Self-Assessed Resilience and its Correlation to Specific Indicators

Work conducted by the Near East Foundation consortium under the Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) funds from DfID / UKAID

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Enabling Access to Global Climate Change Adaptation Funds.

- Climate change funds available for climate change adaptation.
  - Identify local needs by communities
  - Develop capacity to implement and manage investments
- Specific focus on public goods
  - Non-rival
  - Non-excludable
- 3-year project begun in 2015 in Senegal and Mali
  - In one year extension phase BRACED-X
- Monitoring and Evaluation household surveys in 2015, 2017, and currently under way for 2018.
 - This presentation is based on the 2015 baseline

KPI4 (key performance indicator 4 on resilience)

1. **Assets,** including physical and financial assets, food and seed reserves, and other assets that can be deployed or realised during times of hardship to help people absorb losses, and recover from stresses and shocks. Debt could be considered as a negative asset.
2. **Access to services**, including water, electricity, early warning systems, public transport, and knowledge an information that helps people plan for, cope with and recover from stresses and shocks, and how vulnerable these services are themselves to shocks and stresses.
3. **Adaptive capacity**, including factors that specifically enable people to anticipate, plan for and respond to changes (for example by modifying or changing current practices and investing in new livelihood strategies). The ability to adapt to changes in any of the other dimensions listed here might also be included.
4. **Income and food access**, including the vulnerability to shocks and stresses of income sources and food supplies (including food prices/ability to purchase or otherwise access food, and the vulnerability of food supply chains to local and remote shocks and stresses).
5. **Safety nets**, including access to formal and informal support networks, emergency relief, and financial mechanisms such as insurance.

Differences by gender and site

Mean by gender and site to the question how do you rate your household's resilience over the past year?

