



WORKSHOP REPORT

INTEGRATED ANALYSIS AND SCENARIOS

ACCRA, GHANA, 8-11 NOVEMBER 2005

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INTRODUCTION

The workshop on integrated analysis and scenarios was held at the request of the Climate Change Coordinator, W. K. Agyemang-Bonsu, in the Ghana Environmental Protection Agency under the NCAP program. The participants were scientists, researchers, and EPA staff from Ghana with expertise in the areas of cocoa, fisheries, health, land management, poverty, root crops, and women's livelihoods. The participants had contributed to the first phase of the NCAP program, and were preparing to finalize their reports as well as suggest projects for the workplan for the second phase.



The workshop was facilitated by Sivan Kartha, of the Stockholm Environment Institute (SEI), and Eric Kemp-Benedict, an independent consultant and SEI Fellow.

OBJECTIVES

The workshop had two main objectives, as expressed in the Terms of Reference (see Appendix A):

1. Present techniques for integrated analysis.
2. Assist in the development of the workplan for the second phase of NCAP.

An additional requirement in the Terms of Reference, to provide guidance on literature, will be satisfied by providing an annotated bibliography.

DESCRIPTION

To support the workshop objectives, the facilitators presented activities adapted from their previous work that used a combination of structured dialogs, scenario analysis, and software tools to support an integrated analysis. Many of the work products were recorded digitally. The materials used in the workshop, as well as many of the work products (especially the inputs to the workplan) are included with this workshop report as a .zip file archive, "NCAP_Workshop_SEI.zip". The contents of the .zip archive are described in Appendix B. In addition, selected workshop materials and work products are included in Appendices D-G.

There is more than one way to go about an integrated analysis. In the context of the NCAP study in Ghana, the most important goals appeared to be:

- Avoid conflicting policy recommendations.
- Discover competing claims on scarce resources.
- Inquire whether the policy proposals are likely to assist the target group, and not negatively impact another vulnerable group.
- Identify risks by anticipating counter-intuitive behavior from influential actors.

The activities targeted these issues. The workshop had five main segments:

1. Presentations by participants.
2. An introduction to scenarios and integrated analysis.
3. A series of structured dialogs between participants.
4. Demonstration and dissemination of scenario and project planning software, and a presentation by an outside speaker.
5. Work on participants' workplans.

Presentations by Participants

The participants had met together before, but had not had an opportunity to see and comment upon each others' final reports. Although some of the reports were incomplete or in draft form, the background work was sufficiently complete that the participants could assess the implications of each other's work on their own. In this segment, participants presented their work, with an emphasis on the adaptation activities they proposed to research during the second phase of NCAP. This was a critical input to the integration activities.



Introduction to Scenarios and Integrated Analysis

In this segment, the planned activities were described and motivated. The facilitators also introduced the idea of scenarios and the PoleStar scenario tool. PoleStar was presented as an integrating tool that could be used throughout the project to collect and organize quantitative inputs. This is potentially quite important for the project, because different teams, especially the

health and fisheries teams, were separately creating quantitative scenarios. While they used a common set of climate scenarios, they were not otherwise coordinated with each other.

Structured Dialogs for an Integrated Study

In the third segment, the participants engaged in structured dialogs aimed at uncovering potential conflicts and areas of overlap.



Three activities were carried out:

1. **Conflicts and Synergies:** Research teams sat together in pairs and discussed their proposed adaptation activities arranged in a cross-tab matrix. Potential areas of conflict and mutual support (synergy) were identified.
2. **Impacts on Vulnerable Groups:** The entire group together decided on a list of key vulnerable groups. Then research teams examined the implications of their proposed activities on the different vulnerable groups, looking especially for cases of unintentionally undermining a particular vulnerable group.
3. **Actors:** For each proposed activity, research teams identified key actors who could influence the outcome of an activity. Participants were urged to identify ways in which each actor could support or undermine the activity. The primary goal was risk assessment, with a secondary goal being an input to the scenarios.

