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Institutional Responsibilities for the Implementation of International Legal Framework on Energy in Cameroon: An Appraisal

Bessem Rosh Kelly Arreyngang Bate

Ph.D. Student, University of Yaounde II, Faculty of Laws and Political Science, Department of English Law, Cameroon

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Abstract

Even though the institutional responsibilities for the implementation of international legal framework on energy in Cameroon have been applauded, it should immediately be pointed out that, it is subject to an array stakes, risks and challenges. In this connection, therefore, this study investigates the implications surrounding the implementation of international legal framework on energy in Cameroon and equally examines how stakeholders are engaged in the process. The research uses a juridical-normative approach to examine the institutional responsibilities for the implementation of international legal framework on energy in Cameroon through various stakeholder groups and documents such as sustainability annual reports on the subject under consideration. It was discovered that institutional responsibilities for the implementation of international legal framework on energy has consistently had a prominent drive in Cameroon for several years and is important for implementing relevant programs in accordance with the Energy Laws. Findings of this study contribute to the building of empirical reference which will serve as guidelines for management practitioners dealing with institutional responsibilities for the implementation of international legal framework on energy in Cameroon. Therefore, it is recommended that the energy sector put immense effort in engaging various stakeholders in the institutional responsibilities for the implementation of international legal framework on energy in Cameroon.

Keywords: *Institutional Responsibilities, Implementation, International, Legal Framework, Energy, Cameroon*

Introduction

Improving the quality of energy services is one of the sustainable development priorities supported by the United Nations organization since 2015. Access to energy for all is an important point for the sustainable development of the sub-Saharan African countries.1 Energy is therefore one of the key

[1] International Energy Agency. (IEA). Analysis 2020. Available from: http:// www.iea.org, Last accessed on 20 November 2024 at 11:45am.

poles of sustainable development and, as modern energy, it plays a key role in social development.2 As such, energy is a key factor to Cameroon's emergence scheduled to be achieved by 2035.3 The sensitivity of the demand for electric power in time is justified because the generated electricity should be instantly consumed.4 Its importance increases with technological progress, industrialization and need for modern comfort.

Increasing and improving energy require identification and control of factors as well as institutions responsible for the implementation of international legal framework on energy in Cameroon that have a positive impact in the sector. A significant number of works describe the impact of economic factors, population and technology of electricity.5 A comprehensive view of how various institutions influence the energy sector would certainly help in understanding the stakes for the future development of the sector. Government policies in this area could be more enlightened and undergo reorganization. Different models of energy consumption could thus be formulated and adopted in order to predict the potential impacts of changes in planning.

The Ministry of the Economy, Planning and Regional Development published in 2015, the Growth and Employment Strategy Paper (GESP) which traces the main development axes of Cameroon. This document clearly shows that Cameroon fits completely into a development policy of all these sectors.6 This development is subject to high energy demand. The generation of energy should therefore be equal to its demand. Unfortunately, this is not the case for Cameroon. Despite its enormous hydropower potential, energy in Cameroon is unevenly distributed.7 Only 20% of Cameroon's population has access to the national grid.8 Again, power cuts are frequent. The impact of the power cuts is impeded as cost bills to end-users. Power cuts in the Cameroon industries generate huge production losses for them.9 The electricity needs of end-users are continuously growing. For this, unscheduled and repeated power cuts, interrupt the operation and paralyzes the activities of these end users. The transmission and distribution networks of electricity in Cameroon are obsolete.10

These networks are the cause of approximately 26.32% of the losses in electricity in 2013.11 Thus, one quarter of the generated electric power is lost, while the populations' needs are more and more pressing. We also note that electricity prices are influenced by the British company ENEO (ENErgy Of Cameroon) in charge of generation and distribution of electricity in Cameroon.12 Given the points mentioned above, it can be seen that only a deep knowledge of the institutions factors affecting the electricity sector would be a starting solution to the electricity autonomy problem in Cameroon. Climate is among the key factors affecting energy consumption and electricity in particular.13

A few studies have set out to identify the institutions and factors that influence the development of the energy sector over the past three decades. In 1992 a study giving an overview of how investment

