Food and Agriculture Organization of the United Nations

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UNIVERSITÄT BERN
CDE CENTRE FOR DEVELOPMENT AND ENVIRONMENT

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SHARP+ dashboard

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Presented by:

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E-LEARNING SERIES | Sustainable Forest Management Impact Program on DRYLAND SUSTAINABLE LANDSCAPES

FAO

SHARP+ Self-evaluation and Holistic Assessment of Climate Resilience of Farmers and Pastoralists

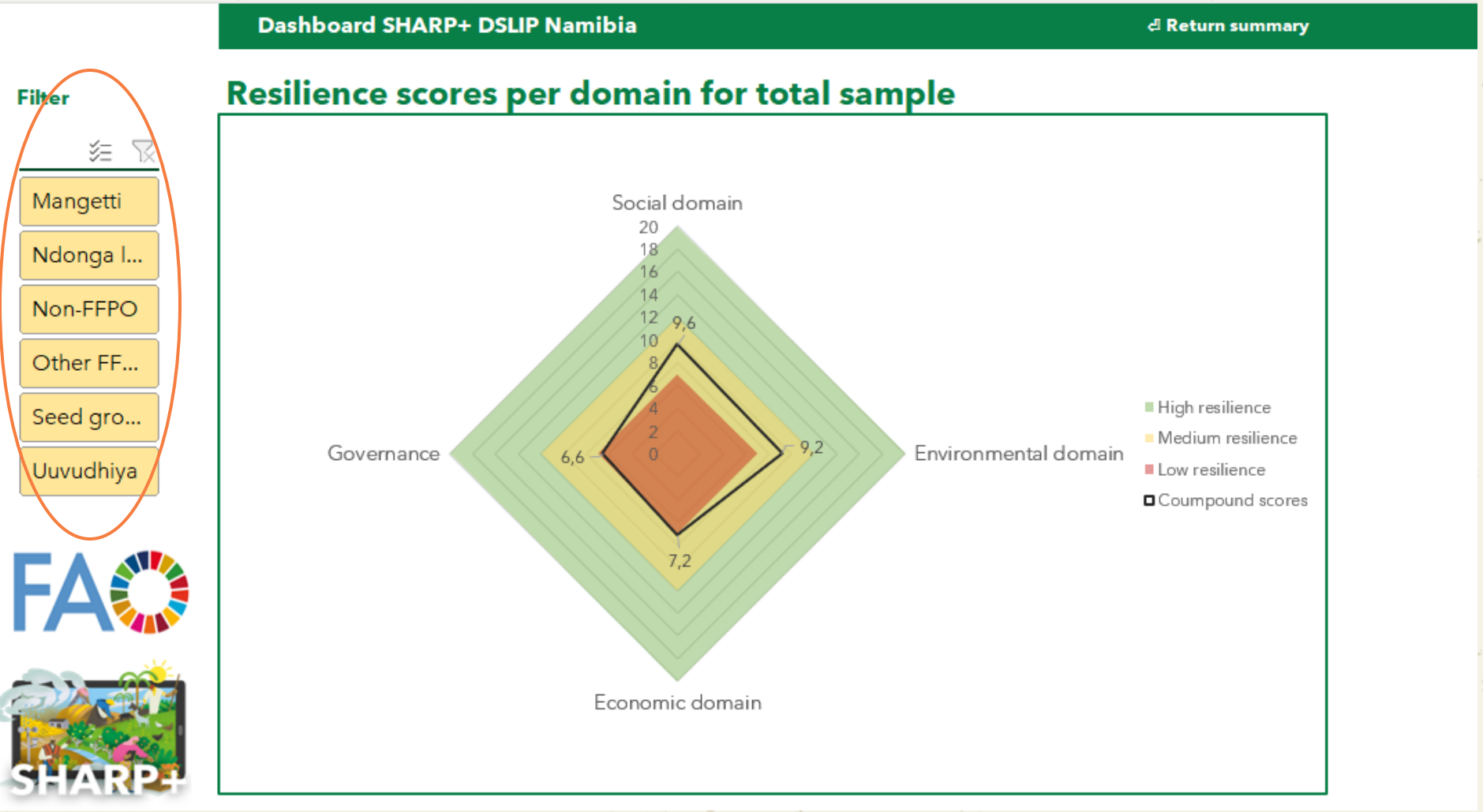
SHARP+ Presentation

The Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP+) tool was developed in 2014 in a collaborative manner by the Food and Agriculture Organization of the United Nations (FAO) and external partners.
The assessment methodology is based on a series of questions covering aspects on how rural households manage their farm systems, as well as the natural resources. It explores how farmers interact and are linked with their communities, which are the main sources of risks and vulnerabilities, how farmers cope with, adapt to and transform following shocks, among others.
SHARP+ is operationalized through a tablet-based application to allow for faster and more accurate data collection and entry processes. The qualitative and quantitative answers are transformed into numerical scores reflecting the resilience of rural-based households as well as the priority areas as considered by farmers. Monitoring changes in the SHARP+ scores at different points in time can be used to indicate whether household's resilience status is declining or improving.
The SHARP+ standard survey consists of four domains (social, economic, environmental and governance), enabling a holistic analysis of resilience. Each domain comprises several modules, being a series of questions covering a specific aspect of the household or farming system under study. The generic version of the SHARP+ survey consists of thirty-three modules, of which seventeen are mandatory for the assessment and sixteen optional. Optional modules are provided to allow users to customize their questionnaire, based on their context and the purpose of the project/programme. The SHARP+ survey was adapted to fit the context and objectives of the project in close collaboration with the project team.