Each of the activities provided inputs to the workplans, and also provided information to help prioritize adaptation activities. The prioritization did not take place during the workshop, but the material was retained by the Coordinator for a later prioritization.

Although each activity was initially planned to take about the same amount of time, in the event the first activity took longer than expected. However, the discussions were so fruitful, it was felt best to let them continue. The two remaining activities were shortened.

The list of vulnerable groups decided on by the participants is shown in Illustration 1. The list was developed in a brainstorming session, in which one of the facilitators sat with a laptop projected onto a screen, while the other facilitator led the discussion. The facilitator with the laptop used a software program, FreeMind, to create the diagram shown in Illustration 1. FreeMind is a free program that was provided to the participants.

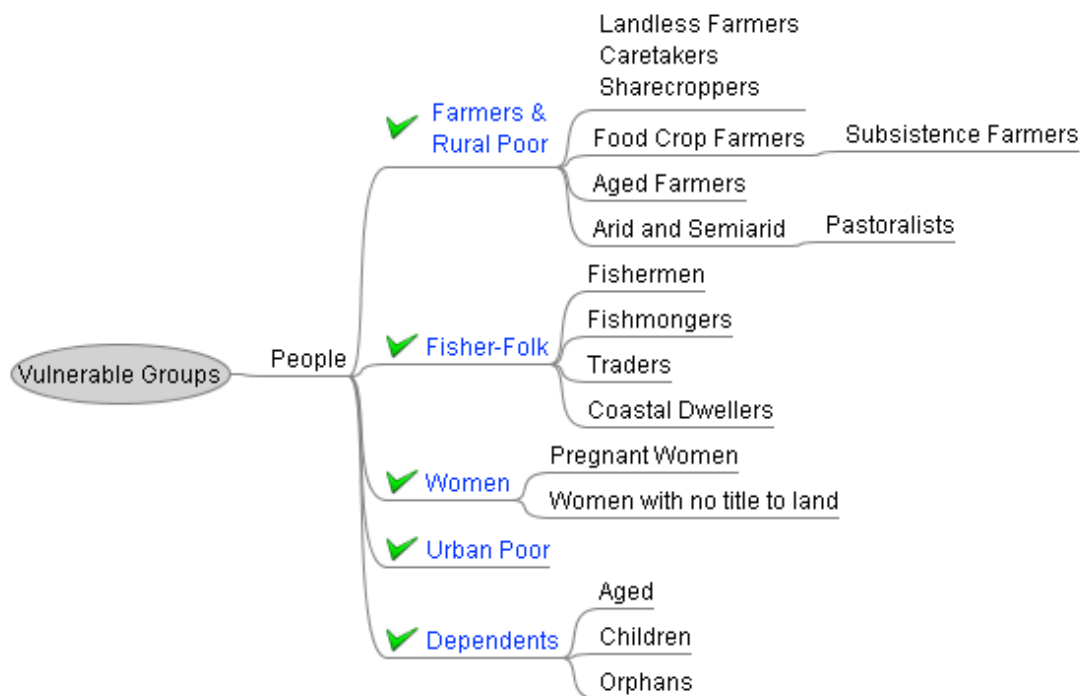


Illustration 1. List of vulnerable groups

Demonstration of Scenario and Planning Software, Guest Speaker

In this segment, the facilitators provided brief introductions to three programs. Installation files for each of the programs were provided to participants.

1. The PoleStar scenario software,
2. The NAPAssess multi-criteria analysis software,
3. The FreeMind mind-mapping software.

PoleStar is an SEI product, and different versions have been used by SEI for many years to develop global, regional, and national scenarios. A full introduction would take many days dedicated to PoleStar, so it was only feasible to give a brief introduction to the software.

NAPAssess is a tool for developing national adaptation plans under the NAPA process. Ghana is not required to produce a NAPA report, but the next phase of the NCAP work, will produce an output that is modeled on a NAPA report. Accordingly, it was felt that it would be useful to introduce the software.

FreeMind is mind-mapping software designed to easily document the output of a brainstorming session. FreeMind was used in the workshop itself to develop the list of vulnerable groups (see Illustration 1).

