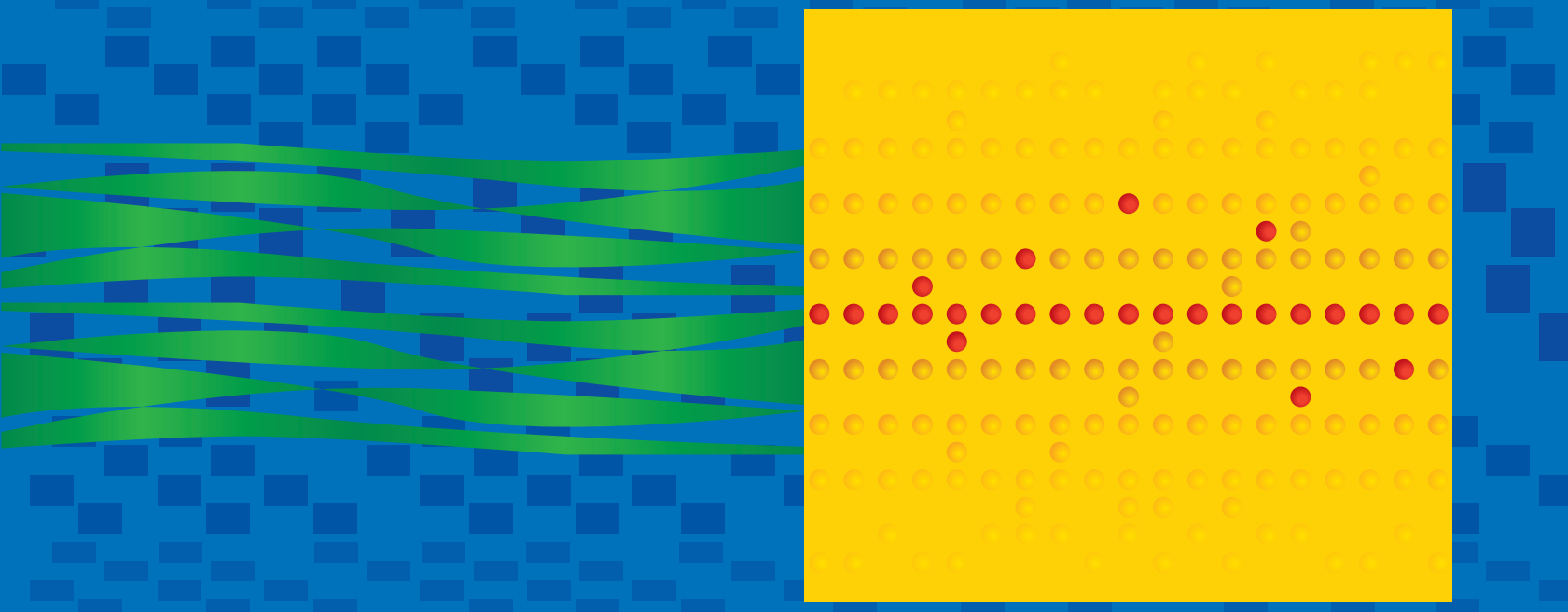

Contribution of energy services

to the Millennium Development Goals and to poverty alleviation in Latin America and the Caribbean

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Project Document

Contribution of energy services to the Millennium Development Goals and to poverty alleviation in Latin America and the Caribbean

Executive summary

Economic Commission for Latin America and the Caribbean (ECLAC)

This document was prepared by Mr. Roberto Kozulj and coordinated by Hugo Altomonte (ECLAC) and Leida Mercado (UNDP), with the assistance of Jean Acquatella (ECLAC), Pierre Guedez (UNDP), Luciana Silvestri, Maria Elena Agüero and Agustina Briano (Club de Madrid).

The Economic Commission for Latin America and the Caribbean (ECLAC), established in 1948, is one of the five regional commissions of the United Nations. It was founded with the purpose of contributing to the economic development of Latin America, coordinating actions directed towards this end, and reinforcing economic ties among countries and with other nations of the world. Subsequently, its sphere of competence was extended to the countries of the Caribbean and the promotion of the region's social development was included among its primary objectives

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Foreword

The energy debate has one dimension that is often sidelined: its relationship with poverty and development. This document attempts to shed some light on this aspect, overlooked when public policies are being formulated.

The document describes the results of the joint effort of the Economic Commission for Latin America and the Caribbean (ECLAC), the United Nations Development Programme (UNDP) and the Club de Madrid, which highlight the crucial role of access to energy services[1] in the attainment of the Millennium Development Goals.