Definition of resilience

SHARP defines climate resilience as the ability of a system to recover, reorganize and evolve following external stresses and shocks. This ability will in turn depend on a variety of environmental, social, economic and governance aspects. Under these considerations, SHARP+ assesses resilience using a modular approach, in which each module describes an element of the farm system and household organization. Each module embeds two scoring components measuring resilience as follows:
Technical resilience component: it is a structured component looking into factual information on the agricultural production unit (farm) or

SHARP+



Compound resilience scores per domain

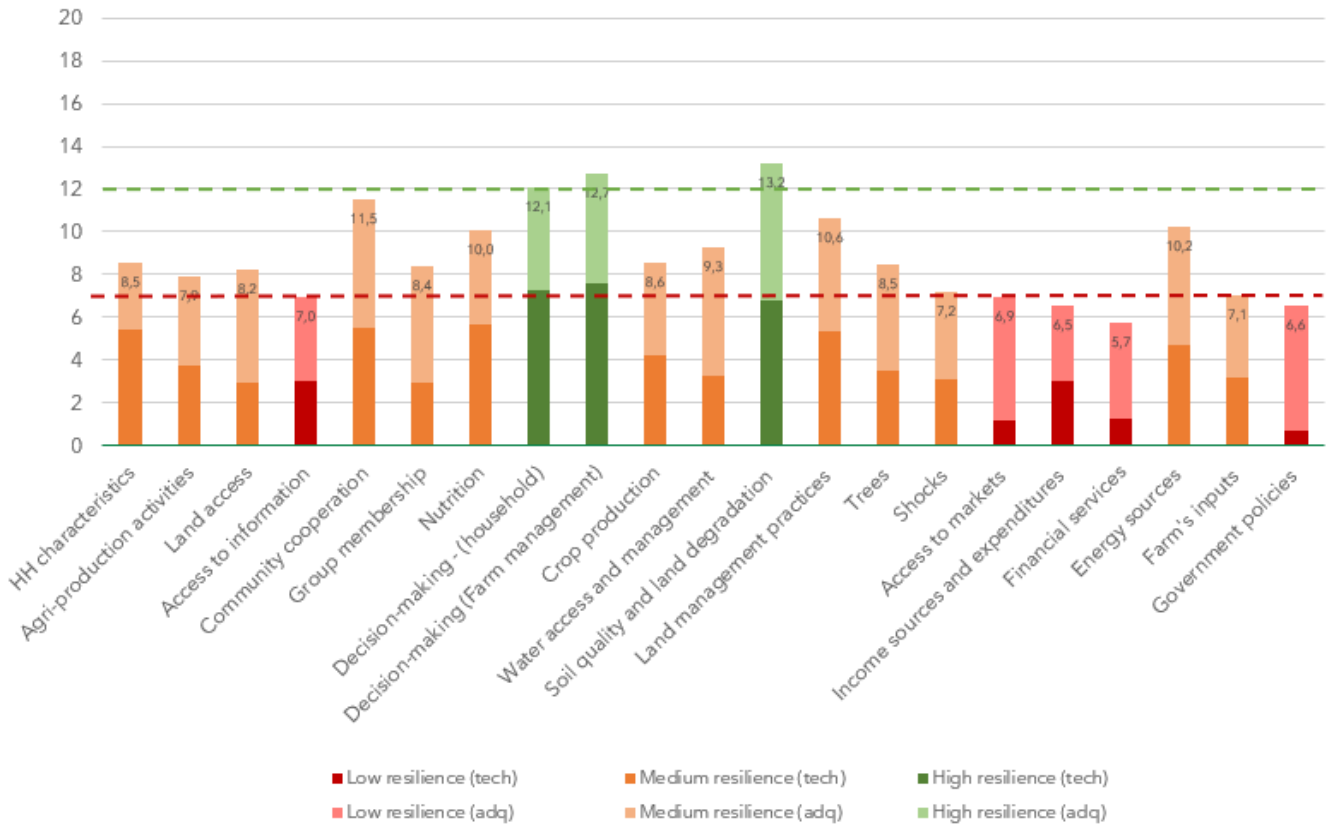
Compound resilience score per module

Compound resilience score per FFPO

Share of household per resilience levels

Compound resilience scores per module

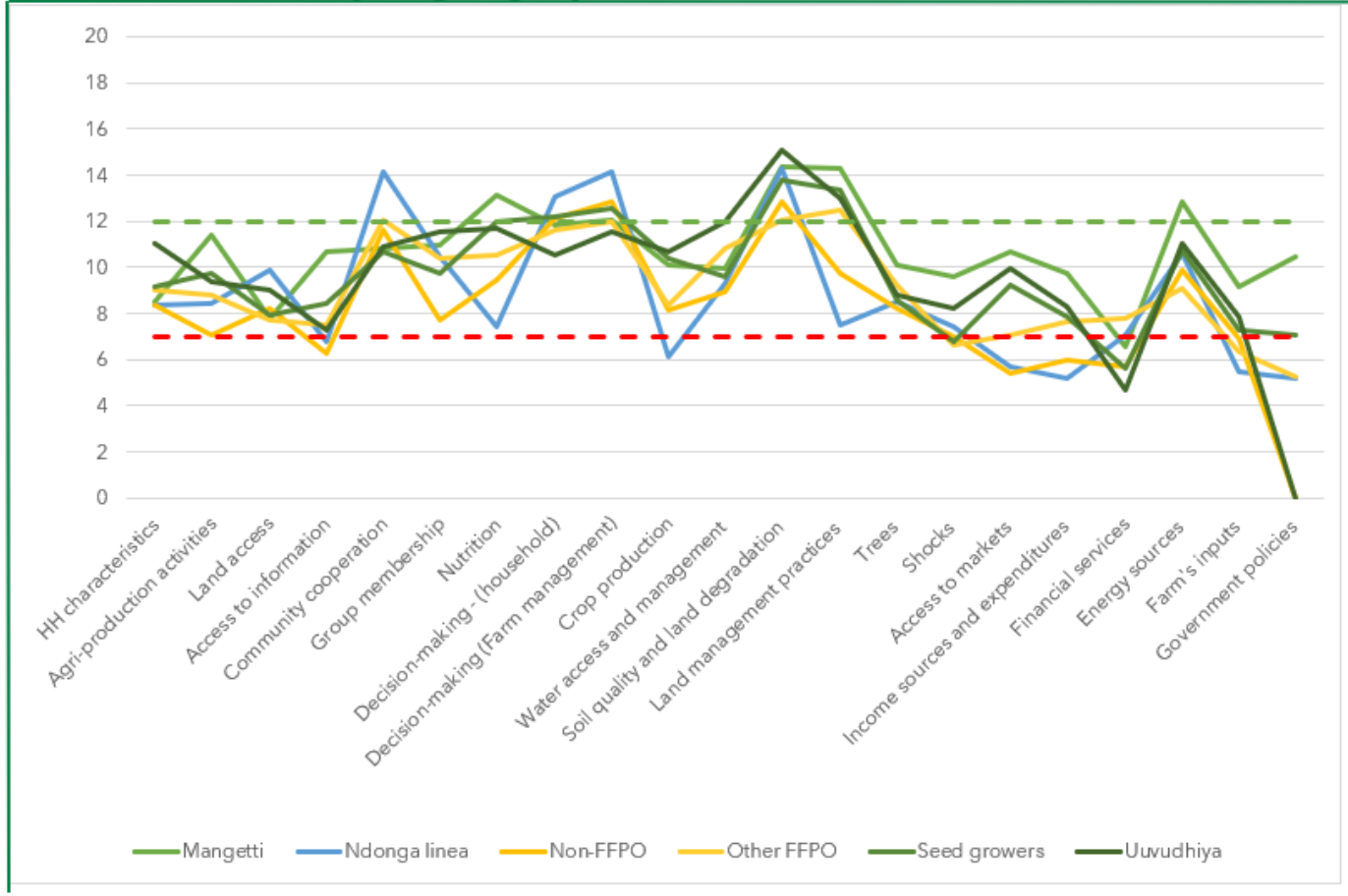
Resilience scores per module for total sample



Compound score (sum of technical and adequacy score)		Mean technical score		Mean adequacy score	
HH characteristics	8,5	Household	5,4	Household	3,1
