

# **Ghana Phase II NCAP Project**

## **Ghana 2 - Output 3: Scenario Development and MCA Workshop Report**

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## Table of Contents

	<b>page</b>
1. Introduction.....	1
2. Logistics.....	1
3. Background.....	1
4. Workshop Welcome Note And Agenda Briefing.....	1
5. Presentations .....	1
5.1. Quantitative Scenarios: Logical Framework Analysis (LFA) & Multi-Criteria Analysis (MCA) .....	2
5.2. Problem Analysis with LFA, MCA, and Futures Methodology.....	2
5.3. Indicator-driven Scenario Development.....	3
5.4. Generating Scenario Inputs.....	5
6. Conclusions.....	6

## **1. Introduction**

This report represents a workshop summary of the capacity building workshop on the use of analytical tools for the formulation of national climate change adaptation strategy document (scenario development and application of multi-criteria assessment techniques). It is provided in fulfilment of Output 3 (out of 17) for Phase II of the Ghana NCAP project.

## **2. Logistics**

The venue for the workshop was the Palm Hill Hotel in Akropong, Ghana. The workshop was held over the period 23 – 25 May 2007. The Ghanaian facilitator for the workshop was Mr. William Agyemang-Bonsu (UNFCCC Focal Point, Ghana EPA). The technical resource person was Dr. Eric Kemp-Benedict (Senior Scientist, Stockholm Environmental Institute – US Center)

## **3. Background**

As part of the country's effort in developing a National Climate Change Adaptation Strategy Document, the EPA Climate Change Office organised this training workshop on the use of some analytical and decision-making tools for the team of sectorial experts. This training was slotted in the Netherlands Climate Assistance Programme (NCAP) to allow the experts to subject their adaptation strategies proposed to some comparative qualitative and quantitative analysis of diverse options to arrive at the most suitable options that will successfully harmonise with other sectorial strategies. This forms part of the technical support being given by Stockholm Environmental Institute (SEI) towards the NCAP which is currently ongoing and being hosted by the EPA, Ghana.

## **4. Workshop Welcome Note And Agenda Briefing**

The workshop started with a welcome note and a briefing of participants by the UNFCCC Focal Point (Workshop Facilitator) on the agenda and what was expected to be achieved at the end of the session. The Facilitator also introduced the Resource Person for the 3-day training workshop.

## **5. Presentations**

### ***DAY 1***

The Resource Person (RP) Dr. Eric Kemp-Benedict gave an outline of his planned programme for the 3-day training session. He highlighted on what he will go through with participants as follows:

1. Quantitative Scenarios: Logical Framework Analysis (LFA) & Multi-Criteria Analysis (MCA)
2. Problem Analysis with LFA, MCA, and Futures Methodology
3. Generating Scenario Inputs
4. Indicator-driven Scenario Development

### **5.1. Quantitative Scenarios: Logical Framework Analysis (LFA) & Multi-Criteria Analysis (MCA)**

He started off with an overview of quantitative scenarios tackling LFA and MCA general concepts. Here is a summary of what he presented:

It was explained that LFA methodology was used for objective-oriented project planning and was project focused. He also explained that MCA tool served the following purposes:

- Problem solving with conflicting objectives
- Focuses debate on relative weight of different objectives
- Project-focused, framework for consensus-building

He again emphasized the application of Scenario Analysis methodology in the following areas:

- Can be used for risk analysis
- An opportunity to significantly expand thinking
- Can be focus of stakeholder discussions
- Focuses on wider context in which project is embedded

### **5.2. Problem Analysis with LFA, MCA, and Futures Methodology**

General problem analysis utilizing LFA and MCA methodology was explained. He also tackled problem analysis by highlighting some questions that need to be answered as follows:

- Identification
  - What is the focal problem?
- Causality
  - What leads to the focal problem?
  - What does the focal problem lead to?
- Conflict
  - What conflicting goals, groups, or worldviews must be addressed?
  - What criteria should be applied to resolve conflicts?
- Problem Tree (LFA)
  - Start with the focal problem
  - What causes the focal problem? (The roots of the tree)
  - What does the focal problem cause? (The branches of the tree)
- Causal Layered Analysis (Futures Studies)
  - Start with the focal problem
  - What are the immediate causes of the focal problem? (typical focus of policy)
  - What institutions, practices, etc., allow the causes of the focal problem to persist?

- What cultural narratives support the continuation of those institutions, practices, etc.?
- LFA
  - Risk analysis and management, Analysis of assumptions
  - Seeks to anticipate conflict

He talked about MCA as a tool which seeks to anticipate, expose, discuss and resolve conflicting issues in order to integrate different options in any decision-making process. He said the output of MCA can be used as a recommendation and also to give a feedback on any process of change.

Participants at the workshop were introduced to some application software tools which were utilized in conducting LFAs, MCAs and Scenario Analysis. Examples of these tools were mentioned as follows: FreeMind, PoleStar and Driving Force.

- **FreeMind:** This tool is opensource mind-mapping general-purpose brainstorming software which could be downloaded for free. This tool was useful in project design flow chart.
- **PoleStar:** This tool was for quantitative sustainability scenario studies and provides an environment for modeling and managing demographic numerical data.
- **Driving Forces:** This software is a tool used in graphically displaying the relative impacts of driving forces affecting various sectorial units.

The tools were just introduced on the first day and their actual hands-on tutorial deferred to the second and third days of the workshop.

Halfway down the 1<sup>st</sup> day session, the Facilitator prompted the Resource Person to change course from theoretical to a practical approach so participants can fully appreciate and comprehend the practical application of the tools and methodologies being presented. Participants concurred and Instructor agreed to prepare some practical hands-on sessions to fit in the schedule for the next two days. The floor was opened for participants to discuss and make their input in respect of what they want to achieve from the training programme. By the close of the first day of training, participants together with the resource person came up with a new programme of activities to follow in order to achieve our objective.

