



ST.MARY'S UNIVERSITY

COLLEGE OF OPEN AND DISTANCE LEARNING,

ADDIS ABABA CENTER

A CRITICAL EXAMINATION OF A POTENTIAL CLEAN DEVELOPMENT
MECHANISM TO BRING SUSTAINABLE DEVELOPMENT FOR
DEVELOPING COUNTRIES

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SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR
THE BACHELOR OF DEGREE IN LAW (LLB)

Dec, 2014

CERTIFICATE

I hereby certify that this thesis entailed, A Critical Examination of a Potential Clean Development Mechanism To Bring Sustainable Development For Developing Countries by **DUFERA TOLCHA** submitted for LLB degree at St. Mary's University, College of Open and Distance Learning, is carried under my guidance and supervision and is a bonafide work. The thesis has not been previously submitted to any University for the award of any degree, diploma or other similar title.

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DECLARATION

I declare that this thesis entitled ‘A Critical Examination of a Potential Clean Development Mechanism to Bring Sustainable Development for Developing Countries which I am submitting for award of the degree of bachelor of Law (LLB) is my original research work Carried under the guidance of **MisTenadamKaleab (LLB)** . Ideas and expressions borrowed from other authors and materials are duly acknowledged and properly cited. I further declare that this thesis wholly, or in part, has not previously formed the basis of award of any degree, diploma or other similar thesis.

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Acronyms

AFDB=African Development Bank

CDMEB = Clean development mechanism executive board

CERS= Carbon Emission Reductions

CDM = Clean development mechanism

DNA= Designated National Authorities

EIA=Environmental Impact Assessment

ESD=Education for sustainable Development

EU= European Union

GHG= Green House Gases

Ipcc= Inter governmental panel on climate change

SCA = Science Council of Asia

UNCED = Unit Nation Conventional Environment Development

UNDP = Unit Nation Development Program

UNFCCC = Unit Nation Framework Convention on Climate Change

UNGA = Unit Nation General Assembly

WB=World Bank

1.4 Back Ground

The international discussion on global warming and climate change issue late 1980s resulted in adoption of the United Nations Framework Convention on Climate Change (UNFCCC) which was later signed by a lot of countries during United Nations Conference on Environment and Development "Summit" held at Rio de Janeiro in 1992. The convention declares the principle of dealing with global warming and climate change that the parties to this convention (UNFCCC) should protect the climate system for the benefit of present and future generations of human kind on the basis of equity and accordance with their responsibilities and respective capabilities. After the Earth Summit a big step for enforcing the convention was made in COP3 in Kyoto, 1997 by adoption of the legally binding target to limit or reduce greenhouse gas emissions for each of Annex I parties (industrialized countries). The global target of GHG emissions reduction was set at least to 5% and ensuring sustainable development for developing countries is CDM among the carbon trading and joint implementation one of the options for developing countries to save the environment from climate change.

1.5 Statement of Problem

Under Article 12 of 1997 Kyoto protocols are to goals (of) the CDM should reduce cost of compliance for developed countries and should to bring sustainable development in developing countries. In this prevention doesn't define sustainable development and sustainability criteria and no any single authoritative organ that check whether the CDM bring sustainable development for developing countries or not so that they leave power for the designated national authority developing countries in order to check whether CDM bring sustainable development or not but DNA of developing countries also not provide sustainability criteria to check projects of CDM. Other problems that are concern in technology transfer that is rise developed countries and developed countries. Developed countries faire the patent right to transfer environmentally sound technology and also developed countries are lack of cost to afford to by this technology and there is also infrastructure problems are raised.

1.6 Objective of the Study

This research paper is basically at examining work ability and activities of a potential clean development mechanism to bring sustainable development for developing countries. The extent how it contributes to sustainable development of developing countries will be dealt with.

1.7 Scope of the Study

The scope of study goes just like this; the CDM definition including objectivity of CDM to reduce carbon emission reduction and concept of sustainable development in general. In addition to this how the CDM benefiting developing countries in order to bring sustainable development and how CDM contribute to sustainable development are the issue.

1.8 Significant of the Study

This study may contribute to laying foundation for further comprehensive research undertakings by potential interested person in the area of clean development mechanism. Taking in to account the invaluable role of the clean development mechanism plays in the process of environmental protection.

1.9 Research Methodology

The study is under taken through literature review book pertinent to the study are collected from Addis Ababa university libraries of social science and law school. In addition more sources are provided from internet browser and convention provides on the environmental are reviewed.

1.10 Limitation of the Study

- Non accessibility of internet service on time and lack of money to print material from internet service
- Lack of time because I am police man serve for the society this research in clear and eligible manner.
- There is also lack of availability of books in libraries concerning CDM.

CHAPTER ONE

INTRODUCTION TO CLEAN DEVELOPMENT MECHANISM

1.1 Introduction

The world faces serious and linked challenges in tackling climate change, promoting clean energy and achieving sustainable development. The initiation of CDM was trying to deal with issue to reverse the climate change that already vulnerable to harsh climate. In paper chapter one is dealing the meaning of CDM and the historicity of CDM in particular the United Nation Convention on climate change provides a forum for both developed and developing countries to meet and discuss way to mitigate and adapt to the impacts of climate change. Nations have common but differentiated responsibility to respond climate change particularly levels of greenhouse gas to the atmosphere. This formulated to the creation of CDM among the three mechanism in particular has seen aims to reduce the emissions whilst contribution to sustainable development in non- annex I. Finally the authority involved in the CDM and achievement of the CDM has been discussed.

1.2 Definition of clean development mechanism

The clean development mechanism is an instrument of Kyoto protocol designed to eliminate greenhouse gas that are or “would have been “emitted from developing countries. In so doing developing countries benefiting from the CDM are placed on development pass involving reducing emission. The CDM is one of the three so called flexible mechanisms of Kyoto protocol along with emission trading and joint implementation.¹ CDM is the mechanisms that come to issue to solve environmental problems such as proving the previous technologies that become very difficult to the environment and supporting the sustainable development of developing countries by reducing the greenhouse gases emissions.

Definition given from financial sector is a carbon trading system established by the Kyoto protocol designed to direct funds from wealthy countries to developing countries to cut

¹ Definition of CDM UNFCCC available at <http://UNFCCC In|kyoto protocol mechanism items 2778.php>|October 10|2005

greenhouse gases.² As provided in this definition it is a way of transfer fund from wealth countries to the developing countries.

The way that the UN clean development mechanism (CDM) was intended to offer rich countries an efficient market mechanism to achieve some of their emission cutting obligation at lowest by instilling green technology in developing countries and to achieve the purpose of Kyoto protocol that is in achieving sustainable development and in contributing to the ultimate objective of UN. In addition to this to assist parties included in annex one in achieving compliance with their quantified emission limitation and reduction commitments.³ It is a way that effective without more cost affects in order to reduce greenhouse gases to foster the purpose of Kyoto protocol.

1.3 History of CDM from the UN Conventions on Climate Change

From the time scientists through the inter-governmental panel on climate change (IPCC) had pointed out the possible implications of increasing carbon dioxide, the UN framework convention on climate change has stated in art 3 that policies and measures to deal with climate change should be cost effective so as to ensure global benefit at the lowest possible cost.⁴ The framework thus set stage for further negotiations towards other flexible mechanisms.

Negotiations on a global level for emissions trading begun in the second conference of parties Kyoto protocol 2 (COP2) in Geneva on July 1996.

