POLICY BRIEF

Low Carbon Growth for Ghana

This policy brief is part of the Technical Assistance to the Ghanaian National Climate Change Policy Framework (NCCPF). The analysis is supported by DFID and the Dutch Government

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Abstract

Low carbon growth seeks to promote economic development while keeping emissions low, or lower. Although Ghana is not responsible for the greenhouse effect, low carbon growth can be beneficial to Ghana. In the short term, pursuing low carbon growth helps identify options that have direct economic and development benefits and can open access to international climate support. In the long term, depending on the effect climate change has on prices and trade, low carbon growth may increase the competitiveness of the economy.

INTRODUCTION

This policy brief explains what 'low carbon growth' is and how it can be beneficial to Ghana. Low carbon growth seeks to promote economic development while keeping GHG emissions low, or lower than without interventions. Low carbon growth strategies are not restricted to use in developing countries, as it is especially developed countries which need to rethink their economic development to move to a low carbon pathway. Low carbon growth typically focuses on reducing emissions (e.g. in energy, industry and agriculture) and increasing carbon sequestration (e.g. through improved forest management). In some cases, the broader term 'climate compatible development', which explicitly takes adaptation/climate resilience into account, may be more suitable (Mitchell and Maxwell, 2010). There may be a logical overlap with climate resilient, or adaptation strategies, especially where low carbon solutions need to be climate compatible (e.g. considering rainfall patterns when developing hydropower). The term 'low carbon' does not imply that emissions cannot increase, especially in situations where the economy is expect to grow, but it does aim at lower emissions from *business as usual* development planning.

Figure 1: Ghana is strongly dependent on agriculture, with cocoa as the main crop

There is no single way to pursue low carbon growth, and it is typically a non-linear, iterative process (van Tilburg and Würtenberger, forthcoming). Although developing a strategy for low carbon growth is in the first place a task for the government, participation of all stakeholders from the start is considered crucial. Several lessons can be drawn from experience and research in the field. Developing a low carbon growth strategy can benefit from (international) technical assistance, but the product ultimately should be produced and owned by the government.

Another key ingredient for a low carbon growth strategy is broad, high level political buy-in. Preferably non-partisan and at least involving the Ministry of Finance (OECD, 2010).

Furthermore, an effective and balanced strategy requires that the factual basis for decision making is available, and that there is national capacity for gathering and analyzing this evidence base. Moreover, broad awareness and engagement across stakeholders helps prioritizing sectors, regions,

technologies and policy instruments. Part of low carbon growth planning is therefore to promote the improvement of the evidence base, build capacity and build awareness. This requires research, technical assistance and dissemination. It is the dynamics of this process that determine the speed of incorporating the low carbon aspect into economic growth, and the process itself can be considered as important as developing a strategy (van Tilburg and Würtenberger, *forthcoming*).

WHY LOW CARBON GROWTH FOR GHANA

Ghana can hardly be held responsible for the current buildup of greenhouse gases in the atmosphere, and is unlikely to make a significant contribution in the near term. Nevertheless, pursuing low carbon growth can be beneficial to Ghana in the long term, but also in the short term.

In the short term, taking a low carbon lens to look at development can lead to identifying (1) options that have direct positive economic and development benefits. For example by improving energy efficiency in industry and households, using agricultural waste for energy production, or improving public transport efficiency. Moreover, in the short term there is (2) international support available for mitigation actions that may have significant development benefits, such as improved cook stoves or waste-to-energy plants. This mitigation support is currently at the heart of the international climate negotiations (UNFCCC, 2010). The main international climate instruments are the Clean Development Mechanism (CDM), Nationally Appropriate Mitigation Actions (NAMAs) and Reduced Emissions from Deforestation and forest Degradation (REDD). In addition, a variety of multi- and bilateral funding sources are available. Substantial support has been pledged and especially REDD and NAMAs, both instruments under development, present opportunities (UNFCCC, 2010a, 2010b).

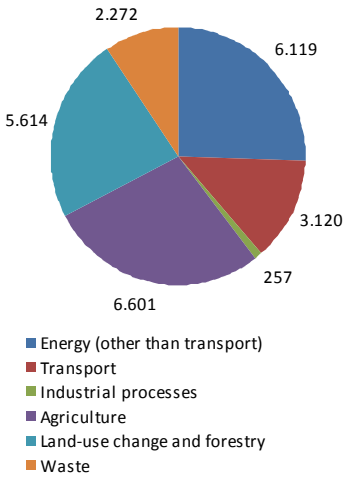

Figure 2: Ghana GHG emissions 2006 [tCO2-eq.] **Source: EPA (forthcoming)**

In the longer term, the Ghanaian economy is expected to grow significantly and pursuing a low carbon growth path poses opportunities. With economic growth in the decades to come, one will see increased pressure on natural resources such as water, on energy supply and on mobility. Pursuing efficient infrastructure and energy solutions to support this growth can contribute to (3) keeping up with these pressures associated with growth, especially in urban areas. Moreover, climate change and its response measures are expected to change the relative prices of input and output. It therefore makes sense to (4) prepare for doing business in a carbon constrained world, as there will be increased demand for products with a low carbon footprint such as biofuels or products with low transport requirements. As a co-benefit, increasing energy efficiency and moving energy production away from fossil fuels reduces dependence on high and volatile fossil fuel prices.

