



Exploring Sustainable Community-based Adaptation Strategies to Climate Change

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Introduction

Well accepted both scientifically and politically that climate change is real (Ladislaw et. al., 2008; IPCC, 2007)

- Adverse impacts being felt in several parts of the globe and the worst affected are the poor, natural resource-dependent rural households (Mendelsohn et al. 2007; Thomas and Twyman 2006, Adger et al. 2007).





Why focus on Adaptation?

- There is a lagged relationship between emissions and their future impacts.
- Past and current emissions have already committed the earth to appreciable changes in climate and no matter the level of mitigation efforts, adaptation is necessary to reduce impact of committed changes in climate (Agrawal, 2008).
- Some climate change is already occurring and will continue to occur in the foreseeable future.



Planning Adaptation Strategies

- UNFCCC provides that all Parties must formulate and implement national or regional programmes containing measures to facilitate adequate adaptation to climate change (Art. 4.1.b).
- A well planned and implemented climate adaptation strategy increases knowledge about future impacts of climate change (IPCC, 2007b);
- Existing experience of historical forms of adaptation provides important lessons on suitability of different forms of adaptation in different contexts (Adger et al. 2005);
- Without proper adaptation strategies, the costs of potentially adverse effects of climate change will go high.



Exploring community-based adaptation

- Guiding principle:
“although climate change is global, adaptation to the effects of climate change must be inevitably local”
- Large scale, broad based regional and even national adaptation strategies are usually so broad that certain hotspots are usually overlooked or “swallowed up” in the overall averaging of parameters.
- This paper presents a review of tools and processes/methodology used in exploring community-based adaptation strategies in the Offin River basin in Ghana.



Study Area

River Offin basin, Ghana.

Rural, predominantly natural resource dependent communities.

Major part of the River Offin basin is found in the Ashanti region within the moist semi-deciduous forests of Ghana.

The core manifestations of climate change already being felt in the basin (Gyampoh et. al., 2008; 2007):

- gradual changes in mean temperatures and precipitation,
- greater range in seasonal and inter-annual variation,
- increased frequency and intensity of extreme events, and
- potentially catastrophic transformations of ecosystems



Review of Tools and Methods

Strengths

- Qualities of the tools and processes/methodology used in exploring adaptation strategies in the Offin River basin. Areas looked at includes the usefulness, effectiveness, and suitability to the environment context.

Weaknesses

- Factors in the process of exploring adaptation strategies in the Offin basin that were considered to have been unfavourable or could work against the success or efficiency of the processes used.

The weaknesses are assessed under:

- Challenges
- Constraints



Review of Tools and Methods

Community Assessment:

Evaluation of communities to get a good understanding of the context in which the study is to be undertaken.

- The traditions, beliefs and cultural context of the community
- How decisions are made and implemented
- Major occupation; crop farmers or pastoralists
- Established local institutions and roles they play
- Structure of the communities: homogenous or heterogeneous, communal or independent;
- Community groupings or classes or caste
- Vulnerability of different groups such as households in the same community to climate impacts;
- Social networks; links with extended families, social groupings or networks.
- The communities' environmental awareness and their dependence on and value of nature.



Review of Tools and Methods

Community Assessment:

- Strengths
 - In-depth knowledge about the communities: helps to make strategies that will be well suited to the people.
 - Gives a good indication of what adaptation strategies are likely to succeed; culturally accepted
 - a good primary database of the communities is made.

- Weaknesses
 - Very little documented information on communities in the Offin basin
 - Community leaders would want to give information that will enhance the status of their communities



Review of Tools and Methods

Adaptive Capacity

Preconditions that enable actions and adjustments in response to current and future external changes; dependent both on social and biophysical elements.

Includes review of existing coping strategies

- Looks at the ability of the communities to adapt to changes occurring in their environment.
- Individual and community assets
- Sources of income, livelihood options, occupation
- Diversity of resources, i.e., human, physical, natural, financial, social
- Knowledge base
- Availability of alternate sources of water, food sources
- Sensitivity of the communities to changing climate



Review of Tools and Methods

Adaptive Capacity

○ Strengths

- A good understanding of the resilience of the people to climate change as well as their preparedness for the effects of climate change/variability.
- An insight into the current climate hazards affecting the people and how they are already coping through their own practices.
- Prompting to what strategies are likely to work and what strategies the people are likely to adopt and implement with ease.
- Makes a database of indigenous knowledge on coping strategies to climate change.

○ Weaknesses

- No historic climate studies in the basin or bench mark indicators of climate in the basin to facilitate assessing sensitivity of communities in the basin to climate change.
- Most respondents are uncomfortable responding to questions about their sources of income, income levels and all questions that are directed at wealth or assets.