The Clinton administration called for a “binding emission target” on the bases of three conditions one of which is through flexible and cost effective market based solution. Even though, skepticism from developing countries and environmental groups were voiced, emission trading nonetheless found its way into art 17 of the Kyoto protocol on climate change.⁵

The CDM did not begin at the onset in its current form. The idea of joint implementation was launched by Norway and Germany in 1991 which at that time did not encounter much resistance. The basic concept was that the transfer of technology to other countries to reduce greenhouse gases could counted towards the benefit of source country of technology.⁶ While included in

² Definition of CDM from financial sector available at [http://Lexicon Ft. |com|term=CDM\)Oct.10|2005](http://Lexicon Ft. |com|term=CDM)Oct.10|2005)

³ Supra note 1

⁴ UNFCCC 1992

⁵ Oberthuer and otto the Kyoto protocol:International climate policy for the first century 1999 p 188

⁶ Dutshne and michaelowa development aid and CDM how to interpret financial additionality 1998 p 10

art.4 of the UN framework convention on climate change (UNFCCC) it was at that time not well defined. In the years following there was a lot of resistance from developing countries who were concerned that such mechanism would let industrial countries “by buying their way into compliance. Environmentalists were also uncomfortable with the notion of pollution regimes given by the issuance of certificates or permits from joint implementation.⁷ It means the joint implementation does not provided everything in clear manner especially concerning developing countries. As understandable from this the joint implementation is the proposal of developed countries only. Because of this the joint implementation does not provide the interest of developing countries in clear manner and miss the concept of sustainable development.

At later stage of the Kyoto process in May of 1997, Brazil proposed a clean development fund which would be financed by industrialized countries non-compliant to the protocol. Due to the “geographical flexibility” of the proposal, the UN states took the opportunity to exercise further flexibility in the implementation of their commitments. The Brazilian proposal would later transform into something very closely resembling the joint implementation concept. However the name CDM made the concept more palatable to skeptics because of the emphases on sustainable development in its implementation. Hence, the CDM was drafted as art 12 of Kyoto protocol and dubbed resulted as the “Kyoto surprised “due to its rather late elaboration in the final days of the Kyoto protocol negotiations.⁸ In short the CDM is trying to overcome what missed by joint implementation like the issue of sustainable development and is not depend on vissionable concept of developing countries. So that CDM is the most valuable that raises concept developing countries by supporting and providing idea of sustainable development.

Therefore, adoption of sustainable development concept in CDM motivates developing countries to participate in reduction of greenhouse gases. From a negotiation perspective, the inclusion of CDM in Kyoto protocol achieves several goals. Some of the goals are:-

1. Provides industrial countries increased flexibility in implementing compliance by allowing them to earn emission credits project based activities in developing countries. This means not only another option for compliance, but the fact that implementation was allowed through countries means geographical flexibility as well.

⁷ Supra note 5 p 165

⁸ Supra note 1

2. The CDM achieves an increased participation of developing countries in climate change negotiation by linking the concerns of local sustainable development. In the end, developing countries benefit from the transfer of resource while developed or industrialized countries benefit from the certification of emission reduction.

3. Added to this is the achievement of principles set about by art 3 paragraph 4 and 5 of the UN frame work convention on climate change where by” parties have the right to, and should promote sustainable development” and parties should cooperate to promote a supportive and pen international economic system that would lead to sustainable economic growth and development in all parts, particularly developing countries parties.⁹

It must be emphasized at this point that the CDM has been successfully negotiated into the Kyoto protocol and accepted by developing countries on the premises that such a mechanism would emphasis sustainable development. The concept of the CDM involved from the Brazil proposal for a clean development fund which would be open for all developing nations. Because of this stable transformation, the CDM concept has been understood by many developing countries that such mechanism would be available and beneficial not only to a few but to all developing nations. What was agreed upon in Kyoto was further outlined in 2000 during the second part of 6th conference of parties (COP6) in Bonn. The Bonn agreement detailed the CDM and paved the way for the ratification of the Kyoto protocol by several countries.¹⁰ That means the Bonn agreement justified all slogan of CDM in order to ensure ratification of Kyoto protocol by many countries. The consensus at the Kyoto protocol specified in Bonn lead in 2001to the Marrakesh accords at the 7th Kyoto protocol (Marrakesh accords means at the 7th Kyoto protocol to UN frame work convention on climate change in 2001 most of rules for the CDM were agreed and enshrined in the so called Marrakesh accords) which framed the final design of the international climate change policy regime and eventually paved the way for the ratification of all countries.¹¹ So, the 7th Kyoto protocol facilitates the way to all countries participates in ratification of Kyoto protocol in order to save the climate from dangerous activities.

⁹Huq, Clean Development Mechanism ,(2002) P 6

¹⁰Kery Transaction cost of CDM project in India 2004 p 4

¹¹ Ibid

1.4. Participant countries in the CDM

A European Union (EU-15) - These countries are: (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Luxembourg, Netherlands, Portugal, Spain, Sweden and United Kingdom) EU member states that joined the EU before 1996 are Annex One countries that are part of EU and are usually net buyers of emission permits.¹²

Countries undergoing the process of transition to a market economy: these countries have emission caps and are usually net sellers in carbon market. Joint implementation projects are hosted mostly in these countries. All of these countries, except Russia, Ukraine and Croatia are members of the EU and thus are part of EU.¹³ Means those countries are not emitters of climate because of this they are seller in carbon market.

Annex one non EU countries that ratified the Kyoto protocol: these countries that ratified the Kyoto protocol and have compliance targets, but are not part of EU, or are not economies in transition. Australia was the last country to ratify the protocol in December 1997.¹⁴

Annex one parties that have not ratified the Kyoto protocol: among the Annex One countries that signed the Kyoto protocol in 1997, only the USA has not ratified it.¹⁵ May the reason USA fear that if the Kyoto protocol binding on me it prevents many activities of the countries.

Non Annex One countries (Asia, Africa and some developing countries) having ratified the Kyoto protocol: these countries do not have the emission caps, are not forced to commit to any reduction target.¹⁶ However developing countries are the first proposal of the CDM to control the emission of developed countries considering their industries are very productive and bring serious problem to the environment. But, developing countries have not emission caps to control the industries of developed countries.

On the other hand, developing countries have no measurement how many percent industries of developing countries bring damage on the climate of developing countries. So that developing countries have not the cap that control influence of developed countries.

¹²Tolkitt, CDM Opportunity for Asia and Pacific (1999) P.8 Available at www.criticalcollective.org/?publication=the=the October 15, 2013

¹³ Ibid

¹⁴ Ibid

¹⁵ Ibid

¹⁶ Ibid

1.5 Responsibility shouldering and Benefit Sharing under CDM

National interest is priority in the international regime climate change has always been a sensitive issue due to the fact that the emission rights always link to the national interest. As economic development proceeds, it is necessary to generate more electricity, bolter industry and participation activities seen as adding to emit greenhouse gases.¹⁷ For this reason some countries are not willing to accept the constraint emission targets as these targets may damages their national economies to a certain extent.

However, all the nations around the world must work together and make their due efforts to reduce emission facing the irreversible impacts caused by global warming. In this scenario, how to reasonably allocate responsibility regarding emission reductions and balance the benefits concerning investments and technology among different countries is paramount task in climate regime.¹⁸ To clarify the idea if the concern issue like investment is common principle how the countries equal share from this investment.

