

**POLICY AND LEGAL INTERVENTIONS IN THE IMPLEMENTATION OF  
CLEAN DEVELOPMENT MECHANISM PROJECTS IN THE FORESTRY  
SECTOR: IMPLICATIONS FOR CLIMATE CHANGE MITIGATION AND  
ADAPTATION IN UGANDA**

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## Synopsis

This paper analyses the policy and legal interventions for the implementation of Clean Development Mechanism (CDM) projects in the forestry sector and assesses how they contribute to climate change mitigation and adaptation in Uganda. The paper is divided into ten main sections. The first section gives an introduction to the paper. The second section gives an overview of climate change in Uganda while the third discusses the mitigation measures that have been developed at the international level. The fourth section explains the nature of CDM and the fifth section explains CDM in the context of Uganda's forestry sector, giving examples of CDM projects under this sector. The sixth section analyses the role of CDM projects under the forestry sector in the promoting adaptation to climate change in Uganda. The seventh section reviews the policy and legal framework for the implementation of CDM in the forestry sector in Uganda while the eighth section identifies the challenges in the implementation of CDM projects under the forestry sector. The ninth section makes a conclusion to the article and the last one makes some recommendations to address the challenges identified.

### 1.0 Introduction

Climate change means a change of climate, which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.<sup>1</sup> Records of surface temperatures over the last century show that there has been a gradual increase in average temperatures around the world. Although this is partly attributed to natural causes, it has also been argued that human activities that produce greenhouse gases that alter the earth's surface are accelerating the warming process.<sup>2</sup>

Climate change has been caused by the increase in the Green Houses Gases (GHGs)<sup>3</sup> in the atmosphere which have radiation blocking properties that trap the sun's energy in the

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<sup>1</sup> See, Article 1 of the United Nations Framework Convention on Climate Change, Rio de Janeiro, 9 May 1992, 31 *Int'l Leg. Mat.* 822 (1992).

<sup>2</sup> *Ibid.*

<sup>3</sup> Annex A of the Kyoto Protocol lists six main greenhouse gases that urgently need to be reduced or limited: Carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous oxide (N<sub>2</sub>O), Hydrofluorcarbons (HFCs), Perfluorcarbons (PFCs), Sulphur hexafluoride (SF<sub>6</sub>). The last three GHGs are referred to collectively as

earth's atmosphere. As a result the lower atmosphere has warmed and continues to warm, changing weather and climate.

According to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC),<sup>4</sup> in the twentieth century, the average global surface temperature had increased by 0.4–0.8°C. Current climate models predict a rise in global temperatures of 1.4–5.8°C between 1990 and 2100, which would be higher than any century time scale trend for the past 10,000 years.<sup>5</sup> The mean sea level has already risen between 10 cm and 20 cm; by 2100, the average sea level is predicted to rise 9 cm to 88 cm.<sup>6</sup>

In light of these changes in climate and its adverse effects on the social and economic life of the people, the international community has taken steps to mitigate the problem. The Kyoto Protocol<sup>7</sup> to the United Nations Framework Convention on Climate Change introduced the Clean Development Mechanism (CDM) under which industrialized countries are allowed to fulfill part of their obligations through the use of emission credits generated by emission reduction projects undertaken in developing countries.<sup>8</sup> Uganda as a developing country and a party to the Kyoto Protocol has undertaken CDM projects under the forestry sector. These projects also bring economic and social benefits to the local communities where they are implemented and the country at large thereby promoting climate change adaptation.

The parties to United Nations Framework Convention on Climate Change (UNFCCC)<sup>9</sup> recognize that state parties should enact effective environmental legislations to combat

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fluorinated carbons. The factors that compare the relative contribution of each GHG to the global warming effect with carbon dioxide as the reference gas are referred to as the global warming potentials (GWPs)

<sup>4</sup> IPCC, *Climate Change: The Scientific Base*, (2001) 2. The IPCC which was in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP).

<sup>5</sup> UNEP and UNFCCC, *Climate Change Information Kit*. (2002)

<sup>6</sup> *Ibid.*

<sup>7</sup> The Kyoto Protocol to the United Nations Framework Convention on Climate Change, UN Doc FCCC/CP/1997/L.7/add.1, 37 I.L.M (signed 11 December 1997).

<sup>8</sup> See, Article 12(2) of the Kyoto Protocol.

<sup>9</sup> The United Nations Framework Convention on Climate Change, Rio de Janeiro, 9 May 1992, 31 I.L.M. 822 (1992).

climate change.<sup>10</sup> The state parties also commit themselves to take climate change considerations into account to the extent feasible in their relevant social, economic and environmental policies and actions, and employ appropriate methods to mitigate or adapt to climate change.<sup>11</sup> As a state party to the UNFCCC and the Kyoto Protocol, Uganda, in compliance with this requirement, has developed a legal and policy framework for sustainable forestry resources management including those under CDM. This paper examines the policy and legal interventions for the implementation of CDM projects in the forestry sector and assesses how they contribute to climate change mitigation and adaptation in Uganda.

## **2.0 Overview of Climate Change in Uganda**

Uganda is situated in mid-eastern Africa. It has an area of approximately 241,038 square kilometres, of which open water and swamps constitute 43,941 square kilometres or 17 per cent.<sup>12</sup> Most parts of the country lie at an average altitude of 1200m above sea level. Owing to its location across the equator, two rainy seasons are experienced annually, although the two seasons merge as you move away from the equator.<sup>13</sup> Mean annual rainfall varies from 750 to 2000 mm between different parts of the country, shaping the geographic distribution of social and economic activities.<sup>14</sup>

The country is pleasantly cool with a long-term mean temperature of 21<sup>o</sup> C. Over a year, mean temperatures range from a minimum of 15<sup>o</sup> C in July to a maximum of 30<sup>o</sup> C in February.<sup>15</sup> In the highlands and around mountains, the elevated landmass exerts a local

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<sup>10</sup> *Ibid*, the Preamble.

<sup>11</sup> *Ibid*, Article 4(1)(f).

<sup>12</sup> Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), *The Second National Report to the Conference of Parties on the Implementation of the United Nations Convention to Combat Desertification (UNCCD) in Uganda* (Entebbe, Uganda) (2002.) 15.

<sup>13</sup> Waiswa, M.M. Strategic Choices for Enhancing Capacity of Rural Communities to Adapt to Climate Variability: A case of Uganda. Contribution to the NOAA Office of Global Programs Workshop-Insights and Tools for Adaptation: Learning from Climate Variability. Washington DC,(2003).

<sup>14</sup> Victor A. Orindi and Siri Eriksen. Mainstreaming Adaptation to Climate Change in the Development Process in Uganda. Ecopolicy Series no. 15 ACTS Press, Nairobi,(2005) 22.

<sup>15</sup> The Republic of Uganda; The Uganda National Water Development Report (2005), Prepared for the Second UN World Water Development Report "*Water, a Shared Responsibility*" (2006) 3.

influence on climate producing rainfall and temperature patterns that are distinct from those of the lowlands.<sup>16</sup>

Climate in Uganda, particularly rainfall, has been erratic since early 1990s. The incidence, duration and amount of rainfall have all exhibited abnormal departures from long-term means. While rainfall in some years was far short of long-term means, thereby causing droughts, in other years it was excessive and produced catastrophic floods. The heaviest rains in recent years were recorded in 1994 and were associated with the El Niño phenomenon. The rains led to sharp rises in lake levels, widespread flooding, washing away of roads and bridges, extensive soil erosion and landslides.<sup>17</sup> It was estimated that 1,000 people died, 11,000 people were hospitalized and treated for cholera, and about 150,000 people were displaced from their homes. Damage to the infrastructure was estimated to be about US\$400 million.<sup>18</sup>

Between July and September 2007 floods swept across the eastern region of Teso owing to excessive rainfall. The floods were caused by the La Nina weather pattern in the Pacific Ocean a phenomenon during which oceans cool down faster, due to extremes in temperatures caused by global warming, and causing the rainy season to come earlier.<sup>19</sup> The resultant effects have seen people having to deal with floods that are more extreme than usual.

