Platform
for Agricultural
Risk Management

Managing risks
to improve farmers'
livelihoods

Knowledge Management

PARM
PLATFORM FOR AGRICULTURAL RISK MANAGEMENT

Agricultural Risk Management: practices and lessons learned for development

K-Sharing & Learning Workshop

25th October 2017
IFAD HQ, Rome, Italy

Main Report

Volume 1

AFD
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PLATFORM FOR
AGRICULTURAL RISK
MANAGEMENT

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Workshop Report

Agricultural Risk Management: practices and lessons learned for development

K-Sharing & Learning Workshop

Date:
Wednesday, 25 October, 2017

Venue:
International Fund for Agricultural Development (IFAD)
Italian Conference Room
Via Paolo di Dono, 44
00142 Rome, Italy

Main Report
Volume 1

Workshop report developed based on the notes of:
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Zodidi Sivetshe NEPAD

Foreword

The Platform for Agricultural Risk Management (PARM) is an outcome of the G8 and G20 discussions on food security and agricultural growth. PARM is a four-year multi-donor partnership between the European Commission (EC), the French Development Agency (AFD), the Italian Development Cooperation (DGCS), German Cooperation (BMZ/KfW) and IFAD in strategic partnership with NEPAD and other development partners to make risk management an integral part of policy planning and implementation in the agricultural sector.

To foster exchanges and knowledge-sharing on initiatives implemented to strengthen agricultural risk management, the PARM and its partners organized a workshop held on 25 October 2017 at IFAD headquarters (Rome, Italy), to identify and develop practices and lessons learned as guidance for policy makers and rural development practitioners to strategically design, implement and mainstream ARM in their activities.

This workshop was designed to contribute to the development of the Publication titled "Agricultural Risk Management: practices and lessons learned for development", through the outcomes of working groups and the inclusion of 10 case studies, selected by an ad-hoc Technical Committee1, to be discussed during the workshop and included in the publication.

The Platform for Agricultural Risk Management would like to thank all of their colleagues and partners for their contribution to the workshop. In particular, PARM would like to extend its gratitude to the members of the Technical Committee for assisting in the structuration of the workshop and the selection of case studies and to the lead discussants and panelists for sharing their time and knowledge.

1 The members of the Technical Committee were: Carlos Arce, PARM; Federica Carfagna, ARC/WFP; Ilaria Firmian, ECD/IFAD; Alessandra Garbero, SKD/IFAD; Åsa Giertz, World Bank; Gideon Onumah, NRI/AGRINATURA; Mariam Soumare, NEPAD.

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List of acronyms

AFD	Agence Française de Développement
AMA IL	Innovation Lab for Assets & Market Access
ANADIA	Adaptation to climate change, disasters prevention and agricultural development for food security
ANR	Assisted Natural Regeneration
ARC	African Risk Capacity
ARM	Agricultural Risk Management
ASAP	Adaptation for Smallholder Agriculture Programme
ATA	Agricultural Transformation Agency
AU	African Union
BMZ	German Federal Ministry for Economic Cooperation and Development
CAADP	Comprehensive African Agricultural Development Programme
CABI	Centre for Agriculture and Biosciences International
CADENA	Componente de Atencion a Desastres Naturales en el Sector Agropecuario y Pesquero
CCAFS	Climate Change, Agriculture and Food Security Research Programme
CGIAR	Consortium of International Agricultural Research Centers
CIMMYT	International Maize and Wheat Improvement Center
CNCAS	Senegal National Agricultural Bank
CSV	Climate-Smart Village
EAFF	East Africa Farmers Federation
EC	European Commission
ECDPM	European Centre for Development Policy Management
FAO	Food and Agricultural Organization of the United Nations
FARMAF	Farm Risk Management for Africa
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
IBIMET	Istituto di Biometeorologia del Consiglio Nazionale delle Ricerche
IBLI	Index-Based Livestock Insurance
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries of Uganda
MAVIM	Mahila Arthik Vikas Mahamandal
MIS	Market Information Systems
MLP	Micro Livelihoods Plans
NEPAD	New Partnership for Africa's Development
NRI	Natural Resources Institute
OA	Oxfam America
PARM	Platform for Agricultural Risk Management
PBI	Picture-based insurance
PTA	Policy and Technical Advisory
R4	Rural Resilience Initiative

RAS	Risk Assessment Study
RIICE	Remote sensing-based Information and Insurance for Crops in Emerging economies
RIIMA	Resilience Index Measurement and Analysis
RPG	Replanting Guarantee Product
SAC	Catastrophe Agricultural Insurance
SAGARPA	Mexican Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food
SARRA	South Asia Rural Reconstruction Association
UCAD	University Cheikh Anta Diop
UN	United Nations
USAID	United States Agency for International Development
WB	World Bank
WFP	World Food Programme
WRMF	Weather Risk Management Facility
WRS	Warehouse Receipt Systems

Workshop Programme

Workshop Programme

1. The Context

Over the past years, many institutions have placed considerable importance on Agricultural Risk Management (ARM). Despite the experience and know-how could have been leveraged to develop more comprehensive strategies to cope with the risks, bottlenecks in terms of insufficient knowledge transfer between countries, lack of a structured lessons learned management system, and low take-up of innovation still persist in the area of agricultural risk management.

In this context, the Platform for Agricultural Risk Management (PARM) - in collaboration with its partners – has raised the need to foster the exchange of knowledge and bring together the experience available on ARM in developing countries, with the objective to build and develop an organized collection of good practices and lessons learned as guidance for policy makers and rural development practitioners to strategically implement and mainstream an holistic ARM approach at global, regional and country level.

2. The Host

The Platform for Agricultural Risk Management (PARM) is an outcome of the G8 and G20 discussions on food security and agricultural growth. PARM is a four-year multi-donor partnership between the European Commission (EC), the French Development Agency (AFD), the Italian Development Cooperation (DGCS), German Cooperation (BMZ/KfW) and the International Fund for Agricultural Development (IFAD) in strategic partnership with the New Partnership for Africa's Development (NEPAD) and other development partners to make risk management an integral part of policy planning and implementation in the agricultural sector.

PARM has the global mandate to contribute to sustainable agricultural growth, boost rural investment, reduce food insecurity, and improve resilience to climate and market shocks of rural households through a better management of risks. PARM plays the role of knowledge broker and facilitator to: enable the integration of ARM into the policy planning and investment in the agricultural sector; enhancing national stakeholders' awareness and capacities to manage agricultural risks; improve the generation, access, sharing of knowledge and strengthen synergies with partners on ARM related issues, develop methodologies for risk analysis and adoption of holistic risk management strategies.

3. The Workshop

Building on selected case studies and lessons learned on ARM-related practices, technologies or institutional arrangements, the workshops aims at facilitating knowledge-sharing and learning to draft guidelines on how to build on existing ARM experience, how to measure their adoption and impact, and how to better design "ARM-proofed" projects.

For this purpose, the workshop brings together policy makers, rural development practitioners (development and knowledge partners), farmers organizations and private sector to share strengths and weaknesses of their ARM experiences. Although a full impact assessment of different ARM initiatives is beyond the scope of this workshop, examples of detailed assessment will be conveyed.

Objectives

- Define a set of methodological guidelines and measures to help identify the key pillars for good ARM practices and guide on how to mainstream ARM into project design and investments in agriculture;
- Share knowledge and experiences on ARM tools and initiatives showcasing their strengths, weaknesses and lessons learned;
- Present how different partnerships or institutional arrangements, including public and private sector, and national or international agencies, can create opportunities for mainstreaming ARM into policies;
- Facilitate knowledge sharing, peer-to-peer, south-south cooperation and partnership-building on ARM among practitioners.

Setting-up

In preparation of the workshop, a Call for Proposal has been shared among key stakeholders at global, regional and local level with the objectives to identify good practices and lessons on ARM.

The proposals have been evaluated by a **Technical Committee** and the selected initiatives will be featured into an input document that will serve as background material for the workshop. In addition, the selected initiatives will participate and contribute to the working groups and will be showcased during the workshop. The sessions will be in the form of interactive panels and world cafés. The aim is to facilitate the learning process through the exchange between practitioners of different ARM initiatives, and the feedback received from technical experts. The outcomes of the discussions will then result in the development of a final publication on ARM tools and lessons learned.