From these premises, the most important consideration for developed countries, which mainly account for the current situation of global warming, is to establish a system to achieve greenhouse gas emission abatement targets at the lowest cost. In spite of the Intergovernmental panel on climate change(Ipcc's) report that any changes in global climate patterns will have the most severe impacts on the poorest and most vulnerable sections of the society.¹⁹ Developing countries are still advocate their responsibility on climate change issue in terms of the accumulative contribution to global warming and per- capita GHG emission levels and wish to seize every opportunity to develop their national economy and advance clean technologies.

The negotiation of the CDM is considered to be a process seeking a win-win strategy to countries benefit. The Kyoto protocol recognizes the differentiated responsibilities of combating climate change based on the historical contribution to emission and provide legally binding commitments for industrialized countries to reducing greenhouse gas emission.²⁰The CDM provides win-win-

¹⁷ REDD-plus and benefit sharing experience interest conservation and other resource management sectors , Available at –[http://doc.google/viewer a=v andqcache:d\]Ef040pmow:ev'tyale.edu |tfd| uplods iucn2520sharing fub.6 |2013](http://doc.google/viewer a=v andqcache:d]Ef040pmow:ev'tyale.edu |tfd| uplods iucn2520sharing fub.6 |2013)

¹⁸ Meeting the requirement of CDM regulations ten tipsforArchitek+Revol October 2011 Available at-
<http://docsgoogle.com|vewer> feb.20/2013

¹⁹ Ibid

²⁰ Ibid

situation means to elaborate the defect of previous environmental protection and bring the fast way to solve the environmental problems. And also raise guideline for the industrialized countries the way they limit greenhouse gases.

As the only flexible financial mechanism involving developing countries, the CDM provides an opportunity to share benefits from implementation emission abatement project between industrialized countries and developing countries.²¹ So by developing the CDM flows of finance in and green technologies would enable poorer countries to cleaner and sustainable development and in the meantime, the CDM are aimed to assist developed countries in partial meeting their individual targets in acceptable workable way.

1.5.1 Underline legal principles of the CDM

Principle of common but differentiated responsibility involved from the nation of the common heritage of mankind dating to 1950.²² Bearing in mind that humans depend on the healthy for their survival. That means in order to insure living of human being health is the core point. So that the health emanate from environmental protection, therefore, the world are common for protection of environment to get better health position and different responsibility to solve the problem raised.

The United nation General Assembly(UNGA) went further by recognizing the earth's climate as a common of mankind.²³ That means every concern issue in environment should have to get common protection. The principle recognizes historical differences in the contribution of developed nation and developing nations to global environmental problems and differences in their respective economic and technical capacities to tackle these problems. It includes two fundamental elements. The first one concerns the common responsibility of nation for the protection of the environment or parts of it, at the national, regional and global level. The second one concerns the need to take into account the different circumstances, particularly each nation's

²¹ Common but differentiated responsibility CDM-A course discussion available or diplo climate change community available at climate.diplomacy.pdu|p|cbdr-principlefub 8|2013

²² Ibid

²³ Ved.p Nanda International Environmental law and policy 1995 p 100

contribution to the evolution of the particular problems and its ability to prevent, reduce and control threat.²⁴

The principle was therefore suggested by principle 23 of the 1972 Stockholm declaration, described succinctly in principle 7 of Rio declaration on environment and development, clearly stated by art 3(1) of UN frame work convention on climate change as the first basic principle and has been recognized in other important international understanding.²⁵

The pre-condition of establishing the CDM is based on different emission reduction target between developed countries and developing countries according to their historical contribution to climate, financial and technological capacity, national circumstance and current percapita emissions.²⁶ The developed countries legally binding commitments in the first Kyoto protocol period reflect differentiated responsibilities while the developing countries involved under CDM demonstrates the common principle responsibilities to tackle climate change issue. So therefore, there is a pre -condition like common responsibilities and cooperation between developed and developing countries depending on the CDM goals.

1.6 Authority Involved in CDM

The authorities involved in the CDM are the clean developemnetmechanismexecutive board and the designate national authorities.

1.6.1 The CDM Executive Board (CDM EB)

The CDM is guided by the conference of parties and supervised by a ten member executive board (EB) comprising one representative from each UN region (Asia, Latin America and the Caribbean, Africa, central eastern European and one from small Iceland developing states and to each from annex 1 and non- annex one parties.²⁷ To supervised CDM executive there should thus executive board organ from each participant.

The CDM executive board is a formula government body established in art 12 of Kyoto protocol to oversee the implementation and administration of CDM. It is under the authority of Kyoto

²⁴ Ibid

²⁵ Ibid

²⁶ Supra note 21

²⁷ Alan silayan equitable distribution of CDM projects among developing countries 1999 p 12 available at www.google.com|ur?? Fub 3\2013 Annex I countries means are developed countries while none Annex I countries are developing countries

protocol. The main function of executive board to develop rules and procedure for CDM operation, to approve new methodologies related to baseline and monitoring plan to issue carbon emission reduction certificate (CERS), to register the project, establishing the ground rules for the implementation of the CDM among participant countries, and reporting and dissemination of pertinent information relating to all aspect of the CDM.²⁸ So the performance of any activities of the CDM projects are deeply entertain by the executive board whether the project is according to guideline or base line or not, and whether the project is depending on the information provided by the executive board or not is checked by the executive board. So, if the project follows all these activities provided by CDM executive board the project will be successful.

A typical example of the CDM executive board project is the novagerer land fill gas to energy project in Brazil. One project proponent is novagerer which is a joint venture between eco securities, an environmental finance company which specializes in greenhouse gas mitigating issues and S.A paulista, a civil engineering and construction firm. The other project proponent is the World Bank Netherlands clean development facility.²⁹ That project provided above are the most example project that are guided according to the CDM executive board and also are good guidance for the project that are on pipeline.

1.6.2 Designated National Authorities (DNA)

The executive board is responsible for monitoring the CDM on behalf of the UN frame work convention on climate change at an international level while the implementation of CDM projects must also be approved and should be monitored at domestic level by the individual party Governments of countries undertaking the CDM project. DNA a national authority for CDM is designated by party to the protocol and parties voluntarily went to be engaged in CDM activities.³⁰ As provide the executive board check the activities of the proect before start to conduct work whether the project has the value or not, while the designated national authrity of the countries have the power to balance whether the project bring sustainable development or not.

²⁸ UNFCCC CDM available at <http://CDM.unfccc.int|EB|backgroundhtm|fub 2\2013>

²⁹ Cited above at note 27

³⁰ UNEPRCE and climate and CD national library

The main task of the DNA is to assess potential CDM projects to determine whether they will assist the sustainable development goals and to provide approval, to project participant in CDM projects. This letter of approval must confirm that the project activities contribute to sustainable development in the country that the country has ratified the Kyoto protocol and the participation in the CDM voluntarily. It is then submitted to CDM executive board to support the registration of the project.³¹ So the role of DNA is to approve the project established in each country that are party to the Kyoto protocol and voluntarily participate in CDM project contribute to sustainable development in the country or not.

Other function of DNA is to:

- A. Decide respective sustainable development criteria according to the national circumstances
- B. Assist potential investors to understand and navigate the CDM implementing relation to the host countries. Rules such as energy sector, foreign investment and taxation and
- C. Report on national CDM programs develops a portfolio of priority of CDM projects and networking information that can be used.³²

These all are role of DNA to organize good way for every project activity of a country to bring sustainable development.