Access to energy services, as a basic factor for poverty reduction and improvement of the environmental conditions of the socially most vulnerable groups, is a topic that is usually not featured prominently in official government policies. In the national development plans, poverty reduction strategies and energy plans and strategies of a large number of countries in Latin America and the Caribbean, the relationship between energy and poverty is not mentioned and, when it is, it is not dealt with in any depth.

There has been little research in Latin America and the Caribbean on the linkage between access to energy services and attainment of national goals for development, poverty reduction and environmental protection. This document shows that, despite the high rates of urbanization in Latin America and the Caribbean, almost 30 million people still do not have electricity, of whom 21.4 million (73 per cent) are poor. The lack of electrical services is directly related to poverty: it is estimated that, of the total poor in the region (200 million), about 10 per cent have no electrical services and this figure rises to 30 per cent in the case of the absolute poor.

[1] The term "energy services" is used to describe the benefits provided by energy use. For households, these benefits include lighting, cooking, refrigeration, telecommunications, education, transport and mechanical power. Energy services are the last link in a chain which starts with primary energy sources and continues with their transformation into energy carriers suitable for final use as fuels and electricity. From the viewpoint of the consumer, what is important is the availability and coverage of energy services. (UNDP 2005).

A large number of families still do not have access to modern fuels for cooking; when they do, this accounts for a disproportionate share of their income, which exacerbates social inequity in the region. In addition, areas which have the largest per capita consumption of firewood generally have low human development indices. The largest number of families using firewood, in all the cases analyzed, is usually found among the poorest inhabitants. Consequently, although access to energy for the poor sectors is not one of the Millennium Development Goals, it is undoubtedly a vital prerequisite for their attainment.

If the Millennium Development Goals are to be attained, the energy policy of States must give priority to the goal of providing access to energy services for the poor, at prices they can afford. For this reason, the energy policies of States cannot be viewed solely from the macroeconomic viewpoint or from the viewpoint of the major energy industries – oil, gas, nuclear or hydroelectric energy – and cannot be subsumed under the major topics such as energy security, geopolitical interests connected with these resources, or effects on climate change.

Increased access by poor sectors to energy services provides an opportunity for incorporating low-carbon and energy-efficient technologies, as well as renewable and decentralized energy sources in remote rural areas. In comparison with the contribution of the higher-income sectors to greenhouse gas emissions, elimination of energy poverty would have a marginal effect on national emissions, in view of the low participation of these sectors in total energy consumption.

All this presupposes a major change from the current view of this issue as being irrelevant: there must be a shift from neglect to active awareness, and particularly towards the expression of a clear political will to eliminate energy poverty as an integral part of the attainment of the Millennium Development Goals. There must be plans with clearly defined goals and quantitative and qualitative resource commitment, with implementation monitoring and evaluation. This will require better coordination between the various ministries, services and government agencies responsible for executing these policies; it will also require definition of areas of action and collaboration between the public and private sectors and between national efforts and international cooperation.

The State must resume a proactive role in the energy sector. This role must dovetail with that of the private sector in a joint effort to achieve the goals of a sustainable and equitable energy policy. Specific goals should therefore be included regarding access to energy for sectors currently without access, and possible and desirable sources geared to the availability of resources and to economic, social and environmental conditions must be identified in each case. Similarly, regulatory frameworks should be established to protect poor consumes in order to guarantee access to clean, efficient and modern energy sources at affordable prices.

The design of policies for qualitative and quantitative access to energy, at prices suited to income levels, may have to include subsidies, both to facilitate access to energy sources and to purchase modern and efficient equipment so as to reduce families' total energy costs and help to alleviate climate change.

In the case of policies for rural areas, it will be necessary: (i) to identify mechanisms to guarantee the continuity and expansion of supply to households; (ii) to move towards programmes that ensure the provision of sufficient energy to improve the productivity of the economic activities of rural communities in order by this means to achieve poverty reduction; (iii) to promote replacement of firewood as an energy source wherever possible and, where this is not possible, use must be made sustainable by means of efficient equipment; (iv) to set ceilings for access to electricity so that sufficient power is provided for productive uses. On the other hand, in the case of urban areas, there will be a need: (i) to set basic consumption standards; (ii) to introduce reduced rates; (iii) to give consideration to cross subsidies; (iv) to adopt energy efficiency policies. Since programmes of this kind can have a considerable impact on total energy consumption, long-term overall and sectoral planning is needed in order for energy consumption to be sustainable.

Efficient and effective access to energy services is a vital requirement for attainment of the Millennium Development Goals, which in turn are intrinsically linked to the enhancement of human rights and of democracy. The countries of the region must therefore rise to the challenge of energy access in order to promote a decent quality of life and protect the rights of their citizens. To this end, it will be essential to formulate national, regional and international agendas that have a clear focus on this subject and that represent effective tools in efforts to combat poverty and inequity.

