of the poor such as cassava, potato, cowpea, and wheat receive little attention from scientists. Neither the private nor the public sector has invested significantly in new genetic technologies for the so-called 'orphan crops' such as cowpea, millet, and sorghum that are critical for the food supply and livelihoods of the world's poorest people. Other barriers that prevent the poor from accessing and fully benefitting from modern biotechnology include inadequate regulatory procedures, complex intellectual property issues, poorly functioning markets and seed delivery systems, and weak domestic plant breeding capacity ■

Based on FAO, 2004. The Gene Revolution: Great Potential for the Poor, but No Panacea, Press Release, Rome, <http://www.fao.org>, (17 May 2004).

Investment Climate in Poor Countries: Less Attractive

Using benchmarks of regulatory performance and reforms in 145 nations, the World Bank reported that poor nations, through administrative procedures, still make it two times harder than rich nations for entrepreneurs to start, operate, or close a business. Overall, rich countries undertook three times as many investment climate reforms as poor countries last year. The top 10 reformers for the most recent survey year were Slovakia, Colombia, Belgium, Finland, India, Lithuania, Norway, Poland, Portugal, and Spain. Of the 58 countries that reformed business regulations or strengthened the protection of property rights in the last year, less than a third were poor or lower-middle-income economies. Poor countries that desperately need new enterprises and jobs risk falling even further behind rich ones who are simplifying regulations and making their investment climates more business friendly. On average, it takes a business in a rich nation six procedures, 8 per cent of income per capita, and 27 days to get started; in a poor or lower-middle-income economy, the same process takes 11 procedures, 122 per cent of income per capita, and 59 days. In more than a dozen poor countries, registering a new business takes more than 100 days. Potential investors in many rich nations enjoy full access to the ownership and financial information of publicly listed companies while investors in most developing countries have hardly any access ■

Based on The World Bank, 2004. Doing Business 2005: Poor Nations Struggle to Reduce Red Tape for Business, Miss Large Growth Opportunities, News Release No:2005/69/S, <http://rru.worldbank.org/doingbusiness>, (8 September 2004).

New Technology: Friendly and Beneficial for Farmers

As high-quality seeds are essential for enhancing agricultural productivity, various methods are used to protect seeds against a multitude of diseases. One common method is chemical dressing. However, pathogens are so adaptable that pesticides soon lose their effect, and chemicals cause environmental problems. Another method is genetic engineering, which isn't widely accepted by society in general. Recently, Schmidt-Seeger AG, grain cleansing equipment manufacturer and the Fraunhofer Institute for Electron Beam and Plasma Technology, both based in Germany developed a chemical- and pollution-free technology "e-ventus", patented in 2001. Since 1995, seeds treated with this procedure have been marketed, particularly for secondary crops such as rye, barley, maize and peas. Using this method, seeds are treated with low-energy electrons. Pathogens in the seed shell are destroyed non-selectively and the seed remains untouched and free from chemicals. In addition, the technology is cheaper in comparison to chemical preserving, and the residue from the seeds can be used for animal fodder unlike chemically dressed seeds. The technology, friendly for farmers and the environment, and also economically feasible, has a great potential to benefit secondary crop farmers ■

Based on Asian Seed & Planting Material, Volume II No. 3, May/June 2004, (Contributed by Misako Kinoshita, University of Tokyo).

Flash EVENTS



3rd IUCN World Conservation Congress

17 - 25 November, 2004

Bangkok, Thailand

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Expert Consultation on Post-Harvest Technologies for Ensuring Food Safety and Value Addition for Enhanced Income

1 - 3 December, 2004

Rama Garden Hotel

Bangkok, Thailand

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International Conference on Emerging Technologies in Agricultural & Food Engineering 2004

14 - 17 December, 2004

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Article Review

La Libéralisation Agricole : Des Effets Ambigus Sur Les Pays En Développement

Agricultural Liberalization: Ambiguous Effects On Developing Countries
Bouët et alii. La Lettre Du Cepii, No 236, July-August 2004

In this latest issue, the authors present their own simulation results related to the potential benefits of agricultural liberalization on the development of the southern hemisphere countries. While many international organizations are rather optimistic about the positive impact of liberalization, their position is less categoric. CEPII's simulations differ because they first take into consideration WTO member countries' commitments related to consolidated tariffs and not to applied tariffs. By using applied tariffs, international organizations obtain an over-estimation of the impact of liberalization. When consolidated tariffs -those exporters are committed not to exceed- are higher than actually applied tariffs, and as long as liberalization does not put them below the applied rate, it does not reduce the protection level.

The second difference is that CEPII's work uses data concerning trade preferences and recent agricultural policy reforms to take into account that developing countries do not form a homogeneous group. In fact, they differ on their production structures and trade specialization, and protection and intervention levels widely vary from one product to another. Access to the markets of the wealthiest countries widely differs too. For countries that benefit from preferential access, putting consolidated tariffs below applied tariffs leads to a reduction of their preferential margin. CEPII's criticism of the World Bank on this issue states that tariff data used by the Bank does not integrate preferential regimes and therefore does not calculate this loss for specific countries.

The overall impact of liberalization, based on trade preferences, regional agreements, and recent American and European reforms as well as the Harbinson proposal of March 2003, shows that world agricultural trade would increase by 8 per cent and not 15 per cent. It shows also that some developed countries and developing countries will improve their situation. For instance, exports of pre-eminent agricultural countries in the Cairns group (Brazil, Argentina, Thailand, etc) will be favored but some of the poorest countries will not receive such benefits. Even the expected increase of 3 per cent in world prices would produce regional disparities, with four developing zones including South Asia experiencing degradation of their terms of trade. Except for

South Asia, the evolution of real income seems to be slightly negative in developing areas, due to the fact that in the CEPII model a dual labour market characterizes these areas, where work remuneration in the agricultural sector is lower. Reallocation of resources due to agricultural specialization has therefore a negative impact on total income.

As the authors warn, these results, based on a general equilibrium model, must be taken with a pinch of salt. However, they clearly show a differentiated impact on exports, trade balance and real income even within the same country or region.

The interest of this article relies on the different voices it raises for pro-liberalization where global positive effects are commonly argued. It draws attention to the situation of the poorest countries for which specific measures are required such as freeing the 47 poorest countries from any commitment. Will this be sufficient to make them able to compete in world markets? Will this be sufficient to ensure that the poorest populations in developing countries will benefit from liberalization? Will it be sufficient to ensure that reallocation of resources in the agricultural sector will benefit the rural poor? As long as the issue of world wealth redistribution and national wealth redistribution issues are not seriously dealt with, prospects for the Poor will remain bleak ■

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