Table 1: List of topics eligible for the workshop in terms of either source of risk or ARM tool

Sources of risks tackled in the project or initiative	ARM Tools implemented in the project or initiative
Weather:	**On-Farm and Community Level Risk Management Tools**
– Droughts	– Climate Smart Agriculture
– Floods	– Crop and Enterprise Diversification, and
– Rainfall variability, etc.	– Asset and Income Based Strategies
Biological and environmental risks	**Finance Related Risk Management Tools**
– Plant pest and diseases	– Agricultural Insurance
– Livestock diseases, etc.	– Weather Index Insurance, and
Market risks	– Agricultural Finance and Microfinance
– Access to inputs	– Remittances
– Quality of inputs	**Market Related Risk Management Tools, and**
– Output prices, etc.	– Contract Farming
Policy and institutional risks	– Commodity Exchanges and Futures Markets
– Land policies	– Warehouse Receipts Systems
– Trade policies	**Government-based Agricultural Risk Management Tools**
– Uncertain subsidies, etc.	– Public Foodgrain Reserves
Macro level risks	– Disaster Assistance Programs
– Exchange rates	– Social Protection and Productive Safety Nets
– Interest rates	**Information and knowledge Management Tools,**
– Access to finance, etc.	– Access to climate information and risk profile
Infrastructure risks	– Farm business advice
– Storage	– Capacity building and experience shared program
– Transportation	
– Post-harvest losses, etc.	

4. The Publication

The main outcome of the workshop will be a publication on "**Agricultural Risk Management: practices and lessons for development"** collecting a set of selected initiatives and including the exchanges and conclusions reached during the workshop. The publication has two main objectives:

- Document and collect best practices for agricultural risk management based on the strengths and weaknesses identified in the case studies;
- Provide guidelines for better design and assessment of agricultural risk management practices.

The publication will be directly linked to the workshop "Agricultural Risk Management: practices and lessons learned for development" held on 25 October 2017. It will follow the same outline and consolidate on the outcomes of discussions. Similarly, the workshop sessions have been designed to allow participants to contribute to the publication. (See Annex 1).

During Session 2 of the workshop, working groups will define broad criteria for effective ARM design and apply them to the selected initiatives. The outcomes of these discussions will then be collected by the PARM Secretariat, consolidated and validated with the help of the Technical Committee to form the content of the first two sections of the publication. The final session of the workshop, dedicated to linking agricultural risk management and policy, will also serve as the basis for the third chapter of the publication.

Agenda

Workshop Facilitator
Maria Magdalena Heinrich
FAO

Time	Description	Presenter
08:30 - 09:00	Registration of participants	
09:00 - 09:15	Opening Remarks	Adolfo Brizzi, IFAD
09:15 - 09:20	Workshop Objectives and methodology	**Facilitator**: Maria Magdalena Heinrich, FAO
Session 1. Setting the scene: What makes a good agricultural risk management project?		
09:20 - 10:15	**Panel Discussion** Defining key pillars for "agricultural risk proofed" projects from design to implementation and results. • From a holistic risk assessment and prioritization to the identification of tools for better design • Measuring results and impact: ARM tools for increasing resilience	**Facilitator:** Carlos Arce, PARM **Panelists:** Gideon Onumah, NRI Fabio Bedini, WFP Federica Carfagna, ARC Jonathan Hellin, CIMMYT Marco d'Errico, RIIMA/FAO Alessandra Garbero, IFAD
10:15 - 10:30	**Panel Discussion Q&A**	**Facilitator:** Maria Magdalena Heinrich, FAO
10:30 - 10:45	**Coffee Break**	
Session 2. Drawing lessons from the field: how to learn and assess good practices to manage risks?		
10:45 – 12:15	**Group Discussions** The group discussions will aim at jointly define a set of methodological guidelines and criteria to identify good practices on ARM tools, including potential indicators and measurement on their impact. Participants will then apply their criteria to one of the selected initiatives. Participants will be grouped by thematic blocks: 1. **Climate risks** **GROUP 1:** Federica Carfagna, ARC- Africa Risk Capacity. Lead discussant: Carlos Arce, PARM **GROUP 2:** Dhanush Dinesh, CCAFS – ASAP. Lead discussant: Aly Mbaye, UCAD **GROUP 3:** Manoj Yadav, GIZ – RIICE. Lead discussant: Francesco Rispoli, WRMF/IFAD **GROUP 4:** James Hansen, CCAFS – Climate services for ARM. Lead discussant: Paxina Chileshe, IFAD 2. **Market and price risks** **GROUP 5:** Norbert Tuyishime, EAFF – eGranary. Lead discussant: Steve Hodges, Uganda Agribusiness Alliance **GROUP 6:** Gideon Onumah, NRI – FARMAF. Lead discussant: Jonathan Agwe, IFAD 3. **Biological and environmental risks** **GROUP 7:** Rupsha Banerjee, CGIAR - Index-based Livestock Insurance. Lead discussant: Julio Pinto, FAO 4. **Policy and institutional risks** **GROUP 8:** Hijaba Ykhanbai, JASIL. Lead discussant: Lauren Phillips, IFAD 5. **Integrated approach (more than 2 types of risks)** **GROUP 9:** Arun Khatri-Chhetri, CGIAR – Climate smart villages. Lead discussant: Joseph Mulema, CABI **GROUP 10:** Fabio Bedini, WFP – Rural Resilience Initiative. Lead discussant: Mariam Soumare, NEPAD	**Facilitator:** Maria Magdalena Heinrich, FAO **Lead Discussants:** Lead Discussants: Jonathan Agwe, IFAD Carlos Arce, PARM Paxina Chileshe, IFAD Michael Hamp, IFAD Steve Hodges, Uganda Agribusiness Alliance Aly Mbaye, UCAD Joseph Mulema, CABI Lauren Phillips, IFAD Julio Pinto, FAO Francesco Rispoli, WRMF/IFAD Mariam Soumare, NEPAD **Presenters:** Rupsha Banerjee, CGIAR - Index-based Livestock Insurance Fabio Bedini, WFP – Rural Resilience Initiative Federica Carfagna, ARC- Africa Risk Capacity Dhanush Dinesh, CCAFS – ASAP Jim Hansen, CCAFS – Climate services for ARM Arun Khatri-Chhetri, CGIAR – Climate smart villages Gideon Onumah, NRI - FARMAF Norbert Tuyishime, EAFF - eGranary Manoj Yadav, GIZ - RIICE Hijaba Ykhanbai, JASIL
12:15 - 12:45	Report Back from groups: recommendations	Group reporters **Facilitator:** Maria Magdalena Heinrich, FAO
12:45 - 13:45	**Lunch**	(...)