[2] Ibid.
[3] MINEPAT. (2009), Cameroon-Vision 2035: Work Documents. Yaoundé, Cameroon: Ministry of Economy, Planning and Regional Development. p1-76.
[4] Psiloglou, B.E. *et al*. (2009), Factors affecting electricity demand in Athens, Greece and London, UK: A comparative assessment. Energy, 34, 1855-1863.
[5] Zhang, T. *et al*. (2012). op.cit.
[6] GESP. (2015), Growth and Employment Strategy Paper: 2009 Report, Ministry of Economy Planning and Regional Development. p29-47.
[7] Abanda, F.H. (2012), Renewable energy sources in Cameroon: Potentials, benefits and enabling environment. Renewable and Sustainable Energy Reviews, 16, 4557-4562.
[8] Wirba.H. *et al*. (2015), op.cit.
[9] Diboma, B.S. *et al*. (2013), Power interruption costs to industries in Cameroon. Energy Policy, (3), 582-592.
[10] SIE-Cameroon. (2011), Situation Energétique du Cameroun. Report, Ministry of Water Resources and Energy. p1-147.
[11] MINEE. (2015), Statistical Yearbook of Cameroon's Water and Energy. Yaoundé: Ministry of Water Resources and Energy. p1-110.
[12] Tamo, T. (2010), Electricity selfgeneration for industrial companies in Cameroon. Energies, (3), 1353-1368.
[13] Hekkenberg, M. *et al*. (2009), Indications for a changing electricity demand pattern: The temperature dependence of the electricity demand in the Netherlands. Energy Policy, 37(4), 1542-1551.

and various reforms could impact the development of the electricity sector in England.14 Additionally, an analysis of the institutions which influence the electrification of households and the extension of the electricity grids in India.15 Several electrification models are formulated depending on the type of household, income and location (rural or urban). Such studies on the Cameroonian energy sector are scarce, and the small margin of existing works is reports from a few active institutions in the energy sector. Thus, the objective of this study is to show the influence of various institutions charged with the implementation of international legal framework on Cameroon's energy development. An overview of the energy sector is equally important, as well as a glimpse of the actions of the Cameroonian government in favour of autonomy in energy development.

Research Method

This legal research and writing is based on empirical research conducted through an analysis of relevant primary and secondary data. Primary data consists of legal and policy instruments on the institutional responsibilities for the implementation of international legal framework on energy in Cameroon. Secondary data consists of books, articles, thesis and dissertations, conference, seminars, papers and reports having a direct bearing on the subject matter under consideration.

The analysis is done through a content analysis approach which consists in critically analyzing legal and policy instruments to see how they relate to, have implications on the subject under study or whether they completely ignore or do not envisage a proper institutional responsibility for the implementation of international legal framework on energy in Cameroon. Again, we used the institutional strategic approach which consists in showing how government, international institutions and organizations contribute in advocating the institutional responsibilities for the implementation of international legal framework on energy in Cameroon.

Discussion

Institutions Charged with the Implementation of Energy Legislation

These institutions act as players in providing a framework for the energy sector to ensure effective energy security and development.

The Ministry of Water Resources and Energy

According to the institutional framework set out in Situation Energétique du Cameroun (2015), the Ministry of Water and Energy (MINEE) has technical oversight of the energy sector and is therefore responsible for the design, development, implementation and monitoring of government policy in the energy sector. In particular, it is responsible for general planning; conducting sectoral strategic studies; awarding concessions and licences; approving operators' investment programmes and electricity tariff policy.[16] In the interests of energy efficiency and security, a sub-directorate for renewable energies has been set up within Ministry of Water and Energy.[17] It is responsible for prospecting and drawing up an inventory of available renewable energy resources, research and technology transfer, designing and implementing development programmes and pilot projects, monitoring operations in the sector, disseminating the best techniques for using renewable energy resources, and so on.

[14] Bunn, D.W. and Larsen, E.R. (1992), Sensitivity of reserve margins to factors influencing investment behaviour in the electricity market of England and Wales. Energy Policy, 20(5), 420-429.
[15] Kemmler, A. (2007), Factores influencing household access to electricity in India. Energy for Sustainable Development, 11(4), 13-20.
[16] Article 71 of the Law of 2011.
[17] Decree n° 2012/501 of 7 Novembre 2012 relating to the organisation of the Ministry of Water and Energy.

