



FARM D

Forum for Agricultural Risk Management in Development

WEBINAR SERIES

Agricultural Sector Risk Assessment:  
Methodological Guidance for Practitioners

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

Washington DC, United States, March 1, 2016

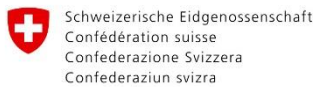


WEBINAR SERIES

# Agricultural Sector Risk Assessment: Methodological Guidance for Practitioners

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

Washington DC, United States, March 1, 2016



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,  
Education and Research EAER  
State Secretariat for Economic Affairs SECO



Ministry of Foreign Affairs



AGRICULTURE GLOBAL PRACTICE  
DISCUSSION PAPER 10

AGRICULTURAL SECTOR RISK  
ASSESSMENT: METHODOLOGICAL  
GUIDANCE FOR PRACTITIONERS



THE WORLD BANK  
IBRD • IDA | WORLD BANK GROUP



# Agricultural Risk Management Team (ARMT)

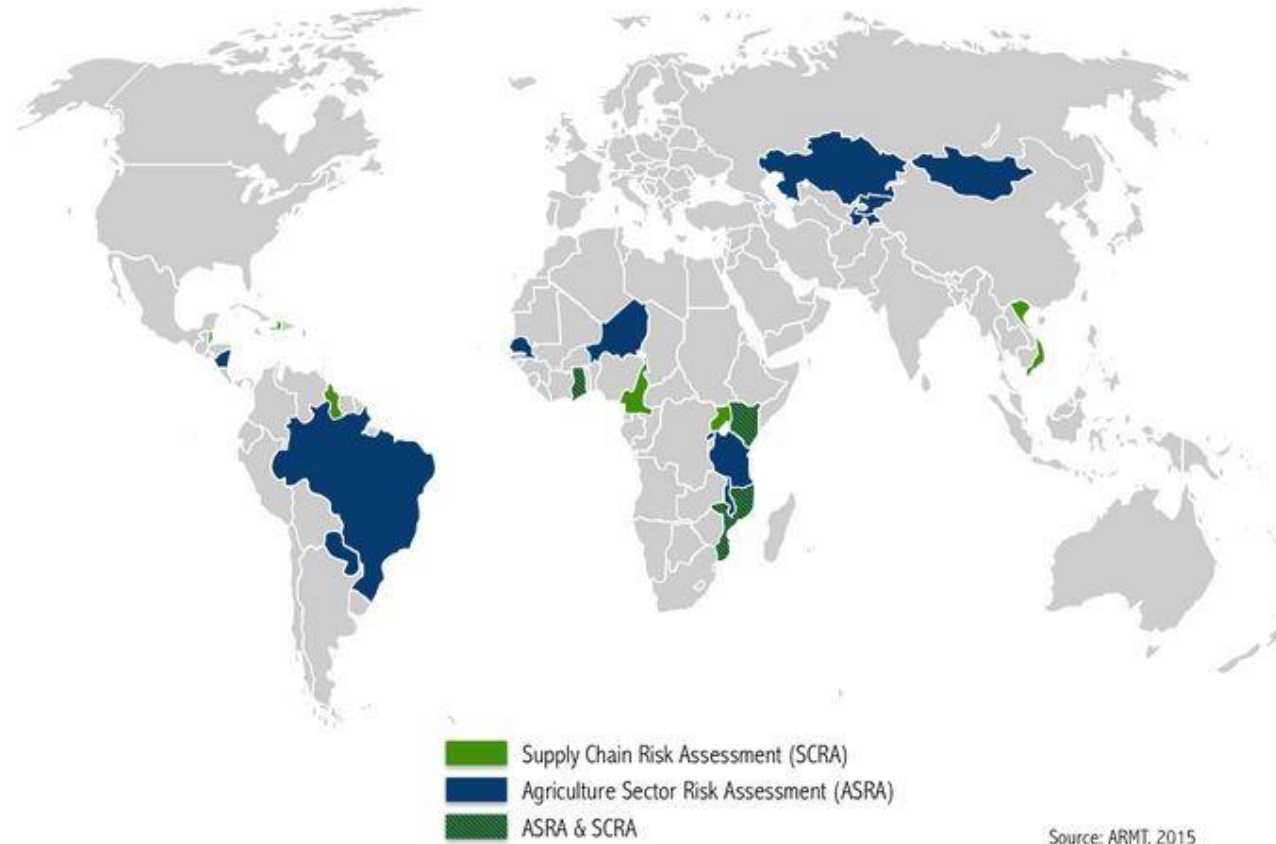
## Risk Assessment and Management

- 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



# 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

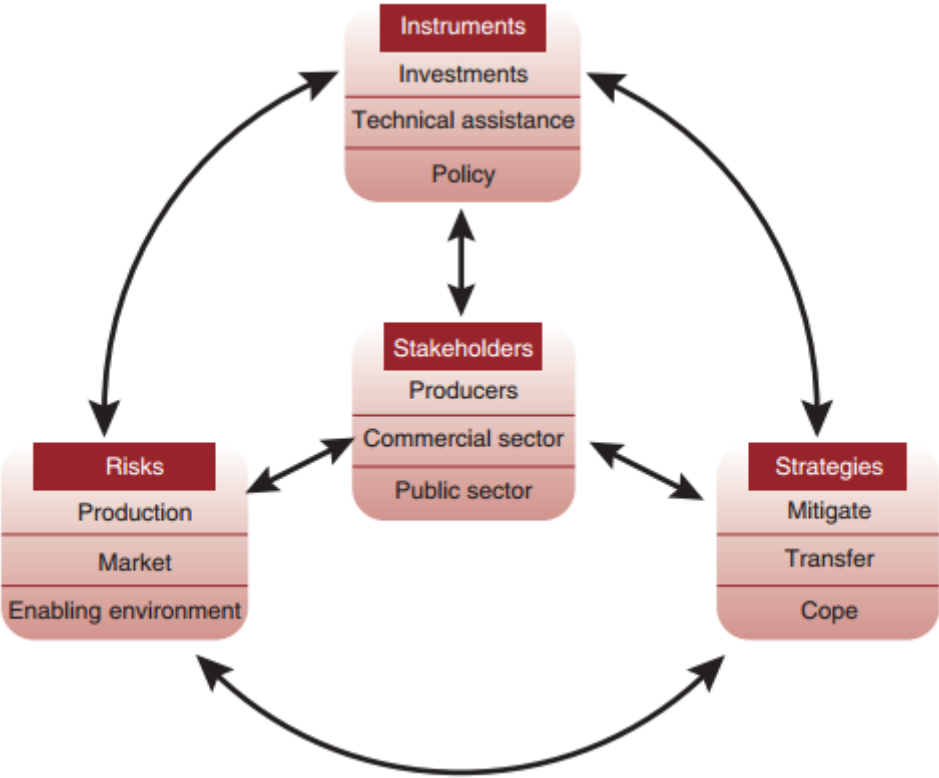


