Platform
for Agricultural
Risk Management

Managing risks
to improve farmers'
livelihoods

Risk Assessment

PARM
PLATFORM FOR AGRICULTURAL RISK MANAGEMENT

Liberia

Risk Assessment Validation Workshop

Main Report Vol. 1

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Agriculture Risk Assessment Study Workshop

Volume I

MAIN REPORT

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In collaboration with:

Report prepared by:
Jallah Kennedy

Foreword

On the 14th June, 2017, the Platform for Agricultural Risk Management (PARM) in partnership with the Ministry of Agriculture and NEPAD organized a Risk Assessment Study Workshop at Boulevard Palace Hotel in Monrovia, Liberia.

PARM would like to thank the Ministry of Agriculture, NEPAD and all the participants for their active contribution to the workshop and to the PARM process in Liberia. Special thanks to the various participants who provided their valuable inputs during the discussions.

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1. Introduction

Objective of the workshop

The main objective of the RAS Workshop on Agricultural Risk Management jointly organized by PARM, the Ministry of Agriculture and NEPAD was to present and discuss the RAS study. The RAS study aimed at identifying the most relevant agriculture risks affecting both farmers and other stakeholders in Liberia, define related transformation deliverables, and guide future decisions on national strategies and programs/investments. In view of this, the workshop specifically aimed at assess the preliminary findings of the RAS study by soliciting inputs from national experts at country level in order to determine its substance and appropriateness, and where possible, provide comments and suggestions to further enrich the report. More specifically the workshop aimed to:

- Present to the participants the holistic approach to agricultural risk management proposed by PARM-NEPAD;
- Present, validate and consolidate the results of the agricultural risk assessment study carried out in Liberia;
- Identify national strategic reference documents to integrate the results of the agricultural risk assessment; including the LASIP (Liberia Agriculture Sector Investment Program)/ NAIP II (National Agriculture Investment Program. 2010-2020): A long-term program (2020) that seeks to transform Liberian agriculture and maximize the sector's contribution to economic growth, employment and income generation, food and nutrition security and poverty reduction.
- Share some agricultural risk management tools/initiatives developed by national and international stakeholders active in the field of ARM.

Background and Opening Remarks

The workshop was officially opened by the Director General of the Central Agricultural Research Institute (CARI), Dr. Walter Wiles, proxy for the Government of Liberia (GOL)/Ministry of Agriculture (MOA). It was mentioned during the allocution that more than 70% of the population of Liberia practice farming and related activities that are associated with risk and therefore the issue of risk should not be taken for granted. He also stressed that the platform for assessing risk issues is important in order to avoid increasing levels of food insecurity. Additionally, he encouraged participants to share the knowledge gained following the closure of the workshop to relatives, friends and farmer colleagues. On the other hand, Julius Bass, representing the Farmers Union of Liberia (FUN) considered the objectives of the workshop as relevant to the needs and aspiration of farmers across the country and will convey the outcome of this gathering to all his members.

2. Workshop Methodology

The workshop was subsumed into 4 sessions, each being coordinated by a chairman and assisted by a rapporteur. Working groups were formed, each constituting a range of 5-8 persons as an attempt to discuss specific assigned topics in terms of identifying gaps and shortfalls in the report.

The agenda proceeded in the following manner: **Session (1)** Opening and Introduction to the workshop objectives and expected results. **Session (2)** PARM Agriculture Risk in Liberia included topical issues such as Definition of Risks and Prioritization according to holistic approach hosted by questions and Answers (Q&A) period. The session also included Results of the Risk Assessment Study in Liberia following the holistic approach including Q&A period and setting up Working Groups. **Session (3)** Gaps of the ARM Tools included topical issues such as Identification of the gaps of the CEIGRAM study. Propositions and recommendations from the working groups and overview of some tools/initiative of the prioritized ARM. **Session (4)** Characterized by principal conclusion of the workshop and closing remarks by PARM and the Ministry of Agriculture.