It has a studies and standardisation department dedicated to drawing up a national renewable energy strategy and a renewable energy development map, updating the database on renewable energy consumption, monitoring best practice in renewable energy development and monitoring organisations and operators in this field.[18] The sub directorate also has a renewable energy development department responsible for identifying and disseminating incentives for renewable energy consumption, motivating operators in the sector, implementing best practices and techniques for the optimal use of renewable energy resources, monitoring pilot projects in the field and applying safety measures for installations and equipment for the production and use of renewable energy. Also, several actors (public, semi-public and private companies, and some associative financial institutions), however, each play specific roles in the eenergy sector in Cameroon.

The Ministry of Environment, Protection of Nature and Sustainable Development

The Ministry of Environment is equally another institution that intervenes in the energy sector to ensure that stakeholders respect environmental norms when carrying out energy operations. To this effect, the ministry of Environment therefore intervenes in the process to control and equally analyze if the modalities regulating the accomplishment of an environmental and social impact assessment are respected by operators. Again, the intervention of the Ministry of Environment in the energy sector is very vital as it helps in mitigating some negative effects that an energy activity could cause on the environment and on human beings in general. The role of the ministry of Environment in the energy sector is very technical as it intervenes to preserve, conserve and protect the environment.[19]

The Rural Electrification Agency

The Rural Electrification Agency (AER), created on 8 September 1999, is responsible for promoting rural electrification throughout the national territory. As such, it provides operators and users with the technical and possibly financial assistance required for the development of rural electrification. The Rural Electrification Agency (AER) is responsible for promoting rural electrification.[20] This role can be deduced from the 2011 law, which directs the electrification of rural areas towards the priority use of facilities for producing electricity from renewable energy sources, such as micro-hydro power stations or solar photovoltaic power stations.

The Electricity Regulatory Agency (ARSEL),

The Electricity Regulatory Agency (ARSEL), created on 15 June 1999, ensures the regulation, control and monitoring of the activities of operators in the electricity sector. In the specific sector of renewable energies, the Electricity Regulatory Agency (ARSEL) is responsible, under the terms of Article 11 of the Law of 2011, to grant licences to operate in the electricity sector. It is also responsible for setting the prices at which electricity is sold, particularly electricity produced from renewable sources. Depending on the amounts set, it can therefore promote or discourage energy security and the development of renewable energies. With the liberalisation of the sector, the need to have a regulator was inevitable. ARSEL's main mission is to regulate, control and monitor the activities of operators in the electricity sector.

The Electricity Development Corporation (EDC)

The Electricity Development Corporation (EDC), created on 29 November 2006, is responsible for managing the water resources and the public assets in the electricity sector on behalf of the government. EDC can also study, prepare or carry out any infrastructure project in the electricity sector entrusted to it by the government, participate in the promotion and development of public and private

[18] A. Nguesseu, D. *et al*. (2018), op.cit.

[19] The Ministry of Environment in accomplishing this role is complemented by the ministry of Forestry and Wildlife whose role here is to ensure that the habitat of fauna and flora species are not negatively affected by the energy activities.

[20] AER created by decree n° 99/193 du 8 September 1999, in application of article 58 of the law of 1998, reinstated by article 62 of the law of 2011.

investments in the electricity sector. This is a public institution responsible for operating and managing publicly owned electricity infrastructures, supporting and implementing infrastructure projects and participating in the development and promotion of private and public investments in the electricity sector.

The Energy of Cameroon S.A. (ENEO-CAMEROON S.A.) and National Electric Energy Transport Company (SONATREL)

The Energy of Cameroon S.A. (ENEO-CAMEROON S.A.), the successor to AESSONEL, was set up on 12 September 2014 and manages the production of up to 1150 MW and the distribution of electrical energy in Cameroon. SONEL was the first national electricity company created on 18 May 1974 after the reunification of Cameroon. It absorbed ENELCAM (Energie Electrique du Cameroun, created in 1948) and EDC (Cameroon Electricity Corporation, created in 1963) attached to East Cameroon and then POWERCAM (Cameroon Electricity Corporation, created in 1962) attached to West Cameroon. The concession agreement between ENEO and GoC has been extended to 2031. National Electric Energy Transport Company (SONATREL), created on 8 October 2015, is responsible for managing the transport of electrical energy and the transport network on behalf of the Government.