1 very weak, 2 weak, 3 neither weak nor strong, 4 strong, 5 very strong   (Likert scale)
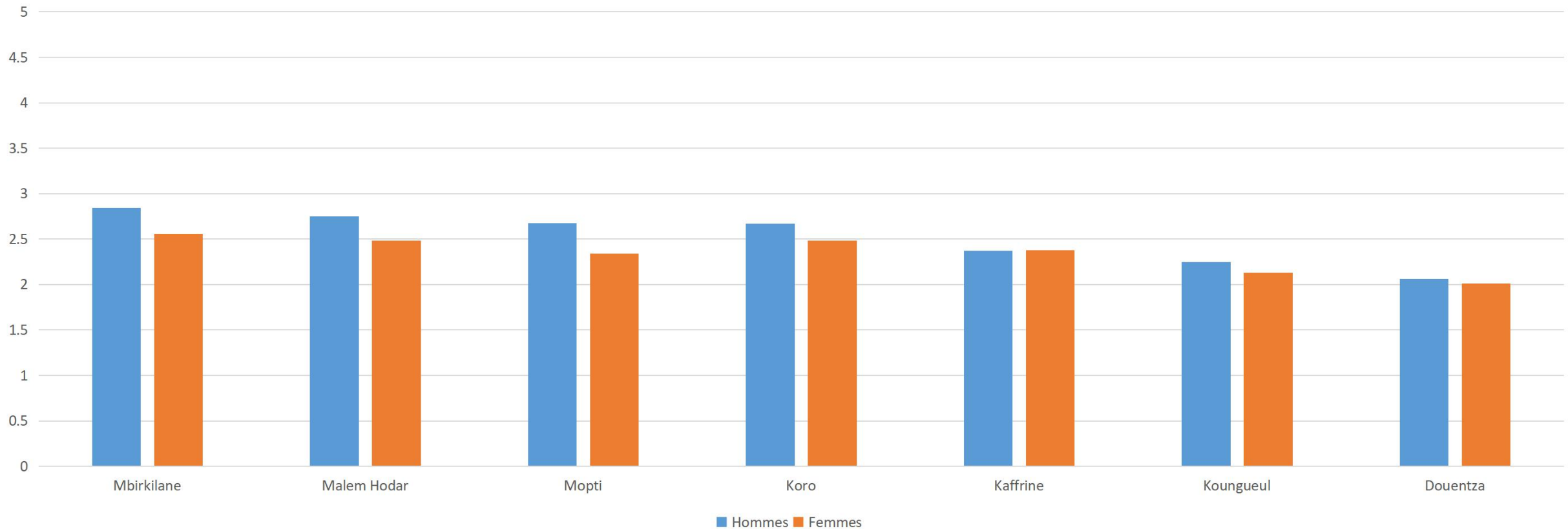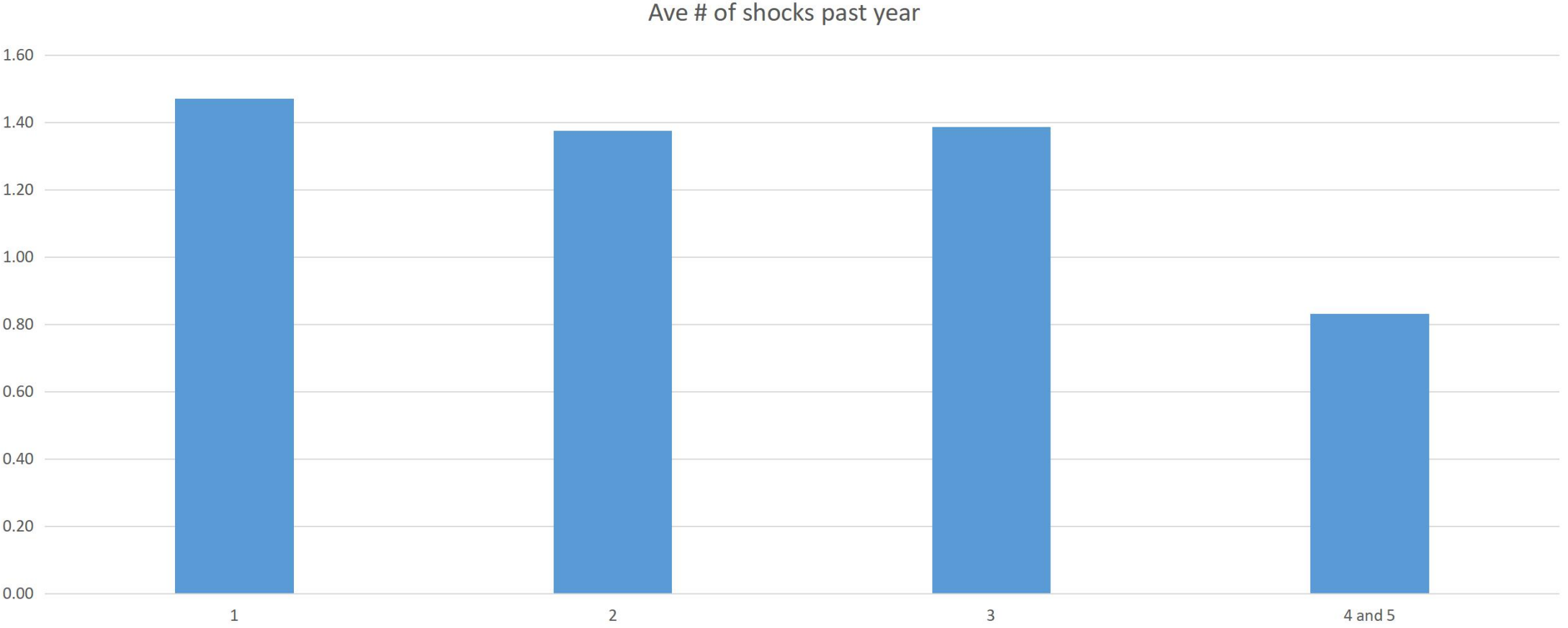
Average to the question:
How many months of grain did you have last year that were sufficient to feed your family (from 0 to 12) sorted by resilience level?
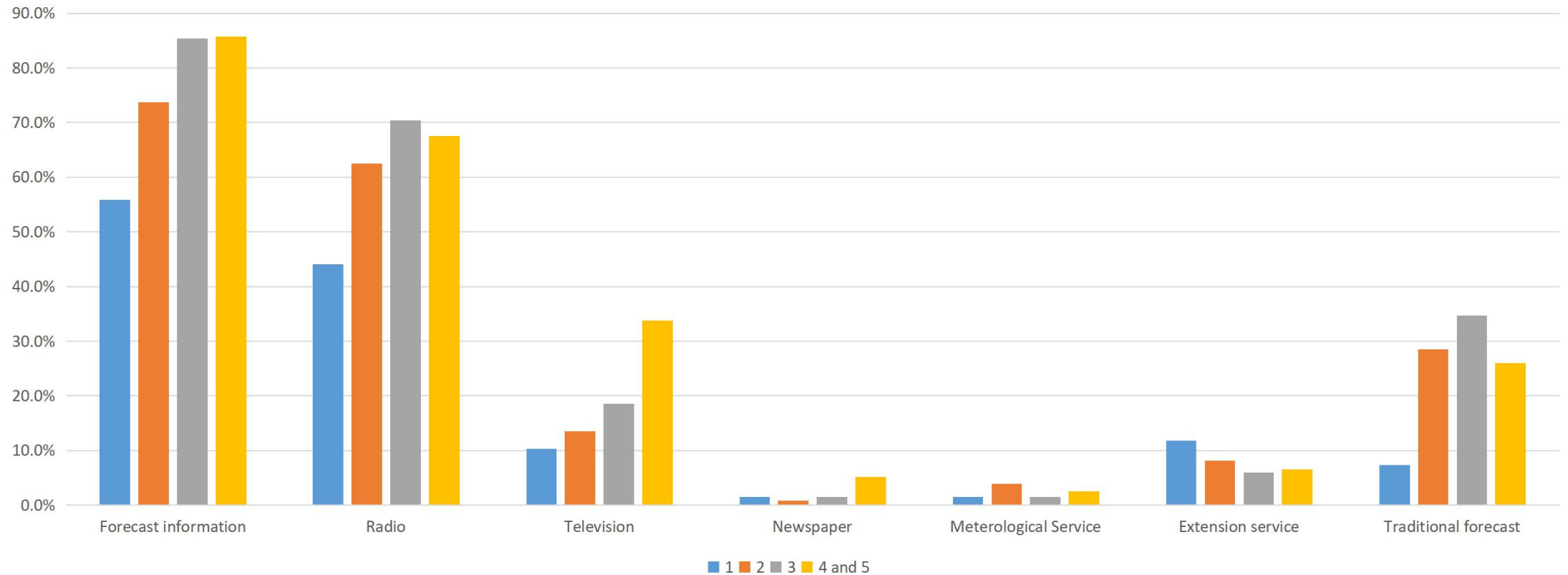*(1 is very weak to 5 is very strong).*

