

**NETHERLANDS CLIMATE  
ASSISTANCE PROGRAMME  
(NCAP)**

**GHANA WORKPLAN**

## Background

1. Ghana signed the United Nations Framework Convention on Climate Change (UNFCCC) at the Rio de Janeiro Earth summit in June 1992 and ratified same on 6 September 1996. At the Twenty-Fifth Sitting of Parliament of the Fourth Republic of Ghana, held on Tuesday 16, November 2002, Parliament approved by resolution the Kyoto Protocol to the UNFCCC and thus resolved to ratify it. The instrument of ratification was deposited at United Nations Headquarters, in New York in March 2003.
2. As a Party to the UNFCCC, Ghana has prepared and submitted to the Conference of Parties (COP) her initial national communication, with funding from the Global Environment Facility and other bilateral programmes such as the Phase 1 of the Netherlands Climate Change Studies Assistance Programme.
3. Regular preparation and submission of national communications to the conference of parties to the UNFCCC is a commitment that all parties have to fulfil. In the light of this Ghana will be preparing her second national communication in line with the guidelines for the preparation of national communications for non-Annex I country Parties, adopted by the COP at its eight session (Decision –17/CP8).

## Objectives

4. Under the NCAP, the emphasis of the programme is on studies in the area of adaptation, with a specific focus on examining the linkages between poverty and climate change and the consequences of climate change on the livelihood systems of poor communities. The ultimate objective of the Ghanaian proposal is to formulate climate change policies that are consistent with the Ghana poverty reduction strategy, thus facilitating the mainstreaming of these policies into district as well national development plans.

## Purpose

5. The broad purpose of NCAP is to:
  - Identify, through investigations of the bio-physical and socio-cultural-economic environments, a range of methods by which Ghana may improve its capacity to respond effectively, efficiently and sustainably to future climate change.
  - Incorporate experience gained from the critical examination of present climate-related problems in the design of appropriate responses to anticipated but, as yet unquantifiable, future climate change.
  - Identify transferable models of good practice in response to present climate-related hazards.
  - Involve a wide range of stakeholders from governmental institutions and civil society in these investigations, in the knowledge that appropriate responses will involve the whole of society.
  - Examine the plight of the most vulnerable members of society in relation to climate-related threats, with particular reference to livelihood strategies.
  - Raise awareness of the threat of climate change among policy-makers, the private sector and civil society.

6. The specific purpose is to strengthen the knowledge base at the national level, on vulnerability and adaptation to climate change in the areas of human health, fisheries, agriculture and land management. The project will also focus on capacity building, dissemination of the outcomes of the first national communication and sensitisation of policymakers, especially parliamentarians and chief directors of relevant government ministries, on the implication of the climate change convention and its attendant Kyoto Protocol.
7. While the GPRS addresses environmental and poverty linkages through strategic environmental assessment carried out on the GPRS, there is no reflection upon the potential impacts of climate change and climate variability –particularly rising temperature and reduced rainfall on vulnerable communities. A paper linking climate change adaptation and poverty, including gender and governance issues, will be prepared to address this gap in the GPRS, and is central to the NCAP effort.

#### **Problem Description**

8. Mainstreaming climate change policies into national development plans has been a herculean task facing many countries. Efforts to integrate climate change mitigations measures into national development plans and programmes have been successful, the integration of climate change adaptation measures has seen very little success, partly because adaptation has not had the attention it deserves.
9. The Third Assessment Report (TAR) of the Intergovernmental Panel on Climate Change has contributed to the understanding of both the science and impacts of climate change by bringing to the attention of governments from developed and developing countries the need to give more serious consideration to adaptation to climate change.
10. Problems associated with climate change adaptation are mostly felt at the local level, with little or no global significance. Attracting financing to implement adaptation related programmes has always been met with stiff competition from mitigation programmes for the limited resources.
11. Whilst least developing countries (LDCs) have received some support for the preparation of their national adaptation plans of actions, small developing countries like Ghana, which find itself outside the cluster of the LDCs, seems not to have any avenue to prepare its national adaptation policy.
12. The NCCSAP2 presents a window of opportunity for Ghana to prepare her national adaptation plan of action which among others will increase the robustness of infrastructure designs, land-use planning, long-term investments, increased flexibility and resilience of managed natural and social systems, and improved societal awareness and preparedness for climate change, variability and impacts.