(...) Time	Description	Presenter
SESSION 3: ARM Practices and lessons for development		
13:45 - 15:45	**"Information Market" showcase** *(Parallel Sessions).* Participants will be free to move around the information market to learn the opportunities and challenges of selected initiatives. The showcase will be organized in two rounds. For each round, initiatives will be presented in parallel sessions grouped by thematic topics: **A. Fostering integration of ARM into policies** – ANADIA, IBIMET – Rural Resilience Initiative, WFP – FARMAF, Agrinatura **B. From germination to the market: transforming risks into opportunities** – Commodity exchange trading Ethiopia, ATA – Integrated grain value chain lending and insurance/ Feed the Future RTI – Replanting Guarantee, ACRE Africa **C. Using farm practices to manage risks** – Hydroponic grass, MAVIM – Farming with Indigenous Micro Organisms, SARRA – Assisted Natural Regeneration, IFAD **D. Innovation against climate and biological risks** – Picture based insurance, IFPRI – Bima Maono Climate and agro-insurance, KfW VFI – Agro-met tools, FAO **E. Accessing information to manage risks** – Digital Inclusion, FAO – EMPRES-i/EMA-I, FAO – Plantwise, CABI **F. From insurance to social protection** – CADENA Mexico, FAO – Agricultural Index Insurance, Feed the Future/USAID – Weather Risk Management Facility, IFAD/WFP **G. Managing climate and market risks at macro and micro levels** – RIICE, GiZ – Climate Smart Villages, CGIAR – eGranary, EAFF	**Facilitator:** Maria Magdalena Heinrich, FAO **Presenters:** Vieri Tarchiani, IBIMET Fabio Bedini, WFP Gideon Onumah, NRI Tewodros Demeke, ATA Jean-Michel Voisard, Feed the Future Senegal Stewart McCulloch, VisionFund International Indra Mallo, MAVIM Shindhe Shiva Shankar, SARRA Alice Brié, IFAD Berber Kramer, IFPRI Stefan Hirche, KfW Ana Heureux, FAO Henry Burgsteden, FAO Julio Pinto, FAO Joseph Mulema, CABI Niclas Benni, FAO Jennifer Cissé, Feed the Future/USAID Francesco Rispoli, IFAD/WFP Manoj Yadav, GIZ Arun Khatri-Chhetri, GCIAR Norbert Tuyishime, EAFF
15:45 - 16:00	**Coffee Break**	
SESSION 4: Mainstreaming ARM holistic approach into policy for better design and investment		
16:00 - 16:10	Wrap up: Summary of Session 1, 2 and 3	Carlos Arce, PARM
16:10 - 17:00	High-level Panel discussion The panel will present the experience of countries that have managed to integrate ARM into the national policies through a holistic process and discuss the role of public-private partnerships for enhancing investments in agriculture.	**Facilitator:** Mariam Soumare, NEPAD **Panelists:** Hon Vincent Frerrio Bamulangaki Ssempijja, Minister of Agriculture, Animal Industry and Fisheries, Uganda Michael Hamp, IFAD Graziella Romito, Ministry of Agriculture, Italy Haladou Salha, AU-NEPAD Jost van Odijk, GROW Africa Francesco Rampa, European Centre for Development Policy Management
17:00 - 17:30	Q&A and plenary discussion	**Facilitator:** Maria Magdalena Heinrich, FAO
17:30 - 17:45	Closing Remarks	Michael Hamp, IFAD
17:45 - 18:30	'*Italian Aperitivo*' Networking and Exhibition Area	

Workshop Outcomes

Opening remarks

Adolfo Brizzi IFAD

The workshop was launched with the opening remarks of Adolfo Brizzi, Director of the Policy and Technical Advisory Division (PTA) in IFAD.

Adolfo Brizzi started off by stating that there is a consensus that Agricultural Risk Management is crucial for empowering farmers. Through integrating risk management in policies and programming, it is possible to ensure that farmers livelihoods are not threatened by risks, and that communities can build resilience. Investing in rural people is IFAD's mandate, and agricultural risk management is clearly one of the tools that can be used to create incentives and empower farmers to leverage investments.

However, he showed that there is not yet a consensus on how to assess, design and integrate ARM practices, once the specific risks and tools are identified. Bottlenecks in terms of lacking capacity, insufficient knowledge transfer between countries, and low take-up of innovation persist in the area of agricultural risk management. Moreover, risks are still assessed based on perception or solutions-oriented. There is a lack of a standardized methodology to provide evidence-based risk assessments and prioritization.

To achieve this consensus, he explained that we need to know more about the existing practices and to learn from past and current experiences. This is why this conference aims at starting a discussion on good practices and lessons learned from agricultural risk management initiatives, through the showcase and analysis of projects, tools or policy tackling various types of risks.

He finally underlined that this conference also had a great potential for a rich multidisciplinary discussion, with a large heterogeneity of participant's backgrounds. It also brought together initiatives form very different size and scope: government officials mainstreaming agricultural risk management into their policies and budgets, experts form IOs running large initiatives, representatives of smaller NGOs working at the local level.

Session 1.
Setting the scene: What makes a good agricultural risk management project?

Facilitator
Carlos Arce
PARM

Fabio Bedini
WFP

Federica Carfagna
ARC

Marco d'Errico
FAO

Alessandra Garbero
IFAD

Jonathan Hellin
CIMMYT

Gideon Onumah
NRI

The first plenary session was composed of a panel of experts on ARM, including Fabio Bedini (WFP), Marco d'Errico, Federica Carfagna (ARC), Jonathan Hellin (CIMMYT), Gideon Onumah (NRI) and Alessandra Garbero (IFAD). Carlos Acre (World Bank/PARM) was the facilitator. The discussion set the scene in order to reach an agreement on what the key pillars for a good ARM project are.

Carlos Acre opened the panel by elaborating on the reason and objective of the workshop.
He explained that the ARM journey began in early 2000 with the promotion of weather index insurance and price hedging to manage agricultural risk and price volatility. In 2007, after two price crises, the need for a holistic approach to ARM was clearly understood. The holistic approach, developed by the OECD and used by PARM, refers to the necessity to focus on multiple risks including production, market and the enabling environment. Experts are gathered for this workshop as they have a consensus that the holistic approach is correct. The work done on ARM needs to shift from putting forward solutions to analysing the problem(s) first, before proposing solutions. He also mentioned that the workshop will explore basic criteria for designing a good ARM project. PARM will develop the guidelines, based on the discussions and outcomes of this meeting, on the basic criteria of designing a good ARM project.

The discussions were then structured around two rounds of discussions.

Round 1:

During the first round of the plenary panel, the experts discussed the following topics:

- Why is ARM necessary?
- How important is it to scale up projects?
- What are the lessons learnt from risk management and mitigation at the farm level?
- What are the key factors to be considered in developing a good ARM project, or ARM tools?
- If the objective of ARM is to increase resilience, how do we measure or rate success?
- Is there a toolkit or specific methodology for ARM?
- What are the data requirements and what should be the measurable outcomes to allow for the impact analysis of an ARM initiative?

It was mentioned that risks in agriculture are well known, but there is a need to identify which risks have to be prioritized on a case-by-case basis. The qualitative and quantitative assessments are therefore important. For example, the quantification of risks revealed that the impact of postharvest losses can be greater than losses due to drought or pests and diseases. A rigorous assessment also confirms and clarifies eventual correlations between risks, giving a strong basis to act and monitor activities.

From the WFP perspective, scalability is one of the most important factor of an ARM initiative. Although it may incur a high initial cost of research, WFP looks at places where large populations are facing climate risks, for example, and considers the possibility of scaling up the intervention from the start, with an integrated risk management strategy using risk reduction, and risk transfer tools at the macro and micro level.

The lessons learnt from risk management and mitigation at the farm level show that for livestock farmers, fodder is more important than crop sales, which is not aligned to conservation agriculture practices. In such situations, there is a need to match technologies and recommendations to farmers' realities. Furthermore, technologies must be linked to agricultural risk management.

According to ARC, access to information, capacity building and ownership are the key factors to be considered to design a good ARM project. ARC has taken the approach of promoting country ownership in its initiative. Capacity building is key to building partnerships with the public or private sector. Multidisciplinary action is demanding but it is a key requirement for the sustainability of interventions.
The links between ARM and resilience can be observed at two levels:

- Theoretical level – synergies between risk management and resilience, where households have to react to recurring shocks. This linkage is clear, as both ARM and resilience building aim at equipping individuals to better face and cope with shocks.
- Practical level – needs to be explored further and used to discuss; but the use of indicators which are based of regression and statistics can demonstrate which are the best practices and identify priority interventions. Interventions must also be context specific to build resilience at community level and possibly a number of interventions may be combined to progress towards managing risk and building resilience.

The Resilience Index Measurement and Analysis (RIMA), which is a quantitative tool to measure resilience, could also be used in measuring the results of an ARM initiative.

The design and evaluation of the impact of an ARM project whose objective is to increase farmers resilience must be context specific. The intervention itself must match farmers' realities. Ex-ante tools include diversification, on-farm decisions such as index insurance. The use of data and surveys is also important; hence monitoring surveys must be conducted on a regular basis (eg. monthly).

→ **Round 1 Summary** - Important considerations for designing a good ARM project:
- Intervention must be contextual;
- Quantification is important;
- A multidisciplinary approach is advised as risks are correlated and one tool cannot address all problems;
- It is not possible to work in isolation and there is a need to engage the public sector.

Round 2

The main questions addressed during round 2 of the plenary panel are the following:
- What are the key challenges in mainstreaming ARM in budgets?
- In the quantification agenda, what are the challenges and solutions?