In general, if the project is deemed by the DNA to be inline with the spirit of the Kyoto protocol or contrary to the intention of the stated intention of stated government policy, the DNA reserves the right to refuse project approval until such time as suitable alteration are made to the project design. In such instances clear reasons for the rejection of project must be provided by the DNA.³³

1.7 Achievement of CDM objectives

The CDM enables annex one parties (or, as is more often the case) companies from annex one parties which have been authorized by those parties to participate in the CDM (annex 1 entities) to provide for approved greenhouse gas reduction projects located within the territory of non-

³¹ Designated national authority (DNA) available at CDM.UNFCCC.INT/DNA/index.htm#sub_2/2013

³² Ibid

³³ DNA Environmental affairs department private bag 394 Lilongwe available at Malawi.acp-CD4.CDM.org/media#sub_4/2013

annexed 1 parties. This finance is achieved through the purchase by the annex 1 entities of carbon emission reduction issued on the bases of the green house reduction achieved by CDM projects. Each carbon emission represents “one tone of carbon dioxide equivalent sequestered or abated”.³⁴

Carbon Emission Reduction (CERS) are valuable internationally tradable instruments that can be acquired and surrendered by annex 1 parties as means of setting their domestic greenhouse gas emission and meeting their Kyoto protocol emission reduction obligation. By enabling project developers and other projects participants to generate additional finance for CDM projects through the sale of CERS, the CDM enables development and implementation of greenhouse gas reduction projects that would not be otherwise viable.³⁵

Greenhouse gas reduction may often be achieved more cost effective in non-annex one parties than annex 1 countries as a result for example of the greater reliance of non- annex one parties on less efficient technologies and available of relatively inexpensive resources and labor in those countries.³⁶ This means that CDM projects present cost effective greenhouse gas reduction opportunities, which if captured and use to market CERS to annex one parties can reduce the need for annex one parties to pursue relatively expensive domestic reduction options.

In accordance with Kyoto protocol objectives, projects approved and implemented in accordance with the international CDM rules demonstrate contribute to sustainable development of the non-annex one countries hosting those (CDM host countries). This means by not only reduction or sequestering their greenhouse gas emissions, but also by contributing to sustainable development.³⁷ For example, ways in which CDM fulfills these requirements by creating employment, facilitating, technology transfer, and enhancing the quality of access to local infrastructure. So in general CDM aims every country that are party of the protocol or the countries that are not voluntary participant in CDM get the way of saving the environment and using the environmental activities properly. Even if Kyoto protocol is not binding on developing countries accept voluntarily the activity of CDM to ensure sustainable development.

³⁴ Baker and machenize guide book for host countries implementing CDM projects 2000 p 17

³⁵ Ibid

³⁶ Michael wara measuring the CDMS Performance and potential 2006 p 10

³⁷ Ibid

CHAPTER TWO

2. GENERAL OVERVIEW OF SUSTAINABLE DEVELOPMENT

So far, as the writer discussed the CDM steps towards the stabilization of Greenhouse gases concentration in the atmosphere to avoid global warming. The CDM also provide principle of common but differentiated responsibilities means, everyone have common principles in protection of environment from dangerous activities and try to solve the problem in different manner. The CDM aims to achieve sustainable development in developing countries and cost effective. The purpose of CDM and general issues of sustainable development are similar concepts, means CDM gives core protection for the environment, ensuring poverty alleviation and give awareness on issue by providing executive board and DNA. Therefore, again in order to say sustainable development there should be sustainability criteria like environmental protection, economic and social. So, in short CDM and Sustainable development are somehow related concept.

2.1 Introduction

In chapter two the writer deals with the concept of sustainable development and the provisional principles of sustainable development in order to clarify the issue of sustainable development. In addition to this there is also element of sustainable development that are provided in Rio declaration and the United nation framework convention on climate change principles of common differentiated responsibility, procedure and substantive rights are come to issue in this chapter. The other issues in this title deal with the role of education for sustainable development, the role of good governance and the role of environmental impact assessment are also discussed.

2.2 The concept of sustainable development

Sustainable development commonly defined as a “development that meets the needs of present without compromising element the ability of future generation to meet their own needs.”³⁸ This means the present generation should have to take measure for the protection of healthy environment and other activities to transfer it to the future generations so that the future generation could live in healthy and conducive environment.

³⁸Tsegai Berhan Environmental law teaching material 2009 p 68

Development can be defined as a collective process of change towards improvement of inequality of life for human being and their community and sustainability can be seen to refer to the need for development to be integrated, socially, economically and environmentally sound oriented to their long term, and hence to last.³⁹ That is way in order to call as sustainable every sector should have to cooperate just like common sector for all activities.

Sustainable development in international law requires accommodation, reconciliation and integration between economic growth, social justice (including human right) and environmental protection objectives towards to participatory issue improvement in collective quality of life for the benefit of both present and future generation.⁴⁰ So the corpus of international law legal principle and instruments which address the intersections between international economy, social and environmental towards present and future generation.

Science council of Asia (SCA) resolution on sustainable development activities three provide that the SCA initiate work adequate theoretical and practical understanding of science of sustainable development as a process, economic, social and ecological change that requires integration of knowledge from all the three prime systems in the world (economic, social and ecological).⁴¹ That sustainability science contributes towards the development tools for integration of economy, social and environmental considerations in development planning and made available of wide usage.

2.3 The Principles of sustainable development

Agenda 21 the concept the program of action adopted by the United Nation Convention on Environment Development(UNCED) conference, refers in its preamble to the need for a global partnership for sustainable development.⁴² As this issue guides us in order to promote continuous development there should be cooperation of peoples of the world.

The Rio declaration on environment and sustainable development clearly links environment and development indicating acceptance by the negotiation of the G-77 desires that the documents

³⁹ Percival miller Schroeder reape [ed 2nd] environmental regulation,law,science and policy 1996 p 1346

⁴⁰ Ibid

⁴¹ Ibid

⁴² FanaHagosBerhane law and development teaching material 2009 p89

title not emphasis the environment at the cost of development.⁴³ The message of this idea is in order to have good sustainable development there should be environmental protection.

While recognizing the integral and inter dependent nature of the earth, our home and working towards international development system which respect the interest of all and protect the integrity of the global environment and development systems.⁴⁴ It sets the goal of establishing a new and equitable global partnership. The right to sustainable development must be fulfilled so as to equitably meet developmental needs of present generation and future generation.

Also while it obligates states to cooperate in a spirit of global partnership to conserve, protect and restore the healthy and integrity of the earth eco-system, it proclaims common but different responsibility of states in a view of their different contribution to global environmental degradation.⁴⁵ Consequently the declaration developed countries in the international pursuit of sustainable development in a view of pressure their societies place on the global environmental and of the technology and financial resource and they command.

Principle 1 of Rio declaration sets the tone of human centered focus for declaration proclaiming that human beings are center of concern for sustainable development.⁴⁶ They are entitled to a healthy and productivity life in harmony with nature. As this principle provides that human being are the sector both for cultivation of the environment and danger of the environment.

Principle 5 of declaration reflects the primary concern of developing countries on the eradication of world poverty.

It calls on all states and all peoples to cooperate in the essential task of eradicating poverty as indispensable requirements to cooperate sustainable development, in order to decrease the disparities in standards of living and better meet development the need of majority of the people of the world.⁴⁷ This principle justify that poverty is one of the greatest obstacle for sustainable development. Therefore cooperation among the state is the best way to promote solution for poverty eradication.

