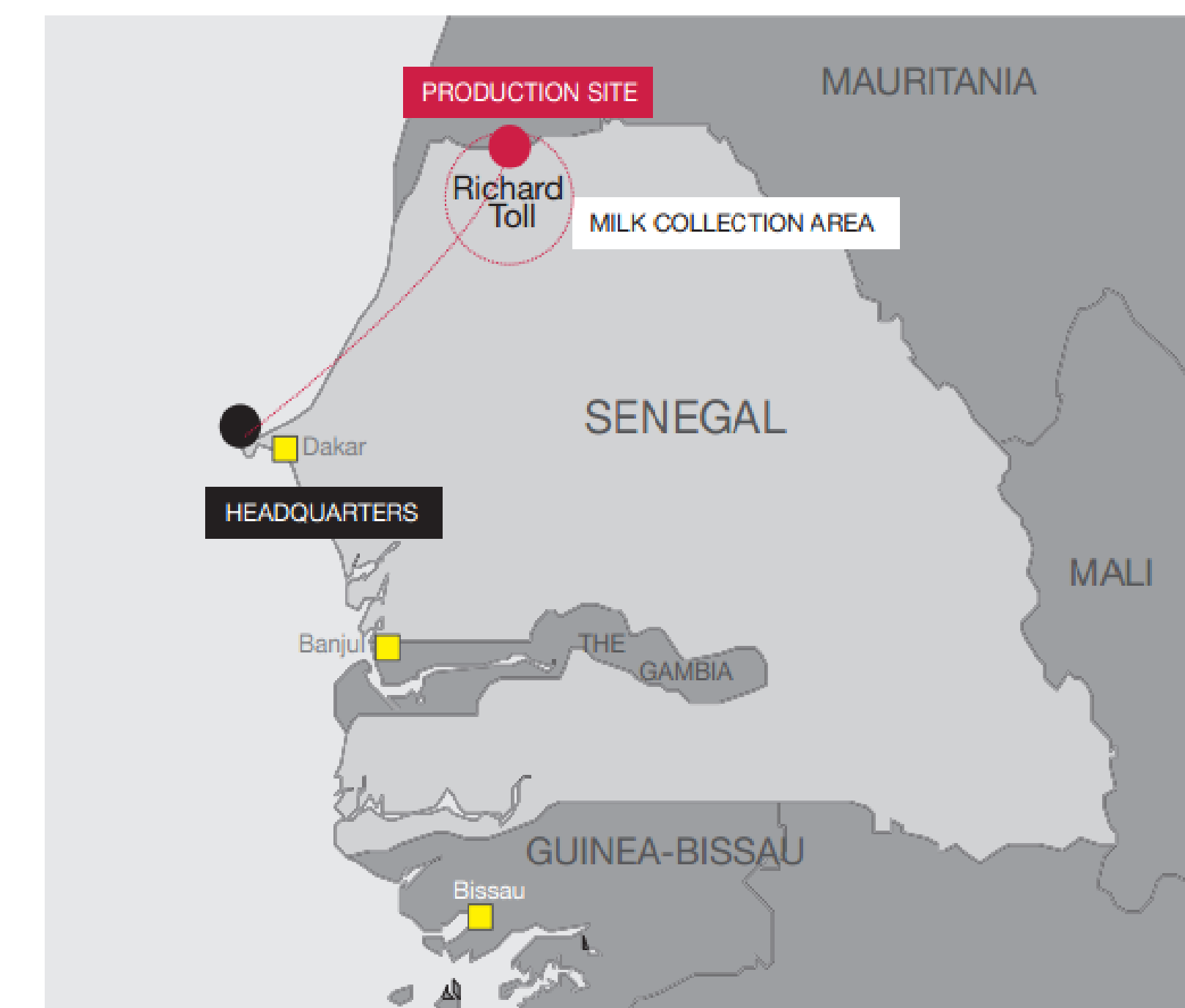


Food security and nutrition as basic indicators of socioeconomic sustainability in a context of innovation

The case of the Laiterie du Berger (LDB) in Senegal

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Parisse M., (2012). Developing local dairy production: the Laiterie du Berger, Senegal, *Field Actions Science Reports* [Online], Vol. 6 | 2012, Online since 22 November 2012, Connection on 22 November 2012. URL: <http://factsreports.revues.org/2271>

Global overview

Farming practices in the West African dairy sector are changing with the increase in milk marketed. In Senegal, the LDB is a modern dairy plant collecting milk in pastoral areas. Set up in 2006, it had quadrupled quantities of milk collected by 2010.

The innovations brought by the LDB:

- Settling dairy farmers within a 50 km radius of the dairy
- Organization six collection routes
- Provision of animal feed through check-off recovered on future milk sales
- Extension team providing technical support to farmers on milking hygiene, dairy herd nutrition, veterinary advice, protected areas for grazing, water wells...

