Resilience in the Sahel-Enhanced (RISE) Program Impact Evaluation

Key Findings from Recurrent Monitoring Survey 2018-19

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RISE program

Goal:
To increase the resilience to shocks of chronically vulnerable populations in agro-pastoral and marginal agriculture livelihood zones of the Sahel.

- Five year program (2015-2020)
- Location: Sahelian areas of
  - Burkina Faso (left)
  - Niger (above)
RISE program

Activity areas

- Improved technologies and management practices
  - Agricultural production
  - Animal rearing
- Access to markets and business development
- Access to financial resources
- Disaster Risk Reduction (DRR)
- Conflict mitigation
- Heath and nutrition

➡️ Strengthen households’ resilience capacities
RMS’s collect real-time data, during the course of an actual shock, on the nature of the shock, how households are coping with it, and their resilience.

Opportunity to gain greater understanding of the underlying determinants of their resilience (their “resilience capacities”) and whether and how a program is making a difference.

Information helps to inform programming for the rest of the project and future projects.
Main takeaways of RMS 2018-19 analysis

- High, increasing shock exposure during RISE
- Four main shocks in RMS period itself: Climate events (drought, flooding), army worms, violent extremism, food price increases
- 55-60% of households were resilient
- What helped them recover?
  - Their own resilience capacities:
    Social capital, assets, savings, informal safety nets, human capital, exposure to information, access to financial resources, markets, services and infrastructure.
  - RISE interventions (suggestive evidence)
Outline

• Background on RMS 2018-19
• Definitions and measurement framework
• Shocks and coping strategies
• Food security and resilience
• What helped households recover?
  – Resilience capacities
  – RISE interventions
• Implications for programming
Background on RMS 2018-19
Objectives of the RMS 2018-19 analysis

(1) Understand the severity and evolution of the shocks households faced over the RMS period

(2) Document the coping strategies they used to deal with them

(3) Assess how resilient they were to the shocks

(4) Explore how households’ resilience capacities and the RISE program affected their resilience
RMS 2018-19 data collection

Quantitative data
- Collected August 2018 – April 2019 (9 months)
- Representative, panel sample
- 828 households
- 5 rounds 2 months apart

Qualitative data
- FGDs, KII
- Concurrently collected in each round

Surveys of the RISE Impact Evaluation
- Baseline April 2015
- Midline April 2017
- Endline April 2020
Definitions and measurement framework
Resilience and resilience capacity

**Resilience**: The ability to “… recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth” (USAID)

**Resilience capacities**: Enabling conditions for achieving resilience
3 dimensions:

- **Absorptive capacity**
  - The ability to minimize exposure to shocks and recover quickly if exposed

- **Adaptive capacity**
  - The ability to make proactive and informed choices about alternative livelihood strategies based on changing conditions

- **Transformative capacity**
  - State of the wider system in which households are embedded:
  - Governance mechanisms, policies/regulations, markets, infrastructure, formal safety nets
TANGO Conceptual Framework for Resilience Measurement and Analysis

Note: Dashed line indicates steady over time.
Shock exposure and coping strategies
Shock exposure

- Measured shock exposure with index taking into account household reports of the incidence and severity of 26 shocks, including:
  - Environmental
  - Economic
  - Conflict shocks

- Shock exposure progressively increased over the course of the RISE program’s implementation in both program areas.
Shock exposure during the RMS period

Four major “exogenous” shocks:
- Multiple climate shocks
- Army worm infestations
- Influx of violent extremism
- Food price increases

Drought
Excessive rains, flooding
Lack of rain at critical times
High winds leading to crop lodging

Streamflow deviation from norm, March 2015 to April 2019
Shock exposure during the RMS period: violent extremism

• Conflict shock rose during the RMS period: escalating violent extremism (Burkina Faso and Tillabery in Niger)
• Starting in RMS Round 3, militant groups attacked villages leading to large-scale displacement
• Downstream impacts:
  − Market disruptions, school closures
  − Disruption of livelihoods: agriculture and livestock rearing, gold panning, petty trade
  − Hampered ability to receive humanitarian assistance

“They could no longer go about their daily business without being scared.”