# Benefits of Agricultural Sector Risk Assessment (ASRA)

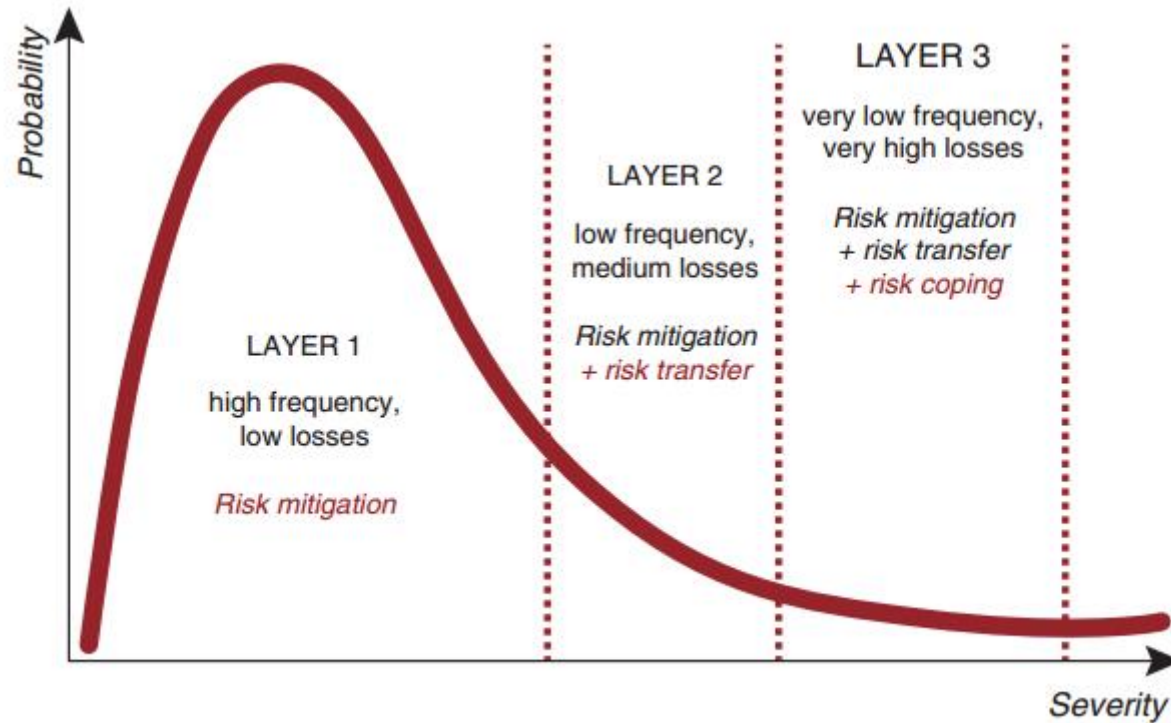
## How ASRA Adds Value

- 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





# Sequential ASRA Flow Process



# 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

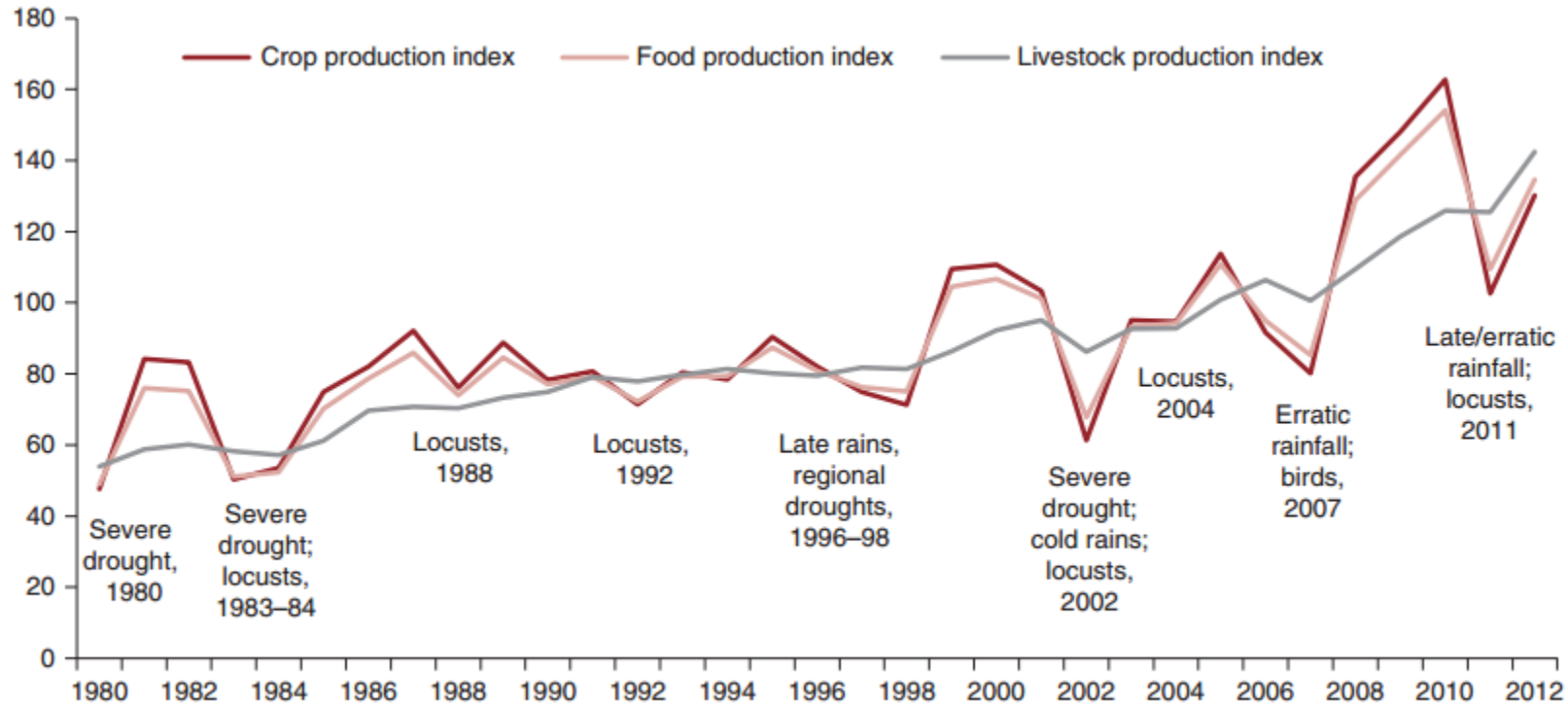
Limitations & Challenges

# 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

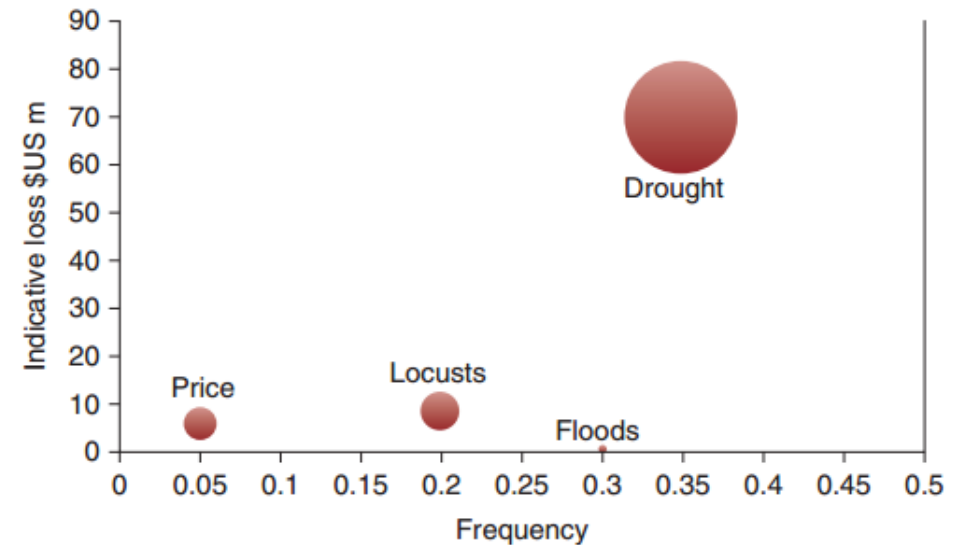


Source: World Bank 2014d.

