

# **Assessment of Adaptation Options in Ghana: Case Study of the Health Sector**

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## **Outline**

- Background
- Methodology
- Cost of implementing Adaptation Measures in the Health sector
- Specific Adaptation Measures In Health
- Lessons Learned

## **Overview of the National Climate Policy Development Framework– Introduction**

- Ghana carried out proximate estimates of the cost of environmental degradation in 1988 as a prelude to the development of a national climate change policy
- The cost of environmental degradation was equivalent to about 4% of GDP from the study
- This exercise ended in the preparation of a strategy to address key issues relating to environmental protection and climate change and became the basis of the National Environmental Action Plan (NEAP)

## **Methodology**

### **Method of Estimation**

The method of analysis involves a calculation of changes in cumulative IF, FF, and O&M costs, by investment entity/funding source combination, for individual investment types and all investment types. These calculations are designed to determine how cumulative investments by each investment entity/funding source combination would change, for each investment type and for all investment types, between the baseline scenario and the climate change scenario.

## Methodology - cont'd

- **Adaptation scenarios** - incorporates new measures to respond to the potential impacts of climate change on GENERAL HEALTH, AND MALARIA
- Investments by private as well as public sources in the base year have been calculated for time horizons 2020 and 2050.
- Estimations are based on assumption that there will be additional investment in the **HEALTH SECTOR** which will see implementation of ADAPTATION measures

## Methodology - cont'd

- Method of estimation
  - ✓ **Health sector** - based on Government budgetary allocation in 2006
  - ✓ **Malaria** – based on costs per episode and the prevalence rate for the Business-As-usual
- **Assessment Approach**
  - ❖ **Appropriately discounting was done and used for estimating the adaptation costs of the Health sector and Malaria in 2020 and 2050**

## Methodology - cont'd

### ➤ **Assessment Approach**

- ✓ The Benefit – Cost analysis method of estimation was used by employing the **NPV** approach
  
- ✓ **NPV** - Calculates the net present value of an investment by using a discount rate and a series of future payments (negative values) and income (positive values).
  - Estimations have been done using a discount rate - based on the Bank of Ghana's prime rate and charges on lending by commercial banks.
  - Investments by private as well as public sources in the base year have been calculated for time horizons 2020 and 2050.
  - Estimations are based on assumption that there will be additional investment in the various sectors which will see implementation of adaptation measures

### **Cost of implementing Adaptation Measures in the General Health sector**

- Incremental cost of adaptation in climate change - **US\$ 350 million by 2020 & about US\$ 352 million by 2050.**
  
- **Major assumptions**
  - ✓ Climate change is projected to increase the burden of climate-sensitive health determinants
  - ✓ Impacts of CC will be manifest in changes in the location and incidence of infectious and diarrhoeal diseases, increases in air and water pollution, and increases in risk of heat stress.

## **Specific Adaptation Measures In Health**

- Improved monitoring systems to detect the arrival or presence of infectious diseases
- Investment in heat-watch warning systems to warn the populations about heat waves

## **Cost of implementing Adaptation Measures Related to Malaria**

- Incremental cost of adaptation to climate change - **US\$ 7.6 million by 2020 & about US\$ 7.54 million by 2050.**
- **Major Facts**
  - ✓ Malaria treatment account for about 50% of all outpatient care in public hospitals
  - ✓ Government spending is a major expenditure item in malaria treatment in Ghana but the payment by the private sector in treating malaria is significant.

## **Cost of implementing Adaptation Measures Related to Malaria**

### **➤ Major Facts**

- ✓ Government expenditure mainly goes into operation of health facilities that treat malaria
- ✓ Families of those affected pay for the cost of treatment
- ✓ Trend of household expenditure is expected to change in the adaptation scenario if the operation of the National Health Insurance Scheme (NHIS) is sustained

## **Lessons Learned**

### **➤ Challenges/Difficulties Encountered**

- ✓ Unreliable and Poor access to data
  - Depending on the source you have different figures
- ✓ Data not disaggregated as expected
- ✓ Some information not documented and thus difficult to use

**THANK YOU**