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Introduction

The joint initiative of the Economic Commission for Latin America and the Caribbean (ECLAC), the United Nations Development Programme (UNDP) and the Club de Madrid seeks to reaffirm the importance of providing access to energy services, as an essential element in poverty reduction and improvement of the socio-economic and environmental conditions of the most vulnerable groups in Latin America and the Caribbean. The aim is also to give political decision-makers the necessary elements to formulate policies that promote effective and efficient access to energy by those groups and thus contribute to the attainment of the Millennium Development Goals in the region.

In this connection, it is essential to understand that, although access to energy by the least protected strata of the population is not in itself one of the Goals, it is undoubtedly a prerequisite for the attainment of all of them.

Energy shortages limit people's opportunities and their quality of life as regards their economic productivity and their ability to enjoy education, food, health and gender equality. In this sense, the inclusion and hence the access to energy of the disadvantaged is a challenge to which democracies must rise if they wish to be faithful to their tenet of respect for human rights, non-exclusion and transparency in the use of natural resources. In addition, the ways in which a society produces and consumes energy have serious implications for the environment and the sustainability of development.

However, despite the importance of the link between access to energy and poverty reduction, the region does not seem to have a common approach, explicit strategies or sufficient and systematized information to transform general pronouncements on the links between energy and poverty into active policies, with the necessary scope and consistency in the face of the magnitude of the challenges to be met. This document finds a lack of the minimum elements needed to make the topic an explicit priority on government agendas for the coming decades, as the attainment of the Millennium Development Goals would require.

The formulation of policies to improve access to energy services among the poor population requires answers to the following questions:

- What type of information exists to quantify the energy needs of the poor or to describe energy poverty in the countries of the region?
- What is the link between poverty and access to energy and what is the pattern of trends in energy poverty in urban and rural areas?
- How many people in each country still have no energy services, such as electricity?
- What types of inequities exist with regard to access to energy in the various social groups at the national level? How can they be quantified?

- What have been the trends in each country of the region as regards the use of firewood and what are the implications for equity, poverty and the environment? What importance has been attached to promoting the shift to better-quality and cleaner sources of energy in the medium and long term?
- What has been the impact on poverty, equity and the environment of the regulatory reforms introduced in the energy sector in recent decades?
- To what extent are concerns about access to energy for poor strata and its linkage with environmental issues reflected in various types of national planning documents in the different cases considered?
- What kind of responses have there been to problems connected with access to energy and the differences in treatment of rural and urban areas?
- What are the lessons learned and the recommendations based on research findings?

For this purpose, this project analyzed extensive documentation and information and produced a series of conclusions and recommendations. These are summarized in this document, which in turn is based on a longer document describing the findings of this research.[2]

[2] Cf. Contribution of energy services to the Millennium Development Goals and to poverty alleviation, ECLAC-UNDP-Club de Madrid joint initiative, Santiago, Chile, October 2009.

I. Poverty and poverty patterns in the region

At the end of 2007, it was estimated that there were about 200 million poor people in the whole of Latin America and the Caribbean (LAC). Of these, just over two thirds were living in urban areas. There were about 72 million absolute poor, half of whom lived in urban areas.

In Latin America and the Caribbean, urban poverty, although less prevalent than rural poverty in relative terms, has been developing into a bigger problem quantitatively and qualitatively. This fact, combined with the demographic forecasts, makes it urgent to devise comprehensive strategies to alleviate poverty and absolute poverty in urban and rural areas simultaneously.

Although high economic growth rates in the region in 2002 and 2007 made it possible to reduce the number of poor and absolute poor, this figure is still over 54 million higher overall than in 1980 and 69 million higher for urban areas. This situation is aggravated by the impact of the international financial crisis in 2008 and 2009.[3]

This means that, while the processes of rural-urban migration were continuing, urban productive systems were not able to absorb and include this immigrant population completely and in accordance with modern standards. As a result, rural poverty has been displaced and become urban poverty and exclusion. This analysis shows that the poor account for more than half of the total increase in the urban population in South and Central America. This situation will undoubtedly become worse as a result of the global economic crisis and the long-term impacts of climate change, making it extremely difficult for the Governments of the region to attain the Millennium Development Goals.