# of months of grains
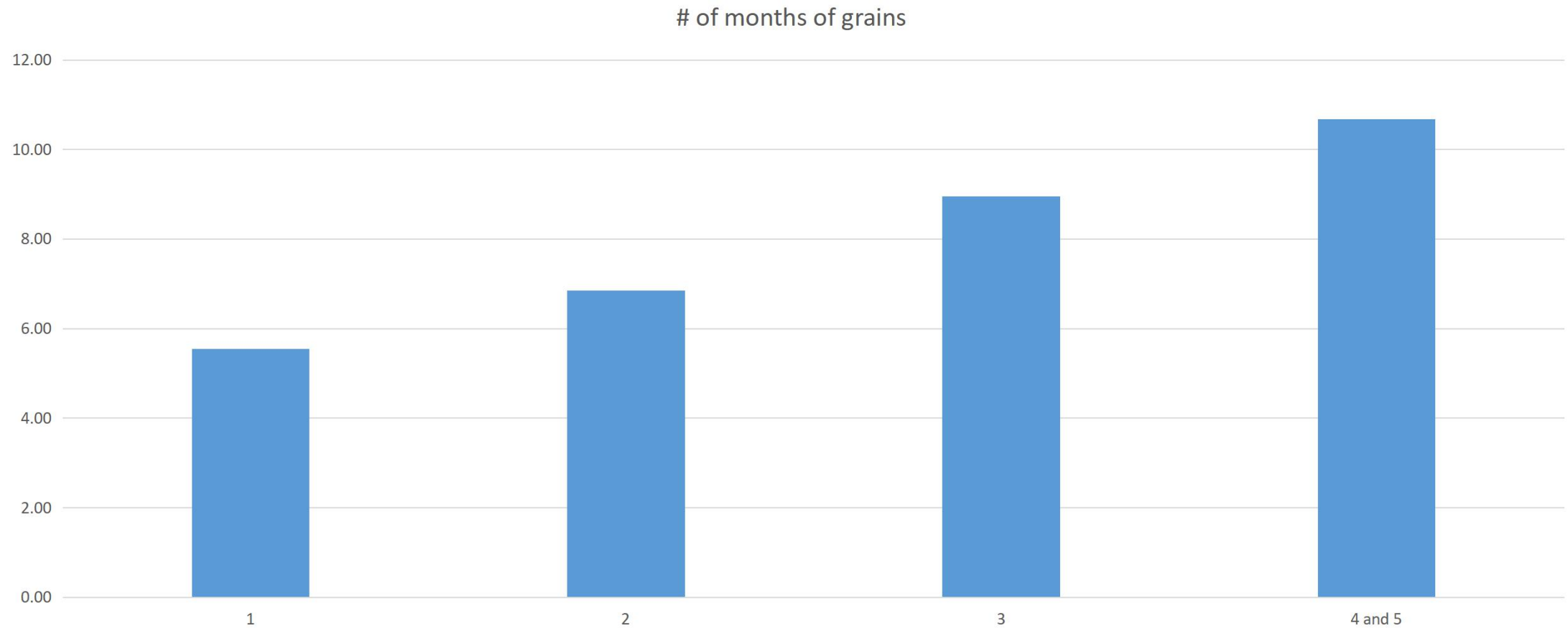
How many shocks did you experience over the past year?

{a fire, strong wind damage, locust invasion, brush fire, a drought, a flood}
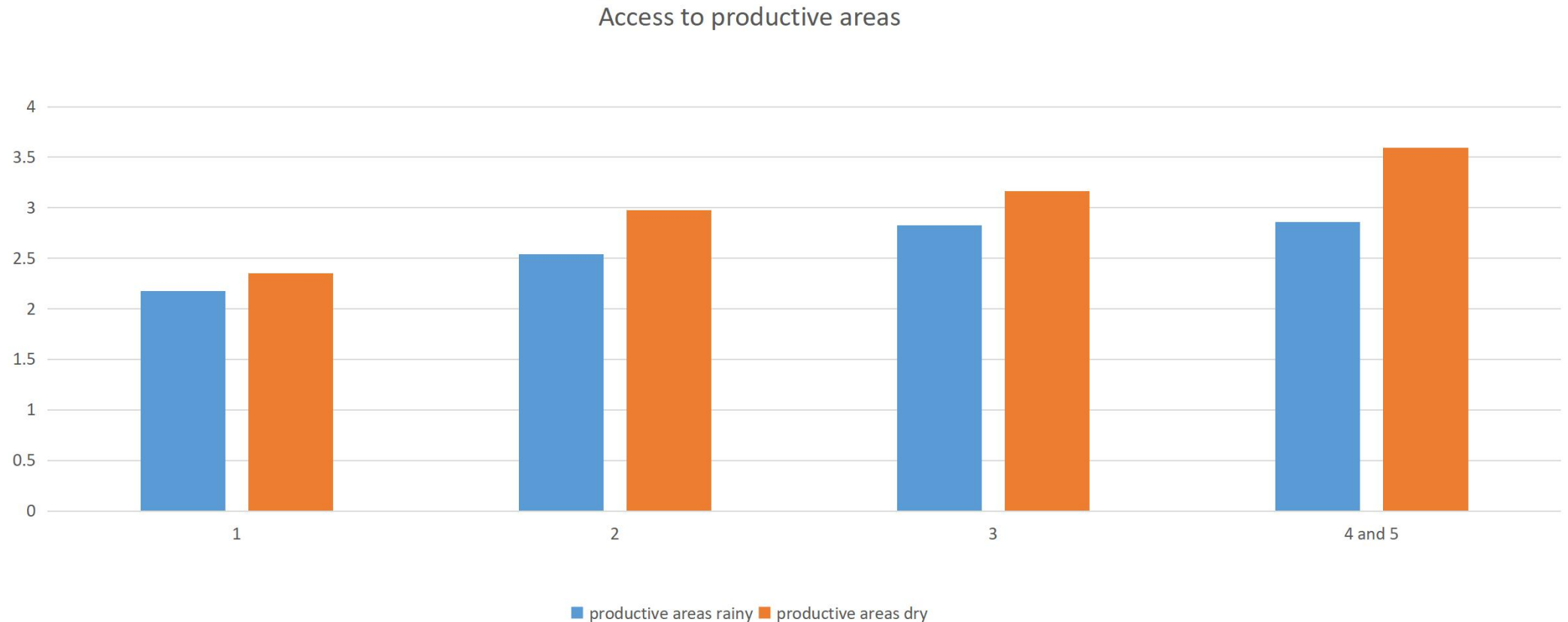

Ave # of shocks past year

Did you have climate forecast information from these sources? Sorted by resilience