⁴³ UNCE rio declaration on environment and development 1992

⁴⁴ Ibid

⁴⁵ Ibid

⁴⁶ Supra note at 23 p 106

⁴⁷ Ibid

Similarly principle 3 recognizes the right to development as a goal that must be fulfilled so as to equitably meet development and environmental needs of the present and future generation.⁴⁸ These statements are the result of ongoing inter-generational environmental responsibility. It is also a response for developing countries demand that equity be standard for the way in which intergenerational development and environmental is meeting. So in short if there is high protection of environment there is good and quality of sustainable development come to picture.

2.4 Element of Sustainable Development

Sustainable development contain both substantive and procedural element.⁴⁹ The substantive elements that provide the right to protect environment for instance, in environmental protection there is the right to get clean water and the right to get conducive environment so that the procedural element is guaranteed for this right.

Substantive element mainly as provided under Rio declaration principle 16 which consider the special situation and need of developing countries, particularly the least developed and provide that those most environmentally vulnerable shall be given special priority. International actions in the field of environment and development should also address the interest and needs of all countries.⁵⁰ In order to fight poverty and environmentally vulnerable developing countries should have to give priority for this purpose and international action also has to take into consideration the interest of all state in order to get sound environmental protection. Principle 7 provides that States shall cooperate in a spirit of global partnership to conserve protection and restore the healthy and integrity of the earth eco-system. In a view of different contribution to global environmental degradation, state, has common but differentiated responsibility.⁵¹

As principle provide that environmental protection from danger is common obligation of state. Principle 8 to achieve sustainable development and higher quality of life for all people state should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.⁵² The state should have to encourage every sector to prevent

⁴⁸ Ibid

⁴⁹ Supra note at 42 p 72

⁵⁰ Supra note at 43 p 4

⁵¹ Ibid

⁵² Ibid

unsustainable problems like air pollution, water pollution and protection from various things that are harm to environment.

The procedural issues mentioned under the principle 16 states national authorities should endeavor to promote the internationalization of environmental costs and the use of economic instruments, taking into account the approach that polluter should, in principle bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.⁵³ The concept gives prominence on protection of environment by providing rules, regulation and transfer information to people polluter pay principle.

2.5 The Role of Good governance for sustainable development

It is widely recognized that good governance is essential to sustainable development.⁵⁴ Well-functioning legal institution and government bound by rule of laws are in turn vital to good governance.⁵⁵ Weak legal and judicial systems where laws are not enforced and non-compliance and corruption are the norms undermine the respect for the rule of law, endanger environmental degradation, and undermine progress towards sustainable development.⁵⁶ Practitioners in development field have increasingly turned their attention to reforms, to improve legal and judicial institutional and promote the rule of law and good governance. If these issues happened there is good sustainable development that free from corruption and environmental problems.

For example various UN agencies such as UNEP and UNDP as well as WB and other regional development banks, are directing increasing resource to reform legal and judicial institution.⁵⁷ While many factors play and important role in development, good governance is now recognized as playing an essential role in the advancement of sustainable development.

Good governance promotes accountability, transparency, efficiency and rule of law in public institutions at all levels. In addition it allows for sound and efficient management of human, natural, economic and financial resource for equitable and sustainable development.⁵⁸ Moreover under good governance there are clear decisions making procedures of the level of public

⁵³ MalleseDamtew environmental law 2010 p 71

⁵⁴ Supra note at 42, P.90

⁵⁵ Ibid

⁵⁶ Ibid

⁵⁷ Id at P. 91

⁵⁸ Id p. 92

authorities, civil society participation in decision making process, and the ability to enforce rights and obligation through legal mechanism.

These aspects of good governance do not in them themselves ensure that society is run when none do they guarantee sustainable development. However, their absence severally limits that possibility and can at, worst impede it. Without proper functioning institution of government based on the rule of law that promotes social stability and legal certainty, they cannot be investment and assumption of risk that form the bases of the market economy.

Development let, alone sustainable development. Indeed the strength of rule of law is the best predictor of countries economic success.⁵⁹ If the government encourage the rule of law in every sector, social provision guidance and environmental sound sector there is good sustainable development that is free from corruption.

Furthermore deficiency in the rule of law encourage high rate of corruption, with further devastating consequence on the confidence of economic actors.⁶⁰ Thus, lack of investment in turn, slows economic growth and consequently deprives the government resources to invest in education, social safety nets and sound environmental management, all of which are critical for sound sustainable development.

If there is good rule of law there is information disclosure these requires the regulatory target to disseminate information.⁶¹ Their usual objective has been to inform person engaged on of harsh climates hazardous. They can avoid through proper conduct, such as wearing ear protection in noise areas or avoiding issue that are harm to environment and give sound solution on the impacts of environment.

As expressed under Rio declaration principle 10 environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environments that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision making process. States shall facilitate and encourage

⁵⁹Pleelakrishnan [ed 2nd], Environmental Law in India(2005) p 205

⁶⁰ Ibid

⁶¹ Supra note at 2 p 157

public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.⁶² Therefore, if those issue mentioned under this principle apply into practical there is easily the state achieve sustainable development.

2.6 Importance of Education for Sustainable Development

Education for sustainable development (ESD) (herein after mentioned as ESD) seeks to integrate the tenets, value and practice of sustainable development into all aspect of education and learning. Resolution 157/254 UN decade of education for sustainable development says that education is an indispensable element for sustainable development.⁶³ That taken into consideration in order to have high sustainability of economic, social and environment is having essential education.

Education for sustainable development aims to provide every individual with opportunity to acquire the values, competencies, knowledge and skills that enable him/her to contribute humane, socially, justice, economically viable and ecologically sustainable future.⁶⁴ Among other things ESD promotes broad sense of local and global responsibility, encourage future oriented anticipatory thinking, builds recognition of global inter-dependence and emphasizes cultural change that embers the value of sustainable development.

Rather than remaining passive in the face of the above mentioned challenge ESD seeks to empower societies, commitments and individuals everywhere to shape their future activities and responsibilities.⁶⁵

That means education raises global problems, for example about learning how to generate creative solution to current problem, about reflecting on new life and current respect for nature and other people. Considering the view point of people from different countries about what sustainability means in practice. It is relevant not only formal education settings, training and work place learning but also to public awareness raising and non-formal learning of kinds.

⁶² [Http://www.users.on.net|rmc|global.htm](http://www.users.on.net|rmc|global.htm) Jun 6/2013

⁶³ [Http://www.gdrc.org|sustdev|UN-resolution.htm](http://www.gdrc.org|sustdev|UN-resolution.htm) Jan 4/2013

⁶⁴ Education for sustainable development available at <http://www.esd.world> conference Nov 30/2012

⁶⁵ Ibid

Thus should not be narrowly as another subjects or concern to be added onto the formal education system or a work place training program. Rather ESD learning issue process through which understanding of orientations towards sustainable development become embedded in the core education and learning process to be found in society everywhere.⁶⁶

To holistically address the development of ESD initiative through access to quality education, there is orientation of existing education systems to address sustainability concern, public awareness and understanding initiative and training program to address specific social, environmental and economic sustainable issues.

2.7 The Role of Environmental Impact Assessment (EIA)

The purpose of EIA is in general:

- a. To support the goals of environmental protection and sustainable development
- b. To integrate environmental protection and economic decision at the earliest stages of planning and activities
- c. To predict environmental, social, economic and cultural consequences of a proposed activities and to assess plans to mitigate any advance impacts resulting from the proposed activities and to provide for the environment of public, department of government and government agencies in the review of proposed activities.⁶⁷

In order to bring continuous development there should be presence of environmental impact assessment.