## 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



Source: World Bank 2014a.

# 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

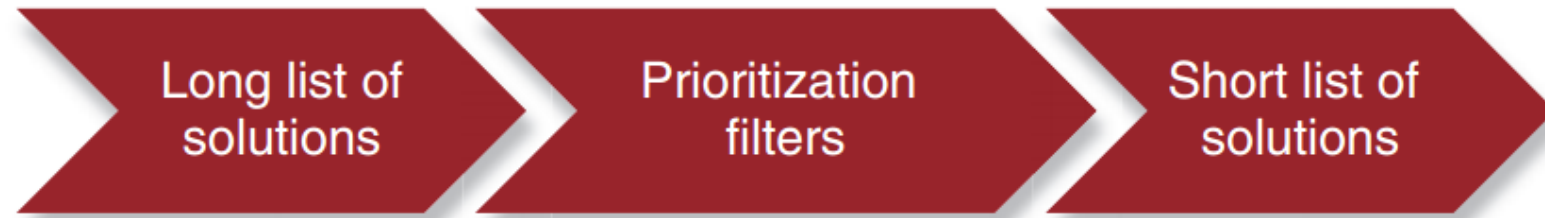
# Step 4: Risk Prioritization

## Three Key Variables For Risk Prioritization



# Step 5: Prioritization of Risk Management Solutions

## Risk Solutions Prioritization Process





# 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>



# Q&A

<http://www.agriskmanagementforum.org/content/ag-discussion-paper-10-agricultural-sector-risk-assessment-methodological-guidance-practitio>