

**GHANA'S EXPERIENCE AT INTEGRATING CLIMATE CHANGE ADAPTATION INTO NATIONAL PLANNING**

The ultimate objective of the UNFCCC is to achieve stabilization of green house gas concentrations in the atmosphere to a level that would permit human interference with the climate system. Such a level ought to be achieved within a time frame sufficient enough to allow ecosystems to adapt naturally to climate change to ensure that food production is not threatened, and thereby foster sustainable development.

Ghana ratified the UNFCCC in 1995 and acceded to the Kyoto Protocol in 2003 thus bringing both into full force for Ghana. By these acts, Ghana bound itself to meeting the obligations under the Convention and the Protocol.

2. Climate Change has very great significance for sustainable development plans, life and livelihoods in Ghana. Climate Change is regarded generally in Ghana as a development issue. However diversity in agro climatic regions across the country from savanna grassland to tropical rainforest with varying degrees of temporal variability makes climate change discussions challenging. It underscores the necessity for integrating climate concerns into development planning for long term achievement of Ghana's development goals as set out in the GPRS and the MDGs. Currently, the GPRS II is Ghana's NSDS and the respect that this document accords climate change is quite revealing of the level of commitment this very crucial development phenomenon of our time actually enjoys in national development planning.
3. Just like many African countries, Ghana is neither able to cope with current climate variability nor adapt to the medium and long term impacts of projected climatic changes. Typically, floods and droughts continue to erode the gains made by poverty reduction programmes that have been pursued for almost two decades. Relief and rehabilitation efforts reduce substantially development budgets, and lost properties of victims of natural disasters reduce their ability to cope with the stresses associated with these occurrences. Climate Change adversely affects poor Ghanaians, affecting their health and livelihoods and thereby undermining the growth opportunities which are key to poverty reduction.

4. It is to be noted that Climate Change will further aggravate water stress, endanger food security, increase impacts from extreme weather events and displace many, and that floods, droughts and sea level rise will significantly increase the transmission of vector and water borne diseases in the country.
5. Impacts of Climate Change appear to be geographically specific, based on local climate and the natural resource base of the ecological zones, yet they engender pervasive and increased vulnerability due to their linkages with many of the activities that sustain the livelihoods of the people especially poor people.
6. The 4<sup>th</sup> Assessment Report of the IPCC confirms that African countries are likely to suffer most from the negative impacts of Climate Change since African countries have the least capacities to adapt to the impacts of Climate Change. Without taking actions to adapt to climate change, it is imminently going to be a good recipe for failing to achieve the MDG(s)
7. Historical climate data observed by the Ghana Meteorological Agency across the country between 1960 and 2000, (a forty-year period), show a progressive and discernible rise in temperature and a concomitant decrease in rainfall in all agro-ecological zones of the country. Future climate change scenarios developed, based on the forty-year observed data, also indicate that temperature will continue to rise on average of about 0.6oC, 2.0oC and 3.9oC by the year 2020, 2050 and 2080 respectively, in all agro-ecological zones in Ghana. Rainfall is also predicted to decrease on average by 2.8%, 10.9% and 18.6% by 2020, 2050 and 2080 respectively in all agro-ecological zones.
8. Scenarios of sea level changes with respect to 1990 mean predicts an average rise of 5.8cm, 16.5cm and 34.5cm by 2020, 2050 and 2080 respectively. Already at the current sea level, the east coast of Ghana, in particular the Keta area is experiencing an annual coastal erosion rate of 3 meters.
9. Ghana is therefore highly vulnerable to the various manifestations of climate change. Areas of the economy and sectors that are particularly important and would be adversely affected are:
  10. Water resources – especially in internationally-shared basins where there is a potential for conflict and a need for regional co-ordination in water management, threat to energy security through hydropower generation and impacts on fisheries.