Agri-production activities	7,9	Agri-produ	3,7	Agri-produ	4,1
Land access	8,2	Land acces	3,0	Land acces	5,3
Access to information	7,0	Access to i	3,0	Access to i	3,9
Community cooperation	11,5	Communit	5,5	Communit	6,0
Group membership	8,4	Group me	3,0	Group me	5,4
Nutrition	10,0	Nutrition (f	5,6	Nutrition (a	4,4
Decision-making - (household)	12,1	Decision-n	7,3	Decision-n	4,8
Decision-making (Farm management)	12,7	Decision-n	7,6	Decision-n	5,2
Crop production	8,6	Crop prod	4,3	Crop prod	4,3
Water access and management	9,3	Water acce	3,2	Water acce	6,0
Soil quality and land degradation	13,2	Soil quality	6,8	Soil quality	6,4
Land management practices	10,6	Land mana	5,4	Land mana	5,3
Trees	8,5	Trees (tech	3,5	Trees (adq	4,9
Shocks	7,2	Shocks (te	3,1	Shocks (ad	4,0
Access to markets	6,9	Access to r	1,2	Access to r	5,7
Income sources and expenditures	6,5	Income so	3,0	Income so	3,5
Financial services	5,7	Financial s	1,2	Financial s	4,5
Energy sources	10,2	Energy sou	4,7	Energy sou	5,5
Farm's inputs	7,1	Farm's inp	3,2	Farm's inp	3,8
Government policies	6,6	Governme	0,7	Governme	5,8