In addition to the variability in rainfall amounts, there has been confusing shifts in the seasons since the early 1990s, with heavy rains falling in the months expected to be dry and persistent desiccating sunshine experienced in the months that are normally wet and cold.<sup>20</sup> Since Uganda's agriculture is heavily dependent on rainfall, the erratic swings in the seasons have caused an increase in the frequency of food and water shortages in the country, with the worst hit area being the dry cattle corridor that stretches from the

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<sup>16</sup> *Ibid.*

<sup>17</sup> *Ibid.*

<sup>18</sup> *Ibid.*

<sup>19</sup> Consultancy Africa Intelligence, Climate Change and Increasing Floods in Africa: Implications for Africa's Development Available at <http://www.consultancyafrica.com/africa-watch/newsletter/november-2007> (accessed on 02/08/2008).

<sup>20</sup> The Republic of Uganda, The Uganda National Water Development Report, 2005, Entebbe

Uganda-Tanzania border to Karamoja region. In Karamoja and Teso regions, several deaths from starvation have been recorded in recent years.<sup>21</sup>

In 2002, it was observed that about 83% of the icecap on Mt. Kilimanjaro relative to its size in 1912 had melted, and that the snow on the Rwenzori Mountains in western Uganda is retreating fast.<sup>22</sup> Between 1991 and 2000, Uganda experienced seven droughts in a period of 10 years compared with eight droughts recorded over the 80-year period between 1911 and 1990.<sup>23</sup>

The prognosis of the changing climate pattern has other far reaching effects in Uganda on natural resources and human life at large. Natural resources and the ecosystem affected have services they provide such as fuel, water supply, good air quality and biodiversity which are critical to the quality of human life. The extinction of these resources will affect human life in a number of ways.

In the energy sector, hydroelectric power generation in Uganda has been significantly affected by changes in precipitation. The low power generation in Uganda is partly attributed to the low water amounts resulting from low levels of rainfall received. This decreased power generation has translated to huge economic losses to the national economy as well as a decline in the quality of life.

Some parts of Uganda are arid and semi arid commonly experiencing rainfall of below 500 mm.<sup>24</sup> Such areas already face problems of water scarcity for domestic, agricultural and hydropower generation. Climate change affects and will continue to affect both the quantity and quality of water available in these places.<sup>25</sup> Over extraction of ground water resources, increased competition and conflicts over water may become common in parts

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<sup>21</sup> The Republic of Uganda, The Uganda National Water Development Report 2005, Prepared for the 2nd UN World Water Development Report, "*Water, a shared responsibility*" (2006), p.10.

<sup>22</sup> Gwage, P. Briefing Document on the UNFCCC and its Kyoto Protocol. Department of Meteorology, Ministry of Water, Lands and Environment, Uganda ( 2004 ).

<sup>23</sup> *Ibid.*

<sup>24</sup> *Ibid*, p.13.

<sup>25</sup> *Ibid.*

of Uganda where per capita water storage is already low.<sup>26</sup> In pastoral areas, severe water shortages resulting from drying up of rivers and reservoirs have contributed to death of livestock from hunger, thirst and disease; and has led to increased conflicts over grazing belts.<sup>27</sup>

An examination of the impacts of climate change on a number of key sectors of Uganda's economy-such as agriculture, water resources and roads, reveals that if funds are diverted to manage disasters, climate change threatens to freeze development efforts. Natural disasters cannot easily be prevented, but adequate adaptation measures can reduce the magnitude of the impact on the national economy.<sup>28</sup> Whereas developing countries like Uganda can engage in climate change mitigation, their priority is adaptation to the impacts of climate change.

### **3.0 Climate Change Mitigation**

The changing climate and the resultant impacts on the environment and human life has instigated international initiatives to have the problem halted within the shortest time possible. The international community has taken legal initiatives towards climate change mitigation as well as strategies that assist people to adapt to climate change, since total mitigation has not yet been realized and may, in fact, take long to be realized. Climate change mitigation strategies, therefore, target to achieve reduction of greenhouse gases in the atmosphere, while adaptation strategies seek to ensure that people live comfortably, despite the changing climate. This section analyses international initiatives that have been developed to mitigate climate change.

#### **3.1 The United Nations Framework Convention on Climate Change (UNFCCC)**

One of the international instruments relevant to climate change mitigation is the United Nations Framework Convention on Climate Change (UNFCCC). The objective of the UNFCCC is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate

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<sup>26</sup> *Ibid.*

<sup>27</sup> *Ibid.*

<sup>28</sup> *Ibid.*

system.<sup>29</sup> The objective is qualified in that it must be achieved within a timeframe that enables economic development to proceed in a sustainable manner.<sup>30</sup>

The UNFCCC sets out a number of principles and commitments which form the theoretical basis for CDM projects. The differentiated obligations imposed on the parties forms the basis for provision of financial support by the developed countries to developing countries for the implementation of CDM. Article 3 sets out principles to guide parties in their actions taken under the UNFCCC. The principle of “common but differentiated responsibility” is recognition that, although all nations must share the burden of combating climate change, developed country parties should take the lead.<sup>31</sup> The reasons for this are that developed countries have contributed a large share of historical and current GHG emissions, and have a greater capacity to pay for mitigation.<sup>32</sup>

Article 4(1) sets out commitments for all parties. The commitments include recording an inventory of, and reporting on national GHG emissions, implementing national climate change mitigation measures, promoting the development and diffusion of technologies and information relevant to climate change, promoting the management and conservation of carbon “sinks”, preparing for adaptation to climate change, and promoting relevant research. These universal commitments must be read in light of the principle of common but differentiated responsibility and parties’ development priorities.<sup>33</sup>

Article 4(2) requires developed country parties to adopt policies and measures for climate change mitigation so as to “demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions...” Article 4(7) explicitly recognizes that developing countries’ fulfillment of their commitments depends on developed countries’ fulfillment of their financial and technology transfer commitments,

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<sup>29</sup> UNFCCC, Article 2.

<sup>30</sup> *Ibid.*

<sup>31</sup> The Principle of Common But Differentiated Responsibilities: Origins and Scope, Available at: [http://www.cisd.org/pdf/brief\\_common.pdf](http://www.cisd.org/pdf/brief_common.pdf) (accessed on 11-08-2008)

<sup>32</sup> UNFCCC, Article 3(1) and Preamble.

<sup>33</sup> *Ibid* Article 4(1).

and that the overriding priorities of developing countries are poverty eradication and social development.

The parties are directed to “give full consideration to” what actions are necessary to meet the adaptation needs of developing countries,<sup>34</sup> to “take full account of the specific needs and special situations of the least developed countries in their actions with regard to funding and transfer of technology”,<sup>35</sup> and to “take into consideration” the impact of their mitigation measures on countries with economies that are particularly vulnerable to the effects of those measures.<sup>36</sup>

Article 11 provides for “a mechanism for the provision of financial resources on a grant or concessional basis, including the transfer of technology”. Under Article 21, the Global Environmental Facility (GEF) was placed in charge of the financial mechanism on an interim basis. The Conference of Parties (CoP) decided to retain the GEF as the entity entrusted with the operation of the financial mechanism.<sup>37</sup> Subsequently, a Special Climate Change Fund to finance projects relating to adaptation, technology transfer and capacity building, and a Least Developed Countries Fund to finance, *inter alia*, “National Adaptation Programmes of Action” have been set up.<sup>38</sup> It is through these financial mechanisms that CDM projects are financed.

One limitation with the UNFCCC is that it does not set out specific emissions reduction commitments for individual parties. This was done later by the Kyoto Protocol which is discussed below.