During this segment, the facilitators also invited a guest speaker. At the same time as the workshop, there was a separate meeting on adaptation taking place in the same venue as the workshop, and one of the adaptation meeting participants was invited to talk about financing adaptation activities.

Contributions to the Workplan

In the final segment of the workshop, participants drafted contributions to the workplan. For this purpose, they used a Word template designed by the facilitators. Given the short time, the material placed in the templates is brief, but it provides a good starting point for drafting the workplan for the second phase of the NCAP work.



SELF-EVALUATION

The workshop was successful in meeting the goals as expressed in the Terms of Reference. In spite of the relatively short time available for the two goals of the workshop – the integration activities and work on the workplans – the participants expressed appreciation for the integration activities and made good progress on their draft workplan.

In the view of the facilitators, the activities led to useful inputs to the workplans and useful insights for the participants and the Coordinator. The software demonstrated and disseminated during the workshop seemed to be useful and interesting to the participants.

Some activities were not as successful. The facilitators could have worked more closely with the guest speaker to ensure a more clearly relevant presentation. Also, the Coordinator expressed a desire to have some Logframe inputs from the participants – especially, a list of activities, indicators (with the means of verification), and risks and uncertainties. This was carried out, but was compressed into a small amount of time on the final day, and was not introduced as carefully as it should have been.

The facilitators explained when introducing the different activities that the formal handouts were there if participants wanted to use them, but were not required. Many participants seemed to find them helpful, but others preferred not to use them. This is fine, and fit with the goal of the facilitators to assist the participants in furthering their work. However, there were two problems. First, it appears that for some of the activities the instructions to the participants were not completely clear, and different research teams produced somewhat different outputs because of this. Second, it did not seem clear to all participants that the handouts and structured activities were really optional. In future workshops, more focus could be placed on the goals and outputs of activities, and the handouts and steps of the activities could then be explained in terms of those goals and outputs.

ASSESSMENT OF ADDITIONAL TRAINING NEEDS

Participants expressed a desire for further training in the use of the software, especially of the PoleStar scenario software. A full training would require between one and two weeks in a workshop dedicated to training for quantitative scenario analysis.

In the context of the NCAP work, the participants in the training workshop would be responsible for developing quantitative scenarios. For this reason, the participants should have strong analytical and computer skills and have the institutional and financial support to carry out the work.

There was also interest expressed in further training in the project planning software. Although SEI does not have any special expertise in project management, SEI staff could prepare a short training workshop (1-2 days) on the use of open-source software for project planning.

APPENDIX A: TERMS OF REFERENCE

Netherlands Climate Assistance Program
(NCAP)
Ghana

Terms of Reference

Stockholm Environment Institute

Purpose

The specific purpose of Part I of the NCAP 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. Part I of NCAP 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.

Under the supervision and direction of ETC, SEI shall carry out the following tasks no later than 1 January 2006.

Major Tasks

1. Provide guidance about best approaches and appropriate literature for the integrated approaches for the NCAP for Ghana,
2. Conduct a 4-day integrated analyses workshop in Ghana
3. Support the development of the workplan for the second phase

Deliverables

Deliverables for this task include:

1. Back to Office report (2-3 pages) that includes a summary of the guidance given in Task 1
2. Workshop report
3. Draft workplan, jointly developed with Ghanaian experts.

Budget

The budget for the three deliverables above is no more than 16,104 Euros. The budget per deliverable is 5000, and 7000, and 4,104 Euros respectively, depending on actual costs.

This budget assumes a fee of 600 Euro/day for Sivan Kartha, and 500 Euros per day for Eric Kemp-Benedict, for 8 days each of TA, for a total of 9,150 Euro. In addition, the following reimbursements will be made, based on actual costs: economy class airfare will be reimbursed up to 3,000 Euro, a per diem of 75 Euros for 5 days in Ghana, and 100 Euros for incidental travel expenses.