- a. Agriculture – food insecurity resulting from declines in agricultural production as a result of declining soil fertility due to water stresses.
  - b. Natural resources productivity and biodiversity that might be irreversibly lost.
  - c. Human health, as a result of increase incidences of vector, - water-, and air-borne diseases, especially in areas with inadequate health infrastructure, leading to loss of manpower and decreased productivity and tremendous impact, and to some extent some failure of and/or stress on the National Health Insurance Scheme.
  - d. Coastal zones vulnerability due to sea-level rise, particularly roads, bridges, buildings of historical importance serving as tourist sites/attractions, and other infrastructure that are exposed to flooding and other extreme events.
  - e. Land Management - exacerbation of desertification by changes in rainfall and intensified land use poses a serious threat to land resources.
  - f. National revenue could decline as a result of the impacts of climate change on cocoa production.
  - g. Energy (hydropower) production – decreasing as result of impact of climate change on water resources.
  - h. Tourism – because of impact of climate change on coastal infrastructure and natural parks and ecosystems.
  - i. Women and poor – climate change impacts greatly on women and the poor because they depend mostly on natural resources and economic sectors (like agriculture) that are susceptible to climate change.
11. For Ghana to cope with Climate Change and thereby achieve poverty reduction, the need has been seen to pursue actions at sector and community levels for the poor to adapt to climate change by enhancing their resilience. What this means is that, adaptation and response measures are be clearly linked with the livelihoods of the people in the midst of a host of

other development challenges such as HIV/AIDs, land degradation, deforestation, loss of biodiversity, demographic changes, including rapid urbanization. Climate Change is seen as an additional socio-economic burden, quite significant, yet to date overlooked in the national sustainable development strategies. Certain actions have therefore been recommended in the context of other development challenges.

12. *The GPRS (II) has broadly cited awareness creation on the implications of climate variability and long-term climate change for the necessary steps to be followed at appropriate geographical levels and within sectors to address the adverse impacts of climate change for sustainable development.* These include:

(a) Broad actions to strengthen the capacity of the poor to cope with climate variability e.g.

- improving human resources,
- strengthening institutional systems,
- providing food security,
- placing public finances on a sound footing,
- sustainably managing natural resources susceptible to climate variability and change – e.g. water, land, and coastal systems e.g. ICAM.

(b) Specific interventions to address particular challenges of Climate Change and associated greater climate variability e.g. in agriculture.

- learning from traditional coping systems of the poor (though not very effective because climate impacts affect entire areas and not mere households.) Other external pressures make these traditional coping methods ineffective e.g. internal population dynamics, external pressures and shocks, requiring greater support from government and civil society
- strengthening of climate risk management plans of government, civil society and the private sector.

13. Sectors which have been noted to have inadequate policies, plans, programmes and practices, of relevance to Climate Change and have to urgently integrate climate concerns could be prioritized as following:

- a- Land use policies -
- b. Water management -
- c. Agriculture -
- d. Forestry -

(These factors force people to live in flood prone areas and reduce access of poor people to these resources especially in times of climate induced stresses)

- e- Human health
- f- Energy
- g- Coastal Infrastructure
- h- Tourism
- i- Disaster management

14. The challenge remains that barriers that constrain integration of climate variability concerns in these areas must be removed to enhance the resilience of poor people to cope with climate change.
15. Ghana urgently needs to take incremental interventions now to mainstream climate concerns in development planning so that climate change impacts on people are significantly induced in the coming years.
16. Many of the changes required in the transition to mainstream climate concerns may not be very costly in financial terms but these require changes in existing institutions, legislation, policies and infrastructure design. International financial support in the short to medium term would be beneficial to enable the transition. Such support would be fused into the national budget.
17. The Clean Development Mechanism (CDM) under the Kyoto protocol holds great promise for technology development and transfer and can assist Ghana to attract the much needed foreign direct investment in the energy, transport, waste, industry, land use change and forestry sectors where there are clear potentials to mitigate climate change by reducing greenhouse gas emission.

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