[3] In Latin America and the Caribbean, the international crisis is expected to cause GDP to contract and unemployment to rise, probably accompanied by increasing informality. Consequently, unlike the situation in 2003-2008, poverty is likely to rise and new stumbling blocks will appear on the road towards achievement of the Millennium Development Goals. This represents the end of a period of improvement in social indicators in which poverty came down by over 10 percentage points. See ECLAC *Economic Survey of Latin America and the Caribbean*, Santiago, Chile, July 2009.

II. Types of energy poverty

Despite the high rates of urbanization found in Latin America and the Caribbean, compared with other regions such as Asia and Africa, about 28 million people still do not have electricity in the region and a large number still have no access to modern fuels for cooking. When they do, a large portion of their income is spent on this. For example, in the group of countries analyzed, spending on energy for the lowest income quintile varies between 5 and 18 per cent of average monthly income; on the other hand, for the highest quintile, it represents only between 0.3 and 3 per cent of monthly income.[4] **Within countries, there are big differences between the higher energy consumption and spending of the higher quintile and those of the lower quintile. The former may be from 3 to 21 times greater than the latter, which reflects and exacerbates social inequity in the region.**

The scarce and disparate information available shows that, in Latin America and the Caribbean, lack of electrical services is undoubtedly related to poverty, although in some cases it may also reflect geographical isolation or access barriers of a different type. Nevertheless, it can be estimated that 73 per cent of the households without electricity are poor. This would mean that in the region over 10 per cent of the poor or nearly 30 per cent of the absolute poor have no electrical services.

Access to modern and clean sources of energy is known to have an important relationship to human development indices (HDIs), as illustrated in figure 1.

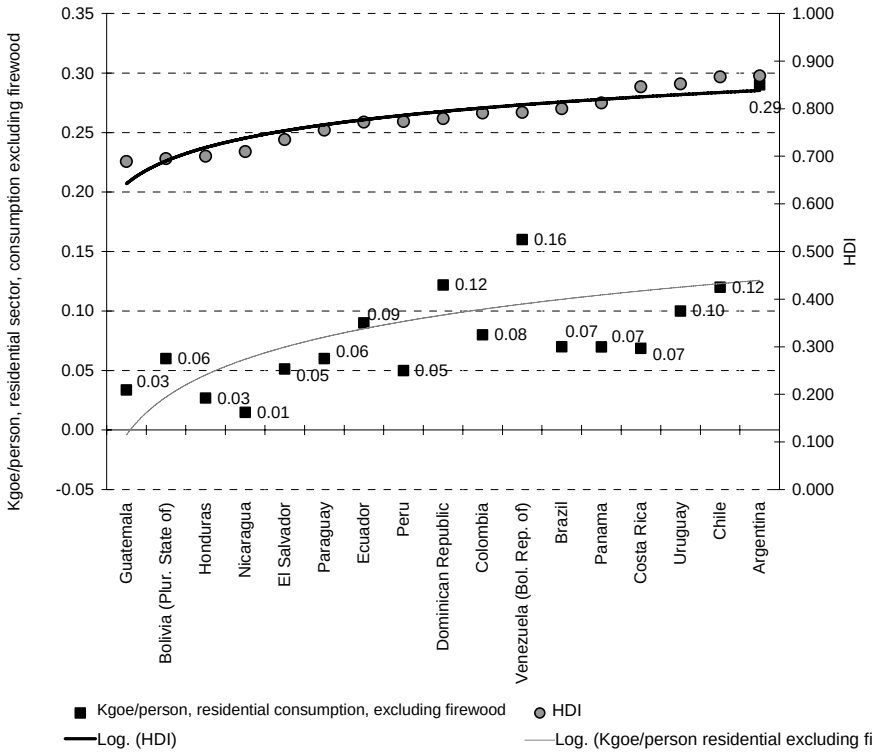
Some noteworthy facts emerge from the analysis of types of energy poverty:

- In all the countries analyzed, the poor strata consume less energy than the other social strata (in countries where the difference could be measured, eight times less on average). However, they spend more of their income on energy than do the non-poor strata.
- In many cases, the price per calorie equivalent unit is higher, basically because of difficulty accessing grid services such as natural gas in some of the countries that have natural gas (even taking into account the subsidizing of liquefied petroleum gas (LPG), this gas was eight times more expensive than natural gas).
- When this is not the case, it is because firewood is used as the basic fuel or because people are illegally connected to the grid and do not pay for the electricity they use.
- In some cases, there is as much as a thirteen-fold difference in the energy spending/income ratios between the poorest 20 per cent and the richest 20 per cent, and many countries do not even have statistics on this aspect.
- Greater per capita firewood consumption also generally corresponds to low HDIs, as is the case for the poorest Central American countries. However, the amount of firewood consumption may reflect other factors such as availability of affordable replacement

[4] See figure 7 and table 4 in the document: *Contribution of energy services to the Millennium Development Goals and to poverty alleviation*, ECLAC-UNDP-Club de Madrid, Santiago, October 2009.

energies, income level of rural settlers, types of firewood consumption and ownership, abundant availability of the resource and lack of satisfactory energy alternatives. This type of consumption may also be connected with cultural preferences and the existence of pockets of poverty within countries which nevertheless have a high HDI.