CURRENT SITUATION AND OPPORTUNITIES FOR GHANA

According to the second national communication to the UNFCCC, Ghana emitted about 24 Mt. of CO_2-eq in 2006 (EPA, forthcoming), which amount to around 1.1 tCO_2-eq per capita. This places Ghana at a similar profile of relatively low per-capita emissions as many other developing countries. According to EPA (forthcoming) until the mid-90's Ghana even was a carbon sink, as its forests absorbed carbon.

Today, the most important sources for GHG emissions are in the energy and agricultural sector and related to land use, land use change, and forestry (LULUCF in the language of the international climate negotiations), with emissions from the energy sector growing fastest. It is expected that GHG emissions will continue to grow with economic growth, development and an increasing population. What happens to the natural gas which is a by-product of the Jubilee oil field will also have a significant impact on future emissions.

Würtenberger *et al*. (2011) show that there have been a significant number of climate change related projects in Ghana since the early 1990s. Many of the initiatives already focus on energy and transport, and on the forestry sector. Involvement of the private sector has been relatively low, especially in the light of the investments needed in the future.

The energy sector is confronted with growing demand, and new plants are likely to be fossil fuel based. The recent gas find presents opportunities for replacing power production based on heavy fuel oil (van Tilburg and Würtenberger, 2010). Moreover, there is considerable renewable energy potential, but low, subsidized electricity prices present a major barrier. In 2007/8, there was a successful program that introduced 6 million energy efficient compact fluorescent light bulbs (CFLs) in Ghanaian households. CFLs tend to reduce energy costs and leave more electricity available for other purposes. Currently, there is still significant potential for improving energy efficiency in households and industry.

Ghana's transport system is road-based with a large informal sector of taxis and minibuses, and particularly in the cities congestion and pollution are increasing. An environmentally friendly urban transport project using high occupancy buses running in dedicated lanes is underway after initial resistance to change from the current informal public transport sector. Moreover, an inter-city rail service between Accra and Tema has been inaugurated. However, there is still an urgent need to improve both city planning and transport planning.

In 2008, it was estimated that wood fuel in the form of firewood or charcoal still accounted for more than two thirds of energy consumed. Wood fuel that originates from a sustainably managed forest, burnt in a clean way, is carbon neutral. However, reality is less ideal and forests are under pressure. There is potential for improving the efficiency of cook stoves and charcoal production, and for reducing emissions and reducing pressure on forest degradation.

The use of wood for fire wood and charcoal production has been one of the drivers of deforestation, leading to a loss of carbon stock in the forest, and lower ability to absorb carbon form the atmosphere, but also contributing to soil erosion, changing local climatic conditions, and a loss of rural livelihoods. Ghana is currently involved in the World Bank Forest Investment Program (FIP) and has prepared its REDD Readiness Proposal for the World Bank's Forest Carbon Partnership Facility (FCPF). The challenge in the coming years lies in moving these and other forestry related initiatives to successful implementation.

REDD+ and low carbon development

REDD stands for 'reducing emissions from deforestation and degradation', while the 'plus' refers to inclusion of other activities, such as the sustainable management of forests and the enhancement of forest carbon stocks. Many of the drivers of deforestation are linked to economic interests: agricultural expansion, wood extraction for timber and production of charcoal, and infrastructure developments. In order for REDD+ to be effective, it will need to be linked to low carbon growth planning. Most obvious links are between forestry and energy and agriculture. (*Source: REDD-net*)

NEXT STEPS

In 2010 Ghana has embarked on a process to create a policy framework for climate change. The first milestone of this National Climate Change Policy Framework (NCCPF) is the presentation of the discussion document *Ghana goes for green growth* (MEST, 2010), which explores what climate change means for Ghana, and what is needed to address low carbon growth, adaptation and social dimensions of climate change. The document does not present priorities for sectors, regions, technologies or instruments, but calls for a national dialogue.

To identify the short term benefits of low carbon growth, two concrete areas require attention:

(1) Involve the private sector to identify and implement options that have direct positive economic and development benefits. When government creates the right regulatory framework and fiscal environment, the private sector can typically undertake required investments in many areas related to low carbon growth. In addition, foster cooperation between government and private sector to identify barriers to low carbon growth.

(2) Improve coordination and transparency to allow for absorbing international support for NAMAs, REDD and other climate finance sources in the short term. To become a front runner for supported actions, Ghana could actively engage in discussing and testing new climate instrument such as NAMAs and REDD, and the associated requirements for measurement, reporting and verification (MRV) of actions.

In the short term, it is important to continue building the fact base and to show concrete results. Developing and disseminating the successes of low carbon projects and programs is the best way to turn the abstract concept into tangible, concrete outcomes. Together with research and capacity building, this is the key to increasing awareness and mobilizing engagement.

Profiting from low carbon growth in the longer term requires research into what the Ghanaian economy could look like in a decade or more, how the long term development challenges interact with climate change, and how economic growth can be achieved in a low carbon manner. Such research could for example assess the future economy's exposure to carbon (footprint) pricing.

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