Session 1: Introduction to the workshop: Objectives and expected results

PARM emerged out of a G-8 and G-20 meeting on food security and agricultural growth, which is a four-year multi-donor partnership between developing countries and development partners to make risk management an integral part of policy planning and implementation in the agricultural sector. It was mentioned that the outcome of this meeting would be meaningless if policy makers do not attempt to mainstream prioritized risks into existing policy instruments in order to facilitate implementation. In addition, it was stressed that PARM is operating in 8 countries, namely; Liberia, Cabo Verde, Cameroon, Ethiopia, Mozambique, Niger, Senegal, Uganda and Zambia. The PARM process in Liberia is unimaginably preceding faster compared to other countries.

The RAS report by CEIGRAM should be considered preliminary until gaps and shortfalls are identified by national experts and recommended solutions accordingly communicated as a further means to enrich the document. Liberia is now in the process of identifying and prioritizing risks issues associated with each sub-sector of the agriculture sector to be mainstreamed into existing policy instruments such as LASIP (1) and NAIP (2) considered as LASIP (2). Liberia initially got information on PARM at the PARM- 12th CAADP meeting side event held in Accra, Ghana.

Session 2: Definition of Risks and Prioritization according to the holistic approach

Risk was defined as an unpredictable event that results in catastrophic proportions being either reversible or irreversible impacting the livelihoods of farmers or producers of livestock and crops, which could be measured in monetary and physical losses. The key types and sources of risks where mentioned and the responsibility of managing the risks entirely rest on farmer or household, community, markets and government – meaning addressing risk issues should be seen from a holistic approach. A key point which also emerged from the presentation is that farmers are able to handle risks issues according to frequency and severity levels. This means that when frequencies are high and severity low, farmers are able to manage such risks levels using local strategies and related tools at their disposal, but largely incapacitated when frequencies are low and severity high, requiring interventions at a higher level such as the government. In such instances, it could be issues of drought, floods or storms overwhelming large populations of the farming community.

Results of the Risk Assessment Study in Liberia following the holistic approach

CEIGRAM outlined various levels of risks occurring in Liberia and explained their characteristics and impacts on agricultural production. According to CEIGRAM, some of the risks associated with agricultural production in Liberia are weather risk, biological risk, inputs risk and political risk. CEIGRAM informed participants that the methodology adopted to facilitate the assessment study was desk review of relevant documents characterizing

the agriculture sector and holding interviews with national experts in Liberia whose activities and work is related to risk management in agriculture and related fields. Also, quantitative and qualitative analysis was used to assess the frequency, severity and worst-case scenario for main agricultural risks, but these depended on the availability of data and information for each category. Further, they stressed that more information is needed to complete the analysis of data and information, but these would largely depend on the inputs of local expertise to fill in observable gaps in regards to the report.

In reaction to the presentation, participants observed that the period allotted to collect, analyze and interpret data on agricultural risk in Liberia was severely limited, and as a consequence, part of the data especially those describing the livestock, and cocoa sectors was inaccurate and needed to be further reviewed. For instance, in regard to the cocoa sector, the report claimed that price fluctuations occur every 3-4 years, but this was swiftly refuted by a representative of LACRA that instead cocoa prices were changing on a daily basis. This erratic price changes were problematic for the sector.

Moreover, livestock population in Liberia as claimed by the report far exceeds available statistics. Participants suspect that livestock especially bovines and Ndama cattle imported from bordering countries are usually slaughtered following few weeks of their arrival in the country, and may have been included in the data which is incorrect. In addition, a representative from CARI observed that it would have been helpful to the data collection efforts by CEIGRAM if the questions and information it recently developed to gather additional information were circulated far earlier to relevant stakeholders for feedback than now. The request for provision of data and information at this moment was not appropriate and timely, and could possibly result in fielding inaccurate data and information. Therefore there was the need to allocate adequate time for accessing and fielding the most appropriate information and data necessary to update and further improve the report.