FIGURE 1
PER CAPITA RESIDENTIAL ENERGY CONSUMPTION (EXCLUDING FIREWOOD) AND HDI

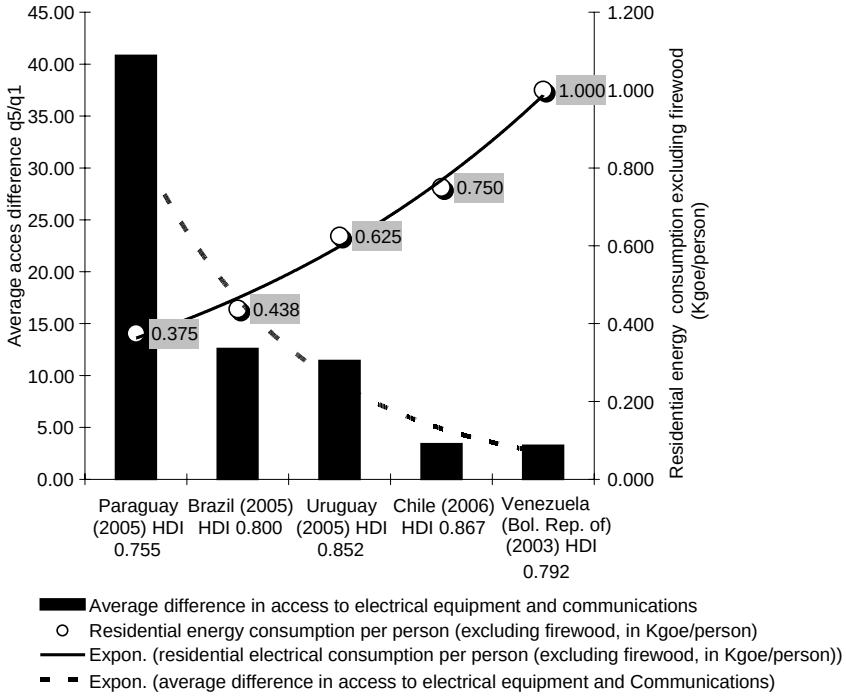


Source: prepared by the author on the basis of information from the Latin American Energy Organization (OLADE), Energy-Economic Information System (SIEE). National energy balances. Economic Commission for Latin America and the Caribbean (ECLAC), Latin American and Caribbean Demographic Centre (CELADE) and United Nations Development Programme (UNDP).

- The geographical, cultural and climatic diversity of the poverty map is huge within the region and within each country. As illustrated in figure 2, the countries of the region vary widely in average per capita consumption, average access to equipment and degree of asymmetry between different income quintiles for these variables within each country. One must therefore exercise great care when considering aspects of energy access by the poor and choosing the type of solution and energy source to be proposed in order to provide energy to the most disadvantaged sectors.
- The issue of inequity arises not only as regards access to the various services, their relative cost and the larger proportion of family income used to meet energy needs. The issue also concerns households' and communities' access to equipment, which in turn is reflected in the level of energy consumption.
- The information available – albeit insufficient – shows the magnitude of the question on another front: access by the poor to household appliances and equipment (computers, Internet, telephone) required by the knowledge society. This is linked to the fact that increase in energy supply must be sustainable as energy access is broadened, which

means that comprehensive planning policies for the sector are needed to ensure that the solution is not social exclusion.

FIGURE 2
DIFFERENCES IN AVERAGE ACCESS TO EQUIPMENT,[5] AVERAGE PER CAPITA CONSUMPTION OF ENERGY FROM MODERN SOURCES AND HUMAN DEVELOPMENT INDEX



Source: prepared by the author on the basis of information from the Latin American Energy Organization (OLADE), Energy-Economic Information System (SIEE). National energy balances. Economic Commission for Latin America and the Caribbean (ECLAC), Latin American and Caribbean Demographic Centre (CELADE) and United Nations Development Programme (UNDP).