### **3.2 The Kyoto Protocol to the United Nations Framework Convention on Climate Change**

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<sup>34</sup> *Ibid* Article 4(8).

<sup>35</sup> *Ibid* Article 4(9).

<sup>36</sup> *Ibid* Article 4(10).

<sup>37</sup> FCCC/CP/1998/16/Add.1, Decision 3/CP.4 Review of the Financial Mechanism

<sup>38</sup> *Ibid*.

The UNFCCC was intended to be a framework for future agreement on specific commitments, and the creation of future agreements was explicitly envisioned.<sup>39</sup> The Kyoto Protocol<sup>40</sup> was adopted to impose more specific mitigation commitments on UNFCCC parties, because UNFCCC lacked these commitments to address the climate change problem. The aim of the Kyoto Protocol is to advance the objective of the UNFCCC.<sup>41</sup> To this end, the Protocol elaborates on the general commitments agreed to in the UNFCCC. Like the UNFCCC, the Protocol recognizes that developed and developing country parties should have differentiated commitments and incentives.<sup>42</sup>

The developed country parties and economies in transition listed in Annex B to the Protocol agreed to reduce their GHG emissions to a specified percentage of their 1990 emissions by 2012.<sup>43</sup> Those parties commit themselves to make demonstrable progress in achieving their targets by 2005.<sup>44</sup> No numerical targets for the reduction of emissions were set for the developing countries, but they are required to report on their emissions.

Article 10 of the Protocol reaffirms and elaborates on the commitments agreed to under Article 4(1) of the UNFCCC, and reiterates that these must be read taking into account the principle of common but differentiated responsibility and development priorities. Annex I parties are mandated to implement policies and measures toward meeting their commitments in such a way as to minimize the adverse effects on other parties, especially developing country parties.<sup>45</sup>

The Kyoto Protocol defines three international policy instruments; the so called Kyoto mechanisms: International Emissions Trading (IET); Joint Implementation (JI); and the Clean Development Mechanism (CDM). Each of these international policy instruments provides opportunities for annex 1 parties to fulfil their commitments cost effectively.

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<sup>39</sup> Article 17 provides for the adoption of protocols.

<sup>40</sup> The Protocol was opened for signature on December 11 1997 at Kyoto. It entered into force on February 16, 2005.

<sup>41</sup> See the preamble to the Kyoto Protocol.

<sup>42</sup> *Ibid*, Article 10.

<sup>43</sup> See Kyoto Protocol, Article 3.

<sup>44</sup> Kyoto Protocol, Article 3(2)

<sup>45</sup> *Ibid* Articles 2(3) and 3(14).

International Emissions Trading (IET) essentially allows annex 1 parties to exchange part of their assigned national emissions allowances.<sup>46</sup> IET implies that countries with high Marginal Abatement Costs (MACs) must acquire emissions reductions from countries with low MACs.<sup>47</sup> Countries that have emissions units but not “used” can sell this excess capacity to countries that are over their targets. Countries not meeting their commitments will be able to “buy” compliance.

Joint implementation programme under the Kyoto Protocol allows industrialized countries to meet part of their required cuts in greenhouse-gas emissions by paying for projects that reduce emissions in other industrialized countries.<sup>48</sup> The sponsoring governments will receive credits that may be applied to their emissions targets; the recipient nations will gain foreign investment and advanced technology (but not credit toward meeting their own emissions caps; they have to do that themselves). This system has advantages of flexibility and efficiency.<sup>49</sup> Not only the state, but also companies, non-governmental organisations (NGOs) or households can participate.

Joint implementation and emissions trading are designed for developed or industrialized countries with emission units. Accordingly, they have limited application in Uganda. Uganda has concentrated much on the Clean Development Mechanism that is designed for developing countries.

#### **4.0 The Clean Development Mechanism**

One of the flexible mechanisms of the Kyoto Protocol is the Clean Development Mechanism (CDM). It allows industrialized country parties to use emission reduction projects in countries not committed to the quantitative limitations for greenhouse gas emissions and receive credit in the form of "certified emission reductions," which they

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<sup>46</sup> Bert Metz, Ogunlade, Stewart and Jiahua pan (Eds): *Climate Change 2001 Mitigation – Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change*, (Cambridge University Press, 2001), p.50.

<sup>47</sup> *Ibid* p.50.

<sup>48</sup> See, Joint Implementation, [http://unfccc.int/kyoto\\_protocol/background/items/2882.php](http://unfccc.int/kyoto_protocol/background/items/2882.php) also see, <http://www.ctrade.org/FAQs.html> (accessed on June 06, 2007).

<sup>49</sup> *Ibid*.

may count against their national reduction targets.<sup>50</sup> The economic rationale is that clean investment might be less costly in developing countries than domestic action in industrialized countries.<sup>51</sup>

The CDM evolved from the Brazilian proposal for a Clean Development Fund (CDF) in a meeting of the ad hoc group on the Berlin mandate in 1997 just prior to the third Conference of Parties.<sup>52</sup> The CDF idea was to finance adaptation measures through penalties levied on industrialized countries not reaching their targets; to ensure much more flexibility in achieving emission reductions and for the possibility of international emissions trading to achieve the emission reductions where it could be done at the least cost.<sup>53</sup> At the third Conference of Parties in Kyoto, the idea became a subject of so much disagreements and skepticism. An apparent contradiction emerged between the goals of emission reduction in the North and sustainable development in the South due to the differing priorities of different countries and regions of the world.<sup>54</sup> After so much opposition most especially from developing countries, CDM was eventually accepted under Article 12 of the Kyoto Protocol to serve as a balance point to meet the yearnings of both the developed world and the developing nations.<sup>55</sup>

The CDM under Article 12 (2) of the Kyoto Protocol strives to promote sustainable development in developing countries, while allowing developed countries to contribute to the goal of reducing atmospheric concentrations of greenhouse gases. In addition to catalysing green investment priorities in developing countries, the CDM offers an opportunity to make progress simultaneously on climate, development, and local environmental issues. The CDM benefits developing countries by giving them access to technology and investment that they would be unlikely to get otherwise, which helps

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<sup>50</sup> M. Dutschke (2002), Sustainable Forestry Investment under the Clean Development Mechanism: The Malaysian Case, Hamburg Institute of International Economics, HWWA Discussion Paper 198, p. 7.

<sup>51</sup> *Ibid.*

<sup>52</sup> Olawuyi Damilola Sunday (2006), Enlisting Carbon dioxide Capture and Storage as a Clean Development Mechanism Project: Legal And Regulatory Issues Considered, available at <http://ssrn.com/abstract=999508> (accessed on September 4, 2008).

<sup>53</sup> *Ibid.*

<sup>54</sup> *Ibid.*

<sup>55</sup> *Ibid.*

them to develop sustainably, and thereby contribute to the ultimate objective of the UNFCCC.<sup>56</sup>

In order to participate in CDM there are three eligibility criteria that countries must meet. All parties must meet three basic requirements: voluntary participation in CDM; establishment of a national CDM authority and ratification of the Kyoto Protocol.<sup>57</sup>

In 2001 the seventh Conference of the Parties (COP) developed the modalities and Procedures for the Clean Development Mechanism (CDM).<sup>58</sup> A prompt start of the CDM was agreed and the CDM Executive Board (EB) was established to supervise the CDM under guidance of the COP and facilitate such a prompt start.<sup>59</sup> The conference of the Parties serving as the meeting of the Conference of the Parties is responsible for the overall implementation of the Kyoto Protocol as well as the CDM. It also supervises the Executive Board of the CDM.<sup>60</sup>

Under the modalities and procedures for the CDM, a participating party must do the following: First, it must affirm that it is the host party's prerogative to confirm whether a CDM project activity assists it in achieving sustainable development, recognize that parties included in Annex I are to refrain from using certified emission reduction generated from nuclear facilities to meet their commitment and bear in mind the need to promote equitable geographic distribution of CDM project activities at regional and sub-regional levels.<sup>61</sup> In addition, it must be emphasized that public funding for CDM projects from parties in Annex I is not to result in the diversion of official development assistance and it not be separate from and not counted towards the financial obligations of parties included in Annex I, and that CDM project activities should lead to the transfer of

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<sup>56</sup> Kyoto Protocol, Article 12(2).