In response to these concerns, CEIGRAM informed the participants that the report should be considered preliminary and work-in-progress, but finalization or completion of the report was dependent on additional information and data. Moreover, it reminded participants that this was not a validation exercise, rather an assessment of the report to mainly identify gaps. Additionally, CEIGRAM stated that the unavailability of adequate data and information constrained most of its efforts to finalize the document.

Participants also observed that the description of data on post-harvest losses was inaccurate. A representative from WFP informed that a 2008 report on post-harvest losses was available; CEIGRAM could access this material to further enrich its presentation. In response to this CEIGRAM stated that the report was accessed and formed part of its assessment.

Working Groups

A total of six working groups were formed, each comprising 5-8 persons to discuss topical issues emerging from the CEIGRAM RAS report. The aim of organizing the working groups is to provide the opportunity to each participant to contribute measurably based on area of expertise. The groups are post-harvest losses, inputs risk on production, biological risk, climate risk, weather risk and marketing risk.

Report from working groups

Biological risks

The working group on biological risks based on field experience estimate that the average post-harvest losses occurring during harvesting, drying, handling operations, farm storage and at the market level for most crops range from 20 – 32.5 %. For instance, rice, cassava, and cocoa are each estimated at 20%, while vegetables account for 30-35%. In terms of the most prevalent crop pests and diseases that impact plant health, the group is in agreement that all crop pests and diseases listed in the report are accounted for in Liberia, but infestation levels varies per crop. Accordingly, the risk levels of rice and cocoa is considered high, while rubber and palm oil is low and the risk level for cassava is medium.

Climate risks

Owing to field knowledge and long-term experience, working group on climate risks intimated that the risk factor for crop yield losses as a result of climate or weather effect is estimated at medium to low and very low. On a regional basis, Nimba (cassava), Grand Bassa (oil palm) and Margibi (rubber) is less than 20% or considered as very low; while Lofa (cocoa &coffee) and Bong (rice) is either 25% or greater than 30% recorded as medium. Main factors attributed to the effect of crop losses are excess rain, floods, extreme dryland, and soil borne diseases.

Weather risks

Nationwide, according to the working group on weather risks, rice and cassava considered as major staple crops suffer severe flooding due to heavy rainfall intersperse with windstorm, resulting in lodging of crop plants thereby

restraining plant growth.

Post-harvest losses risks
Post-harvest losses working group estimate that post-harvest losses attributed to rice, cassava and vegetables are recorded as very high or greater than 35%, while cocoa is recorded as very low or less than 20%.

Inputs risks on production
Inputs risks associated with production are described by the working group as poor viability of seeds due to improper storage. Also, the poor handling and usage of chemical fertilizers and pesticides and related inputs is attributed to limited experience and knowledge by extension service providers. The limitation on use and application of these inputs restrains productivity, the group asserts.

Market risks
Working group on market risks was charged with the task of identifying the risk factor that impacts market price for main agricultural commodities. They identified the main risk factor as poor quality which results in poor handling, drying and storage. Rubber and cocoa are considered as cash crops in Liberia and market prices are calculated based on prevailing international market prices. In the case of cocoa, prices are determined based on grade levels (i.e. grades 1-3) in order to meet international market standards and acceptability.

However, the group did not provide time series data to understand the movement of prices from one period to another. In the case of other commodities such as cassava, palm oil and vegetables, the group was unable to provide information on prices. According to the group, price variability especially for cocoa is high with frequency range of 2-3 years, and in the worst-case scenario price dropped from US$2,480/ton to US$400-500. For other agricultural commodities such as vegetables, palm oil and cassava, price variability is said to be very high, with annual noticeable frequencies of 5-10%; and in the worst-case scenario it is assumed to be 15%.