APPENDIX B: DESCRIPTION OF THE WORKSHOP FILE ARCHIVE

Workshop materials and work products are included in a .zip archive, “NCAP_Workshop_SEI.zip”, that is being distributed with this workshop report.

Workshop materials in the archive include:

- Descriptions of the activities, as Word documents.
- Handouts to support the activities, as Word documents.
- The daily agenda, in PDF format.
- The Word template used by the participants to draft sections of the workplan.
- Presentations by the facilitators.
- The draft PoleStar scenarios prepared by the Coordinator during a PoleStar training at SEI.

Work products include:

- The draft contributions to the workplan from each of the research teams.
- An annotated list of adaptation options proposed by the participants.
- The list of vulnerable groups as a FreeMind mind map.

APPENDIX C: EVALUATION BY THE PARTICIPANTS

Responses to Evaluation Questionnaire

1. What did you like about the session?

a) Integration activities

- Very educative
- Group sessions (especially pairs)
- This was very interesting
- ✓
- Harmonization of ideas or opinions from different groups
- Even though the atmosphere was relaxed, quantum of work was a lot
- Very useful for finding out about all sectors and components for an integrated adaptation approach.
- Liked everything (especially clarity of presentation) [items a-c were marked off]
- It was interactive and exciting
- It helps one to identify conflicts and suggest solutions to address such conflicts. Also it is a very good tool to prioritising the project for adaptation.
- It was very helpful and educative
- It offered me the opportunity to accomplish the integration section of my report.

b) PoleStar overview

- Convenient to use
- Useful as a starting point for thinking about integration
- PoleStar good, but time allotted to it was too short
- Seems to be simple to use and multipurpose
- Of interest and we for some aspects of this work.
- A little too fast to comprehend and appreciate. An in depth “hands on” approach would have been helpful.
- It is a very useful tool for scenario developing and directing policy issues.
- ✓
- Cannot tell?

c) Workplan template

- Very easy to work with, format well structured
- Useful as it allows all groups to make inputs
- Had enough time to work on the workplan. Template user friendly.
- Allows one to generate new ideas
- Easy to use
- Well set out. Clearly explained.
- Very good and easy to work with.
- ✓
- OK

d) Other activities (guest speaker, NAPAssess and FreeMind demonstrations)

- NAPAssess – well focused; FreeMind – best organized
- NAPAssess & FreeMind demonstrations too short

- NAPAssess
 - FreeMind demonstration tool made brainstorming interesting and easy for recording ideas.
 - Good and interesting (FreeMind)
 - Also useful.
 - Excellent. Need some more demonstration on FreeMind.
 - ✓
 - OK [“guest speaker” was crossed out]
2. What would you change, in the content, or approach of training, or both?
- a) Integration activities
- Format of the activity
 - Very good
 - Daily activities were too loaded
 - Some may prefer the “blank piece of paper” overall pooled contribution approach rather than [?] structures (PA style).
 - Nothing
 - It was good [items a-c were indicated]
- b) PoleStar overview
- Excellent
 - To have hands on experience in PoleStar and FreeMind
 - More detailed training
 - Fine
 - Extension of the period
 - Approach to training
 - We need more data and time to [?] this model and use it more.
 - Time allocation was not enough.
- c) Workplan template
- Could include indicators, means of verification and risks, assumptions and uncertainties.
 - No change
 - As for item (a) [some may prefer “blank piece of paper”], but this is purely a subjective comment of which you are aware and the way it was done was also fine.
 - Nothing
- d) Other activities (guest speaker, NAPAssess and FreeMind demonstrations)
- More time to be devoted to NAPAssess and FreeMind demonstration
 - All fine.
 - Approach to training
3. What follow-up activities would you suggest (such as further training and implementation or more technical assistance)?
- Training and implementation
 - Polestar for integration, further refinement of the options to include justification and prioritization
 - Further training in scenario construction