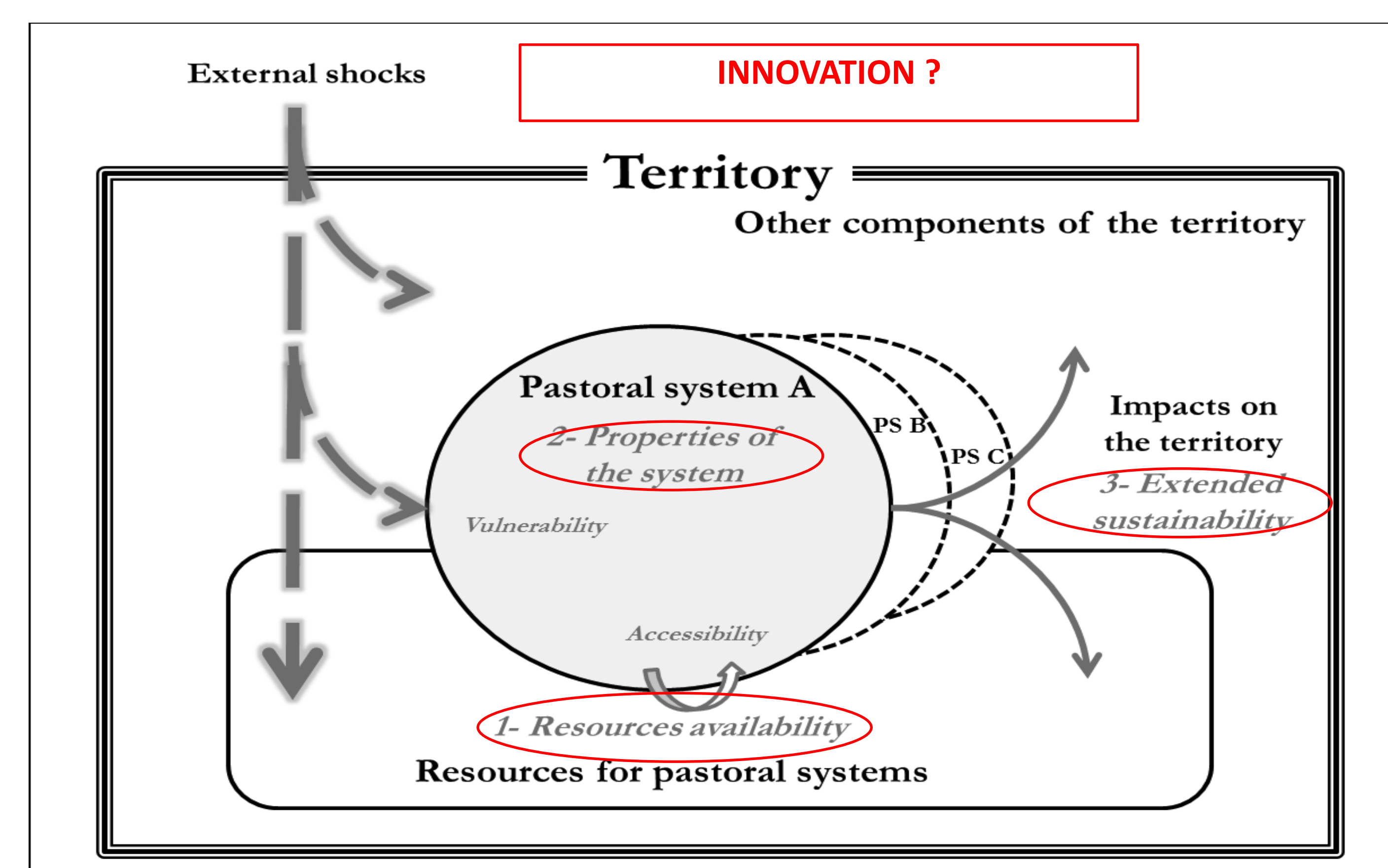
Main indicators of socioeconomic sustainability

- The Food Security and Nutrition Index (FSNI) is used as basic indicator for measuring socioeconomic sustainability of innovation impacts
- Exploration of additional indicators through focus group discussions:
 - ✓ Livelihoods of the producer households
 - ✓ Organization of business-to-business relationships within the value chain
 - ✓ Control of resources and incomes by different gender groups
 - ✓ Change in the mobility of producer communities