## **DAY 2**

The day was planned for lots of hands on exercises and for the Resource Person to address other issues raised on the first day of the course discussions especially on cross-impact analysis with emphasis on application tools like Driving Force and Cross-Impact Interaction Matrices using Microsoft Excel. Day two was more of group exercises interspersed with application software tutorial exercises and one main presentation on Indicator-driven scenario development. The practical application of LFA and MCA software tools were demonstrated and some time was allowed for participants to have a hands-on trial. The day began with a presentation on 'Indicator-driven Scenario Development'.

### **5.3. Indicator-driven Scenario Development**

The summary of this presentation is as outlined below:

It was said that Scenarios can be used to:

- Expand the range of perspectives considered
- Share understanding and concerns.
- Explore and explain competing approaches to problems
- Uncover assumptions and rigorously test them.
- Expose inconsistencies in thought and assumptions
- Provoke debate
- Identify options and make decisions
- Illuminate potential problems, and bring future problems into focus
- Explore alternative responses in the face of uncertainty, and test them against different possible future paths.
- Clarify and communicate complex information and technical analysis
- Evaluate policies and help us make decisions despite the uncertain future.

Forecasting, Backcasting and ‘what if’ in scenario development were also touched on. Scenario methodology steps were outlined as follows:

1. Establish nature and scope
2. Identify stakeholders and select participants
3. Identify themes, targets, policies, and indicators
4. Identify driving forces
5. Select critical uncertainties
6. Create scenario framework
7. Elaborate scenario narratives
8. Undertake quantitative analysis (optional)
9. Exploring Policy
10. Communication and Outreach

Steps for an entire project

1. Specify boundaries
2. Select and prioritize indicators
3. Decide on a model structure
4. Time estimation
  - a) Estimate time
  - b) Decide on a schedule
  - c) Revise scope if necessary

5. Do 2-3 iterations of

- a) Develop
- b) Test
- c) Document
- d) Release

6. Release final scenarios

The subject of INDICATORS as factors that change as a result of activity interventions was highlighted. Again how INDICATORS are applied in modelling future scenarios using Polestar was demonstrated explaining how they change with parameter adjustments within a system.

### **DAY 3**

The last day of the training was planned to be a half-day session as the day in question (25<sup>th</sup> June) was African Union (AU) day and hence was declared a holiday by the State. The activity for the day was meant to consolidate and summarise all the various concepts, tools and methodologies participants have been exposed to on the first and second days of the workshop. In doing so, participants were supposed to see the big picture understand how MCA, LFA, Scenario Development and the various software tools tackled relate and interact with each other and how the process flow can be followed to arrive at a work framework or solution to a problem. The day was started of with a presentation on Generating Scenario Inputs.

#### **5.4. Generating Scenario Inputs**

RP stated that in generating scenario inputs demographic and socio-economic data could be obtained from the following sources:

- Government projections
- World Bank, IMF, or UN projections
  - Economic growth (usually short-run)
  - Demographics
- Existing scenarios
- Forecasts from NGOs
- National economic or demographic models
- Demproj
- IFs model
- IMF planning model
- Published models from literature review
- Basic approach
  - Simple extrapolation
  - Time-series methods

– Basing on past experience, using judgement

- Bayesian approach

RP stated that generating future scenarios involved eliciting likelihoods of possible future events as a result of changes in certain factors and this can be simulated using computer models.

After the presentation participants were taken through PoleStar again which was a bit more detailed than the day before. Participants were taught how to input their own data models and run the software. More or less participants were introduced into the domain of programming in PoleStar. This session lasted for a while considering the fact that it was new to most people and was a bit more difficult to understand.

After this bit, discussions were held as to the way forward; i.e. the subsequent steps to be followed to finally come up with Ghana's Climate Change Adaptation Strategy Document.

## 6. Conclusions

Participants requested for a longer duration for any such program of that nature to facilitate the learning process considering the scope and extensive content of the issues covered during the workshop. However participants found that the session was very interactive than most previously attended training programmes; i.e. interaction between instructor and students and between students during group work exercises existed and was laudable. There were a lot of group discussions and hands-on exercises on cross impact interaction matrices using EXCEL, DRIVING FORCES, FREEMIND and POLESTAR. This helped participants to have a grasp of the concepts and methodologies being taught.

The Participants, Facilitator and the Resource Person used the last hour of the day to discuss the way forward for the overall NCAP which ends in 2008. At the end of the day, the FREE-MIND software was used to produce a flow chart of activities that were outstanding in the NCAP and their sequential order as well as the timelines by which each activity was to be completed. The flowchart showing the sequence of events is as shown in figure 1. The workshop came to a close after sectorial experts were given deadlines to come up with concrete strategies in the light of the training received in order to ease or facilitate the inter-sectoral cross impact analysis which needs to be done at the next stage.

The following steps were proposed for inter-sectoral cross-impact analysis:

1. Compile lists of sectoral programs & activities. To enhance understanding of other sectors:
  - a. Give each activity a short name that fits in an Excel column.
  - b. Give each activity a brief description (1-2 sentences).
2. Each group should look at impact of other groups' activities on own activities.
3. On the basis of cross-impact analysis, groups should discuss and resolve conflicting issues. This may involve revising the scope of some activities to enhance support or reduce conflict.
4. The team should identify activities with significant possibility of support and identify (and possibly remove) activities with significant conflict.

5. Pick a certain number (2-3) of activities from each sector that showed mutual support with more than one sector.
6. Look at joint impact of activities from all other groups on each group.
7. Identify activities that mutually support each other, or complete.

**Figure 1: Ghana NCAP Next Steps**