- Implementation; technical assistance
 - Further training in modelling
 - PoleStar overview
 - Some participants were quite slow in grasping the approaches behind the techniques (i.e., logframe)
 - More technical assistance
 - More technical assistance
 - Further training and implementation
 - PoleStar
4. Do you plan to use the tools and methods presented in the workshop in:
- a) The NCAP project
- Yes
 - Yes, absolutely
 - Yes
 - Yes
 - ✓
 - Yes
 - N/A [some participants were not contributing further to the NCAP work]
 - Yes
 - Yes
 - I intend using the results from the integrative activities to update section on adaptation in our report
 - ✓, the tools will help in my work
 - Yes, to fine tune section under adaptation options and integration
- b) Your work in general, beyond the NCAP project
- Yes for student training
 - Yes, absolutely
 - Yes
 - Yes
 - ✓
 - Yes
 - Already do this.
 - Research in climate variability and changes. Also climate prediction and application research.
 - Yes
 - Integrative and workplan would assist in my report writing in general.
 - ✓, the tools will help in my work
 - Yes

Other Comments

- Overall: Excellent, interactive workshop, where I think all have really benefitted.
- No handouts were provided [for presentations]
- Many thanks

APPENDIX D: AGENDA

8 November 2005	
9:00	<ul style="list-style-type: none"> • Opening Remarks • Welcome and Introductions (WAB) • Overview of the workshop: “Integrated Analysis and Scenarios” (EKB) • Group discussion of workshop goals and agenda (SK)
10:30	Break
11:00	Scenarios: Vulnerability and Climate Change <ul style="list-style-type: none"> • Presentation of preliminary scenarios (WAB) • Overview of scenarios & PoleStar (EKB)
11:45	Begin presentations of adaptation options by theme (facilitated by WAB) (15 min per theme)
12:30	Lunch
13:30	Complete presentations of adaptation options by theme (facilitated by WAB) (15 min per theme)
14:30	Break
15:00	Activity 1: Conflicts and Synergies (EKB/SK) <ul style="list-style-type: none"> • Pairs of groups meet and fill in matrix
17:00	Plenary discussion of Activity 1 (EKB/SK) <ul style="list-style-type: none"> • Each team reports specific adaptation options for revision, research, or removal
17:25	Summarize the day (SK)
17:30	End session
19:00	Dinner

9 November 2005	
9:00	Review previous day, begin first activity (EKB)
9:05	Activity 1: Conflicts and Synergies (EKB/SK) <ul style="list-style-type: none"> • Pairs of groups meet, fill in matrix, make lists of revisions/ comments to adaptation options
11:00	Break
11:30	Continue with Activity 1
12:30	Lunch
13:30	Plenary discussion of Activity 1 (EKB/SK) <ul style="list-style-type: none"> • Each team reports specific adaptation options for revision, research, or removal
14:00	Generate list of vulnerable groups (facilitated by WAB/SK) <ul style="list-style-type: none"> • Moderated plenary discussion
14:30	Activity 2: Impacts on Vulnerable Groups (EKB/SK) <ul style="list-style-type: none"> • Assign participants to groups based on vulnerable group • Meet in groups, fill in matrix, make lists of revisions / comments to adaptation options
15:00	Break
15:30	Activity 2 continued <ul style="list-style-type: none"> • Continue meeting in groups • Critique options, flag options for revision, research, or removal
16:30	Plenary discussion of Activity 2

	<ul style="list-style-type: none"> • Discuss implications of adaptation options for vulnerable groups • Decide on joint list of options for revision, research, or removal
17:25	Summarize the day (SK)
17:30	End Session

10 November 2005	
9:00	Review previous day, discuss plan for the day (EKB)
9:15	Presentation by Steve Thorne on "SSN Approach to Adaptation"
9:45	Presentation on APF (SK/WAB)
10:15	NAPAssess Presentation (moderated by SK/EKB) <ul style="list-style-type: none"> • Choose one vulnerable group to demonstrate • Go over summary process of filling in NAPAssess
10:45	Break
11:15	Exploring the PoleStar scenarios (EKB)
12:00	Start Activity 2 (Shortened) (EKB/SK)
12:30	Lunch
13:30	Finish Activity 2
14:00	Goals of the workplan (WAB) <ul style="list-style-type: none"> • NCAP IIb goals • Required sections of the workplan for a first draft
14:30	Break
15:00	Work on draft workplan in teams
17:30	"Whip-around" presentation <ul style="list-style-type: none"> • Go around table • Each team says in 2-3 minutes what was accomplished
17:30	End session