Session 3: Gaps of the ARM tools

Overview of some tools/initiatives of the prioritized ARM

According to CEIGRAM report, agricultural risk in Liberia is prioritized in the following ranking order; and the provision of tools for addressing risk:
1) heavy rainfall resulting in floods
2) post-harvest losses
3) crop pest and diseases
4) livestock pest and diseases
5) human health
6) and price risk
7) Others are political risk
8) inputs risk on production
9) and windstorm

In terms of the appropriate tools to adopt following the above incidences, road improvement and drainage is to floods, but taking into consideration the establishment of information system and early warning for preparedness; as provision of training for extension service providers and improvement of infrastructure is to post-harvest losses.

Also highlighted in the presentation is the provision of training in plant health management and setting up diagnostic laboratories for analysis of plant diseases, while also ensuring increasing inputs availability and information on use and building a vibrant information system as well as early warning apparatuses is to crop pests and diseases.

Livestock pest and diseases as well as human health can be addressed by improvement of veterinary services and setting up an epidemiology unit and diagnostic laboratories for animal health, but at the same time setting up information system to improve preparedness and early warning.

In terms of price risks, the most appropriate tools to use would be to set up market information and early warning systems, while ensuring the establishment of food reserves and promoting market liberalization and setting standards as well as other regulatory regimes. The presentation further emphasized that the most appropriate tools to address political risk is by strengthening institutional framework and ensuring security of land rights. Regarding inputs risk on production, it emerged that agro- inputs markets and distribution chain should be further strengthened, but ensuring that both extension agents and farmers gain access to available training on the knowledge and application of farm inputs. Risk associated with windstorm can be addressed by putting into place

information system and early warning.

Overview of some tools/initiative of the prioritized ARM

The presentation centered on risk identification, assessing the risks and how to prioritize as well as manage them. In addition, it also took into consideration layers and levels of risk management and the available tools to address them.

The presentation showed that Risk management as a system involves a holistic approach taking into account the involvement of farmers, government, and others requiring the utmost cooperation and investment. According to the presentation, the responsibility of managing the risk entirely rest on each layer and levels of the risk management chain. The implication is risk can be managed at the different layers and levels based on the frequency and severity. For instance, at the farmer/household level, frequency is assumed to be high with low severity; but instances where frequency is low and severity is high, the farmer household may not be in a position to address such situation due to very limited capacity.
The presentation also stressed the importance of the instruments and strategies that could be applied prior to and before the event depending on the layers and levels of managing the risk. It showed how risks can be reduced, mitigated and coped with, pointing out the responsibilities of each and every layers and levels of management.

3. Closing Remarks

PARM thanked the participants for their commitments and contributions to the workshop. It was mentioned that the participants were very sharp and provided useful information that could enrich the RAS report. Patrick Worzie, Assistant Minister of Agriculture for Planning and Development, on behalf of GOL/MOA expressed thanks and appreciation for responding to the invitation to attend the ARM workshop. NEPAD recognized the great efforts of participants.

5. Annex

Annex 1: Agenda
Annex 2: Lists of participants

Annex 1: Agenda

Time	Discussion & Content	Speakers	
SESSION 1: OPENING & INTRODUCTION		**Organisation**	**Name**
	Chair: Ministry of Agriculture		Patrick T. Worzie
8.30-9.15	Registration of participants	PARM-MoA	Jallah Kennedy- Musu Flomo
9.15-10.15	Opening Remarks	MoA	Minister of Agriculture Hon. Seklau Wiles
	Introduction to the WS : objectives & expected results	PARM	Massimo Giovanola (tech. spec)
10.15 - 10.45	Coffee break/ group photo and media		
SESSION 2: AGRICULTURE RISKS IN LIBERIA			
	Chair: Patrick T. Worzie (MoA) **Rapporteur:** MoA		
10.45 - 11.15	**Definition of Risks and prioritization according to the holistic approach** Q&A	PARM	Imaine Abada (ARM country tech. support)
11.15 – 12.00	**Results of the Risk Assessment Study in Liberia following the holistic approach**	CEIGRAM	José Maria Sumpsi Fernando Escribano
12.00- 12.30	Q&A+ Working Groups		Participants
12.30 – 14.00	Lunch break		
SESSION 3: GAPS OF THE ARM TOOLS			
	Chair: Massimo Giovanola **Working Groups**		
14.00-15.00	Identification of the gaps of the CEIGRAM study, propositions and recommendations	WORKING GROUPS	Constitution of 5-8 working groups
15.00-15.45	Working groups' results restitution	WORKING GROUPS	Rapporteur of each working groups
15.45-16.15	Coffee break		
16.15-17.00	Overview of some tools/initiative of the prioritized ARM	CEIGRAM	José Maria Sumpsi Fernando Escribano
		PARM	Jallah Kennedy
SESSION 4: CONCLUSION			
17.00-17.15	**Principal conclusions of the WS**	PARM	Massimo Giovanola
17.15-17.30	**Closing Remarks**	MoA	Representative Ministry of Agriculture