The effects of a project on the environmental values must be assessed in order to take account of the concerns to protect human health, to contribute by means of better environment to the quality of life, to ensure maintenance of diversity of species and to maintain the productive capacity of the eco-system as a basic resource of life.⁶⁸ Therefore aims of environmental impact assessment to promote good sustainable development by fostering greatest social responsibility and increased the capacity of long term environmental consideration in decision making. Formal environmental impact assessment is producer a procedure for drawing together in a systematic

⁶⁶ Ibid

⁶⁷ <http://www.garc.org/eia/difine.htm> Jun 6 2013

⁶⁸ Ibid

way expert quantitative analysis and qualitative assessment of the project's environmental effect, and the scope for mitigating or modifying them properly evaluated by the relevant decision making body before a decision is given. The environmental statement document is the document or the serious of the documents, which sets out and summarize the result of the assessment.⁶⁹ So it is essential for sustainable development that consequence of projects, plans or policies at different levels be assessed before they are executed. Environmental impact assessment examines these consequences and predicts future changes in the environment. It guides administrative agencies in balancing conflicting social value and environmental quality.

Any person who desires to undertake any new project in any part of countries or the expansion or modification of any existing technology submit the application to the secretary, ministry of environment.

The impact assessment agency prepare a set of recommendations based on the technical assessment of documents and data furnished by project authorities and supplemented by data collected during visits of factories if undertaken and details of public hearing.⁷⁰ This is the role of environmental impact assessment to provide conducive environmental conditions every person has to require what is guided by environmental impact assessment.

The assessment shall be compelled within a period of 90 days from receipt of the requisite document and data from the project authorities and completion of public hearing and decision conveyed within 30 days thereafter.

The clearance guaranteed shall be valid for the period of 5 years from commencement of the construction or the operation of the project.⁷¹ Therefore, environmental impact assessment takes a great struggle to save environment from danger and to ensure sustainable development at all.

⁶⁹ David woolly Qc John puglt-smith Richard langama William up ton{general.ed} environbmental law 2000 p 675

⁷⁰ Divan Rosen cranz [ed 2nd]environmental law policy 2002 p 800

⁷¹ Ibid

CHAPTER THREE

3. A CRITICAL EXAMINATION OF A POTENTIAL CLEAN DEVELOPMENT MECHANISM TO BRING SUSTAINABLE DEVELOPMENT FOR DEVELOPING COUNTRIES

3.1. Introduction

Chapter three discuss about the critical examination of a potential clean development mechanism to bring sustainable development for developing countries. The CDM tends to be positive for ensuring sustainable development of developing countries through environmental protection and it will help in a way avoiding poverty alleviation. The critical point, concerning the benefit of CDM for developing countries can be shown from a sample taken in Africa such as the Ethio-Kenya hydroelectric power interconnection and CDM opportunities for Asia. Developing countries confirm that CDM, are helpful for sustainable development through investment activities and others. The sustainable development should fulfill the following three criteria: environmental protection, economic development and social enhancement. CDM, also try to support developing countries to have conducive environment , social health and economic improvement of the society to ensure sustainable development but ,whether the CDM critically bring sustainable development or not is somehow doubtful issue due to certain factors . Finally CDM provide transfer of technologies to solve problem of developing countries but, there are some key barriers to technology transfer rising from developed and developing countries.

3.2. Sustainable Development under CDM

There is no mention anywhere in Article 12 of 1997 Kyoto protocol as to how CDM should foster sustainable development but most developing countries envision fostering sustainable development as more flow of resources and technology into developing countries from Annex one countries.⁷² sustainable development is not requirement for CDM ,it should be seen the driving force for developing in participating in the CDM but , as the united nation environmental

⁷²CDM perspective from china available at-www.ty.juconcoog/357 Accessed on -19/2013

pollution studies show the CDM is directly wisely , has the power to support a major development.⁷³

although sustainable development is abroad concept , the way how CDM should assist in achieving sustainable development united nation flour carbon climate change 1997 art 12 sub(2) was interpret and analyzed . Consequently a CDM project not create major adverse impacts on the social, economical, economic pillars and as development to be understood as a change for the batter.⁷⁴ The basic rule for the CDM were reestablish in art 12 of key of protect it constitution clearly both parties agreed up on the CDM because of its design to create win situations. There for sustainable development has to be interoperated in the context of CDM: certain green house emission reduction perse clearly significant to sustainable development.⁷⁵

Even if sustainable development is not clearly defined under CDM must be understood as project role to a sound way of development within the host countries. It was remuneration for the host country participating in the CDM and not just an optional add on. Therefore, sustainable development seen as the essential element of project need to ensure sustainable development the result for high degree of stakeholder involvement lies in the fact that this lead to CDM project factoring high level of sustainable development.⁷⁶

3.3. How CDM Contribute To Sustainable Development

Sustainable development comprises at least three criteria: the social the environmental and the economic criteria.⁷⁷ Examples of general sustainable development criteria for each of dimensions are:

- Social criteria include poverty alleviation, equity and improved quality of life.
- Environmental criteria provide reduction of GHGS and use of fuel, conservation of local resource, improved health of life, reduce Water pollution, conservation of biodiversity, reduce soil erosion from deforestation, and improve sustainability of natural resource.⁷⁸

⁷³ Ibid

⁷⁴ Sustainable Development , Available at <http://www.googl.com.et> Dec.29,2012

⁷⁵ Ibid

⁷⁶ Ibid

⁷⁷ H. somsen, The book of European environmental law , (2007) Vol.7, p 543

⁷⁸ Ibid

- Economic criteria improved balance payment, increase investment in priority sector, transfer of clean and cost effective technology, generation of local employment and opportunities and positive trade balance.⁷⁹

As provided perspective from the UNFCCC and as well as global investment founders the CDM contribute to maximize both the climate change reduction and sustainable development. Therefore, the CDM contribute to sustainable development environmentally by transferring sound technologies, socially by alleviation of poverty and economically by providing job opportunities.⁸⁰

However, when it comes to practical and concrete issue assessment of sustainability impacts CDM projects there is no single authoritative and universally accepted approach on methodology applicable to any CDM projects regardless of project type and location.⁸¹ Mandated in protocol it has been decide that protects its prerogative of national authorities (DNA) designated by non annex I countries to confirm whether a CDM project assist in achieving sustainable development or not.⁸² This means that project assist in achieving sustainable development vary according to what the actual definition of sustainable development different host country consider as heir development priorities . Several problems with this pragramatic approach to defining sustainable development are identified.⁸³The first problem is different stockholders priorities different aspect of CDM. As a power relation among stock holders, are unequal, it is often the source strong who are able to defined the term for carbon trade⁸⁴. Second problems is attendance of competitions among non- annex I countries to attract CDM investment and create an incentive to set low sustainability standards because criteria are not clearly define by the developing countries (DNAs).⁸⁵ but , as mentioned under art 4 sub (2) of convention for the application of prior informed consent procedure for certain hazardous chemicals and pesticides in international trade 1998 provides each parities have to accurate DNAs that provide for sustainability criteria⁸⁶But ,

⁷⁹ Ibid

⁸⁰ Dr. SaleemulHuq, Applying Sustainable development criteria to CDM projects PCF experience(2002), p.10

⁸¹ Karen Holmolsen, Climate and Sustainable Development (2005),UNEP center energy, P.7

⁸² Ibid

⁸³ Ibid

⁸⁴ Ibid

⁸⁵ Id at P.8

⁸⁶ United Nation Convention Procedure for Certain Hazardous chemicals ,pesticides, International Trade 1998

developing countries fail to promote sustainability criteria provided by the DNAs of developing countries.⁸⁷

3.3.1. Sustainability Criteria and Their Assessment

Sustainability criteria are environmental, economical and social development in order to say sustainable development.