11 November 2005	
9:00	Summary of the week (EKB)
9:15	Introduction to Actors Activity (EKB)
9:30	Groups work on Actors Activity
10:30	Break
11:00	Continue work on workplan in teams
12:15	Workshop Evaluation
12:30	Lunch
13:30	Next steps and formal close to the workshop (WAB)
14:00	End Workshop

APPENDIX E: CONFLICTS AND SYNERGIES ACTIVITY¹

Goal

Uncover unexpected conflicts between adaptation options, as well as potential synergies.

Outputs

Revised list of options; multi-thematic critique of options; better understanding of all options across the project; list of potential research questions for the workplan.

Before Starting

Before the activity starts, each group should provide a list of adaptation options. Assign a notetaker. The options should be placed in a matrix, with rows and columns labeled by each option. Use large piece of paper taped to the wall.

		Group 2 Adaptation Options			
		Option 2a	Option 2b	Option 2c	...
Group 1 Adaptation Options	Option 1a				
	Option 1b				
	Option 1c				
	...				

Activity

- Groups meet in pairs. For example, the *Cocoa* group might meet with the *Fisheries* group, while the *Poverty* group meets with the *Health* group.
- Each pair looks at the cells in the matrix where their cells intersect for 25 minutes, and fills in the cell with:

R = Redundant (the two options are essentially equivalent)

S = Supporting (the two options are distinct, but support each other)

X = Conflict (the two options are distinct, and work against each other)

? = Affect is unclear (the two options might affect each other, but it not clear how)

(empty) = Neutral (the two options do not affect each other)

Example, if two of the adaptation options are...

1a. (Cocoa theme): Extend credit to small farmers to invest in borewells for crop irrigation, and

2a. (Water theme): Improve groundwater recharge by decreasing irrigated cropland.

... then the cell (1a, 2a) should be marked X to signify these two options may conflict.

- Where further research is needed on the interaction between options, the cell should be marked with an asterisk (*), and the notetaker should write down a specific research question that

1 The activity as actually carried out was modified slightly from the description on this handout.

would help resolve the uncertainty.

4. In plenary, the conclusions from each discussion are compiled and presented. Specifically, the presentation should discuss adaptation options that have been revised or removed as a result of the discussions, and research questions that have been recommended.

APPENDIX F: WORKPLAN TEMPLATE

INPUT TO NCAP PHASE II B WORKPLAN FOR _____ GROUP

(This will be used as an input to the workplan for NCAP Phase II. The Coordinator will integrate these into a single common workplan. Please draft one of these for each of your group's adaptation options. You can copy and paste these three sections below for each adaptation option.)

Adaptation Option (Please put name of option.)

Brief description of adaptation option

Please describe the adaptation option here in 3-4 sentences, explaining the actual intervention. Be as specific as you can at this point.

NCAP Phase II b Output:

Detailed description of adaptation option

Research questions

Please provide here the research questions raised in the integration workshop that should be investigated in NCAP Phase II b. You can also add any other research questions that you would also need to investigate in NCAP Phase II.

- R1.
- R2.
- R3.
- etc.

NCAP Phase II b Output:

Answers to the research questions.

Vulnerable Groups

Please explain here how the five primary vulnerable groups (and any other specific affected groups you would like to add) would be affected by this option (if at all).

- G1.
- G2.
- G3.
- ...

Actors

Please list here the key actors that can support or undermine the proposed adaptation activity.

- A1.
- A2.
- A3.
- etc.

NCAP Phase II b Output:

Explanation of how each actor can support or undermine the proposed adaptation activity.

Implementation of the adaptation option

Please write here any particular issues that have been raised in the workshop regarding the design and implementation of the adaptation option. These will be some of the issues that will be investigated in the NCAP Phaser IIb.