“People were becoming more desperate and living in constant fear of being attacked.”

“Everyone had become careful where they go and who they associate with. They felt they had lost their peace.”
Coping strategies

Quantitative data:

Most common
• Selling livestock (but drought⇒poor terms of trade)
• Drawing down on savings
• Reducing number of meals in a day
• Limiting portion sizes at mealtimes
• Reducing regular household expenses

Also widespread
• Sending livestock in search of pasture and water
• Migration of some family members
• Relying on friends/relatives
• Hunting, foraging, fish, termite mounds
• Selling productive assets
• Consuming seed stock

Additional from Qualitative data
• Sale of wood and straw, wild foods
• Casual labor in others’ fields
• Mortgaging land, going into debt to merchants

“This year the price of animals has been so low that even the money from selling 3 goats can’t buy a bag of corn” (Kil Maradi).

“The poorest families collected waste flour from the mills. “(FGD, Centre-Nord)
Coping strategies

**Negative coping strategies**

- Selling productive assets
- Consuming seed stock
- Sending children to work for money
- Borrowing money from money lenders
- Taking children out of school

=> **Undermine future ability to recover**

“To cope with the animal diseases, many farmers tried to sell the animals before they died” (FGBD Maradi)

“People also coped by reducing from three meals a day to two. People were consuming more wild leaves.. People were also consuming their seed stock” (FGD Centre-Nord)
Food security and resilience
Trends in food security

- Resilience measured using changes over time in food security.

- Food security measured using the inverse of the Household Food Insecurity Access Scale (HFIAS).

- Index constructed from responses to nine questions regarding people’s experiences of food insecurity.

- Inverse taken so we have a measure that increases with increases food security.
Trends in food security

**Burkina Faso:** Food security stable since the baseline.

**Niger:** Highly fluctuating pattern
Fell by 30% between baseline and RMS R5

*Food security index at baseline, midline and RMS rounds 1-5*
Effect of shocks on food security

- Resilience: maintaining well-being (e.g. food security) in face of shocks
- But do shocks have a negative impact? Which ones?
- Regression analysis confirms strong negative impact

**Shocks with negative impact on food security:**

- Drought ✓
- Poor rainfall timing ✓
- Flooding ✓
- Insect invasions ✓
- Conflict shock ✓
- Food price increases ✓
- [Animal disease outbreaks ✗]
Resilience: Four measures

1. “Long-term” realized resilience: The total change in food security over the RMS period.

2. “Short-term” realized resilience: The change in food security between RMS rounds (2-month periods).

3. Food security stability: Whether a household was able to maintain or increase its food security between RMS rounds.

4. Perceived ability to recover: An experiential indicator based on households’ own reports of their ability to recover from the shocks they experienced.
How resilient were households?

Realized resilience: recovery

- 60% of households recovered their food security over the RMS period ➔ 40% did not

- Greater percentage of Burkina Faso households recovered (66% versus 56%)

Stability

- 55% food security stability ➔ 45% did not

- Burkina Faso and Niger households fared roughly the same
Has resilience increased since the beginning of RISE?

- Used perceived ability to recover measure (same 1-year recall period at baseline, midline and RMS R1)

- RISE area as a whole: No change in ATR
  - Burkina Faso: Increased by 12.2%
  - Niger: Decreased by 9.5%
Shock recovery: Role of household resilience capacities
Shock recovery: The role of resilience capacities

Indicators ➔ Indexes of three dimensions and an overall index
Shock recovery: The role of resilience capacities

Did households’ resilience capacities (as measured at midline) boost their resilience to the shocks experienced during RMS? YES

Evidence from regression analysis:

- Positive association between overall index of RC both long- and short-term realized resilience
- Positive association between overall index of RC and food security stability over the RMS period
- Household’s RCs reduced the negative impact of shocks on their food security
Shock recovery: The role of resilience capacities

*Estimated recovery trajectory with increasing vegetation deficit at differing levels of resilience capacity (Burkina Faso program area)*
**Shock recovery: The role of resilience capacities**

Households’ initial resilience capacities played a stronger role in boosting resilience in the Burkina Faso area than the Niger area.