The first and foremost challenge is the dimension and nature of the risks. Since ARM is multidisciplinary, there is a need to bring together a range of players in order to address the risks. There is also a big challenge linked to the sustainability and effectiveness of one or two-year programs. To achieve a measurable impact, it is important to have multi-year programs, and the active participation of the private sector is required for sustainability.

To champion challenges, there is a need to involve other partners, such as the private sector, insurance companies, and farmer organizations. For PPPs to be successful, partners should hold each other accountable; donors should also consider investing in long term interventions that can be supported for longer than 5 years.

Risks vary in time and across regions, therefore it is difficult to quantify agricultural risks and income losses. The combination of tools to address risks keeps changing. Capacity and intervention for the different time periods must be adequate with regards to the situation, which means it is important to start with a realistic assessment of what can be done in the short term vis-à-vis medium term and long term.

According to ARC, one of the biggest challenge faced is political stability (change of ministries, etc.) which interferes with the sustainability of capacity building. The financial constraints of national budgets leave ARM at the bottom of the priority lists. Political fatigue is also an important issue to consider; once risks seem to be addressed and well managed, then risk management is no longer seen as a priority.

From the CIMMYT perspective, it is important to put an emphasis on reliable information relating to agriculture technologies. As an example, people do not often talk about the failures but focus more on the success stories, which means that there is very little knowledge being shared on technologies that did not work and the reasons why they were not adopted.

→ **Round 2 Summary** - Key challenges:
- The risk of generalizing results of specific tools should be addressed;
- We need to understand the local traditional coping mechanism;
- It is necessary to integrate information systems and build multi-actor partnerships.

Session 2.
Drawing lessons from the field: how to learn and assess good practices to manage risks?

The purpose of Session 2 was to make participants discuss and reflect on the way to identify good practices for agricultural risk management. The objective of this session was to develop general guidelines for the design of ARM projects, and to apply these guidelines to specific case studies that are featured in the PARM Publication "Agricultural Risk Management: practices and lessons learned for development".

During these group discussions, participants were grouped according to their fields of expertise and interests to:
- Develop a set of criteria to design effective ARM initiatives
- Apply and refine these criteria on selected case studies

Based on the experience and interests of participants as declared during the registration period, four thematic blocks were formed. For each block, several subgroups were created to allow for constructive debates among participants. In each group, a discussant leader facilitated the exchanges between participants. The thematic groups were as follows:
1. Climate and weather risks
2. Market and price risks
3. Biological and environmental risks
4. Policy and institutional risks
5. Integrated approach (taking into account more than two different types of risks)

A checklist with guiding questions was provided to participants to guide their discussion, with the proposition of several key pillars to be validated or changed. The following key pillars were validated by the participants.

1. **Holistic Risk Assessment**. In order to design and implement an initiative to manage agricultural risks, it is important that the risk has been assessed and prioritized following a rigorous holistic methodology.
   a. How has the risk been assessed? Has there been a prioritization exercise?
   b. Have frequency and severity of the risk been assessed? Have worst scenarios been forecasted?
   c. Have the different layers of risks been assessed, looking at the macro, meso and micro levels?

d. Have the links between the different risks present been analysed?
e. Have all relevant stakeholders been engaged in the process? Who were they?
f. Who has or should undertake the risk assessment process? How is it be integrated into the design of the project?

2. **Tools identification and implementation**. Following the prioritization of the risks, adequate tool (or different tools) should be chosen to address the risks identified together with a mapping of existing tools to identify gaps.
   a. Has there been a mapping of existing tools to identify gaps? Have the gaps been measured adequately? Using which indicators?
   b. Are the tools in place adequate to address the risk(s) identified?
   c. Is the tool identified integrated with the existing tools? How?

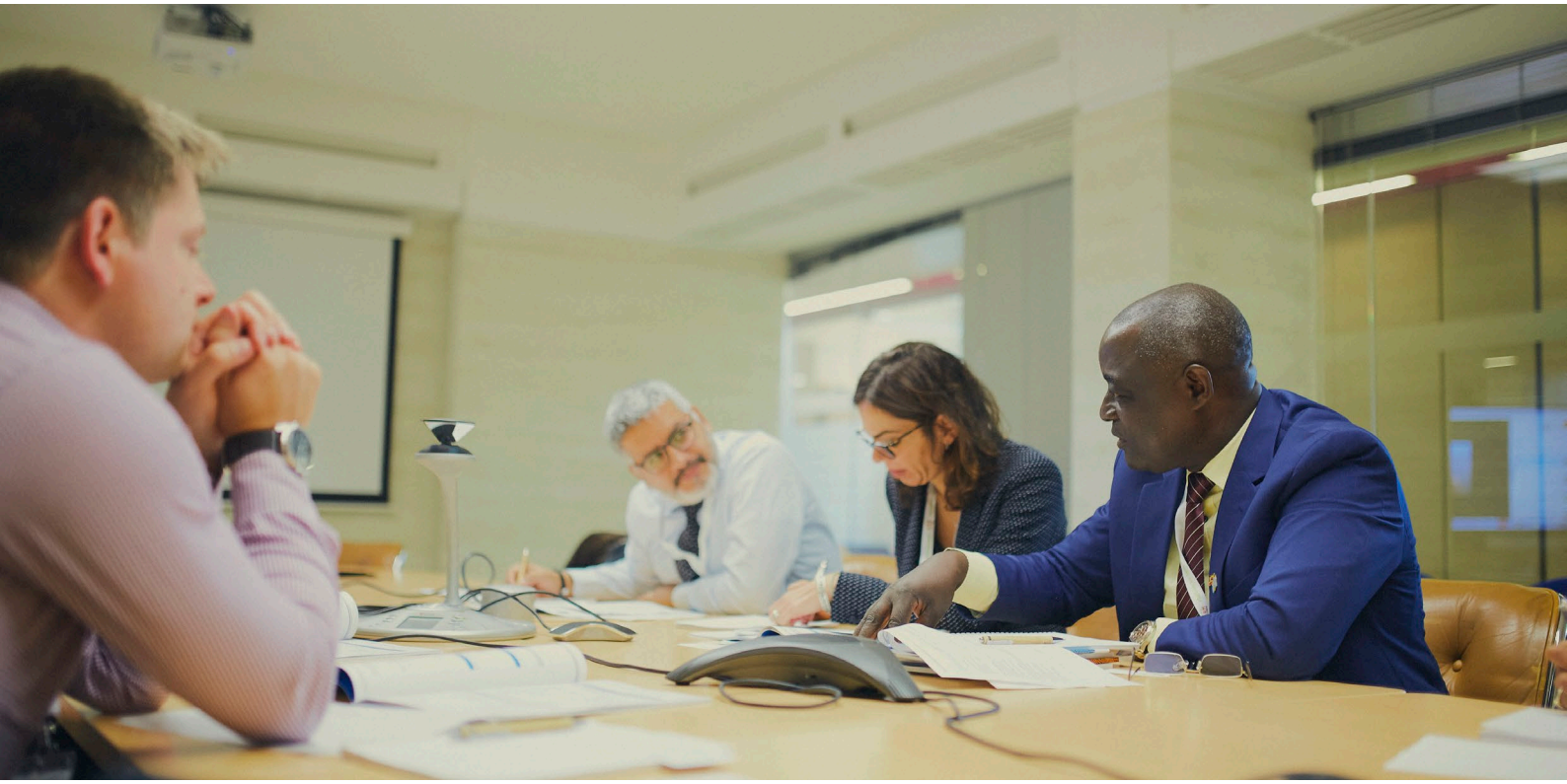
3. **Access to information and capacity building**. Access to information, whether linked to climate events, market prices or policy decisions, is crucial for farmers to manage risks. For an initiative linked to agricultural risk management to be sustainable, access to information by farmers should be central, and capacity building should be planned to enable farmers, extension workers or policy makers to progressively enhance their skills and agricultural risk management techniques.
   a. Have information systems in place been assessed? By whom? At what level?
   b. Have the gaps been identified in term of access to information? What level? What measures have been taken to address these gaps?
   c. Were all relevant stakeholders involved in this process?
   d. Has an assessment of capacity needs undertaken?
   e. Has a capacity development module integrated in the initiative? Who is implementing it? Who are the target?
   f. Is the target group able to access information and capacity building?
   g. What has been put in place to ensure sustainability of the capacity building?