<sup>57</sup> *Ibid.*, Article 5.

<sup>58</sup> Report of the Conference of Parties on its Seventh session held at Marrakech from 29 October to November 2002, FCCC/CP/2001/13, 21 January 2002.

<sup>59</sup> *Ibid.*

<sup>60</sup> *Ibid.*

<sup>61</sup> See summary of the Seventh conference of the parties (CoP7) decisions on mechanisms; [www.dfait-maeci.gc.ca/cdm-ji/cop7-en.asp](http://www.dfait-maeci.gc.ca/cdm-ji/cop7-en.asp) - 54k - (viewed on 3/24/2006).

#### 4. The Bali Conference 2007

Another development at the international scene regarding climate change mitigation and adaptation strategies was the meeting of the 13th Conference of Parties held in Bali in December 2007.<sup>62</sup> One of the major tasks of the Bali Conference was to launch a formal negotiation process for new targets, which need to be agreed on by 2009 if countries are going to have time to prepare for their emission reductions beyond 2012.<sup>63</sup> The Bali meeting agenda included developing a roadmap to guide this negotiating process towards a possible new regime, which will engage all countries, developed and developing.<sup>64</sup> This was in addition to the growth of carbon market, which requires a long-term framework for carbon trading.<sup>65</sup>

Indeed one of the major outcomes of the Bali Conference was the adoption of the Bali Action Plan<sup>66</sup> or “roadmap” which sets out a negotiating process for a new global deal to be concluded by 2009, at the 15th Conference of the Parties in Copenhagen<sup>67</sup>

The Action Plan focuses on four key areas or building blocks. The first one is mitigation which set out a process in which countries collectively accept the need for “deep cuts” in greenhouse gas emissions and agree to long-term cooperative action, up to and beyond 2012.<sup>68</sup> Under this strategy, developed countries already with commitments under the Kyoto Protocol, with the exception of the United States, and are expected to continue to undertake mitigation commitments or actions. The strategy has two important implications for mitigations and adaptation. For the first time, the strategy specifically calls for developing countries to undertake nationally appropriate (depending on their economic conditions) “mitigation actions, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner.” This

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<sup>62</sup>This was the third Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, held in Bali, Indonesia, from 3 to 14 December 2007. It was pivotal meeting that following two years of informal discussions to pave the way for setting new targets for a second commitment period of the Kyoto Protocol.

<sup>63</sup> IISD, Earth Negotiation Bulletin, Vol. 12 No 354, 2007.

<sup>64</sup> See COP agenda (FCCC/CP/2007/1).

<sup>65</sup> *Ibid.*

<sup>66</sup> The Bali Action Plan was adopted as a COP13.

<sup>67</sup> IISD *supra* note 2.

<sup>68</sup> The Bali Action Plan *supra* note 2, para 1.

strategy has far-reaching implications and links developing country actions to directly measurable technical and financial support. Secondly and again for the first time, there was reduced strict separation of actions between developed and developing countries by not using language referring to “Annex I” and “non-Annex I” countries, categories previously used to distinguish between these two groups of countries. This offers the prospect of moving beyond the constraints of the current structure of the Kyoto Protocol for defining a future agreement and differentiating between developed and developing countries. This new global deal will include all Parties to the Convention including developed such as the US which has not ratified the Kyoto Protocol and developing countries did not have any commitments under the Protocol. Thus, it truly paves the way for the world as a whole to take collective action.

The second one is adaptation under which countries accepted that many developing countries face significant challenges in adapting to the impacts of climate change. Thus, the Bali Action Plan supports “enhanced action on adaptation,” which includes: financial and capacity development support for integration of adaptation actions into sectoral and national planning for enabling climate-resilient development; risk management and risk reduction strategies, including risk sharing and transfer mechanisms<sup>69</sup> such as insurance; linking disaster risk reduction and adaptation measures; and encouraging public-private-civil-society-multilateral organization partnerships for effective action on adaptation.<sup>70</sup>

The third one was the technology development and transfer.<sup>71</sup> This strategy was a result of the developing countries expression of the need for what is often termed “tech-transfer,” which, in the past, has been associated more with mitigation actions. Developing countries highlighted that efforts to date are insufficient because when technologies, especially those that are environmentally friendly, are transferred to developing countries, they are not necessarily promoted and made affordable and accessible and therefore support actions for both mitigation and adaptation.

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<sup>69</sup> *Ibid.*

<sup>70</sup> *Ibid*, para c.

<sup>71</sup> *Ibid*, para d.

The final one is resource provision that include funding and investment.<sup>72</sup> This includes “enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation.”<sup>73</sup> It covers consideration of improved access to adequate, predictable and sustainable financial resources, and the provision of new and additional resources, including official and concessional funding.

There were other decisions in addition to Bali Action Plan that have implications for adaption and mitigation. There are: Reducing emissions from deforestation and degradation (REDD) which is being seen as a possible mechanism for a post-2012 regime.<sup>74</sup> REDD could be a market and/or a payment mechanism for the carbon conserved and launching of the Adaptation Fund.<sup>75</sup>

For a project to be eligible the following must also be in place. The designed project must assist non-Annex I parties (developing countries) “in achieving sustainable development and contributing towards ultimate objectives of the Convention, the project must result in “real, measurable and long-term benefits related to the mitigation of climate change”, and projects must result in “reductions in emission that are additional to any that could occur in the absence of the certified project activity.”<sup>76</sup>

## **5.0 Clean Development Mechanism in the Forestry Sector**

### **5.1 Nature of Uganda’s Forestry Resources**

Uganda has about 49,500 km<sup>2</sup> (4.9 million hectares) of forests and woodlands, which is approximately 24% of the total land area.<sup>77</sup> The vast majority of this is woodland, while

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<sup>72</sup> *Ibid*, para e.

<sup>73</sup> *Ibid*.

<sup>74</sup> Emissions from deforestation are estimated to contribute about 20 percent of global greenhouse emissions

<sup>75</sup> See IISD *supra* note 2. The Fund, currently worth about US\$30 million, is expected to grow to about US\$180-\$300 million by 2012 depending on the price of carbon. It is financed by a 2 percent levy on Clean Development Mechanism (CDM) projects (mostly energy projects implemented in developing countries) and will become operational at an early stage during the Kyoto Protocol’s first commitment period (2008-2012). It was decided that the Global Environment Facility (GEF) will function as the Secretariat for the first three years with the World Bank serving as the Trustee. A Board was established that will manage the Fund under guidance of and accountability to Parties with developing countries representing a clear majority.

<sup>76</sup> *Ibid*.