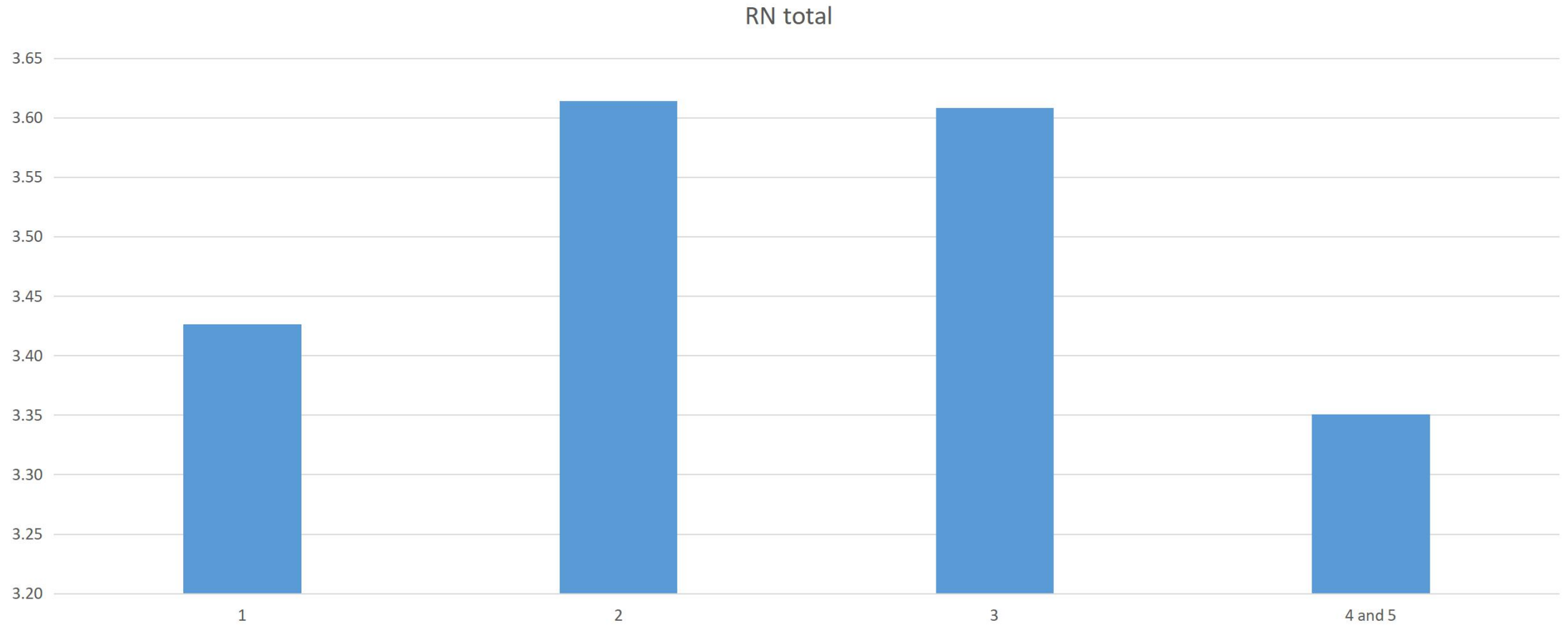Forecast Information and What Source

Access to shared productive areas (average number of areas by resilience group, rainy season and dry season)
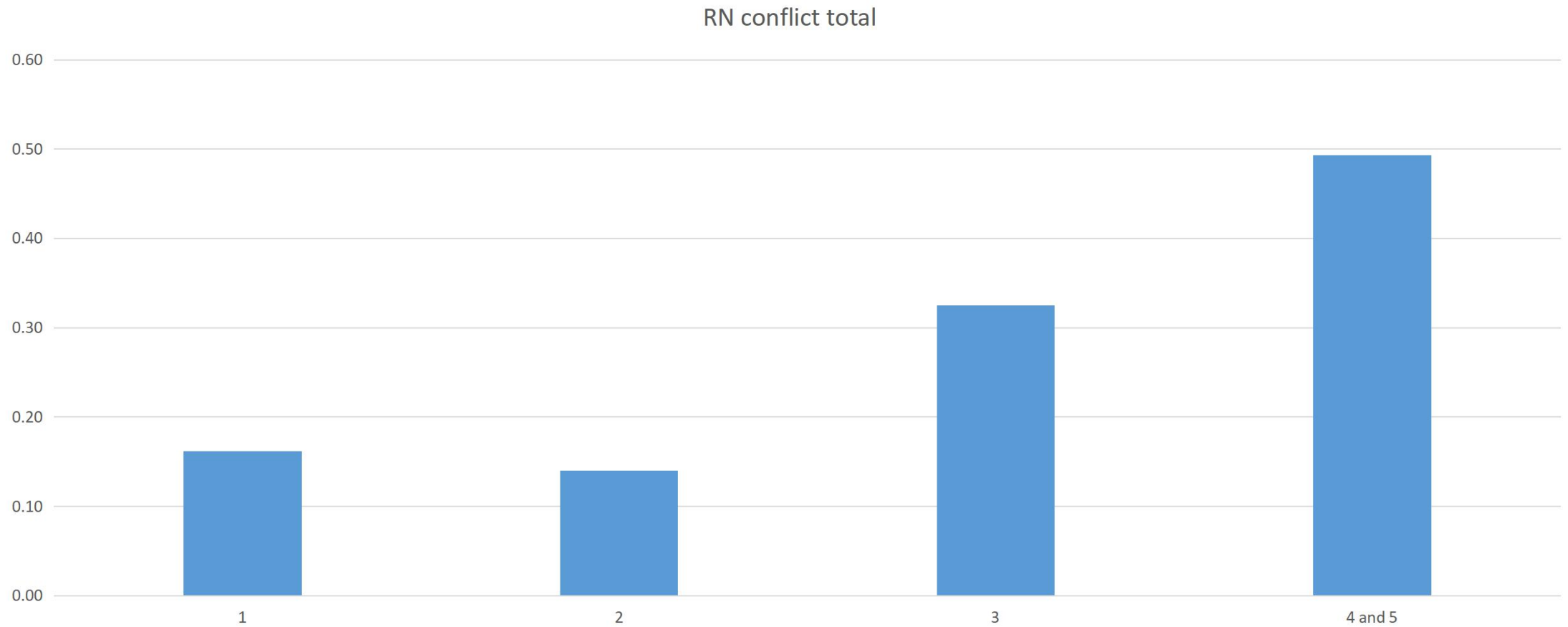
Managed Natural Resource areas by resilience group

A surprising result: number of conflicts experienced

RN conflict total

Degree of involvement in community decision making by resilience group and dimension.