4. **Partnerships and policy integration**. As agricultural risk management often requires coordinated action at different levels, it is important that the initiatives take into account how they are affected by policy and how they influence them, while working to bring together different stakeholders (private and public sector, national regional or international organizations, etc.). To ensure sustainability, ARM initiatives can also be designed to foster the integration of ARM practices into policies.
   a. Has there been a mapping of the key stakeholders to engage with before, during and after implementation?
   b. How does the initiative/tool ensure integration into policy to strengthen its sustainability and impact?
   c. Is the initiative promoting partnerships for ARM? Is the private sector engaged? How?
   d. How are responsibilities assigned to ensure the sustainability of ARM-related policies?

5. **M&E and Knowledge management component**. Measuring results of activities aimed at strengthening agricultural risk management is complex. A robust M&E system must therefore be put in place in order to learn from past experiences and improve future activities. Knowledge Management, and the dissemination of results, is also crucial to learn from past experiences and pool insights and data about what works best and what issues should be kept in mind throughout the design and implementation of an ARM initiative.
   a. Is there a system to measure the results and/or impact of the initiative? How is it set-up?
   b. Are coordination mechanisms in place for monitoring the initiative? Are responsibilities for monitoring well assigned? Who is in charge of monitoring and evaluation?
   c. Does the initiative document, share and learn from its results and impact? Who is targeted by the KM strategy? What are the links between the KM strategy and capacity building?

Summary of group discussions:

Thematic Block and Group	Issues to consider	Lessons learned
Climate – 1 **Case study**: African Risk Capacity **Lead discussant**: Carlos Arce	– Understanding weather-related zoning – Understanding exposure and vulnerability – Responses to weather risks ex ante and ex post – Current policies and strategies – Creating multidisciplinary working groups	– Importance of policy integration – Importance of accurate impact and models
Climate – 2 **Case study**: Climate Services for Agricultural Risk Management in Rwanda / CCAFS **Lead discussant**: Paxina Chileshe	– Micro, meso, macro levels approach – actors at each level (openly available) – Timing – frequency of assessments and interventions – Roles of stakeholders- government, private sector, community, academies – Planning of evaluation (baseline...) – Complexity in measuring impact – Packaging more information into decision making for practionners – Broader context (climate is only one aspect) – Dealing with conflicting information	
Market – 5 **Case study**: eGranary / EAFF **Lead discussant**: Steve Hodges	– Access to good price information – Local, regional, global price info – Knowing the costs of production, aggregation, processing, etc. – Hidden costs e.g. rejection – Knowing market dynamics (standards, timing) – Gaps in accuracy, standardization, timeliness and understandability of market info – Short term and long-term info on market prices and changes (new products and market, safety) – Means to convert info into action – Lack of policy mapping – Lack of coordination between stakeholders – Tool: private sector-driven multi stakeholder platform – Lack of clear definition of success	– Through aggregation, farmers can get a better price – Need to share evaluation (even failure) – Gaps exist in the accuracy of harvest and production info – Gaps exist in the ability to send market info directly to farmers, for price and production data
Market – 6 **Case study**: FARMAF / NRI **Lead discussant**: Jonathan Agwe	– Identify risks vs constraints and challenges – Market is composite – Price and demand and supply factors – Interlinkages between interventions – Identify/analyze/map/recommend what works – Context/institutional structures – Perception vs reality – Socio economic context – Diverse sources/triangulation – 1st and 2nd level reliability – Existence and use of information at farm level – Policy intervention on price management for political fallouts – Informing the learning process – Real vs official data	– Risk prioritization primordial – Value not individual tools but synergies between tools – Monitoring is primordial even all after risks are managed
Biological – 7 **Case study**: Index-Based Livestock Insurance / ILRI **Lead discussant**: Julio Pinto	– Considering all stakeholders – Holistic approach to risk assessment – Food security and employment/investment indicators – Looking at benefits along value chains – Thinking beyond shocks, managing disasters – Data collection, access, sharing, accuracy – Capacity building must be adapted to audience (universities, extension workers, famers, using digital media) – Leadership, multi-stakeholder engagement – Positioning ARM as part of the SDGs	– Local community engagement in validating the data is key – building trust – Buy in and engagement are more important than budget
		(...)



(...) Thematic Block and Group	Issues to consider	Lessons learned
Policy – 8 **Case study**: JASIL Mongolia **Lead Discussant**: Lauren Philips	– Policy changes, lack of ability to implement/realize policies, and risks created by missing or absent policies – Identification of policy risks can often follow from the identification of other risks: – Need for political economy tools and experts: AIIM matrix, K-start framework, horizon scanning, drivers of change approach. – Need for both national experts (familiar with policy process and actors) and international experts (with ideas form other experiences and processes) – Difficulty in assessing the impacts of policy risks (except in case of pricing risks, good methodology exists already, see MAFAP at FAO)	– Multi-stakeholder platforms are good at identifying smaller risks that are not detected by individual stakeholders (e.g. regulatory risks and missing pieces of regulation) – Need for good M&E and KM systems to learn from practice – Participation at local level is crucial to ensuring that policy risks are correctly identified and that solutions reach the ground
Integrated – 10 **Case study**: Rural Resilience Initiative R4 / WFP **Lead discussant**: Mariam Sow Soumare	– Recurrent shocks, like drought – Frequency and severity, worst case scenario – Risk layers – Social protection tools run by the government	– Inclusion of other risks gradually – Combination of tools/risk reduction – Linking different layers of risks – Need for private sector "offtaker" involvement

Session 3.
ARM Practices and lessons for development

There are many ways to manage agricultural risks, just as there exist a wide variety of agricultural risks facing farmers. During this session, various initiatives will be showcased to explore the diversity of approaches, level of intervention and tools put in place to avoid, transfer or manage agricultural risks.

The session started with a general introduction and a brief description of the activity by the workshop facilitator. Afterwards, at the beginning of each round, each presenter was given 1 minute to present him/herself to all participants, as well as to describe the tool/initiative that they are showcasing. The showcase was then organized in two rounds. For each round, initiatives were distributed among three or four parallel panels. Participants were free to move around the information market to listen to the presentations.

The full list and description of showcased initiatives are available in Annex II of this Volume I, while all the presentations are available in Volume II of this report. Below is an overview of the different topics:

Topic A: Fostering integration of ARM into policies

This panel will bring together three initiatives aiming at the mainstreaming of ARM into national policies. They encompass capacity building at various levels, risk assessments and the support of governments in drafting and implementing ARM policies.

Presenter 1: Vieri Tarchiani, IBIMET – ANADIA
Presenter 2: Fabio Bedini, WFP - Rural Resilience Initiative
Presenter 3: Gideon Onumah, NRI - FARMAF

Topic B: From germination to the market: transforming risks into opportunities

In this panel, two initiatives transform market risks into opportunities, enabling farmers to access the market and take control over the sale of their produce. The third introduces an innovative hybrid insurance model, to ensure that farmers' produce is insured from the very early stages all the way to the harvest.

Presenter 1: Tewodros Demeke, ATA - Commodity exchange trading in Ethiopia
Presenter 2: Jean-Michel Voisard, Feed the Future Senegal - Integrated grain value chain lending and insurance
Presenter 3: Stewart McCulloch, VisionFund International – Replanting Guarantee (on behalf of ACRE Africa)

Topic C: Using farm practices to manage risks

Farming practices can be used to face risks, by accelerating the regeneration of the soil, by helping farmers protect their ecosystems or enabling them to shift practices to respond to weather changes.

Presenter 1: Indra Mallo, MAVIM – Hydroponic grass
Presenter 2: Shindhe Shiva Shankar, SARRA – Farming with Indigenous Micro Organisms
Presenter 3: Alice Brié, IFAD - Assisted Natural Regeneration

Topic D: Innovation against climate and biological risks

Designing a hybrid insurance product to cover the most vulnerable stages of plant growth, assessing losses through field pictures taken by farmers, or bringing weather information directly to farmers? Innovation can make a big difference in farmers' lives.