Major impacts of the LDB's supply chain innovations

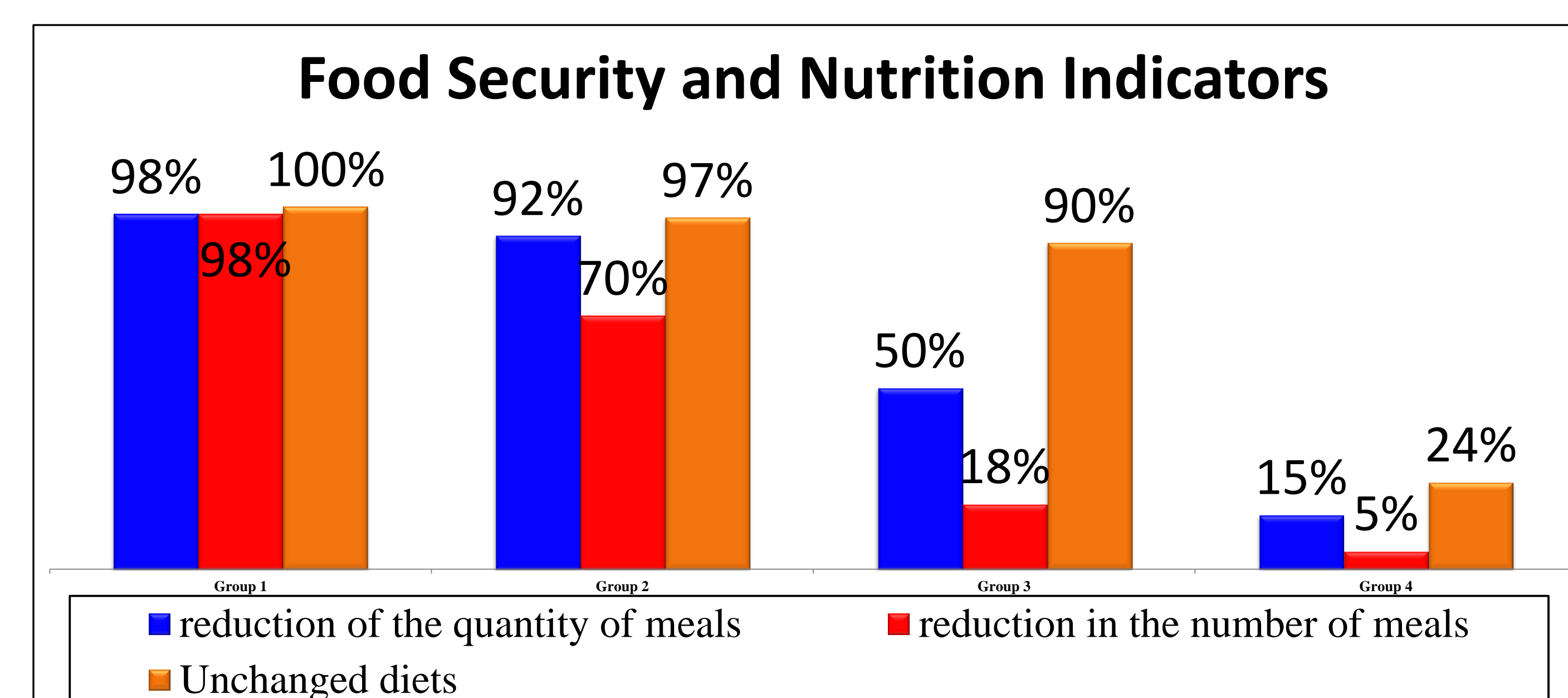
- The FSNI analysis has identified the main determinants of food and nutrition security:
 - ✓ Stabilization of dairy incomes during the dry season
 - ✓ Diversification of revenue sources
 - ✓ Building up a sizeable herd
- Producers are gradually moving away from local markets to supply the dairy
- Dairy incomes constitute more than half of global household revenue during the rainy season
- Supplementary feeding, better animal health and improved milk quality are becoming widespread among pastoral milk suppliers
- Mini dairy cow sheds have led to changes in transhumance practices: women are staying put with lactating cows and children while men still move around in search of grazing land
 - ✓ Women have more time to concentrate on income generating activities
 - ✓ Children have better access to school
- Dairy incomes contribute positively and significantly to the food security of pastoral households
- The LDB has played an important role on the NRM

Conceptual framework



Lambert-Derkimba A., Aubron C., Ickowicz A., Toure I., Moulin C.H., (2013). Pastoral Systems Sustainability Assessment Grid (PSSAG): an innovative method to assess the sustainability of pastoral systems in their territories

Some results



Food Security and Nutrition Statistics						
Groups	Categories	Class size	Mean	Standard deviation	Minimum	Maximum
Group 1	Very low food security	108	0.61	0.07	0.50	0.76
Group 2	Low food security	138	0.38	0.05	0.27	0.49
Group 3	Marginal food security	121	0.16	0.07	0.00	0.27
Group 4	High food security	78	0.92	0.08	0.77	1.00

Way forward to improve methodology

Constructing additional socio economic indicators of sustainability: corporate social responsibility of the dairy towards its pastoralist suppliers ; identification of the final product with the producers' communities. Testing all indicators at the community and value chain levels to consolidate initial results.

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