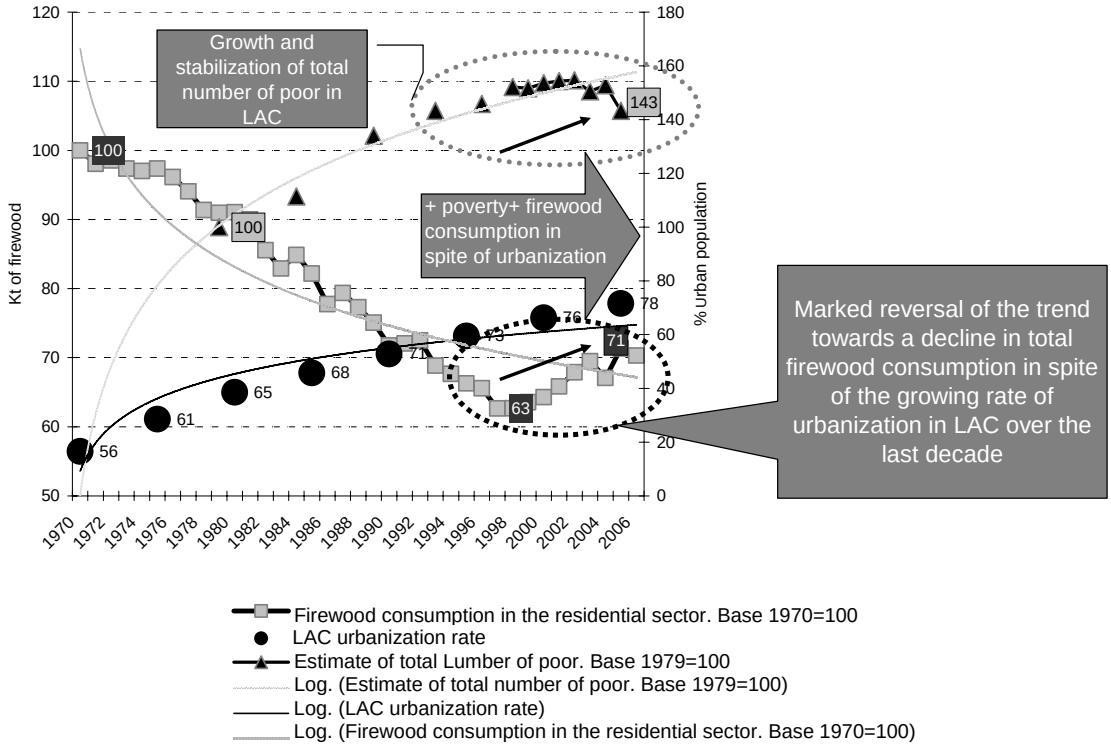
- Energy poverty is different in rural and urban areas. Policies designed to improve access to energy services must therefore deal differently with rural and urban situations. They have a different type of deprivation caused by lack of sufficient monetary income and of access to basic public services, including energy. Energy is a critical element of governance and of the feeling of equality of opportunity implicit in coexistence in democratic societies.
- The lack of sufficient monetary income may sometimes be more of a deprivation in urban than in rural areas. In the latter, poverty is usually accompanied by traditional or pre-modern ways of life. Access to energy through use of firewood may be partially guaranteed, but in ways that are highly undesirable because of the effect on health and on the work of women and children, and because of the correlation with other deficiencies as regards access to education, health services and water.
- Although total firewood consumption decreased steadily in Latin America and the Caribbean simultaneously with the process of urbanization until the mid-1990s, it has risen again over the last decade. This increase may be connected with the impact of the rise of international

[5] Average difference is the quotient obtained by dividing the percentage of the higher income quintile population which has access to a basket of equipment (electrical connection, land-line telephone, Internet, TV, washing machine, refrigerator and computer) by the percentage of the lower income quintile with access to the same type of equipment.

prices of oil and its derivatives between 2004 and 2008. Table 3 below illustrates the reversal of the downward trend in firewood consumption in the region from 1995 to date.

- Thus, despite the lack of specific data for most countries that would allow firewood consumption to be differentiated in urban and rural households, such consumption has probably also increased in poor urban and peri-urban households.

FIGURE 3
TOTAL FIREWOOD CONSUMPTION IN LATIN AMERICA AND THE CARIBBEAN, POVERTY AND RATE OF URBANIZATION 1970-2006



Source: Prepared by the author on the basis of data from OLADE and ECLAC-CELADE.
Note: Trends in the number of poor in index numbers with 1979=100 and percentages of urban population are shown on the right axis, while total firewood consumption attributable to the residential sector is shown on the left axis (1970=100).

In view of the complexity revealed by the preceding analysis, what was the impact of the reforms and to what extent have these problems been included in the national planning of the different countries?