Compound resilience scores per FFPO

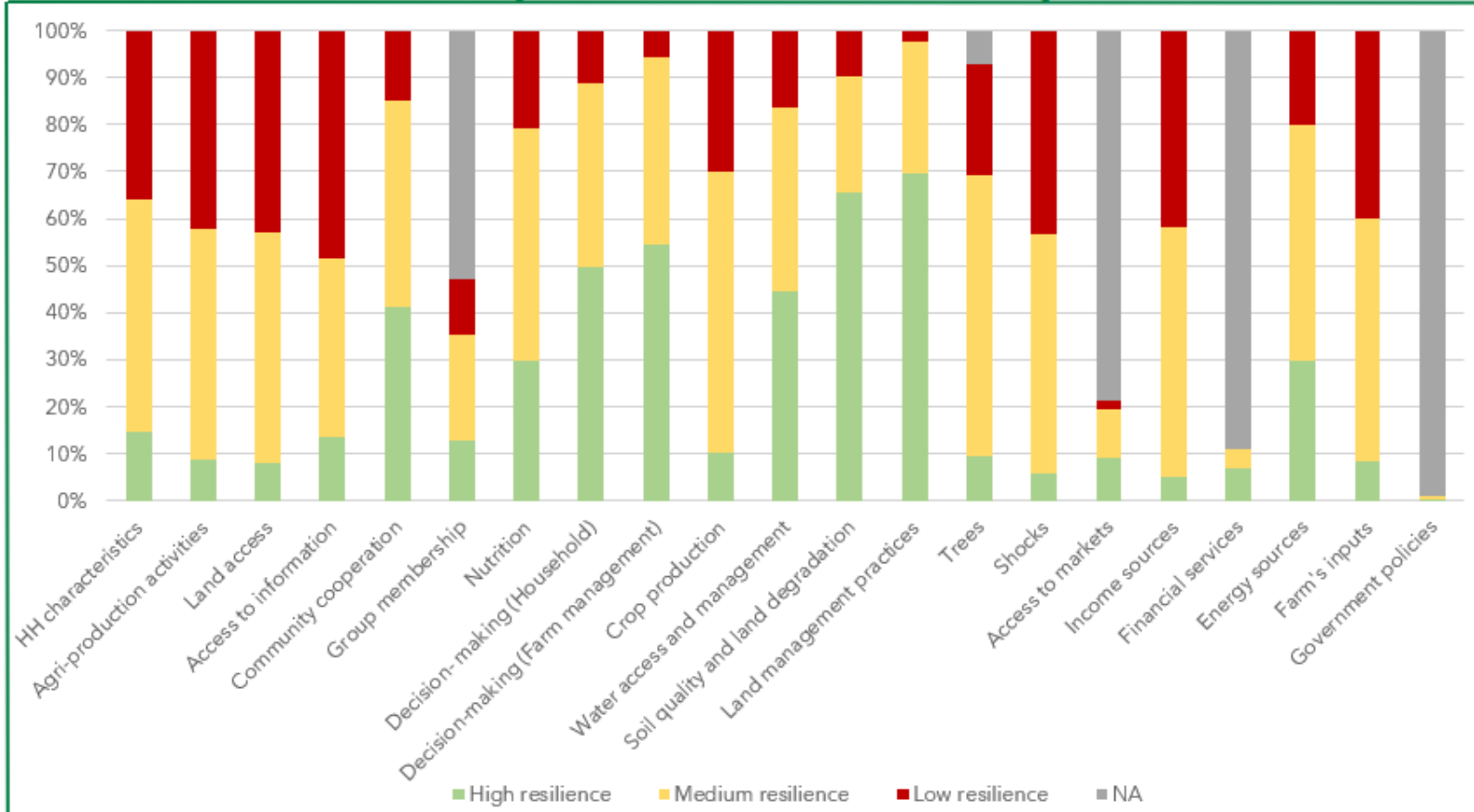
Resilience scores per geographical unit



Module	Mangetti	Ndonga linea	Non-FFPO	Other FFPO	Seed growers	Uuvudhiya
HH characteristics	8,5	8,4	8,3	9,0	9,2	11,0
Agri-production activities	11,4	8,4	7,1	8,8	9,7	9,3
Land access	7,8	9,9	8,2	7,7	8,0	9,0
Access to information	10,7	6,8	6,3	7,5	8,5	7,3
Community cooperation	10,8	14,1	11,6	12,1	10,7	10,9
Group membership	11,0	10,5	7,7	10,4	9,7	11,5
Nutrition	13,1	7,4	9,4	10,5	12,0	11,7
Decision-making - (household)	11,9	13,1	12,1	11,6	12,2	10,5
Decision-making (Farm management)	12,0	14,1	12,8	12,0	12,6	11,5
Crop production	10,1	6,1	8,1	8,4	10,4	10,7
Water access and management	9,9	9,3	9,0	10,8	9,6	12,0
Soil quality and land degradation	14,4	14,3	12,8	12,0	13,8	15,1
Land management practices	14,3	7,5	9,7	12,5	13,3	13,0
Trees	10,1	8,5	8,2	9,3	8,6	8,8
Shocks	9,6	7,4	7,0	6,6	6,8	8,2
Access to markets	10,7	5,7	5,4	7,1	9,2	10,0
Income sources and expenditures	9,8	5,2	5,9	7,7	7,9	8,3
Financial services	6,6	7,1	5,7	7,8	5,6	4,7
Energy sources	12,8	10,6	9,9	9,1	10,8	11,0
Farm's inputs	9,2	5,5	6,9	6,3	7,3	7,9
Government policies	10,4	5,2	#DIV/0!	5,3	7,1	#DIV/0!

* Colors represent the differences between the geographical units per type of score, from yellow (lowest) to green (highest). A green circle represent a high resilience score, yellow medium and red low

Share of resiliencelevels per module for entire sample



- Compound resilience scores per domain
- Compound resilience score per module
- Compound resilience score per FFPO
- Share of household per resilience levels

Summary of the module

Description of the module

This module assesses farmers' capacity to market their products effectively, taking into account various factors such as physical access, organization for favourable sales conditions and pricing, access to diverse sales channels, and progress towards obtaining certification. Farmers organized within grassroots systems are considered more resilient due to their collective bargaining power, pooling of resources and knowledge, and risk-sharing capabilities. The objective is also to be well-connected, meaning to have multiple sales channels to avoid dependence on a single external force. Ultimately, as agricultural households rely on farming as their primary source of income, these activities must be reasonably profitable so that farmers do not solely depend on subsidies or assistance.

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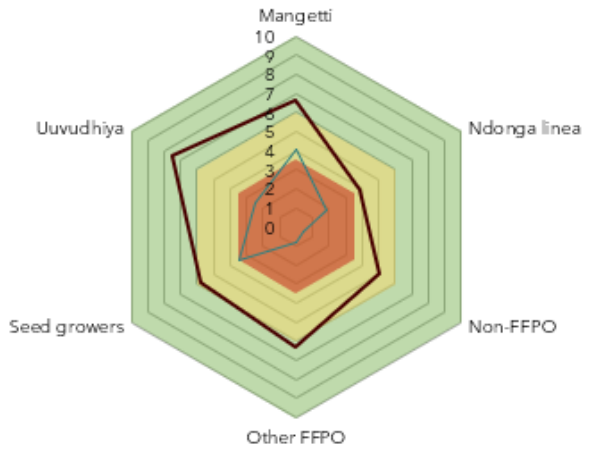
A green circle represent a high resilience score, yellow medium and red low