- 11.
- 12.
- 13.
- ...

NCAP Phase II b Output:

Detailed implementation plan, taking into account the roles of the above actors as needed.

PLEASE COPY THE ABOVE SECTIONS AS MANY TIMES AS YOU
NEED (ONCE FOR EACH ADAPTATION OPTION.)

APPENDIX G: EDITED LIST OF ADAPTATIONS

Summary of Adaptation Options

NCAP IIb for Ghana – Workshop on Integrated Analysis and Scenarios

Note: This is a summary process document, containing a sample of the key outcomes of the first integration activity. It is not meant to replace the detailed notes taken by workshop participants.

Cross-Cutting Adaptation Options

5. Afforestation/Reforestation (AR)
6. Changing/improving farming practices and varieties (CP)
7. Diversifying crops (DC)
8. Diversifying livelihoods (DL)
9. Developing water infrastructure (irrigation, water supply, sanitation) (WI)

Potential Conflicts

Irrigation

Irrigation schemes must be carefully monitored to not become a breeding ground for disease vectors. Afforestation can help reduce this problem.

Aquaculture

Aquaculture holds a great deal of promise for crop farmers, through:

- Diversifying income
- Providing nutrient-rich irrigation water
- Providing a nutritious supplement to diets

However, it also introduces risks that must be carefully managed:

- Ponds must be located outside of farms to prevent eutrophication from fertilizer.
- Ponds and associated standing water can provide breeding grounds for disease vectors if not properly managed, both over the life of the pond and through decommissioning.

Introduction of Hot Spots

One strategy for improving the resilience of cocoa farmers is to encourage food crop intercropping with cocoa. Cocoa production is in forested areas – when land is prepared for intercropping, it typically leads to decline of biodiversity. This can potentially conflict with the establishment of hot spots. A potential solution is to offer and promote alternative livelihoods, related to the biodiversity, to minimize this conflict.

Post-Harvest Technologies

Providing post-harvest technologies to reduce spoilage can increase food security and farmers' incomes. However, with current technologies, there can also be water-related health problems. To avoid this, new technologies should be adopted and developed.

Migration and Rural Labor

Encouraging out-migration from rural areas can be problematic, especially for labor-intensive food crop production, such as for yams.

Notes by Theme

Cocoa

Refers to the cross-cutting options CP, DC, DL, AR, WI. In addition, adds the following option:

- Food crop intercropping for temporary shading.

Poverty

Refers to the cross-cutting options AR, DL, WI. In addition, adds the following options:

- Establishment and management of land use plan for hot spots.
- Enhancing food security by storing food in national banks/silos.
- Enforcement of coastal land use planning, through the provision of incentives & strengthening institutions.
- Promoting and developing alternative energy sources, such as biomass, wind & hydro.

Roots & Tubers

Refers to the cross-cutting options CP, DL, WI. In addition, adds the following options:

- Marketing strategies.
- Post-harvest technologies.

The following research topics were identified:

- Look for best type of irrigation system for cocoa (small-scale).
- Encourage traditional coping strategies.

Land

Refers to the cross-cutting options AR, CP, DL, WI. In addition, adds the following options:

- Moisture conservation.
- Livestock-crop integration.
- Judicious integrated use of fertilizers.

Fisheries

Refers to the cross-cutting option AR (along water bodies). In addition, adds the following options:

- Aquaculture, if accompanied by proper pond construction systems
- Wastewater use
- Cage culture
- Restocking of fingerlings
- Disease monitoring
- Education, through:
 - Creating awareness during dry & rainy season
 - Educating people to consume lesser-known species
 - Enforcement of laws for cultivating along river banks
 - Observation of cultural practices

Health

Refers to the cross-cutting option WI. In addition, adds the following options:

- Vector control

- Vaccination against measles & meningitis
- Formation of community health groups
- Epidemic management
- Monitoring disease risk
- Promote nutrition

The Health team noted that the introduction of marketing strategies by the Roots & Tubers team could also have a beneficial impact on their proposal of community health groups, because it can provide a means of communication.