



Strengthening Resilience and Sustainability in Food Systems for Environmental and Socioeconomic Development

Farm resilience assessment using FAO's adapted SHARP+ tool in Busia County, Kenya

Elizabeth Imbo NICE project country manager Kenya, representing research of:

Charles Chigemezu Nwokoro, Sophie van den Berg, Aleksandra Wybieralska, Elizabeth Imbo, Marnie Pannatier, Jimena Monroy, Cornelia Speich, Kesso Gabrielle van Zutphen, Tanja Barth-Jaeggi, Dominique Barjolle



Study took place in the context of the NICE project

 The NICE project facilitates locally-led actions to improve nutrition of secondary cities' population through agricultural, food and health sector collaborations, and public-private engagements, with strong emphasis on the role of women and youth entrepreneurs.



The NICE project consortium

More information and city factsheets on the NICE webpage: nice-nutrition.ch

Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra

Swiss Agency for Development and Cooperation SDC



3



Project locations











Purpose of the research for NICE

- M/E: baseline for NICE project objectives
- Priorities: identify priorities to reinforce and build resilience



What is the FAO SHARP+ tool?

- Resilience assessment tool combining: self-assessment of farmers + external assessment of agricultural systems
- In the context of CC adaptation projects, it has been implemented in 45+ countries





SHARP+ main outputs



Detailed information of farming systems and livelihoods



- Resilience scores of farming systems and livelihoods
- Quantitative & qualitative georeferenced data



Adaptation FAO SHARP+ tool





Research location



Busia County Locations Farmers (NICE project; Feb 2022)





Multi-stage purposive sampling



Enumerator training



Interviews with farmers





The I3 SHARP+ resilience indicators and ...







Example build-up score questions

Indicator	Module	SHARP question	Response	Scale
4. Functional and response diversity Heterogeneity of features within the landscape and on the farm; diversity of inputs, outputs, income sources, markets, pest controls, etc.	6. Crop production	6. By surface covered, which crops do you cultivate? (seasonal and perennials)	# of seasonal and perennial crops	I=0; 2=1; 3=3; 4=5; 5=6; 6=8; 7+=10
	22.Trees	22. Approximately how many different types/species of trees grow on your land? (trees)	# count from list	I = 3, 2= 5, 3= 7, 4= 9, 5+= 10
	3. Production activities	3. Do you usually carry out any of these activities on your farm?	Animal production, crops, trees, bee keeping, agroforestry, etc.	I = 0, 2= 5, 3= 7, 4+= I0
	24. Income sources	24. Do you have any non-farm income generating activity?	Yes, all year Yes, seasonally Yes, occasionally No	Yes, all year=10 Yes, seasonally=7 Yes, occasionally=5 No=0



on the

Economic Results 1. Socially self-or ganized aspect 7.65 13. Reasonably profitable 2. Ecologically self-r equlated 8 5.33 12. Builds human capital 3. Appropriately connected 4.08 indicators 5.88 5.26 3 4. Functional and response 11. Honours legacy 6.36 5.96 diver sity Social aspects 5.76 10. Locally interdependent 6.99 5. Optimally redundant 4.93 5.11 4.18 5.39 9. Reflective and shared 6. Spatial and temporal heter ogeneity learning 8. Coupled with local natural Ecological 7. Exposed to disturbance capital aspects



Results on the agroecological practices



No.	Agroecological farming practices
I	Agroforestry
2	Crop diversification
3	Crop rotation
4	Excl. organic pesticide appl.
5	Part. organic fertiliser appl.
6	Part. organic pesticide appl.
7	Production and use of locally adapted seeds and breeds
8	Efficient & water-saving irrigation/water manag.
9	Excl. organic fertiliser appl.
10	Intercropping
11	Mulching
12	Barriers and terraces
13	Windbreaks and living fences
14	Other soil/water conserv. practices
15	Integr. of livestock/fishery with crop produc.
16	Rehabilitation of degraded grazing land
17	Controlled grazing



Conclusion and outlook

- Strengthening resilience of farming systems is imperative in the face of climate change
- Priorities for lower resilience scores
- ► SHARP+ rich in results and is scalable
- Georeferenced data for comparison

Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra



Swiss Agency for Development and Cooperation SDC





SWISSAID

german cooperation









Growing Sustainably

Thanks! **ANY QUESTIONS?** You can find me at:

Elizabeth Imbo Elizabeth.imbo@syngenta.com

Sophie van den Berg consulting@sophievdberg.com LinkedIn 'Sophie Jasmijn van den Berg'