Impact evaluation of the Food Security and Development Support Project in the Maradi Region: Republic of Niger

107th session of the Evaluation Committee
29th of October 2019, Rome
Background of the project

**Duration:** 2011-2018.
**Total project cost:** 31.71 million USD (IFAD 70%).
**Coverage of:** 357 villages (18 districts)

**Objective:** Improving the living conditions and crisis resilience of rural populations focusing on food and nutritional security.

**Strategy:** Development of five rural economic hubs focused on wholesale and intermediary markets of cereals.

**Expected results:**
- Increased agricultural productivity;
- Improved access to agricultural markets;
- Improved household nutritional security and resilience;
- Sustainable management of communal resources;
- Strengthening of farmers’ organizations.
Conditions de vie, sécurité alimentaire et nutritionnelle et résilience améliorées de 65 000 ménages ruraux autour de 5 pôles de développement économiques dans 18 communes de la région de Maradi.
Impact evaluation methodology

**Quasi-experimental methods**: Propensity score matching and difference-in-difference.

- **Sample size**: 1,350 households: 614 treated and 736 control group.

- **Sample strategy**
  - stratified sample (group of treatments – agriculture; environment; market; food security).
  - random walk in the village (households).

**Participatory Narrative Inquiry (PNI)**: is drawn on narrative analysis and it integrates

- **Storytelling**
  - (around 560 stories)

- **Sense making process**
  - Participants provide personal micronarratives concerning life.
  - Experience Self-interpretation by respondent.
  - Analysis of stories and variable associations.
  - Group discussion.
Key findings

Relevance:
- PASADEM aligned with main national development policies ("Plan de développement économique et social" and "Initiative 3N")
- Responding to strong needs: (i) improved food security and (ii) market integration
- But underestimated costs and time to build infrastructure for market access

Effectiveness
- Infrastructure progress below targets
- Project redesign shifted budget to infrastructure and away from production activities which were discontinued
- Even if infrastructure was incomplete, better market access, price information and a greater number of buyers (competition) raised prices to farmers

3 wholesale markets, vs. 5 planned
11 intermediary markets, vs. 26 planned
Impact on **rural poverty** is generally positive:

- **Food security and resilience** improved, thanks to women’s access to cereal warehouse; distribution of goats; cash for work.

However, no significant effect detected on **agricultural productivity**:

- It is still limited by a physical and economic **access to inputs** (especially fertilizers)
- The limited capacity of **farmer organizations** to provide agricultural services for production and post-production activities, is still a challenge
### Highlights of impact findings results: propensity score matching and difference-in-difference analysis

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Outcome of interest</th>
<th>Effect</th>
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<tbody>
<tr>
<td><strong>Agricultural productivity</strong></td>
<td>Yield of most important crops (millet, sorghum, cowpea, groundnut)</td>
<td>Not statistically significant</td>
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<tr>
<td><strong>Household income and net assets</strong></td>
<td>Livestock (goats and sheeps)</td>
<td>Positive, statistically significant</td>
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<td></td>
<td>Household material (wall material)</td>
<td>Positive, statistically significant</td>
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<tr>
<td></td>
<td>Durable assets (ox-cart, plow, motorbike, bike)</td>
<td>Not statistically significant</td>
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<tr>
<td><strong>Food security</strong></td>
<td>Months of Adequate Household Food Provisioning (MAHFP)</td>
<td>Positive, statistically significant</td>
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<td></td>
<td>Food Consumption Score (FCS)</td>
<td>Positive, statistically significant</td>
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<tr>
<td></td>
<td>Household Diet Diversity Index (HDDI)</td>
<td>Positive, statistically significant</td>
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<tr>
<td></td>
<td>Coping Strategy Index</td>
<td>Positive, statistically significant</td>
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</tbody>
</table>
Key findings – cont.

**Sustainability**

**Supporting factors:**
(i) Institutional partnerships with the Regional Chamber of Agriculture, local governments
(ii) Some improvements in the capacity of farmer organizations and their unions

**Threats:**
(i) Unclear arrangements for maintenance / repairs of market infrastructure
(ii) Wholesalers and major collectors controlling the markets vs still weak bargaining capacity of farmer organizations

**Gender equality and women’s empowerment.**  
**Individual sphere:** functional literacy;  
**Household sphere:** helped women to contribute to hh food security;  
**Social sphere:** some increase in women’s participation in managing position in local organizations (from 17.5% to 24.5%)

But choice of women-business activities was not optimal. They required managerial and technical skills (e.g. cereal mill) instead of simple processing (e.g. pancakes)
Some contribution to **natural resources management and climate change adaptation** thanks to assisted natural regeneration activities; half-moon ditches; soils bench treatment; zai holes; sand dune stabilization; fire breaks. (Satellite data)

**Changes of vegetation cover in the Maradi Region 2010-2018**
Key recommendations

**Recommendation 1:** Continue to support food security and resilience activities in order to reach poorest farmers in order to improve food and nutritional security

**Recommendation 2:** Develop at least one rural economic hub and related market infrastructure in each project area

**Recommendation 3:** Strengthen farmer organizations in order to provide assistance and services to farmers in production and post-production activities