

## **Climate Change and CDM Activities**

Guinea possesses a rich and varied environment, comprising dense humid and dry forests, plains, mountains, fresh water, coastal and marine ecosystems, etc. These systems are, however, very sensitive to ecological disturbance, are subject to heavy anthropological pressure, and are in a state of constant degradation with a rapid loss of habitats and genetic diversity, to the detriment of future generations.

Although Guinea is not a significant producer of greenhouse gases (per capita CO<sup>2</sup> emissions remained constant from 1980 to 1999 at 0.2 tonnes), the country suffers the sometimes disastrous effects of global warming and climate change. Foremost amongst these are meteorological irregularities that affect the agricultural calendar, cause flooding in areas least prepared for it, and bring periods of precipitation deficit.

Despite the urgency of the problem, few projects or programmes have been agreed or executed with a view to investigating or mitigating the effects of climate change. At West African regional level, measures have been taken to identify forestry measures for the sequestration or reduction of carbon emissions in the Fouta Djallon massif, where a project for integrated management has been instituted.

At national level, the Ministry of Energy has issued information to increase awareness of the CDM within the relevant circles. The AGUIPER NGO has carried out an exercise on the formation of a CDM project.

## **Criteria for Sustainable Development**

Until recently the various actors concerned with development policy in Guinea did not have the relevant information at their disposal to permit the conceptualisation and implementation of CDM projects. However, there are now several general instruments under which action can be initiated:

- A Strategy Document on the Reduction of Poverty, adopted by the government and its principal development partners as a point of reference. This document establishes global and sectoral priorities for combating poverty.
- Various codes (already adopted or in the course of adoption) which lay down conditions for the exploitation and development of the country's natural resources.
- Several documents on programmes and projects in the agricultural and industrial sectors.

The chances of inaugurating CDM projects are enhanced in proportion as these documents are approved by the government and its development partners, often after consultation with broad sections of the population.

## **Constraints to CDM Adoption**

- A designated National CDM Authority has still to be set up, now that Guinea's ratification of the Kyoto Protocol in October 2005 permits it to play a full part in the CDM.

- A lack of information, and a lack of awareness of the CDM, amongst the actors principally concerned.
- A lack of coherence between the relevant national policies (on climate change, combating desertification, the environmental action plan, conditions for the recognition of international investments, the definition of sustainable development, etc.).
- A lack of definition of the authorisation procedures for the validation and verification of CDM projects.
- The lack of a document (in French as well as English) to explain the legal framework, the types of projects eligible (and ineligible), the application procedures, the available support, and the minimum conditions the project must fulfil to obtain national recognition.
- The lack of finance for the reinforcement of capacities.

### **National Stakeholders**

#### Electrical power:

The Ministry of Hydraulics and Energy (DNE) and the Ministry of the Environment for strategic planning, and the Parliament for legislation. The commercial organisations EDG, CBG, FRIGUIA, SAG, HYMEX, AREDOR and various private promoters for investment and the practical development of projects.

#### Hydrocarbons:

The MCI, MEF, DNE, the Economic and Financial Coordinating Committee, the National Hydrocarbon Directorate and the Import Committee, as well as the commercial organisations SGP, GPP, SHELL, TOTAL, ELF, MOBIL and PETROGUE.

#### Biomass:

The Ministry of Agriculture and the Ministry of Waters and Forests. Cultivators and their families. The 4A/TA project (Allemande-Labé). The Foyers Améliorés project. Bûcherons, Grossistes.

#### New and Renewable Energy :

The Division of New and Renewable Energy. The 4A/TA project. The Conakry-Rogbanè Centre for Scientific Research. The commercial organisations Solar Guinée, SODEP, Guinea Solar, SOGUICIT, DELATEG, SEEG, AGUIPER, EDE, ESSOR, etc.

### **CDM Potential in the Industrial and Energy Sectors**

One of the main barriers to industrial development in Guinea is the limited production of energy in a form that can be used efficiently for manufacturing purposes. This means in the first instance electricity, which also contributes to the quality of life of the population who enjoy its benefits. Local manufactures are rarely competitive on the global market, due principally to the high cost of energy, which can range from a minimum of 15 to over 50 per cent of total production costs.

Guinea possesses one of the largest hydro-electric potentials on the African continent, and one that remains largely unused. The large basins of the maritime and central regions could supply 85 per cent of total hydro power. The potential of Upper Guinea is assessed at 10 per cent, while the Guinean forest region has numerous possible sites for small hydro-electric plants. Studies indicate that Guinea's hydro-electric potential is of the order of 6,600 MW from 129 sites, with a guaranteed annual output of around 19,300 GWH. At present, only around 1 per cent of this potential has been exploited.

There is also considerable scope for improving the performance of the thermal generating sub-sector. Its capacity rose from 52.38 MW in 1995 to 97.08 MW in 2004, but the problem is distribution. The plants that have been set up in the various regions do not generally function efficiently, due to breakdowns or general dilapidation. Of the 9.20 MW capacity installed in 2004, only 5.27 MW was available. Before any investment is made in new plants, there is a pressing need to improve those that already exist.

As regards ideas for CDM projects, there are three possible options:

1. Development of village and other communal forests for local energy consumption and commercial use. In order to be eligible for acceptance under the CDM, such projects would have to contribute to biodiversity and constitute a sustainable utilisation of natural resources.
2. Promotion of the use of gas as a partial substitute for traditional energy carriers and a means to relieve pressure on the environment. This would require an adequate distribution network, and pricing would have to make it attractive by comparison with wood and charcoal.
3. Promotion of renewable energy. In Guinea, electricity is supplied from 20 thermal and 8 hydro generating stations. Many of these are not connected to the national grid, and where they are, domestic and industrial consumption is considerably restricted by insufficient production. This situation could be improved by:
  - a. construction of power stations fuelled by wood chips from well-run plantations;
  - b. encouragement of improved combustion technology;
  - c. promotion of solar heating;
  - d. promotion of solar drying of agricultural produce, salt, etc; and
  - e. construction of small generating stations.

## **Conclusions and Recommendations**

The Clean Development Mechanism under the Kyoto Protocol has the double purpose of assisting development while simultaneously enabling the countries concerned to fulfil their commitments to reduce greenhouse gas emissions.

To this end, it is necessary to institute a vigorous campaign of information in order to increase awareness of the CDM amongst the relevant national actors in the political, private and voluntary sectors. The information must also be made available to those partners engaged in development, so that CDM projects can be dovetailed into their

own programmes. Its potential advantages must be made known to decision makers and beneficiaries alike.

A mechanism for ongoing evaluation of CDM projects should be set up at national level as well as within the regional authorities, and should be based on effective participation by the population concerned. The results should be made widely known nationally and locally in order to stimulate further similar initiatives.