Degre d'implication1 is inexistant / very low, 5 is very high, 3 is neutral, grouped by self scored resilience on 1-5 scale
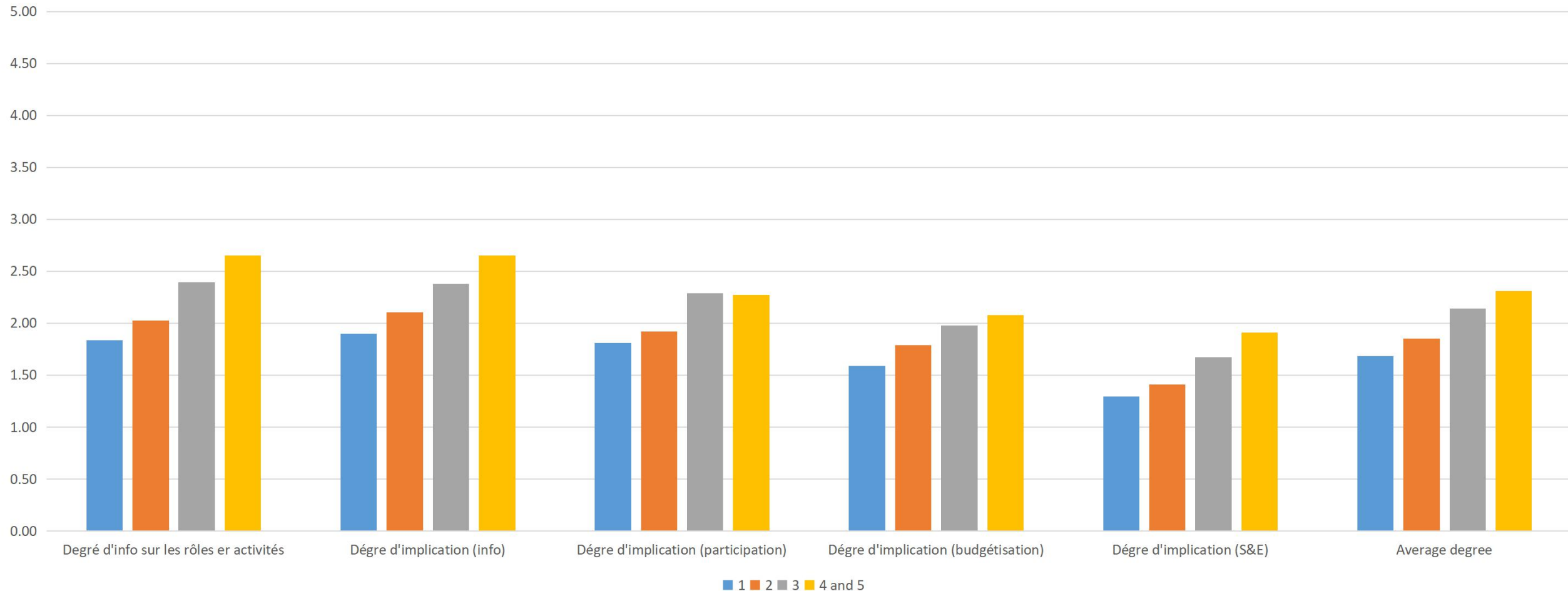
Table 8: OLS Regression results for Resilience Self-Assessment and Household Food Security.

