Agricultural Sector Risk Assessment: Methodological Guidance for Practitioners

Presented by Vikas Choudhary, Senior Economist, World Bank Agricultural Risk Management Team
WEBINAR SERIES

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Washington DC, United States, March 1, 2016
Agricultural Risk Management Team (ARMT)

Risk Assessment and Management
• Address systemic risks to the agricultural sector through sector-wide risk management
• Activities in Africa, Asia, Central Asia, and Latin America

Knowledge & Network
• Capacity building, training, FARMD, etc.
ARMT’s Risk Assessment Portfolio

Source: ARMT, 2015
Risk Assessment Outcomes

Niger

- Risk assessment led to the Govt. of Niger creating a 10 year National Plan for Agricultural Investment (PAGRA).
- The World Bank developing a US $111 million Niger Climate Smart Agriculture Support Project based on risk assessment. Millennium Challenges Corporation providing $60 million parallel financing to support CSA project.

Kenya

- Findings from the risk assessment led to identification of a $200 million CSA investment lending project.

Malawi

- The Government of Malawi is developing an agricultural risk management strategy and a 10-year action plan, informed by the assessment.

Paraguay

- The Government of Paraguay is developing a new operation based on risk assessment findings.
Benefits of Agricultural Sector Risk Assessment (ASRA)

How ASRA Adds Value

• Facilitates knowledge sharing
• Mitigates risk
• Improves the Government’s fiscal position through reductions in ex post emergency spending
• Facilitates expedient resource mobilization when risk events occur through ex ante planning
• Prioritization of risk investment opportunities
Conceptual Framework for Agricultural Risk Management
Risk Management Layers

- **Layer 1**: high frequency, low losses
  - Risk mitigation

- **Layer 2**: low frequency, medium losses
  - Risk mitigation + risk transfer

- **Layer 3**: very low frequency, very high losses
  - Risk mitigation + risk transfer + risk coping
Sequential ASRA Flow Process

Risk Monitoring

Risk Assessment / Reevaluation

Implementation

Solutions Assessment

Operationalizing & Mainstreaming Risk management

Risk Monitoring

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Solutions Assessment

Operationalizing & Mainstreaming Risk management
Contents: Methodological Guidance for Practitioners

How-to: A Stepwise Approach

Step 1: Background and Risk Identification
Step 2: Risk Quantification
Step 3: Fieldwork
Step 4: Risk Prioritization
Step 5: Prioritization of Risk Management Solutions

Understanding Vulnerability
Towards a Risk Management Strategy
Limitations & Challenges
Step 1: Background and Risk Identification

**Preliminary analysis**

- Demand conditions
- Supply chain structures
- Stakeholders and their functions
- Future outlook
- Governance and coordination mechanisms
- Enabling environment
Timeline of Major Shocks to Agricultural Production in Senegal, 1980-2012

Step 2: Risk Quantification

- Several methods can be used
- Time series data ideal
- Scenarios with no data or poor-quality data
- Frequency and intensity

Expected Average Losses For Adverse Crop Production Events in Niger

Step 3: Fieldwork

**Purpose:** Identify the storyline

- Corroborate the timeline
- Test causality of risks identified
- Validate losses against reality
- Assess stakeholders’ capacity to manage risks

**Activities**

- Data mining
- Interviews
- Focus groups and gender analysis
- Validation workshop
Step 4: Risk Prioritization

Three Key Variables For Risk Prioritization

- Frequency of events
- Severity of impact
- Capacity to manage
Step 5: Prioritization of Risk Management Solutions

Risk Solutions Prioritization Process

- Long list of solutions
- Prioritization filters
- Short list of solutions
Understanding Vulnerability to Risk

Defining Vulnerability

- Sensitivity
- Adaptive Capacity
- Exposure

Incorporating Vulnerability in the Risk Assessment

- Constructing a Vulnerability Matrix
- Targeting Women
Toward A Risk Management Strategy

1. Assistance of Experts
2. Discussions with Stakeholders
3. Evaluation of Action Options
4. Creation of a Risk Management Strategy
5. Development of an Implementation Plan
6. Implementation
Limitations & Challenges

• Historical bias
• Data limitations
• Subjective bias
• Risk appetite
• Attribution
• Client expectations
Technical Training: Agricultural Sector Risk Assessment

**Target Audience:** Policy makers and development practitioners who are involved in designing and implementing agricultural programs and policies

**Objective:** To better understand and assess these risks and associated vulnerabilities

**Available on FARMD:** [http://www.agriskmanagementforum.org/content/training-module-agriculture-sector-risk-assessment](http://www.agriskmanagementforum.org/content/training-module-agriculture-sector-risk-assessment)
Q&A