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**Comments on ministerial consultations on energy from a Latin American perspective**

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## **Renewable Energy for Sustainable Development: A Latin American Perspective - Recommendations to Ministers by CSO, for 9thGCSS/GEMF.**

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### **Abstract:**

*Developing countries will account for half of the global energy demand by 2030. Energy production and services may provide a variety of development opportunities for Latin America and other developing countries. In these countries, access to affordable energy services should be secured, and actions should be linked to strategies for poverty eradication. Biofuel programs in Latin America can potentially raise the share of renewables in the region, contributing to sustainable development and increased South-South cooperation, but, at the same time, they bear potential environmental and social risks, taking into account the increased external demand for biofuel and biomass. Hydro dams have long been considered renewable energy sources, but have been responsible for displacements of millions of people in the world, together with huge environmental impacts. Renewable energy sources still face many barriers both in developed and in developing countries. Political, economic, financial, technical, regulatory, institutional, and social obstacles to the development of energy efficiency and renewable, non-conventional, decentralized and sustainable energy should be reduced. In addition, measures to address climate change in the energy sector should be strengthened under the Kyoto Protocol.*

### **Linking access to energy to goals for poverty reduction**

Demand for energy is rapidly growing in developing countries due to industrialization and population and urbanization growth, resulting in higher demands for supply for lighting, heat, mechanical power, transport, communications and energy services that drive development. Two thirds of the growth of global energy demand in the next 25 years will occur in developing countries, and in 2030 these countries will account for 48% of the global demand, compared to 38% in 2002<sup>1</sup>. However, per capita consumption will remain low compared to the average in OECD countries. While industrialized countries are more concerned with climate change and security of supply, developing countries still focus on governmental policies to ensure an adequate energy supply to meet their development needs.

Energy production and services in Latin America may very well present significant development opportunities. However, it is necessary to deal with the flaws of the privatization process of the sector, by ensuring good governance, transparency and access to information. Development priorities should shift from project commitments that are short-term towards long-term priorities, and should be oriented seeking sustainable development and equitable access to energy, not exclusively towards securing political and electoral interests.

Energy offer in Latin America and the Caribbean is still highly dependent on oil and natural gas, which, together, represent two thirds of the global share of energy sources in 2004.<sup>2</sup> Data from

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<sup>1</sup> 2005 World Energy Outlook. International Energy Agency, 2005.

<sup>2</sup> Las Energías Renovables en América Latina y el Caribe: Los desafíos post-Bonn. Natural Resources and Infrastructure Division. ECLAC, United Nations, 2006.

ECLAC show that between 2002 and 2004 a slight reduction of the share of renewable energy sources has been observed in the region, and just a few countries advanced in increasing the share of renewables in their energy balance. At the same time, 1.6 billion people are still without access to electricity in the world, with 47 millions of poor communities in Latin America.<sup>3</sup> Another ECLAC study shows that the gap between rich and poor has been increasing in the region from 1994 to 2004<sup>4</sup>. Access to affordable energy and community participation in managing decentralized renewable energy generation are imperative for poverty alleviation and sustainable development. Thus, policy issues on energy must be linked to the Millennium Development Goals, access to affordable services and poverty eradication.

### **Promoting regional initiatives and South-South cooperation**

The Latin American and Caribbean region took a proactive role during the World Summit on Sustainable Development (WSSD) in Johannesburg, by presenting the Latin American Renewable Energy Platform which suggested the share of a 10% renewable energy level as a commitment for the region, based on voluntary actions, and considering the principle of common but differentiated responsibilities. The platform was re-affirmed during the regional meeting of Energy and Environment Ministers in Brasilia in 2003, the regional preparatory Conference of Bonn Renewables 2004. Governments in Latin America and the Caribbean, followed by other countries, should reposition and redefine the goal proposed in the WSSD concerning the incorporation of at least 10% of renewable energy in regional and national energy matrixes, exclusively considering non-conventional and sustainable energy sources, such as wind, solar, biomass, tidal, geothermic and small hydroelectric power stations.