### **List of Planned Outputs**

13. The major output of the NCAP for Ghana will be strengthened reporting to the UNFCCC and international policy-making, as well as enhanced capacity for national policy and programme formulation with a primary focus on poverty alleviation.
14. The NCAP is expected to be implemented over a period of three years in two separate parts. Part I, will be dedicated to several studies including:
  - (i) Human health vulnerability and public health adaptation to climate change – risks and responses.
  - (ii) Fisheries vulnerability and adaptation assessment.
  - (iii) Land management, including soil erosion/land degradation and wildlife and biodiversity impacts and adaptation assessments.
  - (iv) Vulnerability of agriculture to climate change with particular focus on the impacts of climate change on cocoa production and root crops such as yam and cassava.
  - (v) Women and vulnerability to climate change.
15. In addition, Part I would also address capacity building, public awareness raising, sensitisation and dissemination of outcomes of the initial national communication and its related studies taking into consideration the outcome of the IPCC TAR of importance to the African region.
16. Mainstreaming climate change into the GPRS is a critical piece of the NCAP for Ghana. While this issue can only be fully addressed during the second Part II of the phase of the NCAP, preliminary work will begin in Part I. It is expected that Part II of this phase of NCAP should lead to the completion of a national adaptation policy, land-use planning and the implementation of concrete projects identified for the water resource vulnerability assessment carried out under the previous phase of the programme and further refined in this phase. The outputs will be fed into Ghana's second national communication.

## **Justification of Planned Outputs and Activities**

### **A Human Health Vulnerability and Public Health Adaptation to Climate Change – Risks and Responses**

17. Change in world climate will influence the functioning of many ecosystems and their member species. Likewise there will be impacts on human health. The World Health Organization estimated in its “World Health Report 2002” that climate change was estimated to be responsible in 2000 for approximately 2.4% of worldwide diarrhoea, and 6% of malaria in some middle-income countries.
18. In its Third Assessment Report, the IPCC concluded that: “Overall climate change is projected to increase threats to human health, particularly in lower income populations, predominantly within the tropical/sub-tropical countries”. The TAR further indicated that climate change can affect human health directly (e.g. impacts of thermal stress, death/injury in floods and storms) and indirectly through changes in the ranges of disease vectors (e.g. mosquitoes), water-borne pathogens, water quality, air quality and food availability and quality. The actual health impacts will be strongly influenced by local environmental conditions and socio-economic circumstances, and by the range of social, institutional, technological and behavioural adaptation taken to reduce the full range of threats to health.
19. Available statistics indicate that malaria is one of the highest causes of death in the country. No studies have been conducted in the country so far that provides the actual impact of climate change on human health. Very little, if any, is known about the impacts of climate change and climate variability on the prevalence of cerebro-spinal meningitis (CSM) in the northern section of the country.
20. It is anticipated that this programme would for the first time, provide an in-depth study and analysis of technical and policy options for the consequences of climate change on human health. The knowledge gained through this study would help in the planning and formulation of appropriate health related climate change adaptation policies.

### **B. Fisheries Vulnerability and Adaptation Assessment**

21. The exact cause-effect relationships between climate change and fish stock variability are poorly understood because the relationship is difficult to define. Considering that nearly 25 percent of the Ghanaian population live in the coastal zone and about 10 percent depend on the coastal fishery for livelihood, it is likely that any changes in the production of the fishery may impact on the socio-economic lives of the people.
22. For the past four decades, climatic conditions have been found to be changing in the country. This period coincided with the conspicuous fluctuation in the landing of the most significant pelagic species exploited by the canoe fleet.

23. Inland waters are affected hydrologically, physically, chemically and biologically by climate change. One reason for their vulnerability is that lakes, rivers and wetlands reflect human and natural events in their watersheds. Interactions with changes to their watersheds, riparian shorelines, and use of water combine to make lake and stream ecosystem vulnerable. Potential changes in quantity and quality of water reduce the ability of these waters to provide goods and services.
24. This assessment should provide technical indication of the impact of climate change resulting from changes in precipitation and sea surface and inland water temperatures on species population growth rate, yield and catchability. Moreover, as the fishing industry in Ghana is predominantly in the hands of women, this study should also address the perception of climate change risk and vulnerability for rural women and provide the appropriate adaptation options and development opportunities for aquaculture if traditional wild fishes are less stable.

**C. Land Management, Including Soil Erosion/Land Degradation and Wildlife and Biodiversity Impacts and Adaptation Assessments**

25. In addition to Ghana's commitment to the Climate Change Convention, there are also commitments to Conventions of Biological Diversity and Desertification. Under NCCSAP2, there is need to study the synergies of policies, programmes and actions that address these conventions at national and international levels. There is also need to explore how these environmental problems are underlain in the case of Ghana, by water availability and access. These issues together will be addressed as the "Land Sector" in these efforts.