Energy Steering Committee and National Committee of the World Energy Council

The Energy Steering Committee, a little-known institutional player, is proving to be a focal point for renewable energy in Cameroon, as it is a unit for reflection, support and supervision of strategies for managing energy crisis situations and for finalising the national energy plan. The National Committee of the World Energy Council, for its part, is a body reporting to the Minister in charge of energy, whose main mission is "to prepare and ensure Cameroon's participation in the work of the World Energy Council and to monitor the application of the Council's recommendations in Cameroon". Founded in 1923, the World Energy Council covers a full range of energy-related issues, including renewable energy and energy security. Its objective is to "promote the sustainable supply and use of energy for the benefit of all", in terms of accessibility, availability and acceptability.

Factors Influencing Implementation

It shall be important to analyse the leading factors that influence either directly or tacitly the implementation of international legal frmaework on energy in Cameroon. This is because the implementation of international legal frmaework on energy in Cameroon entails a series of implications and stakes.

Legal Factors

Historically, to boost the development of energy, the country has relied on reforms on the electricity sector, led by hydroelectricity largely developed compared to other RE sources such as wind, solar and biomass. Initially, the law n°98/022 of 24 December 1998 governing the electricity sector, which is a general legislation concerning the electricity sector, focused on hydroelectricity development only. Afterwards, the electricity Law 2011/022, governing the electricity sector and promulgated on December 14, 2011. This law contains the legal provisions of the electricity sector, from generation (from primary or secondary sources) to the distribution, sale and transport of energy. More specifically, it deals with (i) regulation of water storage and hydroelectricity, (ii) regulation of competition in the electricity sector, (iii) regulation of non-competitive activities, (iv) regulation of environmental protection in the electricity sector, (v) regulation of consumer protection, (vi) regulation of internal electrical installations and electrical equipment, (vii) establishment of a Transmission System Operator (TSO) for electrical energy, and (viii) renewable energy and electrical energy management.clearly defined RE sources.[21]

[21] Key changes under this new legislation included the role of the State in:ensuring the promotion and development of RE;establishing the opportunity for the transmission system operator or any local distributor to purchase the surplus of electricity

Additionally, Article 63 of Law No. 011/022 provides a broad definition of energy, which encompasses all forms of energy from renewable sources, namely: solar thermal and photovoltaic energy; wind energy; hydropower from water sources with an exploitable capacity of less than or equal to 5 MW; biomass energy; geothermal energy; marine energy. Reducing climate change through renewable energies is supported by the National Development Strategy 2020-2030 (SND 30). Launched in 2020, it aims to provide access to electricity for the entire population by 2030. This law precisely shapes the legal and institutional supervision for RE promotion, by creating the Department of Renewable energy within the Ministry of Energy and Water Resources. To cope with the growth of electricity demand, several government plans and programs for energy development have been announced and deliverables are highly expected. The Master Plan for the Development of RE in Cameroon is still to be released. The rural electrification master plan, which focuses as well on RE such as solar energy in the northern regions and hydro energy in the southern regions, is as well to be released.

Political Factors

The first is to empirically analyze to what extent political factors explain the countries' decisions to achieve energy development. The deployment of energy is a good indicator of countries' commitment in the promotion of environmental friendly energy policies and, as we shall see, one that has received little attention in the scientific literature. The second, closely connected one, is to compare the explanatory power of those political determinants with that of other economic, energy and environmental drivers that have received greater attention in the literature so far, at least in the particular case of energy development. The reasons for interest in this analysis are manifold.