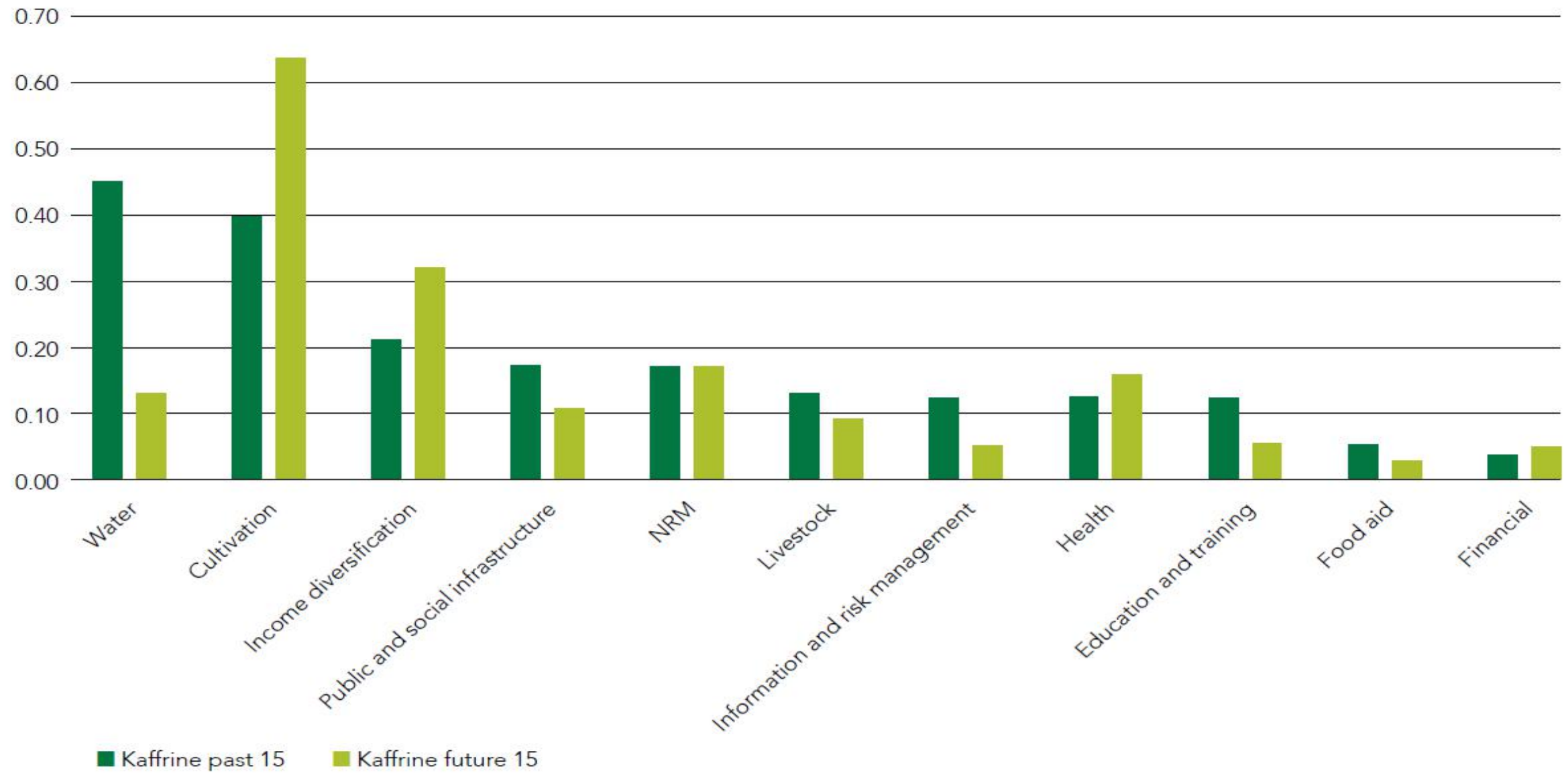|	Resilience			Food Security		
	Beta	St. Error	Sig.	Beta	St. Error	Sig.
Douentza	0.7636	0.3428	**	0.0309	1.0701	
Koro	1.2548	0.3613	***	3.4975	1.1277	***
Mopti	1.1115	0.3635	***	1.4427	1.1346	
Kaffrine	1.0114	0.3458	***	3.6755	1.0793	***
Koungheul	1.1609	0.3294	***	5.4294	1.0283	***
Malem Hodar	1.4182	0.3320	***	4.3576	1.0362	***
Mbirkelane	1.3581	0.3461	***	2.0181	1.0804	*
Gender of Head	0.1338	0.1457		−0.4158	0.4548	
Household size	0.0110	0.0119		0.1529	0.0372	***
Average age HH members	−0.0034	0.0038		−0.0030	0.0118	
Cultivation first	0.1297	0.1192		0.0896	0.3721	
Elevage first	−0.2731	0.1518	*	−0.8913	0.4740	*
Number of activities	0.1700	0.0393	***	0.5505	0.1227	***
Number of shocks	−0.1190	0.0334	***	−0.4617	0.1043	***
Forecast information	0.1660	0.0862	*	0.3543	0.2690	
Access managed productive areas	0.1247	0.0378	***	0.3890	0.1180	***
Access markets	0.0044	0.0512		0.0226	0.1598	
Access public services	0.0045	0.0522		0.1941	0.1629	
Access inputs	−0.0518	0.0427		0.1925	0.1334	
Access financial services	0.1047	0.0279	***	0.1568	0.0871	*
Number of community infrastructure	−0.0112	0.0229		0.2540	0.0716	***
Access infrastructure	0.0111	0.0489		0.1233	0.1527	
Number of natural resources	0.0310	0.0309		−0.0446	0.0964	
Natural resource conflicts	0.0562	0.0438		0.2978	0.1367	**
Average implication development	0.1268	0.0360	***	0.1192	0.1124	
R²		0.92			0.92	