**D. Vulnerability of Agriculture to Climate Change- Impacts of Climate Change on Cocoa and Root Crop Production**

26. Ghana is highly dependent on cocoa and root crops, the former for exports, thus supporting the economy as a whole, the latter as a staple, particularly for the poor. It is well established that plants are highly sensitive to changes in climate—from hours of sun, to rainfall and application of water, soil conditions, and particularly to temperature due to effects on evapotranspiration. Little work has been done on the sensitivity of these crops to climate change, and given their importance to Ghana, need to be examined further to better prepare appropriate policies and adaptation mechanisms. As women play a major role in farming it is crucial to examine gender as a factor in the vulnerability of people in this sector.

**E. Capacity Building**

27. There will be targeted capacity building activities aimed at ensuring the effective implementation of the programme. The areas for capacity building will, by theme and sector, will include, among others:
  - CBO capacity building to enhance CBO sustainability.
  - Training, especially around vulnerability to climate variation
  - Gender, climate change and livelihood risk, and
  - Population and resources scenario development – this will require some technical assistance.

28. Capacity building will take place at local, regional, and national levels. At the local level, the focus will be on strengthening training materials to address climate variability and sustainable livelihoods. At the regional level, the focus will be on adaptation in land use systems. At the national level, the focus will be within the Ministry of Environment and other ministries, on issues that will underpin a national adaptation strategy.
29. Based on the capacity building needs, various institutions that members of the national climate change committee and/or individual NGOs and CBOs will be engaged on the basis of their focal areas and capacities. Already some individual NGOs/CBOs have acquired profound strengths in the three areas listed above and these NGOs/CBOs can play a useful role in NCCSAP2.

**F. Public Awareness Raising, Sensitisation, Dissemination and Mainstreaming**

30. Ghana recognises the importance of engaging all stakeholders and major groups, especially the vulnerable, in the development of policies relating to climate change and consistent with our sustainable development goals. It is expected that this section of the NCCSAP2 should, in part, fulfil the New Delhi work programme on Article 6 of the UNFCCC (Decision 11/CP.8), by facilitating public access to information on climate change and its effects and enhance cooperation, coordination and exchange of information among government agencies, non-governmental organisations, community-based organisations as well as business private and public sectors.
31. It will also seek to promote public participation in addressing climate change and its effects and the development of adequate and acceptable response measures. The thrust will be to bring policymakers including parliamentarians and chief directors of relevant government ministries, to a level of understanding and appreciation of the broad spectrum of climate change activities using Ghana's initial national communication and the IPCC TAR the basic materials.
32. These four efforts are inter-connected. Public awareness raising will focus on material preparation for media release, based on the studies from both NCCSAP1 and NCCSAP2. Sensitization will be addressed to ministerial and chief director levels, with highly focused seminars. Dissemination of information will continue to be a core activity of EPA. Mainstreaming will focus on putting environment and climate change issues into the Ghana Poverty Reduction Strategy.

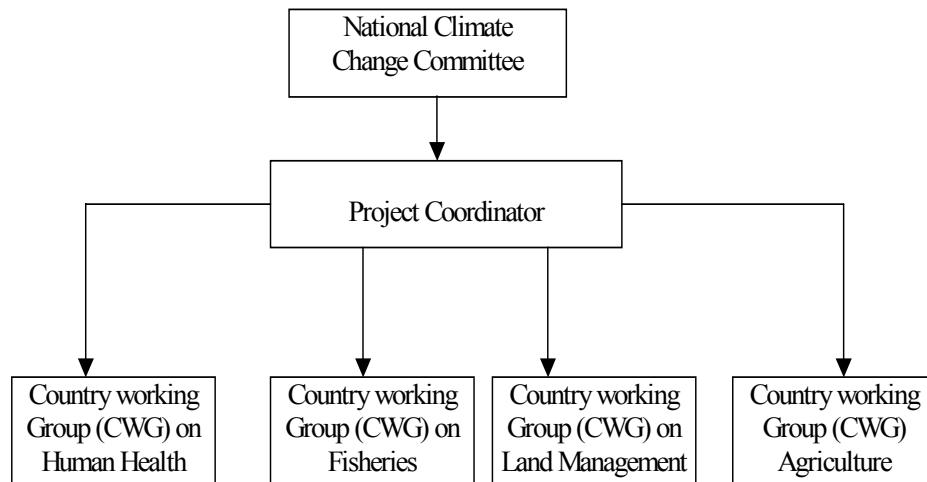
**G. Women and Vulnerability to Climate Change**

33. In keeping with the early spirit of NCCSAP2, Ghana wishes to initiate studies of women's livelihoods vulnerable to climate change. To do so, it wishes to produce a paper that tackles methodological issues in a livelihood framework that can address problems in the health, agriculture, fisheries and land sectors. Attention will be given to aide determination of the approach and early results, particularly through women's networks.