The attention devoted to the political and institutional drivers fills an analytical lacuna in our understanding of Energy deployment. This lacuna is all the more serious, since investing in energy activities is, first and foremost, a political decision. Governments actually finance the deployment of energy in response to multiple political factors. Among them, the pressure of lobbies that demand a greater use of energy sources, like the environmentalists and the green energy industry; the pressure of lobbies instead contrary to such deployment, like the nuclear and the oil based industries; and, last but not least, governments invest in energy activities provided that it yields a positive rate of return in terms of expected votes.[22]

In poor countries like Cameroon people value material well-being more than environmental amenities; yet, once a country reaches a sufficiently high per capita income, citizens pay greater attention to the environment. Insofar as policies respond to people's preferences, we should observe that poor countries tend to sacrifice the environment at the expense of development, while rich countries do the opposite.[23] .Everything hinges, however, on the extent to which policies (including environmental ones) reflect people's preferences. Corruption, a standard measure of governance quality, reduces the responsiveness of policies to citizens' preferences and should then raise the income level at which environmental protecting policies start to be adopted.[24]

generated from RE sources;fixing tax benefits for products, goods and services intended for RE exploitation; and Creating an agency responsible for the promotion and development of RE.

[22] Furthermore, the deployment of REs is a 'hot' policy issue, as the COP21 conference held in 2015 shows. In the EU; the combined needs of reducing its energy dependency and protecting the quality of the environment have pushed the Commission to set a series of targets that member countries must reach by 2020 (Directive 2009/28/EC); among those, a share of REs in gross final energy consumption of at least 20%. The task is daunting, since considerable differences exist in RE gross final energy consumption among the member countries. Malta, for instance, consumes no RE at all, while in Sweden they represent 43% of total energy consumption3. Such large cross country differences among a group of rather homogeneous and closely integrated economies cast doubts on the validity of models that rely exclusively on economic and environmental determinants. Political factors must also play a role.

[23]Arrow.T. *et al*. (1995), op.cit.

[24]Lopez, R.. and Mitra, S. (2000), Corruption, pollution, and the Kuznets environment curve. Journal of Environmental Economics and Management 40: 137-150.

In a similar vein, Fredriksson and Svensson study both theoretically and empirically the contrasting effects of corruption and political instability on the implementation of energy policies.[25] They predict that corruption reduces the "stringency" (that is, the efficiency of implementation) of environmental regulations; yet political instability should offset this effect, as it lowers the rate of return on corrupt practices.[26] Also, government ideology is another political factor that potentially affects the environmental quality and the stringency of energy policies. Potrafke investigates the hypothesis (among others) that market oriented and right wing governments have been more active at deregulating product markets, among them, the market for energy.[27] His empirical estimates show that right wing governments do in fact promote deregulation of the energy market.[28]

Also the concentration of the government majority seems to positively affect market deregulation, while the institutional constraints appear not to play a major role.[29] Focus on the effects of government ideology and of other political factors on the energy market alone. Their results confirm that left wing governments favor regulation in the energy sector, with the fragmentation of government again playing a partly offsetting role.[30]

Again, more stringent institutional constraints seem to favor the deregulation of the sector. On the other hand, market-oriented, right wing governments endorse energy deregulation, although the link between environmental policy and government ideology in this case appears less evident than for left wing governments. Both studies look at government ideology only, disregarding other political dimensions that may have an impact on energy policy decisions. Consequently, that is likely to prove a serious neglect, for instance, makes the interesting point that left wing governments may find themselves in an ambivalent position through the protection of the environment.[31] Further, because policy decisions aimed at protecting the environment can be costly in terms of employment levels. Employment concerns may be particularly influential in policy decisions in countries that adopt corporatist governance methods. In such a case a conflict arises in the political objectives of left wing parties when they run the government.[32]

Socio-Economic Factors

Social, and economic institutions dealing with energy have failed to overcome a new series of grave problems—problems of economics (access to capital), empowerment (self-reliance), equity, and the environment.[33] Also, many of the humanmade threats to the species and the biosphere, indeed to civilisation's future, are energy-related.[34] In fact, energy strategies have impacts on major issues related to poverty, women, population, urbanisation, and lifestyles.[35]

In this connection, therefore, these linkages imply that energy has to be tackled in such a way that social and economic problems are at least not aggravated which is what conventional energy strategies tend to do, because they are so preoccupied with energy supplies that they ignore these problems completely or deal with them inadequately. Also, because of its linkages to social and economic