<sup>77</sup> *Ibid*.

the remainder is tropical high forest and forestry plantations. The western region of the country (Kibale, Kabarole and Bundibugyo districts) has more than 60% of the country's closed forests, while the central region has a little more than 20%.<sup>78</sup> The forests and woodlands resources of Uganda are found both in and outside protected areas.<sup>79</sup> More than 50% lie outside protected areas. The rest of the forest and woodland estate consist of small, scattered patches therefore making it difficult to manage them centrally.<sup>80</sup>

The Permanent Forest Estate (PFE) is about 1.9 million hectares, this includes all forest reserve land and all forested areas in the National parks and wildlife Reserves.<sup>81</sup> The PFE represents about 9% of the total land area of Uganda. These areas are set aside permanently for the conservation of bio-diversity, the protection of environmental services and the sustainable production of domestic and commercial forest produce. Half of the PFE is made up of the gazetted central and local forest reserves, land held in trust and managed by the National Forestry Authority and local authorities. The other half includes the forested areas of national parks and wild reserve land held in trust and managed by the Uganda Wildlife Authority.<sup>82</sup> The remaining 70% of forested land includes the large areas of forests and woodlands that grow on private or customary land. These are not part of PFE, as there is no formal policy that determines forestry as a land use on private or customary lands.<sup>83</sup>

## 5.2 CDM Projects under the Forestry Sector

Forests mitigate against global warming by storing thousands of tons of carbon. They also contribute to the livelihoods of many people in Uganda by providing subsistence and market income, and insurance in times of need. Given the role of forests as a major carbon sink, their loss is predicted to trigger negative feed back mechanisms that will

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<sup>78</sup>The National Environment Management Authority (NEMA), State of Environment Report 2006/2007 p.78, Kampala.

<sup>79</sup>*Ibid.*

<sup>80</sup>*Ibid.*

<sup>81</sup>*Ibid.*

<sup>82</sup>The Republic of Uganda, Ministry of Water, Land and Environment, *The Uganda Forestry Policy* (2001), Entebbe.

<sup>83</sup>*Ibid* p.2.

exacerbate the current threats to biodiversity conservation.<sup>84</sup> In addition, deforestation in Uganda is also on the increase and at an alarming rate. Deforestation leads to GHG emissions and contributes to climate change.

CDM can be used to turn this around and improve carbon concentration or carbon sinks. It is to be argued that selective forestry activities under the CDM can provide a win-win situation because such activities provide both environmental and socio-economic benefits to communities.<sup>85</sup>

Examples of CDM can be illustrated by the following forest projects: A reforestation project is already being implemented by UWA Face Project in the Mt. Elgon National Park and Kibaale National Park. The UWA Face Project is a joint venture between Uganda National Parks and Face Foundation of Holland. Face Foundation is financed by the electricity generating companies of Holland. Under the above project, Face Foundation is funding a substantial part of the financing of the forest, and in return it gets carbondioxide sequestration and offset in the contract areas of Mt. Elgon and Kibaale National Parks during the term of 99 years (1994 to 2093). The emissions from 27,000h regenerated forest in Kibale and Mount Elgon National Parks amount 1500000 tones of carbon dioxide worth US\$ 45 million. Further, the emissions from 7100h in Bukabaleba forests and the adjoining Norwegian managed forest amount to 4million tons of carbon dioxide worth about US\$ 12million.<sup>86</sup>

In addition, the Institute Fur Umwelt Und Entwicklung (IUE) is being promoted by a German investor, targeting commercial forests and planning a project at the Kikondwa Forest Reserve. The Bakojja Wood Country Ltd a locally funded firm is interested in the commercial forestry in Mubende District is undertaking ground work for the implementation of the CDM.

## **6.0 Role of Forestry CDM Projects in Climate Change Adaptation in Uganda**

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<sup>84</sup> Magezi S.A.K, Potential for Clean Development Mechanism Projects in Uganda, Kampala, 1998

<sup>85</sup> *Ibid.*

<sup>86</sup> *Ibid* at 62.

Adaptation to climate change refers to responses to actual or expected climate changes or their effects.<sup>87</sup> According to the IPCC,<sup>88</sup> such responses include changes in processes, practices or structures either voluntarily or planned to minimize potential damages or to take advantage of opportunities associated with changes in climate. Climate change adaptation strategies seek to ensure that people live comfortably, despite the changing climate. Effective adaptation strategies imply reducing present and future vulnerability to climate change<sup>89</sup> and include coping strategies or changes in practices and processes in light of the perceived climatic change.<sup>90</sup> Such actions can be taken by individuals, households, governments and other stakeholders. Adaptation may include policy measures that reduce vulnerability and enhance adaptive capacity, or the ability of people and systems to adjust to climate change.<sup>91</sup>

Uganda's forests play a big role in helping people to adapt to climate change. Uganda's forests and wood lands are central to sustainable development. They play important roles in the social and economic development of the country.<sup>92</sup> They also create employment for a big a number of people. Approximately 100,000 are in the informal sector in fuel wood and charcoal production.<sup>93</sup>

The current annual turnover of business in forestry is about Uganda Shillings 356 billion, with a further estimated annual value of Ug. Shs. 112 Billion as environmental services.<sup>94</sup> It is expected that with the full operationalization of the activities of the Forest Reserve management institutions like the National Forestry Authority and the District Forestry

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<sup>87</sup> AfDB. *et. Al*, Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation. AfDB, ADB, DFID, DGIS, EC, BMZ, OECD, UNDP, UNEP, World Bank (2003).

<sup>88</sup> IPCC., Climate change : Impacts, Adaptation and Vulnerability. Contribution of working Group II to the third assessment report of IPCC. Cambridge University Press, Cambridge (2001).

<sup>89</sup> Huq, S., A. Rahman, M. Konate, Y. Sokona and H. Reid., Mainstreaming Adaptation to Climate Change in Least Developed Countries (LDCs). IIED, London (2003).

<sup>90</sup> DFID, Climate change and Poverty. Making development resilient to climate change DFID (2004).

<sup>91</sup> *Ibid* .

<sup>92</sup> *Supra*, note 71.

<sup>93</sup> *Ibid*, p.4.

<sup>94</sup> *Ibid*.

Service, the contribution of the Forestry sector to the Economy is expected to multiply more than three times.<sup>95</sup>

In the energy sector, over 90% of the Country's energy demands are met from wood fuels.<sup>96</sup> About eighteen (18) million tonnes of firewood are consumed annually and nearly five hundred thousand (500,000) tonnes of charcoal. Large volumes of timber are also used for construction, furniture making and other manufacture estimated at 800,000 m<sup>3</sup> (eight hundred thousand cubic meters) per year. The value of non-timber products derived from forest reserves and other forests such as medicines, craft materials, and food are also known to be significant.<sup>97</sup>

Forests also provide environmental services, although these services and values are not easily quantifiable, they are recognised as integral to agricultural productivity, soil and water conservation and nutrient recycling. Forests also act as reservoirs of the country's biodiversity, including its unique genetic resources and diverse ecosystems.<sup>98</sup>

Tourism in Uganda is mainly focused on forests or locations therein. Tourism contributes to economic and social development and to resources conservation. The Uganda Wildlife Authority reveals that eco - tourism revenues are approximately Uganda shillings 2.7 billion.<sup>99</sup>

These benefits accruing from forestry resources are likely to increase with the implementation of CDM projects in Uganda. This will improve the social and economic lives of the people by promoting the existing sources of livelihoods such as promoting soil and water conservation or by promoting alternative sources of livelihoods. These will ensure quality life despite the changing climate patterns; thereby promoting adaptation.

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<sup>95</sup> *Ibid.*

<sup>96</sup> *Ibid.*

<sup>97</sup> *Ibid.*

<sup>98</sup> *Ibid.*

<sup>99</sup> *Ibid.*

## **7.0 Policy and Legal Interventions in the Implementation of CDM Projects in the Forestry Sector and their Implications for Climate Change Mitigation and Adaptation**

In order for the CDM to be successfully implemented in Uganda, there must be a supportive policy and legal framework through which such implementation is to be done. Since participation in CDM projects is voluntary,<sup>100</sup> it is up to individual countries to put in place such frameworks depending on whether they consider such CDM projects as beneficial to them. It can, on the other hand, be argued that designing an effective policy and legal framework for the implementation of CDM is mandatory once the country undertakes the CDM projects. This mandatory requirement stems from UNFCCC which requires state parties to undertake policy and legislative measures for mitigation of climate.<sup>101</sup> In this section, a review of the policy and legal framework with regard to the implementation of the CDM in the forestry sector is made with the major focus being the adequacy of such a framework to CDM implementation.