Presenter 1: Berber Kramer, IFPRI – Picture-based insurance
Presenter 2: Stefan Hirche, KfW and Stewart McCulloch, VisionFund International - Bima Maono Climate and agro-insurance
Presenter 3: Ana Heureux, FAO – Agro-met tools

Topic E: Accessing information to manage risks

This group brings together initiatives that aim to bridging the information gap between information providers and farmers. Through mobile application, these initiatives aim at bringing information directly to farmers, about best practices for animal and plant health or through a holistic approach.

Presenter 1: Henry Burgsteden, FAO – Digital inclusion
Presenter 2: Julio Pinto, FAO - EMPRES-i/EMA-i
Presenter 3: Joseph Mulema, CABI - Plantwise

Topic F: From insurance to social protection

In this panel, presenters provide feedback on index-insurance and how it can be used to help farmers manage risks, and how it can be linked to social protection.

Presenter 1: Niclas Benni, FAO - CADENA (a Programme of the Mexican Government)
Presenter 2: Jennifer Cissé, USAID - Agricultural Index Insurance: Feed the Future Innovation Lab for Assets & Market Access
Presenter 3: Franceso Rispoli, IFAD/WFP - Weather Risk Management Facility

Topic G: Managing climate and market risks at macro and micro levels

This panel was added during the workshop to allow for further information-sharing around some Session 2 initiatives. The three initiatives look at ways to manage climate and market risks at various levels, from macro to micro levels, remote-sensing and community level interventions.

Presenter 1: Manoj Yadav, GIZ - RIICE
Presenter 2: Arun Khatri-Chhetri, CGIAR - Climate Smart Villages
Presenter 3: Norbert Tuyishime, EAFF - eGranary

Session 4.
Mainstreaming ARM holistic approach into policy for better design and investment

Hon. Minister
Vincent F. Bamulangaki Ssempijja
MAAIF Uganda

Michael Hamp
IFAD

Jost van Odijk
Grow Africa

Francesco Rampa
ECDPM

Graziella Romitto
Italian Ministry of Agriculture

Haladou Salha
AU-NEPAD

Facilitator
Mariam Soumare
NEPAD

The objective of Session 4, the high-level panel discussion, was to consolidate the day's discussions and address pending questions from experiences of the panelists in mainstreaming ARM approach into policy, to encourage investments into agriculture and engagement of the private sector.

This panel brought together the Honorable Minister of Agriculture, Animal Industry and Fisheries of the Republic of Uganda, Hon. Vincent Frerrio Bamulangaki Ssempijja, AU-NEPAD Senior Technical Advisor to the Rome-based African Ambassadors and Senior Liaison Officer to the Rome-based UN Agencies, Mr Haladou Salha, Michael Hamp, Head of the Rural Finance Desk at IFAD, Graziella Romito, representing the Italian Ministry of Agriculture, Jost van Odijk from GROW Africa and Francesco Rampa from the European Centre for Development Policy Management.

Panelists provided insights from their experiences at national, continental and global levels, from the point of view of governments, development partners, the private sector or a research institute. The discussion was facilitated by Mariam Sow Soumare form the NEPAD Agency.

Mariam Sow Soumare introduced four aspects that are pertinent for mainstreaming (integrating) ARM into national policy decision making; i.) How do we ensure that there are enough public goods available on the market for various stakeholders to invest in ARM; ii) Capacity: identifying and bringing in the required capacity (HR, institutional, etc) to run different components of ARM strategies; iii) Inclusivity: How inclusive are these ARM strategies of smallholders to have access to the tools; iv) Resources (financial): What role do governments play with regards to budgets for ARM.

Question 1: The first question was directed to the Hon. Vincent Frerrio Bamulangaki Ssempijja, Minister of Agriculture, Animal Industry and Fisheries of the Republic of Uganda. The facilitator asked the Minister to share some insights from the country's experience in integrating ARM into national policies (public policy agenda) to make it effective and accessible to smallholders, as the country that has been a champion of ARM.

In his response, based on the experiences of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) in Uganda, as a champion of ARM, the Minister provided a background of PARM and the status of the agriculture sector in Uganda. The contribution of agriculture to the GDP is 26% and the sector employs over 80% of the country's population. He explained that less than 10% of farmers are in commercial agriculture, mainly due to risks which deter smallholders and the private sector from investing. This shows a need to upscale their ARM activities as well as upscale their collaboration with the PARM and NEPAD platforms. He described a 6-step approach which was adopted in the country to facilitate the mainstreaming of ARM into national policy decision making:

The first step followed in Uganda was to secure uptake and buy-in from all stakeholders, which would require a multi-sectoral approach where by other ministries and stakeholders were approached including the Office of the Prime Minister, farmers organizations and the private sector. The risk assessment study (RAS) was then conducted with support from PARM. The knowledge gathered from the outcomes of the RAS was used to integrate ARM into national polices such as the Agriculture Sector Risk Management Plan 2015-2020 and the National Development Plan. Two feasibility studies were then conducted, based on the outcomes of the RAS, on crop pests and diseases and information systems. Moreover, the government started capacity development on ARM, focusing on the extension services which reached 80% of extension workers as well as working with Makerere University to develop a comprehensive curriculum. This has allowed for awareness of ARM to be raised both at the political and operational levels.

Resource mobilization is the current undertaking, with a focus on mobilizing resource for crop pests and diseases, through the Office of the Prime Minister. The Ugandan Government has budgeted for agricultural insurance and is reviewing options for a point of entry. Operationalization of the warehouse receipt system remains the biggest challenge in Uganda for ARM.

Question 2: The second question was directed to Graziella Romito, representing the Italian Ministry of Agriculture. It touched upon the way in which the Italian Ministry of Agriculture ensures that ARM remains a priority on the G7 Agenda and how its aims to sustain the momentum created around ARM?

Graziella Romito responded by highlighting that the main challenge experienced when they began ARM was empowering farmers to know the risk they may encounter on a daily basis, from a holistic approach. The objective was to bring all stakeholders to a consensus that ARM must be considered during the development of agricultural policies. G7 ministers committed themselves to the holistic approach as well as to improve knowledge for farmers, through information systems. Another important aspect is the role of financial institutions and the role of the private sector for sustainable practices: risk management policies must be integrated into agriculture policies and not operate in isolation.

Question 3: In the third question, Michael Hamp was asked to elaborate on the experience of IFAD in working for ARM, especially at the global level.

Michael Hamp, representing IFAD, explained that its commitment linked to the G7 agenda was to work on the policy and technical (operations) to fulfill the international agenda. This includes harmonizing and incorporating ARM in the work of the technical and advisory of IFAD, in particular through the work done on financial assets development.

Question 4: Mr Haladou Salha, representing the African Union (AU) and the New Partnership for Africa's Development (NEPAD) responded to a question on their role in terms of policy design and formulation of ARM mainstreaming into the regional agendas and processes such as the Comprehensive African Agricultural Development Programme (CAADP) and the Agenda 2063.

Mr Salha explained that the CAADP was established to bring coherence, better coordination and participatory process for all stakeholders. He referred to pillar 3 of the CAADP framework which pertains to Food supply and reducing hunger; and translating CAADP into concrete actions such as the Regional Strategy for Food reserves and Homegrown School Feeding Programme. Other actions led by AU member states in support of CAADP implementation include signing of the CAADP Compact and the development of National Agricultural Investment Plans at national level, to promote ownership by member states and build the support of farmers' organizations, the private sector and international development partners. National interventions should be designed in accordance with the CAADP Framework, while responding to country-specific processes. The peer review mechanism is based on the decisions by African Heads of State to ensure mutual accountability. The 1st report will be presented in June 2018 at the AU Summit. Mr Salha also emphasized sustainability through funding mechanisms such as the Maputo 10% allocation of national budget to agriculture, which was also adopted and reaffirmed in the Malabo Declaration. Agricultural budgets should be used to enhance and complement existing interventions. He ended his response with stating that the role and value proposition of CAADP is based on implementation through the support of Regional Economic Communities. CAADP also supports the NEPAD Agency's mandate of harnessing Africa's knowledge through cross learning and sharing, and monitoring and evaluation tools.