Module's resilience score	High resilience	Medium resilience	Low resilience	Technical score /10	Adequacy score /10	Compound score
Mangetti	10,0	6,0	3,5	4,1	6,6	10,7
Ndonga linea	10,0	6,0	3,5	1,8	3,9	5,7
Non-FFPO	10,0	6,0	3,5	0,4	5,0	5,4
Other FFPO	10,0	6,0	3,5	0,8	6,3	7,1
Seed growers	10,0	6,0	3,5	3,5	5,8	9,2
Uuvudhiya	10,0	6,0	3,5	2,5	7,5	10,0
Grand Total	10,0	6,0	3,5	1,2	5,7	6,9

Technical and adequacy scores per geographical unit



Description of the resilience scores for the total sample

- **Compound score :**

Overall low resilience of the module

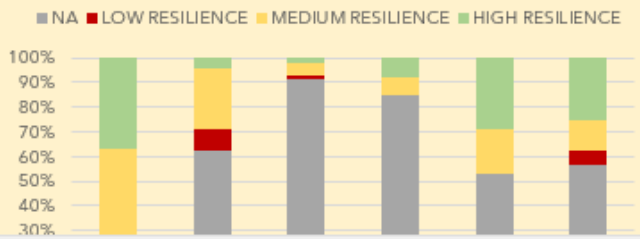
- **Technical score :**

Low resilience score according to the calculated indicators

- **Adequacy score :**

Medium resilience score according to the calculated indicators

Share of households per level of resilience



Key findings for total sample

- **Ability to sell farming products :**

When desired, most farmers are not able and/or are not organized to sell their products

- **Farming products selling organization :**

Most farmers sell their products alone

- **Community-organized selling activities :**

Most farmers sell their products to intermediaries, dealers or in the street, rather than selling in local markets, through cooperative/farmer organizations, other types of group selling or farmer fairs

- **Direct selling :**

For farmers selling through intermediaries or on the street, most of them don't have other sources of selling

- **Price setting :**

The selling prices of most farmers' products are directly set by the dealers or set at the market price, as farmers do not have the freedom or information to set the prices themselves

- **Prices levels :**

Prices at which most farmers sell their products are too low or too fluctuating to make a profit

- **Certification :**

Explanation of the modules

Overall Resilience scores

Scores disaggregated per FFPO

Key findings

Summary of the module

Description of the module

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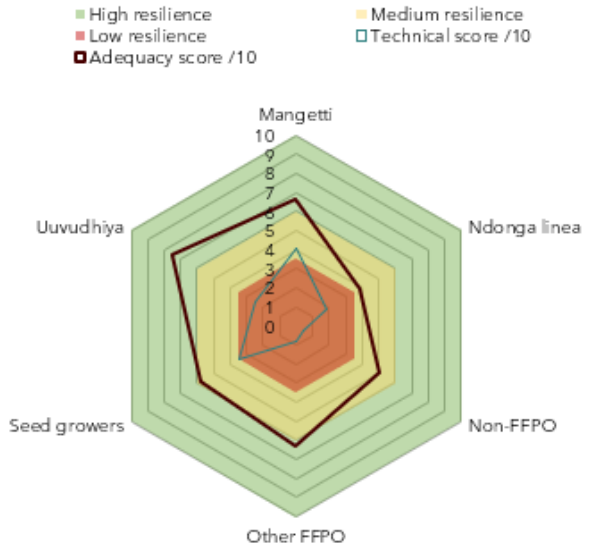
Mangetti	10,0	6,0	3,5	4,1	6,6	10,7
Ndonga linea	10,0	6,0	3,5	1,8	3,9	5,7
Non-FFPO	10,0	6,0	3,5	0,4	5,0	5,4
Other FFPO	10,0	6,0	3,5	0,8	6,3	7,1
Seed growers	10,0	6,0	3,5	3,5	5,8	9,2
Uuvudhiya	10,0	6,0	3,5	2,5	7,5	10,0
Grand Total	10,0	6,0	3,5	1,2	5,7	6,9

Technical and adequacy scores per geographical unit



Description of the resilience scores for the total sample

- **Compound score :**

Overall low resilience of the module

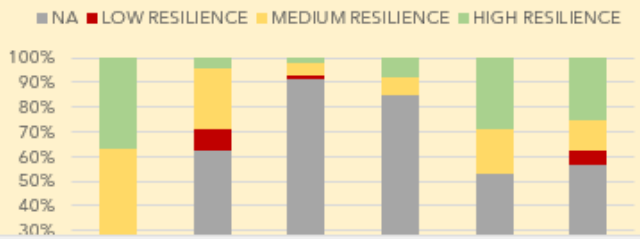
- **Technical score :**

Low resilience score according to the calculated indicators

- **Adequacy score :**

Medium resilience score according to the calculated indicators

Share of households per level of resilience



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Prices at which most farmers sell their products are too low or too fluctuating to make a profit

- **Certification :**

Explanation of the modules

Overall Resilience scores

Scores disaggregated per FFPO

Key findings

Summary of the module

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Non-FFPO	10,0	6,0	3,5	0,4	5,0	5,4
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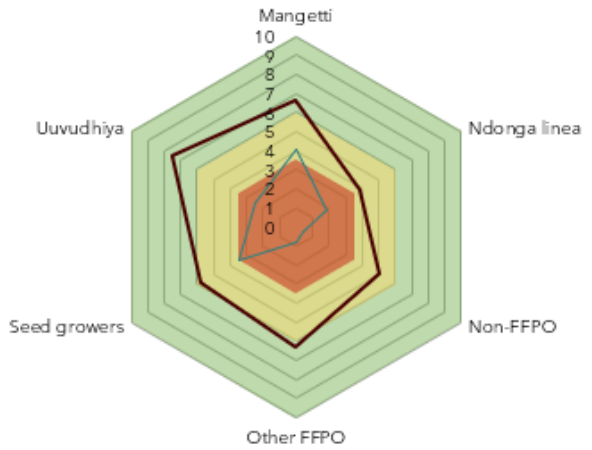
Seed growers	10,0	6,0	3,5	3,5	5,8	9,2
Uuvudhiya	10,0	6,0	3,5	2,5	7,5	10,0
Grand Total	10,0	6,0	3,5	1,2	5,7	6,9