Even if most of developing countries do not ensure sustainability criteria, some of developing countries ensure sustainability impact studies like from Africa: South Africa, Ghana, and Nigeria and from Asia china and India.⁸⁸ These countries are considered as a model and their sustainability criteria are based on national environment management, economic and social aspects.⁸⁹ Sustainability criteria are not assessed separately without designated national authorities (DNA). The DNA'S determine the development of countries or whether the project support sustainable development in countries or not, a project needs to have impact in at least one of sustainability aspect. It can be rejected from the countries.⁹⁰

So if all of developing countries improve their DNA's depending on projects should be compatible with the national environment and development priorities and strategies including reduction of fossil fuel consumption, increase utilization of renewable resources and enhance energy efficient is the best way to ensure of development of one countries from the beginning this is the principle of CDM.⁹¹ But, in order to ensure whether the activity is positive way or negative way that is the role of DNAS of host countries. However the DNAS of developing countries not provided sustainability criteria.

3.4. How CDM Benefit Developing Countries

The basic principle of CDM is simple: developed countries can invest in low cost abatement opportunities in developing countries and receive credit for the resulting emission reduction thus

⁸⁷ Supra note at 81, P.9

⁸⁸ Capacity development for the clean development mechanism. Available at <http://www.google.com> Nov.25,2012

⁸⁹ Ibid

⁹⁰ Ibid

⁹¹ Ibid

reducing thus cut backs needed within their boarder.⁹² means both developing countries and developed countries get benefit from the emission reduction activity. while CDM lowers cost of compliance for developed countries , developing countries benefit as well not just from the increase of investment flow , but also from the requirement that these investment advance sustainable development goals.⁹³ So, the activity of investment provided by the CDM bring economic contribution for the developing countries.

The CDM encourage developing countries to participate by promising that development priorities and initiatives will be addressed as part of the issue concerned and climate change control among the countries.⁹⁴

The CDM generally offers opportunities for sustainable development. It can also bring important co- benefit such as poverty reduction, access to energy efficient lighting and cooking, improvement of air quality and having conditions for reduction of costs and generation of job opportunities.⁹⁵ The point is in short, CDM facilitates the way for the development of certain countries.

The other benefit of the CDM is contribution to the transfer of technologies and knowledge between countries. In doing so, it focuses on the project in all host countries and at all stages of development implementation contribution to sustainable development.⁹⁶ So, if the CDM implement in proper manner it can also good for ensuring modern saving due to the use of carbon emission reduction (CERS) ,and examine the different between CDM project and non CDM projects and provide opportunities for the improvement in the regional distribution of CDM project.⁹⁷

From developing countries perspective,CDM can attract capital for projects that assist in the shift to a more prosperous but, less carbon intensive economy, encourage and permit the active participation of both private and public sectors, provide a tool of technologies transfer and if

⁹²How CDM benefit Developing countries, Available at www.CDMgreentechnologies. Nov 17/2012

⁹³ Ibid

⁹⁴ Ibid

⁹⁵ Ibid

⁹⁶ Clean development mechanism, Available at <http://CDM.UNfccc.UNf.INT/ABOUT/DEV.BEN/INDEXHTML>
Nov.19,2012

⁹⁷ Ibid

investment channeled into project that replace the old and inefficient fossil fuel technology or create new industries in environmentally sustainable technologies and help investment.⁹⁸ CDM has the potential power to shape development as developing countries give supportive evidence for the activities of CDM. If that is case yes there is high contribution for sustainable development even if CDM does not provide directly contribution to sustainable development.

3.4.1. An Ethiopian Kenya Hydro Electric Power Inter Connection Project as Example

An Ethio-Kenya hydroelectric power interconnection project may be the first benefit from work conducted by the African Development Bank (AFDB) through the African carbon support program, to develop new CDM methodology that would make interstate electricity connection eligible for CDM revenue.⁹⁹ Therefore, the hydroelectric power technology serves both countries without any impacts on the climate of those countries by enhancing good environmental protection acceptance.¹⁰⁰

The project serves, as a case study for the methodology of CDM and involves 2000 mega watt (mw) of clean hydro energy to be generated in Ethiopia and exported to Kenya to replace the equivalent amount that otherwise be generated from fossil fuel fired plants.¹⁰¹ It means the project comes to effect without harm to environmental condition and in short it replaces the power one may get from the fossil fuel fired.

Upon the approval of the project by the United Nations framework convention on climate change (UNFccc) and registration of project by the CDM executive board this project will be the largest CDM project in Africa in terms of green house gases (GHG) emission reduction and revenue.¹⁰² The benefit of CDM get acceptance to ensure reduction of GHG emission in host countries and contribution to the development of countries.

3.4.2. Opportunities for Asia

The reason for the selection of Asia from developing countries is because Asia is vulnerable to climate change. So, CDM is solution to combat climate change.

⁹⁸ Important of CDM, available at <http://www.google/e.com.et/search?h/dec 29/2012>

⁹⁹ Ethiopian Kenya hydropower available at www.adb.org/en news and events/ article building CDM case for Ethiopia Kenya hydro power interconnection project 1/2013

¹⁰⁰ ibid

¹⁰¹ ibid

¹⁰² ibid

The challenges posed by the threat of climate change have also opened up multiple opportunities in terms of policy interventions, new initiatives, technology absorption economic instruments and cooperation at the national, regional and global levels.¹⁰³The CDM being a cooperative financial mechanism has the potential to play a great role in ushering the desired goal of climate change mitigation and sustainable development along with attendant benefits.¹⁰⁴ The CDM can serve the interest of both the developed countries and developing countries. The developed countries have opportunities for investment in developing countries for emission reduction projects at lower cost and get the credit of thereof . On the other hand, the developing countries can avail the opportunities of supplementing their resources to meet the development needs and in the process contribute towards the common goal of GHG reduction.¹⁰⁵

For developing countries in Asia, the overacting is to achieve economic growth for meeting the basic human needs.¹⁰⁶It will necessarily require increased production and access to energy as also economic service for income generation and employment avenues.¹⁰⁷ While the conventional methods of developments have triggered issue of environmental problems including the threat of climate change the CDM offers opportunities to adopt environmentally compatible mode of the development.¹⁰⁸ While contributing towards the global goals of emission reduction, the CDM holds the promise for environmental and social gains in the developing countries through abatement of local environmental and social problems and associated social benefit. Participation of the public well as private sectors for investment and technology transfer in emission abatement projects offers the much needed opportunities to the developing countries to replace the inefficient technologies and launch new initiatives for sustainable production and use of energy a key CDM component for economic growth.¹⁰⁹It means the CDM encourage public participation in every activity to reach on good economic status interms of technology as well as social development goals.