Is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

Figure 1: Percent of households in Mali reporting experience with categories of development assistance in the past 15 years and the impact on such assistance on their community's resilience.
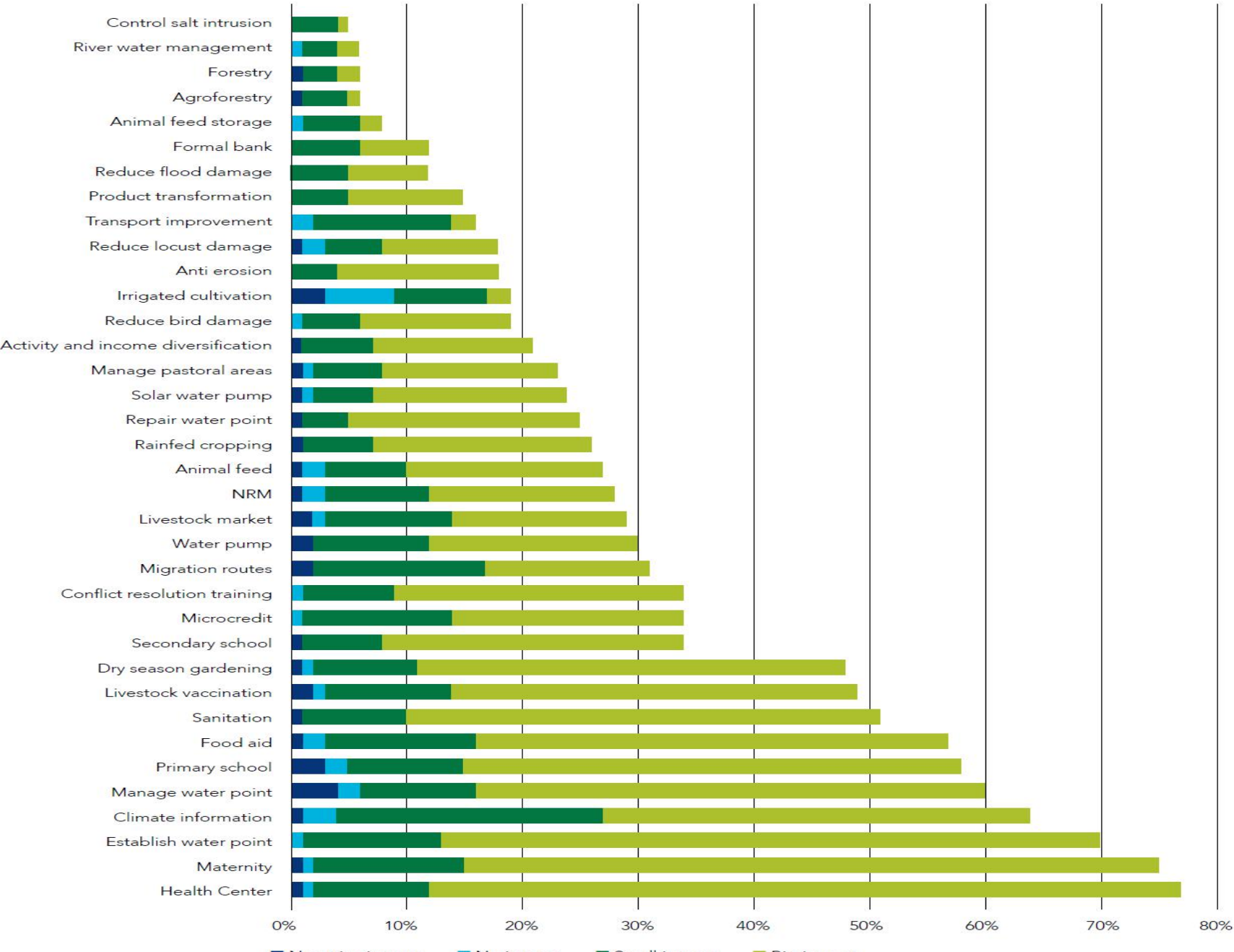
Evaluation of past development experiences in Mali.

Figure 4. Ranking of categories of intervention that have (dark green) and will (light green) best support community resilience over 15 year periods for Senegal. The ranking is normalized on a [0,1] interval, where 0 means a strategy was not placed in the top five, 1 means it was ranked highest, and a fraction is allocated to other items in the top five that are not the top ranked.*

Legend:
- Kaffrine past 15
- Kaffrine future 15

Categories: Water, Cultivation, Income diversification, Public and social infrastructure, NRM, Livestock, Information and risk management, Health, Education and training, Food aid, Financial

Conclusion

- Developing understanding of the local experience with food security and resilience

- Unpacking determinants of these variables.

- Understanding local experience with development projects.

- Evaluating future priorities
  - Panel analysis will follow as we move towards 3 rounds of panel data for M&E.