**Planned Organization structure and Co-ordination**

34. Until the proposed national Climate Change Commission is established, the Energy Resources and Climate Change Unit of the EPA shall be responsible for the co-ordination of the programme. The Project Coordinator (PC), engaged for the period of the project shall be responsible to the day-to-day management of the project.
35. The PC shall prepare local contract agreements and terms of reference for the experts and secure and make available to experts the needed resources and facilities for timely delivery of reports of studies. The PC shall communicate all necessary information to the ETC International and shall serve as the liaison between the expert teams and the international experts recruited by ETC International. The PC shall organise all necessary steering committee and project coordination meetings.
36. Sectoral working groups shall be constituted to undertake planned studies. A minimum of two experts, including a socio-economist, shall be constituted for each study.
37. The National Climate Change Committee (NCCC) shall serve as the oversight committee of the programme. The NCCC shall be responsible for the evaluation and monitoring of the project implementation and project outcomes, and shall ensure that the relevant policy recommendations are integrated into sectoral development plans.

**Figure 1. Climate Change NCCSAP2 Organisation**



### **Stakeholders**

38. A broad cross-section of stakeholders will be consulted throughout NCCSAP2, with a strong foundation of engagement through the National Climate Change Committee, which includes government, private sector, civil society, research organisations and NGO participation, as evidenced by the following organisations that participate:

- a. Environmental Protection Agency
- b. Ministry of Environment and Science
- c. Ministry of Energy
- d. Energy Commission
- e. Ministry of Finance
- f. National Development Planning Commission
- g. Meteorological Services Department
- h. Ministry of Trade and Industry
- i. Ministry of Food and Agriculture
- j. Ministry of Lands, Mines and Forestry
- k. Ghana Statistical Services
- l. Architectural and Engineering Services Limited
- m. Friends of the Earth (Ghana)
- n. Green Earth Organization
- o. Forestry Commission
- p. Ministry of Health
- q. Fisheries Department
- r. Water Research Institute
- s. Water Resources Commission

### **Timeline**

39. Figure 2 contains a timeline for activities to generate the outputs described earlier in this proposal. Some activities are discrete events, some are a series of programme interventions, and some are ongoing activities throughout the programme. The timeline attempts to capture this by Ghanaian and TA efforts. Detailed budgets are discussed in Paragraphs 41 and 42.

**Figure 2. Timeline for Part I**

<b>Activities</b> <b>Month</b>	<b>Discrete Events</b>	<b>Programme Interventions</b>	<b>Ongoing (Management)</b>	<b>Ghana Effort</b>	<b>Technical Assistance</b>
1	Gender Paper	Public awareness raising, sensitisation, dissemination and mainstreaming	↓	X	
2	Population-Resources			X	X
3	GPRS-Climate	Capacity building		X	X
4		Public awareness raising, sensitisation, dissemination and mainstreaming		X	
5				X	
6	Health Assessment			X	X
7		Public awareness raising, sensitisation, dissemination and mainstreaming		X	
8				X	
9	Agricultural Assessment	Capacity building		X	X
10		Public awareness raising, sensitisation, dissemination and mainstreaming		X	
11				X	
12	Fisheries Assessment			X	X
13		Public awareness raising, sensitisation, dissemination and mainstreaming		X	
14				X	
15	Land Assessment			X	X
16		Capacity building		X	
17		Public awareness raising, sensitisation, dissemination and mainstreaming		X	
18				X	

### **Technical Assistance**

40. The request for foreseen technical assistance follows the general thrust of the Ghanaian proposal. In terms of sectors, the single largest request is for support to the health sector. The request for support for agricultural adaptation studies TA builds on successful studies in the previous phase of the programme. Fisheries is a new sector, but one that is central to understanding local livelihood vulnerability – both coastal and inland livelihoods. The land sector TA request draws together climate change with biodiversity and desertification, as well as initiatives around water management; TA in this sector will provide a push to place environmental issues, in particular, climate change adaptation strongly into GPRS and coordinate efforts at the international level. The final request for TA assistance is to prepare urgently a position paper for use as determined by Ghana on a total population-resource scenario against climate change to 2050.

### **Names and Contact Details of Contact Persons:**

1. **Jonathan A. Allotey**  
Executive Director  
Environmental Protection Agency  
P. O. Box M326  
Accra, GHANA  
Tel. +233 21 662693  
Fax +233 21 552690  
E-mail [jallotey@epaghana.org](mailto:jallotey@epaghana.org)
  
2. **William Kojo Agyemang-Bonsu**  
National Climate Change Coordinator  
Energy Resource and Climate Change Unit  
Environmental Protection Agency  
P. O. Box M326  
Accra, GHANA  
Tel. +233 21 664697  
Fax +233 21 662690  
E-mail [wbonsu@epaghana.org](mailto:wbonsu@epaghana.org)

-end.