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Advancing Capacity for Climate Change Adaptation (ACCCA)

Analysis and Evaluation of the Pilot Action.

Project Report

Project Title	Strengthening Community-Based Adaptation to Climate-Sensitive Malaria in Emuhaya and Kericho Districts in the Western Kenya Highlands
Country	Kenya
Project site(s)	Emuhaya and Kericho
Project Leader(s)	Maggie Opondo
Monitoring Team(s)	Jon Padgham
Project Objectives	To strengthen community-based interventions to enable and support effective adaptation decisions to reduce vulnerability to climate-sensitive epidemic malaria in Emuhaya and Kericho



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I. Activities

A. Project Activities Planned

- Identify two specific locations, one in Kericho, one in Emuhaya in Western Kenya.
- Identify stakeholders, build collaboration and embed ownership.
- To acquire data and pool knowledge that creates a contextualized systems model of climate-sensitive malaria in Emuhaya and Kericho.
- To identify possible adaptation strategies, compare them using multiple criteria and select the most sustainable alternatives (including capacity building needs), and implement priority actions.
- To identify risk communication methods and materials, select appropriate ones and tailor them to the local contexts, and implement them.
- To develop and apply indicators to monitor and evaluate the performance of the overall project and pre versus post adaptation intervention, including the pilot work's utility to inform a *Regional Community-Based Malaria Intervention Strategy*.

B. Status of the activities Planned

- **Identification of Pilot Communities and Building Collaboration** - In September 2007, two communities in Western Kenya (Wekhome location in Emuhaya and Kebeneti location in Kericho) were identified as pilot communities in the project. A Participatory Rural Appraisal of the identified communities indicated their suitability as pilot communities given their contrasting ecological, social, economic, political and cultural contexts resulting in differential vulnerabilities.
- **Data Information and Inventory** - Data information has been collected by scientists in the project on the following:
 - Data analysis of household survey and establishment of indicators
 - Existing data about malaria risk and vulnerability factors (ecological, social, economic, political and cultural)
 - Local hospital data on malaria prevalence



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- Results of malaria surveys
- Weather and climate data
- Remotely sensed data for 1990- 2000; 2001- 2009
- Existing malaria interventions and those from the literature
- Assessment of existing capacity – inventory of local personnel, anti-malaria campaign programmes and NGOs
- The data information and inventory packaged and completed by July 2009
- **Identification of Adaptation Strategies** – Two adaptation strategies (Indoor Spraying in Kericho and planting Napier Grass in Emuhaya) were identified and implemented in 2008
- **Identification of Risk Communication Methods and Materials** - The multi-stakeholder team held several meetings (July, August and September 2007; and July and October 2008) that aimed at sensitizing the stakeholders (local administrative personnel, local and district health officials, health promoters and the pilot communities to risks of climate induced malaria). Training of health promoters was conducted in October 2008 with a follow-up in May 2009.
- **Development and application of indicators to monitor and evaluate the performance** – A preliminary household survey was conducted toward the end of 2007 for 300 households (150 each in Wekhome and Kebeneti). The household survey established the baseline indicators for the project. Pre- and post-intervention malaria testing of children was conducted in August 2008 and August 2009 respectively to determine the efficacy of the adaptation strategies implemented.

C. Self evaluation relative to activities executed

- The project was able to implement activities 1-4 fully but activity 5 in part. This is because the project was not able to use outputs from the project to inform a Regional Community-Based Malaria Intervention Strategy due to time and resource constraints.



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D. Challenges encountered

- Due to drought (widespread crop failure thus food shortages & lack of animal fodder) during the MAM season in 2008 – communities in Emuhaya cut down the Napier grass consequently shading of the breeding habitats was destroyed leading to normal development of malaria vectors.
- At the beginning of the rainy season parasitological malaria survey in Emuhaya indicated that the incidence of malaria had not significantly reduced (30% prevalence rate).
- Getting a sustainable alternative for the maintaining indoor spraying in Kebeneti after the end of the pilot project.

E. How these challenges were resolved

- The project will provide the materials for planting of Napier grass over a much bigger area - given the predicted El Nino rains in October 2009 while the Wekhome Community Malaria Control Programme in Emuhaya (WCMCP) will provide the labour.



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II. Outputs

A. Project goals and objectives

Goal: Strengthening community-based interventions to enable and support effective adaptation decisions to reduce vulnerability to climate-sensitive epidemic malaria in Emuhaya and Kericho

Objectives:

- Reduce vulnerability to the impact of malaria epidemics in Emuhaya and Kericho.
- Enhance collaboration targeting climate sensitive malaria that is sustainable and locally-owned between the local health institutions and vulnerable communities in Emuhaya and Kericho.
- Increase knowledge within the communities and local health institutions in Emuhaya and Kericho.
- Develop risk communication materials for climate sensitive malaria for use by other communities in Emuhaya and Kericho.

B. Important accomplishments of the project

- Embedding ownership and buy-in of pilot communities and ensuring sustainability of the project (establishment of Wekhome Community Malaria Control Group & Kiptenden Malaria Control Group and selection of health promoters).
- Mobilising the community members in actively participating in the pilot project.
- Development of risk communication materials and translated into local languages. Risk communication awareness workshops were able to sensitise the communities in the pilot project on malaria risk in the face of climate change.



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- Planting Napier grass to shade irrigation channels – Napier grass can reduce the abundance of larval stages of malaria vectors up to 88%, provides fodder for livestock and can support a handicraft informal industry (mats, baskets etc). Although scientific evidence is lacking – Napier grass appears to reduce the incidence of the maize stem borer.
- Indoor spraying of 1140 households – the target was 1200 – therefore a 95% achievement rate.

C. Key outputs of the projects and how these outputs were used or will be used.

- Napier grass planting now extended over a wider geographical area in preparation for the October 2009 predicted El Nino rain.
- Exchange visits between the two pilot communities to enable them learn from each other.