III. Impact of energy reforms on social and environmental dimensions

Analyses made using various social and environmental indicators have shows that, with rare exceptions, the reforms made in the energy sector in Latin America and the Caribbean over the last two decades did not explicitly consider access to energy services by the poorest strata of the population, or environmental aspects. On the contrary, the social and environmental impacts of the reform process were generally negative in those respects:

- Throughout the region, the processes of disintegration of electricity chains and the new interactions between electricity generating sectors and gas producers, resulting from increasing use of combined cycles and gas turbine power stations, altered the previous balance between hydraulic and nuclear generation with respect to generation from conventional heat sources.
- This trend towards greater consumption of fossil fuels in the electrical generating sector, combined with other factors, resulted in an increase in total per capita CO2 emissions.
- As far as distribution is concerned, in several South American countries the reforms resulted in higher rates for electricity and natural gas consumption for poor sectors with lower usage. They also increased the cost of fuels such as liquefied petroleum gas and kerosene, as a result of price liberalization.
- A contrasting example is provided by Colombia, which enacted the 1994 Public Services Act classifying services into six social groups and establishing an official system of cross subsidies between residential consumers, with the support of productive sectors and the State, for the benefit of the two poorest strata.
- In addition, the Natural Gas Expansion Plan, formulated in Colombia in 1991 and in effect since 1997, resulted in the connection of over 4 million users, about half of whom were from the two lowest strata. It should be noted that this plan was launched among lower-income groups easily able to afford connections and equipment to replace a dangerous flammable fuel that had caused many accidents among the poor themselves. In addition, this policy made it possible to replace both electricity and LPG for cooking, water heating and air conditioning in all social strata, although the poor benefited most in relative terms.

- The reforms in South America also regularized illegal users of electricity. However, the regularization created new difficulties of access, which in some cases led to problems of growing discontent and to electricity being cut off because people had not paid their bills.
- In Central America, the reforms did not make a big difference in the rates paid by the poor but did result in a large general increase in the cost of electricity.
- No widespread and systematic effort to increase energy access for the poor in rural areas was found.
- The higher energy prices since 2003 resulted in higher costs for the poor using LPG and other modern fuels.
- Per capita firewood consumption in rural areas has increased in many Central American countries and some South American countries, in a reversal of the earlier trend.

To sum up, although there have been very diverse reforms as regards ownership changes, sector regulation, pricing policies and energy policies in the various countries, there has clearly been a lack of vision to tackle the problems of energy access by the poor, improve access and help to mitigate energy sector emissions.

IV. Energy and the Millennium Development Goals: results of the analysis of the documents studied

The detailed analysis of energy plans and strategies, development strategies and national poverty reduction strategies, and national reports on progress towards the Millennium Development Goals, among other official documents of the countries of the region, reveals scant attention to the topic of access to energy by the poor population and its link with the energy, social and environmental progress needed for the attainment of each of the Goals.

Indeed, in half of the documents analyzed, the treatment of the topic of energy and poverty was found to be only moderately informative, consisting of several lines or paragraphs devoted exclusively to energy questions. The documents were classified on a scale of 0 (no data, no reference to energy, the key words do not appear) to 4 (detailed information, covering more than half a page and providing specific information).

It is concluded from this analysis that:

- Far from revealing correctly defined energy policy directions, the issue of access to energy has been dealt with in a scattered and unsystematic manner, with a superficial approach that sounds more like rhetoric than a real interest in solving a clearly identified problem situation. Even worse, there is no explicit linkage between access to energy services as a basic aspect of poverty reduction and the Millennium Development Goals.
- If consideration of the issue had been a focus of the political agendas of the countries of the region, the documents would have been expected to include satisfactory indicators of the lack of energy services for the poor, a clear description of the problem situation identifying diagnostic studies, strategic approaches to overcome it, instruments defined for each strategic approach and actions relating to each approach. Nothing of the kind is found to such a systematic degree.

The reasons identified as possible causes of this state of affairs include:

- Frequent lack of coordination between the various departments of the ministries of energy, or energy and mining, and between these ministries and the agencies responsible for programmes of poverty reduction, education, public health and environmental management, promotion of renewable sources and rural development, among other areas of public policy related to energy access by the poorest sectors of the population.