Technical and adequacy scores per geographical unit



Description of the resilience scores for the total sample

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Overall low resilience of the module

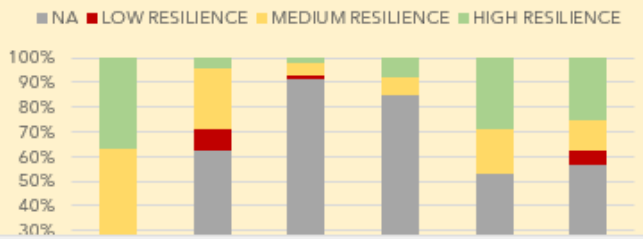
- **Technical score :**

Low resilience score according to the calculated indicators

- **Adequacy score :**

Medium resilience score according to the calculated indicators

Share of households per level of resilience



Key findings for total sample

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- **Prices levels :**

Prices at which most farmers sell their products are too low or too fluctuating to make a profit

- **Certification :**

Explanation of the modules

Overall Resilience scores

Scores disaggregated per FFPO

Key findings

Summary of the module

Description of the module

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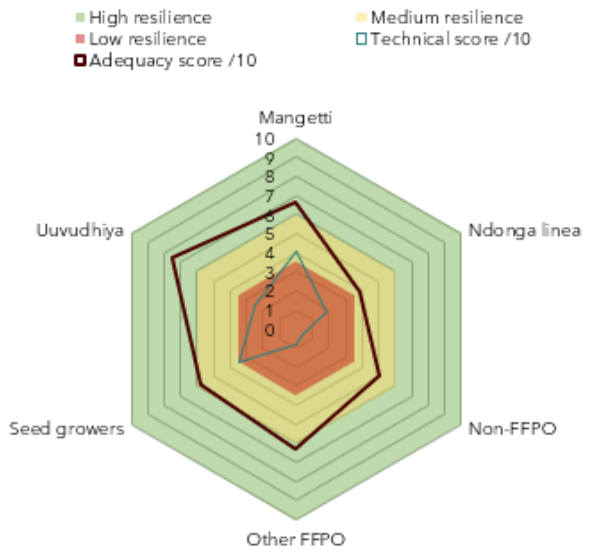
Ndonga linea	10,0	6,0	3,5	1,8	3,9	5,7
Non-FFPO	10,0	6,0	3,5	0,4	5,0	5,4
Other FFPO	10,0	6,0	3,5	0,8	6,3	7,1
Seed growers	10,0	6,0	3,5	3,5	5,8	9,2
Uuvudhiya	10,0	6,0	3,5	2,5	7,5	10,0
Grand Total	10,0	6,0	3,5	1,2	5,7	6,9

Technical and adequacy scores per geographical unit



Description of the resilience scores for the total sample

- **Compound score :**

Overall low resilience of the module

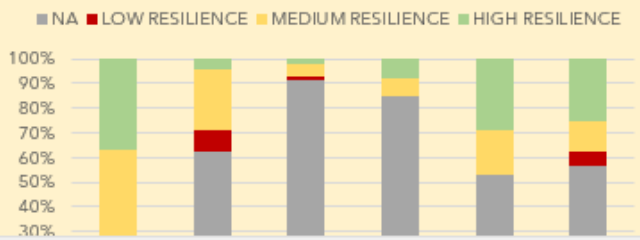
- **Technical score :**

Low resilience score according to the calculated indicators

- **Adequacy score :**

Medium resilience score according to the calculated indicators

Share of households per level of resilience



Key findings for total sample

- **Ability to sell farming products :**

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- **Prices levels :**

Prices at which most farmers sell their products are too low or too fluctuating to make a profit

- **Certification :**

Explanation of the modules

Overall Resilience scores

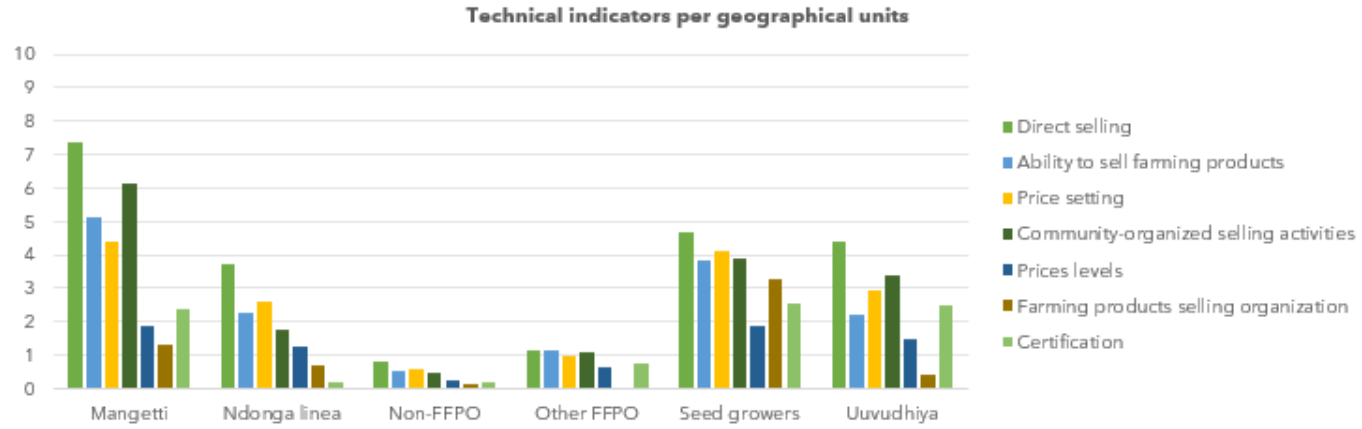
Scores disaggregated per district, farm typology, FFPO, etc.