- **Indicators of resilience capacity**
  - **Absorptive capacity**
    - Bonding social capital
    - Asset ownership
    - Cash savings
    - Access to informal community safety nets
    - Availability of hazard insurance
    - Availability of disaster preparedness & mitigation
    - Support for conflict mitigation
  - **Adaptive capacity**
    - Bridging social capital
    - Linking social capital
    - Household aspirations and confidence to adapt
    - Diversity of livelihoods
    - Access to financial resources
    - Asset ownership
    - Human capital
    - Exposure to information
  - **Transformative capacity**
    - Bridging social capital
    - Linking social capital
    - Access to markets
    - Access to services
    - Access to infrastructure
    - Access to communal natural resources
    - Access to formal safety nets

- **Burkina Faso ✓**
- **Niger ✓**
Specific, individual resilience capacities are the actionable programming and policy levers that can potentially strengthen households’ resilience in the future. Which boosted’ resilience?
Shock recovery: The role of resilience capacities

Three capacities stand out as having likely strengthened households’ resilience to shocks in all RISE surveys: baseline, midline and RMS

- **Absorptive capacity**
  - Bonding social capital
  - Asset ownership
  - Cash savings
  - Access to informal community safety nets
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  - Support for conflict mitigation

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Shock recovery: The role of resilience capacities

Five were found to have likely strengthened households’ resilience to shocks in at least two RISE surveys:

Indicators of resilience capacity

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Shock recovery: Role of RISE interventions
Shock recovery: The role of RISE

Methods

- Look at difference between two groups (50% each)
  - High exposure: Received resilience programming from REGIS-ER and/or REGIS-AG
  - Low exposure: Did not

- Regression analyses
  - Realized resilience: Standard growth regression
  - Stability: Probit regression
  - ATR: OLS regression

Independent variables:
- Shock exposure
- Initial food security
- Socio-demographics
- Livelihood group (agriculture, pastoralism, other)
- Asset index
Shock recovery: The role of RISE

Methods

- Difference-in-difference analysis

Note: Exploratory analysis in advance of formal impact evaluation (endline)
Shock recovery: The role of RISE

Descriptives: Change in food security over the RMS period for RISE low- and high-exposure households

- Burkina Faso, high: 18.4 to 18.9
- Burkina Faso, low: 18.3 to 17.1
- Overall, low: 15.8 to 16.6
- Overall, high: 15.2 to 14.5
- Niger, low: 12.9 to 13.9
- Niger, high: 11.8 to 20.1

** and *** indicate statistical significance
Shock recovery: The role of RISE

Findings (suggestive evidence)

Rise interventions

• Have had a positive impact on households’ ability to recover from the shocks faced over the RMS period
• Helped Niger households maintain stability in their food security in the face of drought
• Reduced the negative impact of drought on Niger households’ ability to maintain their food security
• Reduced the negative impact of flooding on Burkina Faso households’ food security
**Shock recovery: The role of RISE**

*Estimated recovery trajectory as the cumulative rainfall deficit over the RMS period increases for low- and high-exposure households (Niger)*

Note:

Positive impacts are due to program’s efforts to strengthen households’ resilience capacities. Endline Impact Evaluation will pinpoint which.
Implications for programming
Implications for programming

Recommendations

- Redesign and expand safety nets
- Expand the focus of Disaster Risk Reduction activities beyond droughts to include floods
- To deal with rising violent extremism, implement interventions that focus on conflict mitigation
Implications for programming

Recommendations

• Continue to invest in savings groups to strengthen social capital, especially in areas where social capital is beginning to erode

• Continue to strengthen households’ adaptive capacity

• Continue to strengthen transformative capacity
Thank You

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