¹⁰³Dilip k. Biswas, Implementation of clean development mechanism is Asia and the pacific united nations (2005) p. 21

¹⁰⁴ Ibid

¹⁰⁵ Ibid

¹⁰⁶ Ibid

¹⁰⁷ Ibid

¹⁰⁸ Ibid

¹⁰⁹Technology transfer under CDM In developing countries available climate org / technology transfer feb 1/ 2013

3.5. The Technology Transfer under CDM In Developing Countries

Technology transfer refer to the process of sharing skills knowledge , technologies and methods of manufacturing to ensure that technological developments are made accessible to wider range of user .The transfer of climate change technologies – technologies which reduce green house gases emission from developed to developing nation are a key strategy in efforts to tackle the climate crisis.¹¹⁰ So, the technologies go on line of environmental protection there is easily the sustainable development come to approach.

According to the United Nations frame work convention (UNFCCC), priority technologies for developing world which reduce GHG emissions include energy efficient lighting, land fill methane gas recorder, bio gas technologies, solar natural gas distribution system, management technologies and biomass for power generation, wind energy and solar water heating.¹¹¹

UNFCCC Art 4 sub 5 of convention provide that the developed country parties shall take all practicable steps to promote facilitate and finance , as appropriate , the access to environmentally sound technologies and know – how to other parties to enable them particularly developing countries .¹¹² As united nation framework convention on climate change provided that technologies should be eligible and solve social problems specially developing countries.¹¹³

Since technology transfer has been incorporated into various united nation climate programs the CDM allows developed countries to invest in abatement opportunities in developing countries and receive credits for the resulting emission reduction, thus becoming a tool for technology transfer.¹¹⁴ In the past developing have been eager to participate in technology transfer but this has often come at cost and not in the most beneficial way.¹¹⁵ The spirit of CDM is to support sustainable development and encourage mutually beneficial transfer of appropriate technologies.¹¹⁶

¹¹⁰ Technology transfer for sustainable development through clean development mechanism available at <http://researche.pository.edu.au/5> feb 10/2013

¹¹¹ Ibid

¹¹² Ibid

¹¹³ Ibid

¹¹⁴ Ibid

¹¹⁵ Ibid

¹¹⁶ Ibid

This is because the CDM is a form of market tool in which valuable goods are to be bought and sold. A number of technical regularly project finance and administrative function must be performed for this tool to operate. Many of these functions may be most effectively understand by the private markets or existing international institutions.¹¹⁷

3.5.1. Some Key Barriers to Technology Transfer under CleanDevelopment Mechanism (CDM)

However, developing countries face problems during international technology transfer that are still apparent under clean development mechanism.¹¹⁸ Those problems hinders for the successful transfer of climate technologies are:

- Intellectual property rights
- Poor infrastructure property rights
- Poorly implemented laws and regulation
- Trade barriers
- Lack of proper knowledge, insufficient skilled person.¹¹⁹One of the more contentious issues is intellectual property rights (IPRS). In the view of many developing nations, patents for environmentally sound technologies remain in the hands of develop country corporations, making it difficult for developing countries enterprises to gain access to knowledge related to the development and deployment of climate friendly technologies.¹²⁰ For example, developed country holders of knowledge patents on green technologies can refuse to grant permission to the enterprises of developing world. As result, developing country enterprises cannot access to clean technologies nor can they afford to by innovative, climate friendly technologies.¹²¹

¹¹⁷ Ibid

¹¹⁸ Ibid

¹¹⁹ Ibid

¹²⁰ Ibid

¹²¹ Ibid

CHAPTER FOUR

Conclusion and recommendation

4.1. Conclusion

The CDM have the two main purpose that is defined in Article 12 of the Kyoto protocol to the united nation frame work convention on the climate change the CDM have these two folds as to assist developing country parties in achieving sustainable development and to assist developed

country parties in achieving compliance with parties of their quantified emission limitation and reduction commitment. In this, Art 12 of Kyoto protocol only provided that CDM assisting developing countries in achieving sustainable development not mention in the provision how CDM fosters sustainable development. However, the CDM is oriented towards improving the quality of life towards of the very poor from the environmental stand point. The social well being the CDM project achieving should lead to alleviation of poverty by generating additional employment, removal of social disparities and contributing to the provision of basic needs to people heading to improvement in their quality of life. In addition the CDM bring investment opportunities consistent with the needs of countries including a discussion of the impacts of the projects activities on the resource sustainability and reduction of level of pollution in general. The CDM perspective from developing countries can encourage projects to be reach on prosperous, encourage and permit the active participation of both private sector and public sector and create new industries in environmentally sustainability technologies and help investments. So that the case or the realities rise from developing countries there is CDM contribution in sustainable development. Practically there is example like Ethio-Kenya hydro electric power interconnection and opportunities for Asia. However, whether the CDM bring sustainable development for developing countries or not is the prerogative of the developing countries to confirm whether the CDM assists in achieving sustainable development or not. It is the power of designated national authorities (DNA) of developing countries. However, the DNA of developing countries has not sustainability criteria (social, economic and environmental) in order to check whether the CDM bring sustainable development or not. Because the CDM executive board gives the prerogative value for developing countries designated national authority but, the DNA of developing countries fail so this is the problem. There is also other issue that is most of developing countries only run for competition for introduction of CDM projects without checking whether the project has negative side on the environment or positive side on the environment because the developing countries designated national authority does not provided sustainably criteria.

Concerning the technology transfer the CDM under the Kyoto protocol allows industrialized countries to transfer technologies that are environmentally safe and sound technologies with a priority to the renewable sectors or energy efficiency projects that are comparable to best practices in order to assist in up gradation of the technological bases of developing countries

specially to cut green house gases. But developing countries face some key problems like intellectual property rights (IPR), poor infrastructure in the countries, poorly implemented laws and regulation, trade barriers and lack of proper knowledge and insufficient skilled person. These problems are the very challengeable issue for developing countries. In general as provided in this paper yes CDM can contribute to sustainable development through environmental protection, social activities and economic cooperation. But, whether the CDM bring sustainable development critically or not is a debatable issue. For example, if the technologies is sound technologies yes it is good for social health and environmental protection but it may less economic contribution because it employ less number of employees.

4.2. Recommendation

Based on the above discussions the researcher would like to recommend on the following points.

- The designated national authority of developing countries should have to defined the sustainable development and should have to provided sustainability criteria to check whether CDM is bring sustainable development or not. Because there is no single authoritative and universally accepted approach on methodology applicable for CDM.
- Art 12 of the Kyoto protocol is nothing say on the way how CDM bringsustainable development for developing and does not define sustainable development and element

of sustainable development in clear manner so the Kyoto protocol has to clarify the issue of sustainable development.

- Every stockholder that means whether it is strong stockholder or weak stockholder should have to be guided by the same criteria (economic, social and environmental) of sustainable development that is applicable for every stock holder.
- Developing countries should have to reduce competition simply to attract the CDM investment and they should accept the CDM project, depending on whether the project is environmentally, economically and socially best or not.
- Relaxation of intellectual property rights rules rather than making rigid in order to facilitate good sustainable development for developing and developed countries.
- Network for knowledge sharing between developed countries and developing countries could join networks that promote exchange of knowledge and mutual assistance in order to avoid environmental problems of developing countries.
- Governments of Developing countries should try to establish appropriate regulation and policies that could induce technology change through regulation of energy markets and environmental regulation to support every sector.
- Trade tariffs placed on clean energy technologies should be reduced or eliminated . That means price of environmentally sound technologies should have to depend on the capacity of developing countries.

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