Mariam Sow Soumare summarized his response by emphasizing that as NEPAD Agency, bi-annual reporting to Heads of State with regards to the progress in CAADP implementation and Agriculture and Food Insecurity Risk Management is vital, due to the state of regional food insecurity and the role of agriculture to transform livelihoods. Risk management is becoming increasingly important in ensuring sustainability of the sector and accountability to African populations.

Question 5: Jost van Odijk from GROW Africa, was asked to elaborate on the role Grow Africa has played in facilitating private sector investment in agriculture, and the link between ARM and investment requirements.

Jost van Odjik first highlighted that the occurrence of risks cannot be controlled but one can control their response to the risk, and that is what the private sector exists for. He elaborated further by stating that farmer's willingness to investment is encouraged by provision of a stable environment, for example where they can be guaranteed access to a market and revenues. Two factors are required to make a market stable or predictable: investments in the short term and long term; and for risks to be priced according to their frequency and severity.

Question 6: The last question was directed to Francesco Rampa from the European Centre for Development Policy Management, asking him to share his ideas on the role of different stakeholders in ARM.

From the ECDPM perspective, coherence is the biggest challenge, since policy is a cross-cutting and risk management is influenced by many policies and many stakeholders such as government and development partners. ARM requires champions from both private sector and government to align their objectives, as shown by the example of Uganda, where the Office of the Prime Minister in Uganda has played a key role to champion ARM and integrate it into policies. At the community and implementation level, there is a need to blend resources to manage risks in agriculture; for example, using Official Development Assistance to bear risks while upscaling interventions. One other challenge is to find the right balance in terms of mixing the role of private sector with the need to help countries and farmers specifically. There is also the need to expand the use of technology to increase productivity and to make agriculture attractive to youth. This goes beyond focusing on production, ensuring efficient risk management and he inclusion of youth along the value chain.

Closing remarks

The workshop was closed by Michael Hamp, head of the Rural Finance Desk at IFAD.

After asking the participants to share their take-away from the workshop in one word –partnership, dialogue, capacity building- he emphasized the diversity of the initiatives and structures represented during the workshop, which is a good representation of the diversity of risks, risk management tools and actors who are currently involved in managing agricultural risks around the world.

He underlined that this workshop was the beginning of continuous dialogue and partnership for better agricultural risk management, and hoped that participants were able to learn, share their experiences and connect with each other throughout the day.

Annexes

ROUND 1
ROUND 2
ARM KEYPILLARS
CLIMATE RISK SPECIFIC
LESSONS LEARNED
1. Data & availability
2. Understanding
3. Broader context (macro) (political economy)
4. Monitoring and evaluation (M&E)
5. long term perspective
6. Filling gaps
(Partnerships)
7. Review of available tools
1. Agromet data
2. Understanding weather zoning
3. Understanding exposure and vulnerability
4. Responses to weather risk ex-ante/ex-post
5. Current policies and strategies
6. Multi disciplinary working groups
7.
1. Integration with policies
2. Accurate impact crop models
3. Operation plan
4. Expectation management

A1. List of Initiatives

Topic A: Fostering integration of ARM into policies

ANADIA: Adaptation to climate change, disasters prevention and agricultural development for food security
Presented by: Vieri Tarchiani, Istituto di Biometeorologia del Consiglio Nazionale delle Ricerche (IBIMET)

ANADIA is a training and research for development project, implemented in Niger since 2013 and funded by the Italian Agency for Development Cooperation. The objective of ANADIA is to contribute to a sustainable agriculture, adapted to climate change and less vulnerable to climatic extremes in Niger. ANADIA aims to strengthen the capacity of stakeholders at national, regional and local level to mainstream climate change adaptation and disaster risk reduction in decision making from national to farm scale".

Rural Resilience Initiative
Presented by: Fabio Bedini, WFP

The World Food Programme (WFP) and Oxfam America (OA) launched the R4 Rural Resilience Initiative (R4) in 2011 to enable vulnerable rural households to increase their food and income security in the face of increasing climate risks through a combination of four risk management strategies: improved resource management through asset creation (risk reduction), insurance (risk transfer), livelihoods diversification and microcredit (prudent risk taking) and savings (risk reserves).

Farm Risk Management for Africa – FARMAF
Presented by: Gideon Onumah, NRI

The Farm Risk Management for Africa (FARMAF) Project promoted scaling-up and/or development of market-based agricultural risk management (ARM) tools, including crop insurance, in most cases interlocked with production financing schemes; sustainable market information systems (MIS); and structured output marketing systems including warehouse receipt systems (WRS) on different scales (commercial operations in Tanzania and Zambia and small-scale inventory credit or Warrantage in Burkina Faso) as well as exchange-based trading systems.

Topic B: From germination to the market: transforming risks into opportunities

Commodity exchange trading in Ethiopia
Presented by: Tewodros Demeke, ATA

Commodity Exchange trading, by creating certainty regarding the quality, quantity and location of commodities to be traded, reduces transaction costs, which may be in the form of: cost of sourcing produce for traders and processors as well as the cost of accessing markets for farmers, especially for premium quality produce. Exchange trading improves collection and dissemination of market information to all players. The warehouse receipt system, which may be developed to underpin commodity exchange trading (as a delivery mechanism), ensures that agricultural produce is stored in well-run facilities, thereby reducing post-harvest losses. That system also makes it possible for producers, who so desire, to defer sale during the harvest season, when prices are low and to gain from seasonal price increase. It also allows smallholder farmers to aggregate – sometimes facilitated by inventory finance and sell directly to processors and large traders, rather than through intermediaries.

Integrated grain value chain lending and insurance
Presented by: Jean-Michel Voisard, Feed the Future Senegal

Since 2012, the Senegal National Agricultural Bank (CNCAS), the National Agricultural Insurance Company, small scale farmer unions and local rice mills are implementing an integrated lending mechanism that links in-kind farmer loan re-imbursements to miller lines of credit by resorting to grain collateral management mechanisms. The Farmer loan performance is also secured through the bundling of an agriculture insurance product. The system rests on IT based inventory and farmer tracking tools, the development of adapted insurance products, the improvement of rice quality and the introduction of quality testing protocols at farm level, the mainstreaming of certified seed and best practices etc.

Replanting Guarantee, ACRE Africa
Presented by: Stewart McCulloch, VisionFund International, on behalf of ACRE Africa

The Replanting Guarantee Product (RPG) is an input replacement insurance product that covers the risk of adverse weather conditions like insufficient rainfall at the sensitive germination phase. In the event of the insured event, drought or insufficient rains, compensation is sent to the registered farmers via their mobile money wallets. This enables farmers to purchase another bag of input, example – seed, to salvage a season.

Topic C: Using farm practices to manage risks

Hydroponic grass
Presented by: Indra Mallo, MAVIM

In Maharashtra (India), the regions of Marathwada and Vidarbha had been facing severe drought conditions for 3 - 4 years. Scarcity of green fodder affected animal health and milk production resulting in distress sale of cattle. To prevent this, MAVIM introduced Hydroponic Grass and Azola cultivation among farmers under the Micro Livelihoods Plans (MLP) as part of the IFAD assisted Tejaswini Rural Women Empowerment Programme. Due to availability of hydroponic grass and Azola, fat ratio in the milk was maintained and milk production also increased. MLP members could retain their animals.

Farming with Indigenous Micro Organisms
Presented by: Shindhe Shiva Shankar, SARRA

Many traditional farming communities and indigenas peoples have over generations developed agricultural systems that are productive and environmentally sustainable. Such traditional farmers domesticated thousands of crop species and millions of plant varieties, mostly grown without agrochemicals. While traditional agricultural knowledge and practice has in many places been lost or atrophied, such small diversified farming systems offer promising models for promoting biodiversity, conserving natural resources, sustaining yield without agrochemicals, providing ecological services and lessons for resilience in the face of environmental and economic change. The initiative blends indigenous micro-organisms technologies with Indian traditional farming practice to increase the resilience of farmers.