### **7.1 Review of the Policy Framework for Implementation of CDM under the Forestry Sector**

Although a policy in Uganda cannot be relied on as the basis for any legal action, it can be referred to in contentious matters to clarify issues and provide direction.<sup>102</sup> Policies guide government agencies in the implementation of environmental laws and ensuring sustainable use of natural resources. Uganda has in place a comprehensive policy framework which is useful in the implementation of CDM projects under the forestry sector. This section makes a review of these policies and highlights their significance in promoting the implementation of CDM projects in the forestry sector.

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<sup>100</sup> See, Participation Requirements set out in Decision 15/CP.7; Principles, Nature and Scope of the Mechanisms Pursuant to Articles 6, 12 and 17 of the Kyoto Protocol.

<sup>101</sup> UNFCCC, the preamble and Article 4(1)(f).

<sup>102</sup> J. Obitre-Gama (2000), 'The Application of International Law into National Law, Policy and Practice,' Paper presented at the WHO International Conference on Global Tobacco Control Law, 7 to 9 January 2000, New Delhi, India.

**a) The Vision 2025<sup>103</sup>**

The Vision 2025 was launched in 1998 as a strategic framework for National Development and is one of the strategic framework documents relevant in the implementation of the CDM. The Vision promotes strategies to limit Greenhouse Gas emissions which include: improving energy efficiency so as to reduce demand and hence the amount of carbon dioxide generated during energy production; using cleaner energy sources and technologies to reduce emissions of carbon dioxide and pollutants that cause acid rain and other environmental problems; improving forest management, expanding forest areas and encouraging tree planting to increase the size of carbon sink in the country and adopting agricultural practices which reduce emissions of methane and nitrous oxide.<sup>104</sup> These strategies indicate Uganda's commitment to apply CDM mechanisms.

**b) The Uganda Forestry Policy 2001,<sup>105</sup>**

The main objective of this policy is to establish an integrated forestry sector that achieves sustainable increases in the economic, social and environmental benefits from forests and trees by the people of Uganda, especially the poor and vulnerable.<sup>106</sup> The policy provides for the protection of the Permanent Forest Estate (PFE) under government trusteeship and the development and sustainable management of natural forests on private land.<sup>107</sup> It also provides for a wide cross section of stakeholder participation in the management of the forests.<sup>108</sup> The policy further encourages partnerships with the local forest communities to develop sustainable management of forests.<sup>109</sup> This partnership provides an opportunity for foreign companies to work with the local communities to implement CDM projects through reforestation and afforestation.

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<sup>103</sup> The Republic of Uganda, Ministry of Finance Planning and Economic Development, *Uganda Vision 2025, A Strategic Framework for National Development*, (1998).

<sup>104</sup> *Ibid*, 283.

<sup>105</sup> *Supra*, note 71.

<sup>106</sup> *Ibid*, 15.

<sup>107</sup> *Ibid*.

<sup>108</sup> The stakeholders include: local government, the private sector, local communities and farmers. Issues addressed include the conservation and sustainable use of forest biodiversity.

<sup>109</sup> The Uganda Forestry Policy, *supra note 71*.

Policy Statement No.3 of the Forestry Policy is relevant to CDM implementation in so far as it provides for commercial forest plantations. The statement notes that the private sector will play the major role in developing and managing commercial forest plantations which will either be through large-scale industrial plantations on government or private land or through small-scale plantations on farms.<sup>110</sup> The role of government in this respect is to support and regulate this development. The government is required to put in place a regulatory framework, which will create a positive investment climate to encourage private sector investment in commercial forest plantations.<sup>111</sup> The government is required, amongst other tasks, to set out priority areas for the development of carbon storage plantations in different areas of Uganda.<sup>112</sup>

The Uganda Forestry Policy notes that government will pursue amongst others, the following strategies to facilitate the development of commercial forest plantations: strengthen legal agreements between government and private investors for use of forest reserves, review forest and tree tenure rules, to encourage the development of commercial forest plantations; to promote innovative financing mechanisms such as the forestry fund, and fiscal incentives in order to encourage investment and ensure sustainable sources of operational and investment funds; to review the Investment Code to better accommodate large industrial forest plantation developments; to encourage small to medium-scale commercial plantation development, to foster local economic benefits; to develop standards of best practice for commercial plantations and disseminate these to the private sector; and to develop improved seed services and planting sources and planting stock, and to promote their commercial production.<sup>113</sup>

The Forestry Policy sets out key elements of support for the implementation of its objectives. Those that are relevant to implementation of CDM projects are: first, sector-planning whereby a National Forest Plan (NFP) will be developed to provide strategic

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<sup>110</sup> *Ibid.*, p.17.

<sup>111</sup> *Ibid.*

<sup>112</sup> *Ibid.*

<sup>113</sup> *Ibid.*

framework for the development of the forest sector.<sup>114</sup> Second, sector investment whereby the government will develop a favourable investment climate for private and public investment in the sector.<sup>115</sup> This will include new financial incentives, the removal of market distributions, review of the Investment Code, review of legislation on land leases, the creation of a Forestry Fund, and the development of more transparent and accountable systems of administration and regulation. It is anticipated that this new climate, coupled with active investment promotion, will encourage a range of private investments in commercial forestry. The government will also pursue further sources of funding for sector development including carbon credits and international funds to support biodiversity conservation.<sup>116</sup> Third is international and regional co-operation. Under this component, the government is required to participate fully in the development and implementation of international obligations and cross-border co-operations agreements. One of the international agreements ear-marked by the Forestry Policy is the UNFCCC.<sup>117</sup>

A review of the Forestry Policy reveals that it provides a fairly adequate framework for the pursuit of massive human-induced afforestation and reforestation programmes relevant to CDM implementation. The current Forestry Policy is a fundamental departure from the old Forestry Policy that was inclined in favour of forests in protected areas; in which the public sector /government exercised a command, control and exclusionary style of management; and in which farm forestry, commercial forest plantations and forests outside protected areas received little attention beyond the rhetoric in government pronouncements.<sup>118</sup> The new Forestry Policy sufficiently takes care of the previous shortcomings in the forestry sector particularly in the context of CDM.

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<sup>114</sup> *Ibid*, p.25.

<sup>115</sup> *Ibid*.

<sup>116</sup> *Ibid*.

<sup>117</sup> *Ibid*, p.28.

<sup>118</sup> See Ministry of Agriculture, Animal Industry and Fisheries and the Ministry of Finance, Planning and Economic Development of the Republic of Uganda; Plan for Modernization of Agriculture: Government Strategy and Operational Framework, August 2000.

**c) The National Environment Management Policy (NEMP) 1994<sup>119</sup>**

This Policy is important for the implementation of the CDM projects under the forestry sector. The overall goal of the NEMP is to establish sustainable social and economic development, which maintains or enhances environmental quality and resource productivity on a long-term basis that meets the needs of the present generations without compromising the ability of future generations to meet their own needs.<sup>120</sup> The Policy contains guiding principles that are relevant to the implementation of CDM projects in Uganda. The policy recognises that Uganda's forests provide a wide range of environmental services and values such as the amelioration of climate and stabilization of soils, which are critical to national development.<sup>121</sup> The policy also recognizes that private forestry should be encouraged by appropriate incentives, extension services, marketing assistance and increased security of land and tree tenure.<sup>122</sup> Private forestry is important in encouraging private individuals and civil society organisations to participate in the implementation of CDM projects under the forestry sector.

