

## Supplementary file 2 – Survey questionnaire

Multi-hazard risk assessment at community level integrating local and scientific knowledge in the Hodh Chargui, Mauritania

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Risk determinant	Indicator (Ref. to column at Supplementary file 1)	Question	Answers (Score)	
Exposure	3	What are the crops grown?	Rain-fed millet, sorghum, cowpeas (0). Vegetables (1).	
	4	How much livestock is present at the village during the dry season?	Dromedaries, horses, cattle, donkeys, sheep, goats.	
	5	How many boreholes and modern /traditional boreholes are there?		
	6	Are there ponds on the territory of the community?	Yes (1), No (0).	
	7	How many earth dams are present in the community territory?		
	8	How many are the inhabitants of the community? How much population has arrived and left in the last year?	Actual. Arrivals (including births), departures.	
	9	What are the types of soils in order of importance?	1 Dune, 2 Sandy soils, 3 Rocky areas, 4 Clayey soils, 5 Mixed soils (1 + 3 = 1).	
	10	Are the fields fenced?	No (1). Yes, with barbed wire, Y with thorny branches (0).	
	11	How many earth embankments are there in the community territory?		
	12	How many houses are in the flood zone?		
	13	How many wells are found in the flood zone		
	Vulnerability	16	Does the community receive the telephone signal?	Y (0). N (1).
		17	Do members of the community use mobile phones?	Y (0). N (1).
18		Does the community have earth embankments?	Y (1). N (0).	
19		How many earth embankments do not have a spillway / lock?	1 (0.5). > 1 (1).	
20		How many earth embankments are damaged and lose water?	1 (0.5). > 1 (1).	
21		Are earth embankments protected with barbed wire against animal transit?	All (0). Some (0.5). None (0).	
22		Are river banks protected with gabion walls?	All (0). None (1).	
23		How many wells are flooded in the wet season?	One or more (1). None (0).	
24		How many km is the nearest pasture in the dry season? and in the wet season?	≥ 200 km (1). 8 km (0).	
25		How many solar power plants are there?	5 (0). 1 (0.33), 0 (0).	
26		What is the distance of the nearest well in the dry season?	3.1 km (1). 0 km (0).	
27		Is the borehole equipped with a pump, water tank and tap?	Yes (0). No (1).	
28		Does the borehole motor work or is it dead?	It works (0). It is broken (1).	
29		Does the fountain offer a regular service?	Yes (0). No (1).	
30		What is the water flow of the well?	Dry well (0). > 24h to recharge (0.75). 6 -24h to recharge (0.66). 3-6h to recharge (0.5). 1h to recharge (0.3). Water always present (1).	
31		What is the quality of water at the end of the dry season?	Good (0). A little salty (0.5). Very salty (0.66). Unusable (1).	
33		How does access to water happen for gardening?	Faucet (1). Water transport from a well far away from a cart with animal traction (1).	
34		Is gardening practiced?	Y (1). N (0).	
35		How many kilometers is the market located?	33 km (1), 0 km (0).	
36		How many fields are fenced with barbed wire?	All (0). Most (0.5). Minor part (0).	
37		What is the destination of the crop in order of importance?	Nema Market (0). Local market (0). Self-consumption only (1).	
38		How many days does the interruption of the track last in the wet season?	60 days (1). There are no interruptions (0).	
Adaptive capacity		41	Do small holder farmers and herders listen to radio programs directed at them?	Y (1). N (0).
	42	Do herders benefit from extension services?	Y (1). N (0.5).	
	43	Does the community practice fodder storage?	Y (1). N (0).	
	44	Do farmers / horticulturists benefit from extension services?	Y (1). Occasionally (0.5). N (0).	
	45	Is access to water through fountains?	Y (1). N (0).	
	46	Does the community have a borehole?	Y (1). N (0).	
	47	How many wells have solar pumps?	≥1 (1). 0 (0).	
	48	How many are the existing agricultural cooperatives?	≥ 3 (1). 2 (0.5). 1 (0.3). 0 (0).	
	49	How many farmers listen to the radio?	Y (1). None (0).	
	50	How many earth embankments are equipped with spillways?	≥ 1 (1). None (0).	