Key findings

Detail of technical scores

* The technical indicators are averaged to calculate the technical resilience score

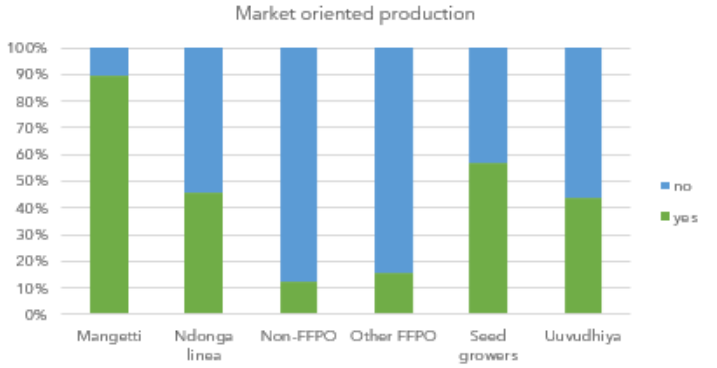
Detail of technical score	Direct selling	Ability to sell farming products	Price setting	Community-organized selling activities	Prices levels	Farming products selling organization	Certification
Mangetti	7,4	5,1	4,4	6,1	1,9	1,3	2,4
Ndonga linea	3,8	2,3	2,6	1,8	1,3	0,7	0,2
Non-FFPO	0,8	0,5	0,6	0,5	0,2	0,1	0,2
Other FFPO	1,2	1,2	1,0	1,1	0,6	0,0	0,8
Seed growers	4,7	3,8	4,1	3,9	1,9	3,3	2,6



Details of the subscores

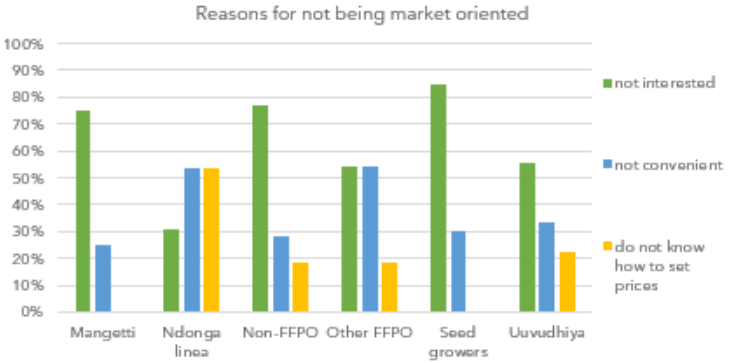
Module's descriptive analysis

Market oriented production (for financial	yes	no
Mangetti	89,5%	10,5%
Ndonga linea	45,8%	54,2%
Non-FFPO	12,5%	87,5%
Other FFPO	15,4%	84,6%
Seed growers	56,6%	43,4%
Uuvudhiya	43,8%	56,3%
Grand Total	26,1%	73,9%

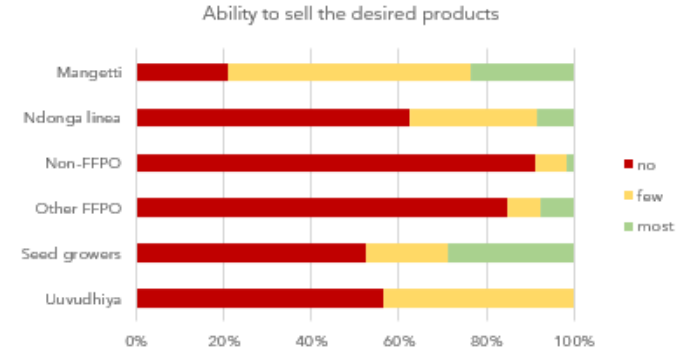


Reasons for not being market oriented	not interested	not convenient	do not know how to set prices
Mangetti	75,0%	25,0%	0,0%
Ndonga linea	30,8%	53,8%	53,8%
Non-FFPO	77,0%	28,0%	18,7%
Other FFPO	54,5%	54,5%	18,2%
Seed growers	84,8%	30,3%	0,0%
Uuvudhiya	55,6%	33,3%	22,2%
Grand Total	75,1%	29,8%	18,2%

*Only for subsistence farmers (not market oriented)



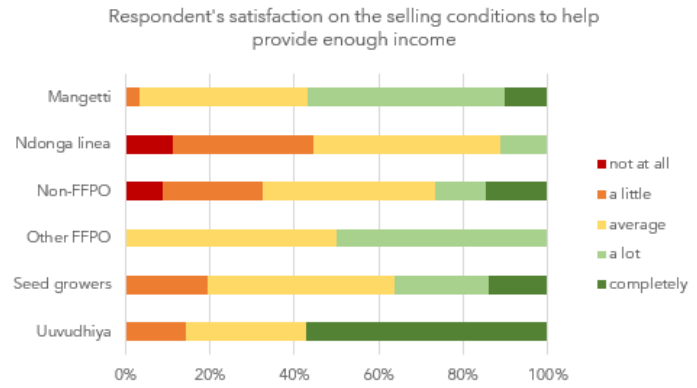
Ability to sell the desired	no	few	most
Mangetti	21,1%	55,3%	23,7%
Ndonga linea	62,5%	29,2%	8,3%
Non-FFPO	91,3%	7,1%	1,5%
Other FFPO	84,6%	7,7%	7,7%
Seed growers	52,6%	18,4%	28,9%
Uuvudhiya	56,3%	43,8%	0,0%
Grand Total	78,9%	14,0%	7,2%