The policy also has relevant strategies for the implementation of CDM. It for instance calls for improvement of the local capacity to manage protected and gazetted forest reserves by encouraging people's participation in forest planning and management.<sup>123</sup> The rationale for this is to ensure climate change mitigation. The development of local capacities ensures the viability of CDM projects initiated in the forestry sector. The policy also calls for economic incentives and the necessary legal framework and technology to encourage and facilitate rural communities, wood-fuel using industries and institutions, and the private sector to be self-sufficient in forest product requirements.<sup>124</sup>

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<sup>119</sup> The Republic of Uganda, Ministry of Water, Lands and Environment, *The National Environment Management Policy for Uganda* (1994).

<sup>120</sup> *Ibid.*, 3. This is closely related to the Brundtland Commission, formally the World Commission on Environment and Development (WCED), known by the name of its Chair Gro Harlem Brundtland, which was convened by the United Nations in 1983. The commission was created to address growing concern "about the accelerating deterioration of the *human environment* and *natural resources* and the consequences of that deterioration for *economic* and *social* development." In establishing the commission, the UN General Assembly recognized that environmental problems were global in nature and determined that it was in the common interest of all nations to establish policies for sustainable development

<sup>121</sup> *Ibid.*, 31.

<sup>122</sup> *Ibid.*

<sup>123</sup> *Ibid.*

<sup>124</sup> *Ibid.*

The economic incentives under the policy may include financial support from CDM supporting countries<sup>125</sup>.

## **7.2 Review of the Legal Framework for the Implementation of CDM under the Forestry Sector**

### **a) The Constitution of the Republic of Uganda, 1995**

The 1995 Constitution is the supreme law in Uganda and has provisions regulating forestry resources that are relevant for the implementation of the CDM in Uganda. Under the Constitution, it is the duty of Parliament to enact laws to protect and preserve the environment from abuse, pollution and degradation and also to promote measures intended to manage the environment for sustainable development and to promote environmental awareness.<sup>126</sup>

The state has the duty to protect important resources, including land, water, wetlands, oil, minerals, fauna and flora on behalf of the people of Uganda.<sup>127</sup> Under article 237 (2) (b), the Government or (where appropriate local government) is required to hold in trust for the people and protect natural forest reserves and any land to be reserved for ecological and tourism purposes for the common good of all citizens. The trust obligation imposed on the state eases the implementation of the CDM in two ways. First, CDM projects can be more easily implemented by the government than would have been the case if the forestry resources were subject to private ownership, which would involve a lengthy process of land acquisition for the implementation of the projects. Second, the trust obligation bars the government from leasing out or otherwise alienating the forests referred to.<sup>128</sup> This ensures subsistence of CDM forest projects. Suffice it to note that the enforcement of the public trust doctrine has faced a lot of challenges as the government is degazetting some forest reserves in the name of promoting private investment and industrialization.

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<sup>125</sup> Peter A, et al Environmental Science & Policy, Volume 10, Issue 3, (2007) 204-218.

<sup>126</sup> The Republic of Uganda (1995), The Constitution of the Republic of Uganda, 1995. Article 245.

<sup>127</sup> *Ibid*, Principle XIII.

<sup>128</sup> This position is fortified by section 44 (4) of the Land Act, Cap 227 Laws of Uganda, 2000.

**b) The National Environment Act, Cap 153**

This is the principal legislation governing the environment in Uganda whose purpose is to provide for sustainable management of the environment and establishes the National Environment Management Authority (NEMA) as a coordinating, monitoring and supervisory body. NEMA is the main institution responsible for the operation of the Environmental Impact Assessment (EIA) regime.<sup>129</sup> Projects which must undergo the EIA process include forestry related activities such as reforestation and afforestation.<sup>130</sup>

A review of the National Environment Act reveals that while it generally provides, for a comprehensive framework in relation to environment management, climate change related issues are not given any special consideration. Nevertheless, some of the sectors that are critical to climate change and in particular, the CDM are covered.

Thus, in relation to forests, section 45 of the National Environment Act provides that NEMA shall, in consultation with the lead agency which is the National Forestry Authority (NFA), issue guidelines and prescribe measures for the management of all forests and that all forests shall be managed in accordance with the principle of sustainable development. These guidelines have to take into account forests in protected areas, including forest reserves, national parks and game reserves; and forests on lands subject to interests held by private persons.<sup>131</sup>

NEMA, in consultation with the National Forestry Authority, is given powers to expressly exclude human activities in any forest area by declaring it a specially protected forest.<sup>132</sup> Section 39 of the National Environment Act mandates the District Environment Committees to identify areas to be targeted for afforestation and reforestation. This is however, restricted to hilly and mountainous areas and does not, therefore, adequately

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<sup>129</sup> *Ibid*, Section 6 (1) (f).

<sup>130</sup> *Ibid*, Third Schedule. The detailed EIA process is regulated by the Environmental Impact Assessment Regulations, 1998.

<sup>131</sup> *Ibid*, section 45 (2).

<sup>132</sup> *Ibid*, section 45.

address deliberate massive human induced afforestation and reforestation initiatives as envisaged by Article 3(3) of the Kyoto Protocol.

The above notwithstanding, the establishment of NEMA with other institutions under the Act and the obligations imposed on it in relation to forest management ensures that the implementation of CDM projects is integrated into the overall environmental legal framework of Uganda. This is advantageous to the extent that such integration guarantees facilitation of the implementation process by the government. Sustainable management of the environment which is the underlying objective of the National Environment Act has far reaching implications for climate change mitigation. For instance a key component of sustainable environment management is the promotion of forest management. Forests in turn play an important role in climate change mitigation through absorption of some greenhouse gasses.

**c) The National Forestry and Tree Planting Act, 2003**

This is the main Act dealing with forestry resources management in Uganda. The objective of this Act is to promote the conservation, sustainable management and development of forests for the benefit of the people of Uganda. This Act is a fundamental departure from the outdated Forest Act (which was repealed) in as far as it provides for a modern regulatory framework for the sustainable management of forests and also addresses some key issues relevant to CDM.

The following key features of the Act are worth pointing out: it provides for the establishment of private forest plantations and declares that all forest produce on such a private plantation forest belongs to the owner of the plantation and that the owner is free to use the forest produce in any manner he may determine.<sup>133</sup> It also provides that any person may enter into a contractual or other arrangement with the owner of an interest in a private forest for the right to harvest, purchase, or sale of all or any part of the forest produce in the private forest.<sup>134</sup>

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<sup>133</sup> Section 22.

<sup>134</sup> Section 23.

The Act provides for the intervention of the Government to extend technical services to persons involved in the development of private forests and forestry activities in general. Such assistance to be extended includes, the provision of information, training and advice on the management of forests, the establishment and maintenance of nurseries and other facilities necessary for seeds and plants; materials, financial assistance; and cooperation and liaising with other lead agencies in the management of forests and forest produce.<sup>135</sup>

It also provides for the preparation of a National Forest Plan by the Government of Uganda which shall be the framework for the implementation of the forestry policy, other programmes by the Government and stakeholders in the forest sector.<sup>136</sup>

In view of the fact that CDM is market based and encourages the participation of private entities and organizations, the provisions in the National Forestry and Tree Planting Act for the commercial private exploitation and development of forests are important. This private element in the forestry industry fosters the development of CDM because; with reduced government involvement comes along reduced bureaucratic tendencies thus leading to quick conclusion of CDM deals; with profit being the main motivation.

#### **d) Land Act, Cap 227**

The Act provides for the tenure, ownership and management of land.<sup>137</sup> Under the Act, land is to be utilized in accordance with the various laws listed in section 43 including the Uganda Wildlife Act, the Water Act and the National Environment Act. Section 44 reiterates the constitutional provision creating a trust over environmentally sensitive areas as stipulated in Article 237(2) of the Constitution. Section 44 (4) prohibits Government or a local government from leasing out or otherwise alienating any natural resource referred to in this section. Government may in terms of section 44(5), grant concessions or licenses or permits in respect of such land subject to any law. The permit would authorize use of the land in a manner stipulated by the relevant laws but would not confer

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<sup>135</sup> Section 26.