Assisted Natural Regeneration
Presented by: Alice Brié, IFAD

Assisted natural regeneration (ANR) is a simple, low-cost forest restoration method that can effectively convert deforested lands of degraded vegetation to more productive forests. The method aims to accelerate, rather than replace, natural successional processes by removing or reducing barriers to natural forest regeneration such as soil degradation, competition with weedy species, and recurring disturbances (e.g., fire, grazing, and wood harvesting). Within the framework of a support from the Global Environment Facility to implement a programmatic approach for sustainable land management, Assisted Natural Regeneration was part of the initiatives put in place in the rural areas of the Maradi region in Niger.

Topic D: Innovation against climate and biological risks

Picture-based insurance
Presented by: Berber Kramer, IFPRI

Picture-based insurance (PBI) is an innovative crop insurance product that we are currently piloting in the states of Punjab and Haryana in India. Using a smartphone app, insured farmers take pictures periodically of the same section of their insured plots, from land preparation to harvest. These geo-referenced pictures are uploaded to the cloud to serve as input for loss assessment. In the pilot phase, insurance pay-outs were determined by agronomic experts. Combining the data from these loss assessments with objectively measured yields and self-reported damage, developing algorithms are currently developed that estimate indices of crop damage based on geo-referenced pictures for low-cost automated loss assessment for insurance purposes.

Bima Maono Climate and agro-insurance
Presented by: Stefan Hirche, KfW and Stewart McCulloch, VisionFund International

VisionFund International's climate & agro-insurance scheme Bima Maono consists of crop (and limited livestock) insurance and is part of an integrated agricultural-development and financing programme, supported by KfW's InsuResilience Investment Fund. Starting in Tanzania, Bima Maono shall be rolled out to at least seven African countries. Crop insurance is extended on the back of agricultural lending (usually input loans) and supported by advisory on improved farming techniques. The insurance scheme is a hybrid of weather index and multi-peril crop insurance (flood, drought, pests and disease), the former up to the germination phase, the latter up to harvesting and based on expected yield shortfall (actual vs. expected yield, determined by agronomists), developed by ACRE Africa. Additionally, VisionFund is implementing a portfolio level climate index natural catastrophe scheme in 5 African and 2 Asian countries to provide a funding mechanism to maintain the supply of credit to communities affected by disasters.

Agro-met tools
Presented by: Ana Heureux, FAO

Increasing availability and accessibility of weather and agrometeorological information allows farmers to prepare for variability in weather, time their planting and harvesting and better understand their cropping systems. The purpose of the project is to present this information in the most user-friendly way possible and also combine weather data with country and region-specific crop data to make useful and specific recommendations. The close collaboration with national agencies and services in Africa and Macedonia facilitates the involvement of a great number of farmers, in the vision of a country-driven approach. In Rwanda and Senegal, a weather and agro-meteorology smartphone application and a SMS system have been developed. In Macedonia, a website has been developed with weather/ climate information and agrometeorological information such as crop disease, soil water and irrigation.

Topic E: Accessing information to manage risks

Digital inclusion
Presented by: Henry Burgsteden, FAO

The initiative focuses on the development of four apps that will help improving agricultural services and availability of local content. It will make useful data, information and statistics available and accessible as digital services to the rural poor. It is initially developed for use in two countries in Sub-Saharan Africa: Senegal and Rwanda. The applications are: "Cure and Feed your livestock", "e-Nutrifood", "Weather and Crop calendar", and "AgriMarketplace".

EMPRES-i/EMA-i
Presented by: Julio Pinto and Fairouz Larfaoui, FAO

EMPRES Global Animal Disease Information System (EMPRES-i) is a web-based application designed to support veterinary services by facilitating the organization and access to regional and global disease information. Timely and reliable disease information enhances early warning and response to transboundary and high impact animal diseases, including emergent zoonoses, and supports prevention, improved management and progressive approach to control. EMA-i is a mobile app that allows for transmission of data directly from the field to the EMPRES-i database.

Plantwise
Presented by: Joseph Mulema, CABI

Plantwise works to help farmers lose less of what they grow to plant health problems. Working closely with national agricultural advisory services we establish and support sustainable networks of plant clinics, run by trained plant doctors, where farmers can find practical plant health advice. Plant clinics are reinforced by the Plantwise Knowledge Bank, a gateway to practical online and offline plant health information, including diagnostic resources, best-practice pest management advice and plant clinic data analysis for targeted crop protection.

Topic F: From insurance to social protection

CADENA (a Programme of the Mexican Government)
Presented by: Niclas Benni, FAO

CADENA (Componente de Atencion a Desastres Naturales en el Sector Agropecuario y Pesquero) is a Mexican governmental programme that offers macro-level crop and livestock catastrophe insurance programs to small-scale, vulnerable farmers, through a public-private collaboration mechanism. It is operated by the Mexican Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA). The CADENA program contains two main components: (i) the catastrophe agricultural insurance (SAC) programs for farmers, livestock producers, aquaculture farmers, and fishermen, and (ii) in states where SAC is not provided, a continued direct support that involves compensation payments to farmers for climatic disasters.

Agricultural Index Insurance - Feed the Future Innovation Lab for Assets & Market Access
Presented by: Jennifer Cissé, Feed the Future/USAID

The AMA IL has piloted a number of index insurance products, including most notably the Index Based Livestock Insurance (IBLI) project in Kenya and Ethiopia, but also area yield insurance for cotton farmers in Mali and Burkina Faso and bundled insurance with improved maize seed for farmers in Mozambique and Tanzania. The AMA IL activity is primarily a research activity, focused on developing innovations in index insurance and understanding farmer barriers to on-farm investment. The IL documents and shares lessons learned to assist project developers and policymakers design high-quality insurance products that protect farmers and increase resilience.

Weather Risk Management Facility
Presented by: Francesco Rispoli, IFAD

Since 2008, IFAD has partnered with the World Food Programme (WFP) through the joint Weather Risk Management Facility (WRMF). Through the partnership, IFAD has built experience in design and implementation of agricultural index insurance, and engaged in research, knowledge management and capacity enhancement. IFAD sees agricultural insurance as a tool to both protect and promote smallholder agricultural production and rural livelihoods. The presentation will look at some of the lessons learned on index insurance for smallholder agricultural development, including opportunities and constraints, and some solutions to scaling-up.

Topic G: Managing climate and market risks at macro and micro levels

Remote sensing-based Information and Insurance for Crops in Emerging economies – RIICE
Presented by: Manoj Yadav, GIZ

In order to better forecast harvests, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the Allianz Re, the International Rice Research Institute, the software company Sarmap SA and the Swiss Agency for Development and Cooperation (SDC) have launched a rice crop monitoring initiative called RIICE (Remote sensing-based Information and Insurance for Crops in Emerging economies). Since 2013, this partnership between public and private organisations has been helping rice farmers and governments in Asia to undertake timely countermeasures when faced with imminent harvest losses.

Climate Smart Villages
Presented by: Arun Khatri-Chhetri, CGIAR

The Climate-Smart Village (CSV) is an approach to agriculture research for development, that tests technological and institutional options for dealing with climatic variability and climate change in agriculture using participatory methods. It aims to scale-up and scale-out the appropriate options and draw out lessons for policy makers from local to global levels. The approach incorporates evaluation of climate-smart technologies, practices, services and processes relevant for local climatic risk management and identifies opportunities for maximising adaptation gains from synergies across different interventions and recognising potential maladaptation and trade-offs.

eGranary
Presented by: Norbert Tuyishime, EAFF

eGranary is a virtual aggregation platform that provides the following 5 services at a go – access to markets, access to certified seed and fertilizer, affordable credit, agriculture insurance and extension services. It intends to make agriculture data available on time for decision making at the farmer level, investors level and to influence policy, as well as to make farmers more bankable by de-risking their operating environment and building their capacity.

A2. List of participants

Africa Risk Capacity (ARC)		Federica Carfagna
African Development Bank (AfDB)		Cecil Nartey
CARGILL		Clea Kaske-Kuck
Centre for Agriculture and Bioscience International (CABI)		Joseph Mulema
Consultative Group on International Agricultural Research (CGIAR)		Rupsha Banerjee
		Arun Khatri Chhetri
		Dhanush Dinesh
		James Hansen
Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ)		Stefan Kachelriess-Mathess
		Manoj Yadav
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