- The different attitudes to the topic among other leading players such as ministries of economy and finance, service providers, municipalities and other government entities, such as regulators when systems have undergone far-reaching institutional reform.
- Weakening or inefficiency of the institutions responsible for energy planning, because of the belief that market mechanisms alone can provide an effective and efficient solution to all issues connected with energy policy.
- Lack of statistics, information, indicators and studies that would allow formulation of public policies focused on the poor sectors of the population in both rural and urban areas.
- Incorrect assimilation of rural electrification goals with goals of rural energization[6] and failure to acknowledge the problems of access, for both the rural and urban poor.
- Lack of trained middle-level technicians.
- Ignorance of the energy needs of the poor in various geographical areas, rural and urban.
- Reluctance to use subsidies to solve the problem of energy access and to guarantee accessibility for the poor sectors, both for budgetary reasons and for other reasons based on theoretical concepts that may unfortunately gain credence.[7]

[6] Energization is understood to mean the process of incorporation of all energy sources appropriate for family consumption for heating and other uses. This is as opposed to "electrification", which means availability of electricity as the only source of energy for such uses.

[7] Yet subsidies are routinely used in the energy sector (gasoline and diesel fuel) in many countries; since they apply to everyone, they do not target the poor population. There is an opportunity to redirect a fraction of this expenditure in targeted subsidies to solve the problem of energy access.

V. Towards energization of the national planning frameworks and achievement of the Millennium Development Goals

The analysis conducted confirms the need for an explicit framework of strategies and policies to eradicate energy poverty in the region. The strategies must take into account the diversity of actual situations in the poor sectors in each country and in each specific area.

The political will to find a response to this problem must be considered as a global priority in the fight against the scourge of poverty, particularly in its extreme manifestations that undoubtedly occur when modern forms of energy are not available. When this is not feasible in the short term, the sustainable use of firewood should be actively promoted and transition deadlines should be set for the poor to accede to modern, clean and efficient energy sources.

The quantification of energy requirements to meet basic need should also be given priority. Simultaneous attainment of the Millennium Development Goals globally depends on correct evaluation of the resources that will have to be mobilized in the light of energy supply and demand scenarios in order to ensure future quality of life.

In view of this situation, it is recommended that short-term and medium-term initiatives should be adopted in order to:

- Strengthen government planning agencies with highly specialized and efficient technicians who view planning as a process requiring institutional flexibility, inter-agency coordination and dialogue with public and private actors for implementation and ongoing monitoring of the policies set.
- Implement programmes for compilation of adequate statistics to allow comprehensive monitoring of the energy sector and identify unmet basic energy needs in poor sectors, including their specific geographical location.
- Include in the national budget items for investment and subsidies to achieve energy access and accessibility for poor sectors, after definition of specific coverage goals and technologies to be used for this purpose.
- Identify sources of financing for programmes and guarantee their sustainability (for example, international cooperation, government input, redirection of existing energy subsidies, use of cross subsidies, etc.).
- Find the best way to ensure that subsidies are poor-oriented, adequate and official and so that they do not in turn cause consumption to rise above basic thresholds.

- Analyze, using simulated scenarios, the expected impacts of greater energy consumption through inclusion and raising of the consumption threshold of the poor, with formulation of comprehensive policies for efficient energy use in other consumption sectors.
- Define explicitly the expected extent of the contribution of renewable energies to meet the energy needs both of the poor and of the other sectors.
- Define indicators for monitoring and quantification of the progress achieved, by periods.

The analysis also produced the following recommendations for specific programmes:

- Progress towards rural energization programmes ensuring the provision of sufficient energy to improve the productivity of the economic activities of rural communities, in order to reduce poverty by this means.
- Set goals so that the provision of services is not dispersed and an integrated approach is adopted to access to efficient and clean fuels to replace firewood or, when this qualitative leap is not feasible in the short and medium term, programmes result in sustainable use of firewood in the context of a concept of integrated management of forest resources.
- Set electricity access thresholds that allow sufficient power for productive uses.
- Incorporate new management models in programmes of electricity access using renewable sources in rural areas, with the aim of ensuring continuity and expansion of supply.
- Provide funding for bodies responsible for researching and developing new technologies, supervising results at the design stage and at the stage of prototype production, experimental testing, manufacture and actual use in poor sectors of the population..

The delivery of clean, affordable and reliable energy to persons living in a situation of energy poverty is a huge challenge for democracies. Full access to energy services should be considered as a public good and a civic right for the achievement of the equality of opportunity to which all true democracies aspire.

Lastly, the elimination of energy poverty requires States to make every effort to ensure that the poorest population in Latin America and the Caribbean consumes more, better quality and less polluting energy. Now that the twenty-first century is well under way, with the international energy debate focused on accelerated development of clean and efficient technologies to offset global climate change, it is unacceptable that the most socially and economically vulnerable social groups in Latin America and the Caribbean should have their precarious situation aggravated by lack of access to better quality energy to cover their basic needs. Reversal of this situation must become an explicit obligation of Governments and must be incorporated as a fundamental element in the great poverty reduction effort to which countries have committed themselves in the Millennium Development Goals.