Sub-regional integration processes may offer interesting initiatives to promote South-South cooperation. Regional integration has been defined as a priority within the foreign policy of several countries of South America, mainly Brazil, Argentina and Venezuela. The Initiative for the Integration of Regional Infrastructure in South America (IIRSA), established in 2000, plans large-scale projects in the area of energy, transports and communications<sup>5</sup>. IIRSA's huge integration projects such as highways, navigation channels, hydroelectric dams and gas pipelines, frequently cross natural reserves or indigenous and traditional communities, without taking into account those peoples' specific needs. An alternative model of regional integration needs to incorporate the demands of affected stakeholders, such as indigenous movements, traditional communities, environmentalists, and trade unions. A regional integration approach should consider a policy framework for the regulation of monopolies and for cooperation in the social area, benefiting education, health and the environment. Integration processes should also target the more efficient and solidarity use of local resources to benefit the region, and not just focus on providing energy supply for global markets.

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<sup>3</sup> World Bank, 2000 and International Energy Agency, 2002.

<sup>4</sup> Energía y Desarrollo Sustentable en América Latina: Enfoques para la Política Energética. Natural Resources and Energy Unit. ECLAC, United Nations, 2006.

<sup>5</sup> <http://www.iirsa.org>. The initiative counts with public financing from the National Bank for Economic and Social Development in Brazil (BNDES), the Corporación Andina de Fomento (CAF), the Financial Fund for the Development of the River Plate Basin (FONPLATA) and the Inter-American Development Bank (IADB) that also coordinate technically the initiative.

## **Biofuel as an opportunity for sustainable development**

The Brazilian biofuel experience bears a huge potential to contribute to adequate energy supply and also offers an excellent opportunity for South-South partnerships and technology transfer. Potential risks with biomass energy resources include, however, the devastation of primary forest and other conservation lands. Monocrop cultivation may result in loss of biodiversity, soil infertility and land degradation. Excessive use of fertilizers and pesticides is responsible for the pollution of land and water resources. There is also a risk of competition for land between food production and biomass resources. Bioenergy is not necessarily carbon-neutral, and frequently additional energy requirements are necessary for crop cultivation and fuel transport. In addition, increasing international trade in bioenergy and biomass will create further competitive pressure for unsustainable production. Thus, bioenergy development should meet sustainable management criteria, and benefit small family and organic producers and farmers.

The Clean Development Mechanism under the Kyoto Protocol, which entered into effect in 2005, together with the growth of carbon markets, represents a huge potential for many developing countries to mitigate climate change, but sustainability criteria should be carefully observed. Instead of relying exclusively on market mechanisms, production and priority patterns in many Latin American and other developing countries also need to be reconsidered. Export patterns should shift from electro-intensive goods based on cheap natural resources to manufacturing high value-added goods, and technological training, capacity-building and endogenous innovation should be targeted.

Greenhouse gas emissions from deforestation and land change use are still significant in many Latin American countries in the Amazon region, and efficient means to combat and reduce deforestation must be put in place. Cross-ministerial working groups should be involved in all steps of the legislative drafts, implementation and monitoring of plans to combat deforestation. Multi-stakeholder dialogues and participatory approaches should be strengthened.

## **Stop large dams and displacements**

The current mode of extraction, appropriation, and use of fossil fuels and other energy sources, some of which are considered renewable but which signify the unsustainable use of natural resources in the region is one of the main causes of land appropriation and aggression against local communities in the developing world. In this context, hydropower, considered a major source of renewable energy, has been causing significant environmental degradation and social conflicts due to the displacement of populations.

The World Commission on Dams estimates that some 40-80 million people have been physically displaced by dams worldwide.<sup>6</sup> Most numerous displacements by dams in Latin America include Sobradinho Dam in Brazil, built in 1982, with an installed capacity of 1,050 MW and an estimated 70,000 people displaced; Yacyretá Dam, on the Paraná River between Argentina and Paraguay, built in 1998, with an installed capacity of 3,100 MW and an estimated 68,000 people

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<sup>6</sup> Dams and Development. A New Framework for Decision-Making. The Report of the World Commission on Dams, 2000.

displaced; and Itaipú Dam between Brazil and Paraguay, built in 1982, with an installed capacity of 12,600 MW and an estimated 42,400 people displaced.<sup>7</sup>

In many countries, movements of dam-affected people started to organize themselves to ask for broad consultation processes on dam projects, fair compensation for the displaced, improvement of new settlements and the cancellation of large dam constructions. These resistance movements, combined with economic stagnation have since the end of the eighties significantly reduced ambitions to build more large dams in many developing countries.