[25] Fredriksson, P. and Svensson, J. (2003), Political instability, corruption and policy formation: the case of environmental policy. Journal of Public Economics 87: 1383–1405.
[26] Ibid.
[27] Potrafke, N. (2010). Does government ideology influence deregulation of product markets? Empirical evidence from OECD countries. Public Choice 143: 135-155.
[28] Ibid.
[29] Ibid.
[30] Biresselioglu, M. E. and Karaibrahimoglu, Y. Z. The government ideology and use of renewable energy: Case of Europe. Renewable Energy 47: 29-37.
[31] Neumayer, E. (2003). Are left-wing party strength and corporatism good for the environment? Evidence from panel analysis of air pollution in OECD countries. Ecological Economics 45: 203-220.
[32] Ibid.
[33] Ibid.
[34] Awareness of the energy dimensions of these issues has arisen more recently, but the underlying energy bases of the issues are still imperfectly appreciated by decisionmakers, perhaps because this understanding has not been disseminated widely.
[35] Data on infant mortality, illiteracy, life expectancy, and total fertility as a function of energy.

problems, energy can contribute to their solution. Unfortunately, energy and the major problems of today's world are not being dealt with in an integrated way by national and international policy-makers.

Another approach is called for: one that recognises that the satisfaction of social and economic needs by energy is best achieved by treating neither energy supply nor energy consumption as ends in themselves.[36] After all, what human beings want is not oil or coal, or even gasoline or electricity per se, but the services that those energy sources provide.[37] Thus it is important to focus on the demand side of the energy system, the end uses of energy, and the services that energy provides. In fact, one can identify a rather small set of the most important of these energy services. They include the basic services of cooking, heating, lighting, space conditioning, and safe storage of food. Additionally, the provision of clean water and sanitation, which is facilitated by energy, affects public health in cities as well as rural areas.[38] Societies also require services such as transportation, motive power for industry and agriculture, heat for materials processing (steel, cement, and so on), and energy for commerce, communication, and other economic and social activities.

The demand-side, end-use-oriented energy services approach stresses another difference. The end user cares less about the original sources or fuels used to provide the service than about crucial attributes of the final energy carrier from a social standpoint.[39] Also, among the most important attributes are energy's accessibility (particularly for the poor, women, and those in remote areas), affordability, adequacy, quality, reliability, safety, and impact (particularly on the immediate environment).[40] The traditional supply-side approach tends to forecast energy demand on the basis of projections of past and present economic and demographic trends.[41] It tends to ignore the large variety of scenarios that are feasible considering the opportunities and potentials offered by changes in energy demand, improvements in energy efficiency, shifts from traditional energy sources to modern energy carriers, and dissemination of new energy technologies.

To best serve humanity, the energy system should help achieve the goals laid down at the 1992 United Nations Conference on Environment and Development (the so-called Earth Summit) in Rio de Janeiro, and in other UN contexts. These goals include the promotion of economically viable, socially harmonious, environmentally safe, and strategically secure societies.[42] Again, meeting these goals requires five crucial components: economic efficiency, equity (particularly for the poor, women, ethnic minorities, and those in remote areas), empowerment or selfreliance, environmental soundness, and peace.[43] Together these components can be taken as some of the most essential measures of sustainable development.

The Earth Summit led to greater awareness that development needs to be sustainable if it is to serve humanity's short- and long-term goals. More than 150 governments committed themselves to the protection of the environment through the Rio Declaration and Agenda 21.[44] Government representatives considered that key commitments related to energy would be covered under the United Nations Framework Convention on Climate Change (UNFCCC), which was signed on this occasion.[45] Agenda 21 makes this important statement: Energy is essential to economic and social development and improved quality of life. Much of the world's energy, however, is currently produced and consumed in ways that

[36] Bloom, D.E., and J.G. Williamson. 1998. "Demographic Transitions and Economic Miracles in Emerging Asia." The World Bank Economic Review 12 (3): 419–55.
[37] Ibid.
[38] Ibid.
[39] Ibid.
[40] Nathan, D. (1997), Economic Factors in Adoption of Improved Stoves, Wood Energy News 12 (1): 16–18.
[41] Ibid.
[42] United Nations, (1993), Report of the United Nations Conference on Environment and Development (UNCED), Agenda 21. Document A/Conf. 151/26/Rev. 1, Vol. 1. New York.
[43] Ibid.
[44]United Nations Development Programme, (1995), Human Development Report 1995, Oxford University Press, New Delhi, p.67.
[45] Ibid.

could not be sustained if technology were to remain constant and if overall quantities were to increase substantially.