<sup>136</sup> Section 49.

<sup>137</sup> The Preamble, Land Act, Cap 227.

ownership of the land. Management of the land in Uganda is important for the implementation of CDM projects under the forestry sector because they result in the altering land use in Uganda.

#### **e) Local Governments Act, Cap 243**

This Act consolidates and streamlines the existing law on local governments in line with the Constitution to give effect to the decentralization and devolution of functions, powers and services.<sup>138</sup> The Local Government Act provides that it is the responsibility of the Local Government to protect and preserve the resources from abuse, pollution and degradation and to manage the resources for sustainable development within the district.<sup>139</sup> The District Council is the highest political authority in the District and the Second Schedule to the Act prescribes its functions. These include land surveying, land administration, physical planning, forests and wetlands, environment and sanitation, protection of streams, lakeshores, wetlands and forests.<sup>140</sup> The districts have an important role to play and should be actively involved in the design and implementation of CDM projects which are to be located in their areas of jurisdiction.

### **8.0 Challenges for Implementing CDM Projects in Uganda in the Forestry Sector**

There are a number of challenges in the implementation of CDM under the forestry sector. This section discusses some of these challenges.

First, as sequestered carbon is relatively a new ‘commodity’, introduced by the Kyoto Protocol and enjoying some unique characteristics,<sup>141</sup> complex legal issues arise when defining the property rights it engenders and in drafting carbon sequestration sales contracts. It is not easy to approve, monitor and verify that carbon credits earned under

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<sup>138</sup> The Local Government Act, Chapter 243 of the Laws of Uganda, Preamble.

<sup>139</sup> *Ibid.*, second schedule part 2.

<sup>140</sup> *Ibid.*

<sup>141</sup> Jon Kusler *Supra* note 90

clear and transparent rules for, permanence and sustainability given the limited technical knowledge available in Uganda.<sup>142</sup> Further, contractual concerns arise because participating in CDM projects requires signing international contracts. These contracts require expert negotiation by people exposed to international contracts, commercial law and CDM legal issues<sup>143</sup> which most Ugandans are not familiar with.

Second, Uganda lacks a strong national institutional framework to implement the Kyoto mechanisms. There are failures at different institutional and policy levels for environmental management in implementing the Kyoto Mechanisms. Policies such as the National Environmental Policy lack financial facilitation and skilled manpower. Whereas it is now largely accepted that climate is an important resource and worth protecting, and whereas implementation of the Kyoto Protocol is expected to be done through a hierarchy of enforcement from the Ministry of Water and Environment, through NEMA and local government, down to community level, the enforcement capacity available at all these levels does not appear to be commensurate with the widespread nature of the problem. In particular administration at district and local environment committee levels lack adequate manpower and resources to implement and monitor all the CDM projects.<sup>144</sup>

Thirdly, there is inadequate funding for CDM projects. Uganda mainly relies on donor funding to implement CDM projects. This adversely affects Uganda's ability to strategically position itself to attract CDM investment in pioneer projects.

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<sup>142</sup> Katrina et al, How do CDM Projects Contribute to Sustainable Development, Tyndall Centre for Climate Change Research Technical Report, University of East Anglia, Norwich (2004).

<sup>143</sup> UNIDO *supra* note 30

<sup>144</sup> The National Environment Management Authority (NEMA), State of Environment Report 2000/2001, 5.

Fourth, Uganda has no emissions baseline. Under Article 12(5) (c) of the Kyoto Protocol, emissions reduction may only be certified if it is additional to any reductions that could have occurred any way and hence the additionally concept. The issue of concern is that Uganda does not have an emissions baseline against which surplus reduction can be measured.

Lastly, the private sector does not have capacity to fully participate in CDM activities due to lack of awareness of stake holders about its economic benefits.

## **9.0 Conclusion**

Carbon sequestration through forestry sector can help mitigate climate change. For a developing country such as Uganda, carbon sequestration also represents an opportunity to fund sustainable development through financial inflows. Projects in the forestry sector, and land-use change and forestry projects more generally, have the potential to help mitigate climate change by acting as sinks for greenhouse gasses, particularly CO<sub>2</sub>. However, concerns have been expressed that participation in carbon-sink projects may be constrained by high costs. This problem may be particularly severe for projects involving smallholders in Uganda. Of particular concern are the transaction costs incurred in developing projects, measuring, certifying, and selling the carbon-sequestration services generated by such projects.

It can be observed from the analysis of the policy and legal framework that Uganda lacks a specific policy and law on climate change where issues relating to implementation of CDM projects would be provided for. The consequence of this is that CDM projects are regulated by scattered policies and laws, which are not very effective.

While CDM projects improve local incomes and natural resources management, there are concerns that conversion of land into tree plantations can also harm local ecosystems. Insecure land tenure constrains new investments and increases the risk that local communities will lose access to forests. Another challenge is that projects with

smallholders have high transaction costs. These costs can be overcome by building strong community institutions and simplifying project guidelines. To attract more projects, Uganda needs to build its capacity to identify relevant opportunities

## **10 Recommendations**

### **a) Development of a Specific Climate Policy and Law**

The Government should introduce a comprehensive policy instrument specifically aimed at the climate change mitigation and CDM investments. Currently, the existing policy framework is scattered over various policy instruments. It is recommended that a concrete policy instrument specifically targeting climate change should be formulated to guide in the implementation of CDM projects. Specific legislation aimed at the climate change mitigation and CDM implementation, which is currently unavailable in the country, should also be introduced.

### **b) Capacity Building**

The Government should step up capacity building efforts in all the government bodies that are involved in CDM implementation. This should hand in hand with raising awareness about the role of CDM projects in mitigating climate change and how the projects can be implemented. The rationale for this recommendation is that CDM is a highly technical field that can only be understood and appreciated by personnel with specialized knowledge and skills. It is recommended that the Department of Meteorology, NEMA, NFA and the proposed National Climate Change Secretariat, be targeted for this purpose;

### **c) Establishment of the CDM Fund**

The Government should establish a CDM fund to specifically provide financial assistance to CDM project activities. In view of Uganda's low financial capabilities, it is suggested that Uganda should lobby developed countries to contribute towards this CDM fund through financial bodies established under the Kyoto Protocol, such as the GEF, the Special Climate Change Fund and the Least Developed Countries Fund.

**d) Strengthening the Institutional Framework and Coordination**

Efforts by Government aimed at the establishment of the National Climate Change Secretariat that will be Uganda's DNA should be stepped up and the establishment of this authority concluded as soon as possible to facilitate the participation of Uganda in CDM. In the meantime, the existing institutions such as NEMA, NFA and the Metrological Department should be strengthened through adequate staffing and meeting their financial needs pending the establishment of the National Climate Change Secretariat.

**e) Weather and Climate Change Monitoring**

Weather and climate information is required to support adaptation activities as well as long-term monitoring of climate change. A good network of climate change monitoring is critical for provision of accurate and timely information for adaptation activities, including early warning systems. It is, therefore, important that the national meteorological services should be strengthened. This should be done through improving the climate observation mechanisms (for example through adopting advanced technology in climate change observations); improving the communication systems for efficient climate data collection and exchange; improving the data processing and archiving system to ensure the availability of quality data for climate monitoring and operations and research; and improving the capacity for climate data management systems through the training of personnel in data monitoring and processing.

**f) Development of Long-term Adaptation Action Plan**

There is need to develop a long-term adaptation action plan. The long-term adaptation plan should take into account the vulnerability of various sectors of the economy. The adaptation plan should be consistent with and should re-enforce existing principles and sectoral plans. The following could guide the development of the adaptation action plan: strengthening of the early warning information capacity, especially for food security and short-term climate prediction; incorporation of climate change and variability information and projections into long-term development plans; carrying out an inventory of existing

practices and methods used to adapt to extreme climate events; and participatory and consultative approach.