Review of Tools and Methods

On-going Adaptation Projects Assessment:

Evaluation of ongoing projects or programmes that are aimed at helping the communities to better live with the negative impacts of climate change and also take advantage of opportunities that the changes in climate may offer.

- This involves an assessment of ongoing programmes/projects and/or external interventions in the basin aimed at mitigating or helping the communities to adapt to the climatic changes



Review of Tools and Methods

On-going Adaptation Projects Assessment

Strengths

- It brings out what is already being done, the advantages and disadvantages, relevance and suitability to climate change adaptation.
- Helps to know the gaps in those projects and what more is needed to be done to improve the people's ability to adapt.

Weaknesses

- Even projects which originally had no focus on climate change adaptation are said to have that aim and this makes identification of real projects aimed at climate adaptation difficult.
- Project documents are difficult to access for evaluation
- Some local assembly officials are also not forthcoming with information on on-going projects.



Review of Tools and Methods

Participatory Rural Appraisals

A range of methods that ensures active participation of all stakeholders. It emphasizes on local knowledge by enabling local people to conduct their own discussions and analysis of issues to arrive at a conclusion, with the researcher only acting as a facilitator or moderator. It facilitates information sharing, analysis, consensus building and action among stakeholders.

- Focus group discussions (FGD) were conducted in communities in the study area to get the input of selected groups on what they think will better help them to adapt to the changing climate and its effects on their livelihood options.
- Identified groups included traditional leaders and opinion leaders in the community; women only; the youth; and farmers.



Review of Tools and Methods

Participatory Rural Appraisals

Strengths

- Ensures active participation of the communities in exploring their own adaptation strategies.
- The people themselves suggest interventions which they believe will help them in adapting to the effects of climate change.
- Shows the people's understanding of things happening around them in terms of climate.
- Debates on critical issues that usually ensues amongst the people during the discussions is a very good source of indigenous perceptions and knowledge on climate change.

Weaknesses

- High tendency of the moderator of the discussion to ask leading questions or skew the deliberations in a particular angle.
- Only extroverts may speak whilst introverts speak only when called upon
- In a mixed group, opinions of influential people such as committee heads, chiefs, family heads and opinion leaders are almost always accepted by the entire group
- People who expect monetary rewards for partaking in the discussion



Review of Tools and Methods

Desk Study

Refers to an investigation of the available data and literature relevant to formulation of adaptation strategies

- A desk study of adaptation strategies implemented elsewhere in communities with similar conditions as the Offin River basin.
- The research looked at the processes involved in arriving at the adaptation strategies in other areas
- Which adaptation strategies have worked and which ones have not
- How local people have responded to proposed adaptation strategies
- Lessons learnt from various previous approaches.



Review of Tools and Methods

Desk Study

Strengths

- It serves as a source of relevant literature for the background of the study and also on past and current climate change trends as well as projections or forecasts of future climate changes
- It brings on board case studies of adaptation strategies that have been employed elsewhere and lessons learnt from their implementation.
- More knowledge is acquired on the state of the art in adaptation studies, principles, methodology/process, key concepts and expected challenges in formulating adaptation strategies.

Weaknesses

- There are not much work done on adaptation strategies in sub-Saharan Africa or areas with similar conditions.
- Accessibility to the limited work done in the area is very difficult. Most of the possible sources of good and current information such as journals are not readily available, or will require purchasing them online or subscribing to the journal.



Review of Tools and Methods

Expert contributions

Inputs from people assumed to have a high degree of skill in or knowledge of the issues of concern in exploring adaptation strategies.

Who are the experts?

- It involves consultations with experts in the area of climate change and adaptation for their experience and views on which strategies are feasible and are best suited for the communities under study.
- In-depth interviews were conducted with selected people who were found to be knowledgeable in specialised areas such as agriculture and herbal medicine to get their expert knowledge on possible adaptation strategies.



Review of Tools and Methods

Expert contributions

Strengths

- The experience of experts who have worked in the communities or different communities with similar conditions offers meaningful contributions
- Different views from authorities in the field makes it easy to know what is happening elsewhere and how relevant it may be to the study being undertaken.
- Direct correspondences from these experts, normally, are clearer than reading them from publications or text books.

Weaknesses

- Who is considered an expert?
- Finding the right experts with the needed experience in the field for their inputs and their willingness to assist is a major constraint.



Conclusion

- The tools and processes/methodology used in this study were chosen based on the availability and quality of data in the Offin River basin needed in exploring adaptation strategies.
- Flexibility of methods and active involvement of expected beneficiaries of the adaptation options ensures a better understanding of the need for adaptation and a greater likelihood of the strategies being implemented.
- There cannot be a universal methodology for exploring adaptation strategies globally.



Thanks for your attention