The need to control atmospheric emissions and other gases and substances will increasingly need to be based on efficiency in energy production, transmission, distribution and consumption, and on growing reliance on environmentally sound energy systems, particularly new and renewable sources of energy.[46] The Framework Convention on Climate Change, which has been ratified by 164 countries, defines an ecological target—without linking this target to social impacts that implies the implementation of energy measures. The Intergovernmental Panel on Climate Change (IPCC) also has presented scientific assessments of data related to climate change and prospects for inputs, adaptation, and mitigation of climate change and their relationship to energy issues.[47]

Since the Earth Summit many other initiatives have been taken at various levels to promote sustainable energy through increased energy efficiency, support for renewable energy sources, and integrated energy resource planning. There are now good examples, significant benchmarks, and success stories all around the world of efforts in these areas. But these efforts are dispersed. Though they provide a good starting point, they cannot meet the tremendous energy challenges facing humanity during the 21st century.

Energy issues tend to get sidelined in many international forums. Such major global issues as poverty, women, population, urbanisation, lifestyles, undernutrition, environment, economics, and security tend to get higher priority than energy.[48] But missing from most discussions of these issues is the important linkage between each of them and global and local energy systems. It is too little appreciated that achieving progress in these other arenas can be greatly assisted by manipulation of energy systems. Even when this linkage is mentioned, the discussion focuses on how these global issues determine energy consumption patterns.

Energy is treated as the dependent variable. Also, very little attention is directed at understanding whether current energy patterns are aggravating these issues, and almost no attention is given to how alternative energy strategies can contribute to their solution. Thus a fresh conceptual framework is required. The framework elaborated in this section concerns the linkage between energy, on the one hand, and poverty, women, population, urbanisation, and lifestyles, on the other.[49] The linkage between energy and food security is also crucial, particularly because it concerns the important social problem of undernutrition that is so widespread and serious, especially in developing countries Cameroon inclusive.

More so, the energy-undernutrition link has been treated adequately in other contexts.[50] It explains how energy strategies can play a powerful role in increasing the supply of food as well as building an environment in which food is absorbed more effectively. As humankind enters the new millennium, it is important to highlight energy's critical relationship to major global problems.[51]

[46] Ibid.
[47] Myerson, A.R. (1998), op.cit.
[48] UNDP. (1997), Human Development Report, Oxford University Press, New Delhi, p. 89.
[49] Batliwala, S. (2012), Rural Energy Scarcity and Nutrition: A New Perspective, Economic and Political Weekly 17 (9): 329–33.
[50]UNDP. (1997), Energy after Rio: Prospects and Challenges. New York: UNDP, in collaboration with International Energy Initiative, Stockholm Environment Institute, and United Nations Conference on Environment and Development.
[51] The timeliness of the challenge derives from three critical elements that are converging to make the world thirstier for energy services: aspirations for a higher living standards, booming economies in large regions, and population growth. The assessment that follows draws together a number of diverse elements that are relevant to sustainable development, and for which issues of supply and demand of energy are significant. It goes on to show new options for using energy more efficiently, and also how both renewable and fossil sources of energy can be used in cleaner, more efficient ways to help create a more sustainable future. In fact, the global goal for energy can be stated very simply: sustainable development of the world. Energy services therefore are a necessary condition for sustainable development.

Conclusion

The above-mentioned measures could have had a greater impact if they had been part of development policy on the institutional responsibilities for the international implementation of legal framework on energy in Cameroon, with instruments for monitoring their application and assess their impact. So far, we cannot really say that these measures have facilitated the emergence of the energy sector in Cameroon and equipment remain very highly needed, and quality still leaves something to be desired.

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