Annex 2: Lists of participants

Name	Title
Hon. Charles McLain	Deputy Minister, Planning and Development
Hon. Patrick Worzie	Assistant Minister/CAADP Focal Person
Dr. Walter Wlies	Director, CARI
Dr. Arthur B. Karnuah	Animal Geneticist, CARI
Department of Regional Development, Research and Extension (DRDRE)	
Edward Perry	Director, Extension Service
Alaric N. Mienwipia	Agronomist
Theophilus Baah	Agronomist
Amos Zeon	Agronomist
Monica K. Honore	County Agriculture Coordinator
Department of Planning and Development (DPD)	
Henry Bundor	M&E Officer
Musu Flomo Bendah	Director, Planning & Policy
Augustine Dweh	Director, Statistics
Baron Bartuah	Statistician
Katurah Woods	Planning Officer
Department of Technical Services (DTS)	
Gamonyou A Sam	Entomologist
Roland Varkpeh	Director, Livestock
Gregory Tarplah	Director, Crop Resources
Project Management Unit , MOA	
Yoko Nyanbeanquoi AAgon	Agricultural Economist
Liberian Hydrological Services	
Anthony Kpadeh	Director
National Standards Laboratory	
Pius Adjrho	NSL
Forestry Development Authority	
Rebecca Kalayai **Stephen Wilson**	Agro-Dealers Association
Financial Institutions	
Comfort Y. Mohn	Afriland First Bank
Universities	
Dr. Kpadeh Koikoi, Professor **Peter Korvah,**	University of Liberia College of Agriculture & Forestry)
Hannah M. Farr **Caroline Nyaplue**	Cuttington University
Farmers Union Network of Liberia	
Julius Bass	
Farmers Associations	
Ruth N. Bondo **Morris Teah** **Nancy Jackson**	DOKODAN Farmers Cooperatives (Nimba)
Kollie Newman	Love and Unity Farming Group
Patrick Sama	Voinjama Farmers' Cooperative Society (Lofa)
James yeawolee	Livestock Farmers' Association (Lofa)
Priscilla Nabil **Francis Taliwoe**	Winners' Women Farming Group Kwapagei Framers Association
Lorpu Gizzie **Musu Tuah Younn**	Progressive Women Farming Group County Agri. Coordinator
Development Partners	
Jackolie Mulba	Agriculture Development Officer, USAID
Jobson R. moma	Program unit FAO
Anderson Emmanuel	WFP
Lonnie Herring	WFP
Non-Governmental Organizations/Civil Society Organizations	
Marvelous Queejaoy	ACDIVOCA
Laveto Akoiforkpa	ACDIVOCA
Maxim Kumeh	Integrated Development Consultants (IDC)
Liberia Agriculture Commodity Regulatory Agency, LACRA	
Urias Tumu	

Kenneth Kafumba	
Etagegnehu D. Belayneh	
Samuel N. Koffa	Community Forestry Specialist
Charlene Freeman	Cuttington University
Charlenev Talery	

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