Descriptive analysis

Respondent's perception of adequacy

Respondent's satisfaction on the selling conditions to help provide enough incom	not at all	a little	average	a lot	completely
Mangetti	0,0%	3,3%	40,0%	46,7%	10,0%
Ndonga linea	11,1%	33,3%	44,4%	11,1%	0,0%
Non-FFPO	8,8%	23,5%	41,2%	11,8%	14,7%
Other FFPO	0,0%	0,0%	50,0%	50,0%	0,0%
Seed growers	0,0%	19,4%	44,4%	22,2%	13,9%
Uuvudhiya	0,0%	14,3%	28,6%	0,0%	57,1%
Grand Total	3,4%	16,9%	41,5%	23,7%	14,4%



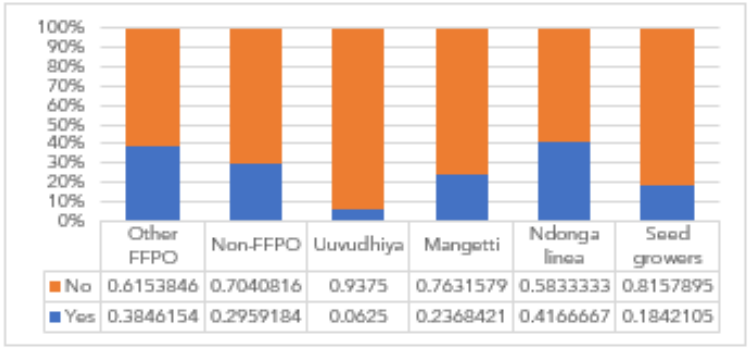
Self-assessed adequacy

Summary of the module

This dashboard module presents data from the behavioural change assessment related to the cultivation of millet, a drought resilient neglected and underutilized crop. The visualizations explore key behavioural drivers, barriers, and enabling factors influencing adoption, comparing respondents who have adopted the practice ('doers') with those who have not ('non-doers'). The information on this sheet is disaggregated by producer organizations. The aim is to support the identification of strategic entry points for encouraging uptake and informing tailored interventions.

Module's descriptive analysis

millet in the last 12 months		
% Yes	Yes	No
Other FFPO	38.5%	61.5%
Non-FFPO	29.6%	70.4%
Uuvudhiya	6.3%	93.8%
Mangetti	23.7%	76.3%
Ndonga linea	41.7%	58.3%
Seed growers	18.4%	81.6%
Grand Total	27.7%	72.3%



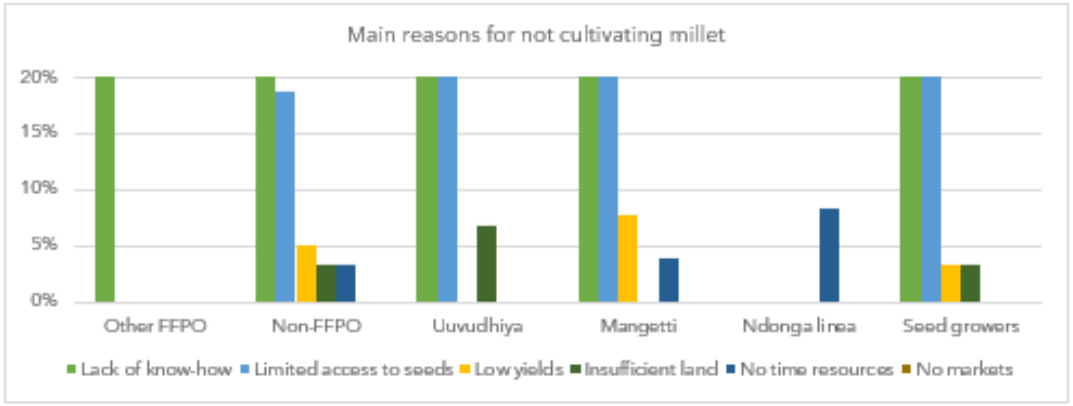
Cultivation of Millet		
# Yes	Yes	No
Other FFPO	5	8
Non-FFPO	116	276
Uuvudhiya	1	15
Mangetti	9	29
Ndonga linea	10	14
Seed growers	14	62
Grand Total	155	404

Behavioural insights

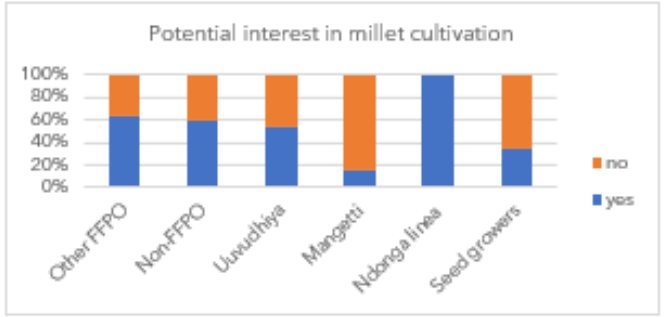
Doers and Non-doers

Non-doers - millet cultivation (n=404)

Main reasons for not cultivating millet	Lack of know-how	Limited access to seeds	Low yields	Insufficient land	No time resources	No markets
Other FFPO	75%	0%	0%	0%	0%	0%
Non-FFPO	59%	19%	5%	3%	3%	0%
Uuvudhiya	93%	47%	0%	7%	0%	0%
Mangetti	85%	27%	8%	0%	4%	0%
Ndonga linea	0%	0%	0%	0%	8%	0%
Seed growers	72%	33%	3%	3%	0%	0%
Grand Total	62%	22%	4%	3%	3%	0%



Potential interest in	yes	no
Other FFPO	62.5%	37.5%
Non-FFPO	59.8%	40.2%
Uuvudhiya	53.3%	46.7%
Mangetti	15.4%	84.6%
Ndonga linea	100.0%	0.0%
Seed growers	35.0%	65.0%
Grand Total	53.6%	46.4%



Behavioural insights