Since 1946, the World Bank has been the main financing body for the construction of large hydro dams. Until 1994 the Bank had financed USD\$ 58 billion for more than 600 dam projects in 93 countries. In 1994, more than 300 organizations from 44 countries requested a moratorium to World Bank financing of large hydro dam projects, until a fund to compensate people displaced had been created and a new operative policy framework established to ensure that community participation was guaranteed in the consultation, implementation and control of any hydropower project. Governments should not support the construction of large dams. They should also force multilateral development banks to stop funding large dam and fossil fuel projects and should stop giving these institutions funds for such projects, and, instead, support research and concrete projects to promote renewable and sustainable energy sources.

The full implementation of the recommendations of the World Commission on Dams Report should be considered by Governments as a means toward promoting the implementation of sustainable, equitable, and efficient methods of providing energy services. Projects should have low impacts and meet community priorities. All steps during the environmental licensing process must be fully respected and carried out in a transparent way. Access to information on the implementation status and financing of energy projects should be ensured.

Hydropower is capital-intensive and dependent on large centres of demand, also requiring long, expensive and often inefficient distribution systems. Decentralized energy production and distribution mechanisms are needed to benefit people in rural areas. Governments should abolish monopolistic control of grids and energy markets and push forward subsidy reforms. Considering the cumulative impacts of multiple small hydro dams on small watersheds, Governments should promote an integrated river-basin approach for planning, implementation and monitoring of hydropower projects, ensuring participatory, multi-stakeholder processes in all project stages. Affected communities should be represented in key decision-making bodies.

### **Removing obstacles to renewables in developing countries**

Renewable energy sources still face many barriers both in developed and in developing countries. Obstacles to the development of energy efficiency and renewable, non-conventional and sustainable energy sources should be reduced or removed, according to the agreements reached and expressed in the Johannesburg Plan of Implementation (JPOI) and the Agenda 21 Plan of Action. Governments should implement policy frameworks based on the Policy Recommendations for Renewable Energies, agreed during Bonn Renewables 2004, including clear targets and timetables.

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<sup>7</sup> Silenced Rivers: The Ecology and Politics of Large Dams. Patrick McCully, 2001.

Under the Bali Strategic Plan of Action for Technology-Support and Capacity-Building for Developing Countries, developed countries should increase international cooperation and the transfer of renewable energy technology to developing countries, together with capacity-building programs. Diversification of renewable energy sources is necessary, and access to alternative, decentralized sources such as wind and biomass should be provided. In rural areas in developing countries, adequate credit procedures and capacity-building should be combined with the provision of local high-quality solar electric systems. Nuclear energy should not be an option to be considered as alternative to fossil fuels, since safety concerns are very significant. Efforts from developed countries to provide energy from waste incineration should also be opposed as incineration emits large amounts of toxins and other substances harmful to human health and the environment.

Governments should make a commitment in their political will to promote renewable energy production and use, and develop long-term strategies and subsidy mechanisms, addressing social and environmental externalities in an adequate way. Local capacity for designing and developing projects and adapting technologies should be increased. Governments should promote a cross-ministerial approach on energy and environment, and should compel energy and environment ministries to work together for the integration of energy, environment and development policies. National and international regulatory frameworks should be put in place, based on a participatory multi-stakeholder approach.

Additionally, investments should shift from energy production to energy efficiency technologies. To improve energy efficiency, Governments should consider better conversion efficiency of fossil fuel combustion, improved end-use efficiency, conservation and promotion of less energy intensive consumption patterns, and better land-use practices.

To address climate change, Governments should support a strengthened global climate change regime that could stabilize and start to reduce global greenhouse gas emissions by the year 2020. These negotiations should take place under the relevant provisions of the Kyoto Protocol, whose initial commitment period ends in 2012. Since existing national measures have proven to be insufficient to mitigate dangerous climate change, it is necessary that all large emitting countries make additional commitments to contribute to climate protection efforts, in accordance with the principle of common but differentiated responsibilities. Developed countries should not focus on transferring carbon-intense obsolete technologies to developing countries in order to achieve the commitments made under the Kyoto Protocol, but support renewable and sustainable energy projects. Concrete measures on climate change in the energy sector should also be addressed at the fourteenth session of the Commission on Sustainable Development, in 2006 and 2007.

## **Questions**

- 1 - What precautions are necessary in the large-scale development of bioenergy, considering its potential environmental consequences?
- 2 - How can hydropower resources be developed in an environmental and socially acceptable manner, especially in developing countries?
- 3 - How can political, economic, financial, technical, regulatory and institutional obstacles to the promotion of renewable and sustainable energy sources be reduced in developing countries?