

Flood risk/ vulnerability by locality



In Manica and Sofala, 52% of localities are at risk of flooding. This corresponds to 39 localities in Manica and 60 localities in Sofala. The table below presents a risks calculation based on key indicators, and whether localities are at risk of flooding.

Risk	Manica	Sofala	Total
Very High	2%	5%	7%
High	9%	10%	19%
Moderate to High	7%	6%	13%
Moderate	3%	10%	13%
Least	6%	11%	17%
None	21%	10%	31%
Grand Total	48%	52%	100%

Flood risk/ vulnerability by administrative post



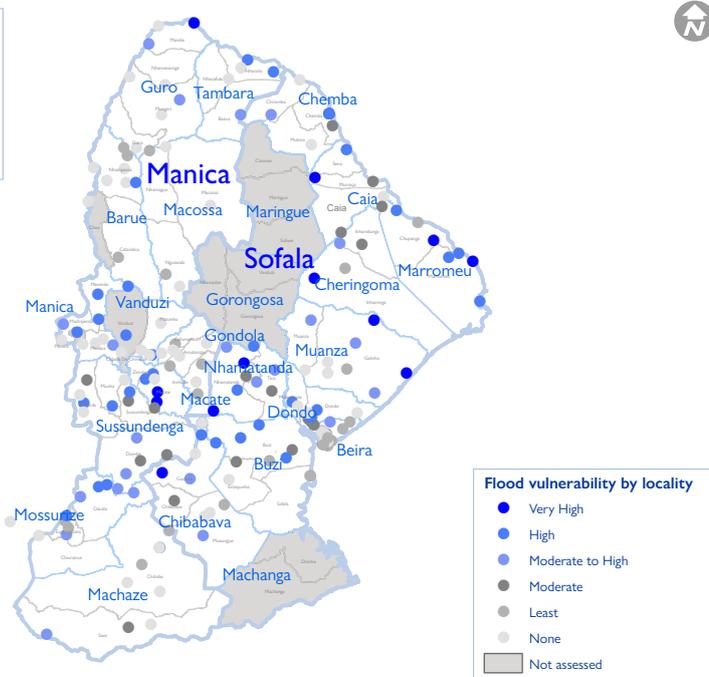
In Manica and Sofala, all posts have at least one locality that is under some risk/vulnerability from floods. The posts with the highest risk profiles are Macate (Manica), Marromeu (Sofala), and Nhamatanda (Sofala).

Risk	Manica	Sofala	Total
Very High	0%	0%	0%
High	3%	9%	11%
Moderate to High	16%	19%	35%
Moderate	17%	24%	41%
Least	13%	0%	13%
None	0%	0%	0%
Grand Total	48%	52%	100%

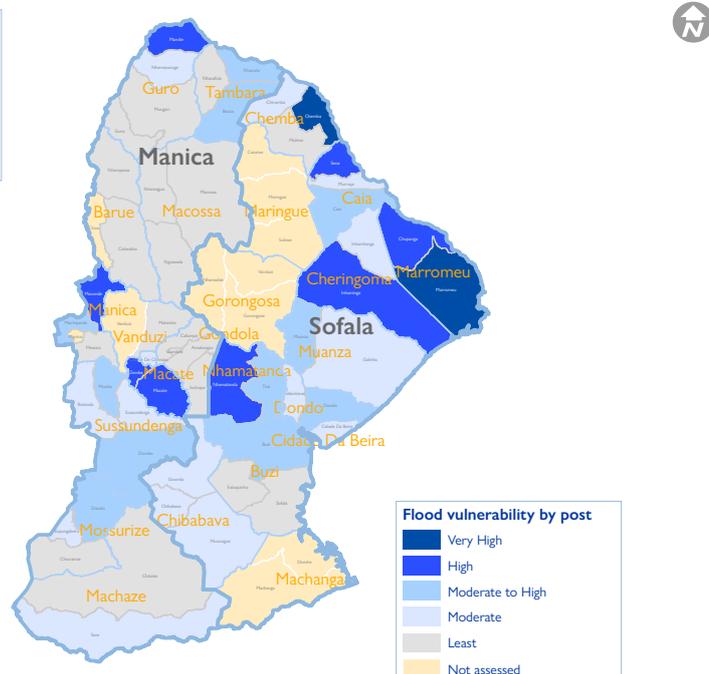
NATURAL DISASTER RISK

Floods

Analysis shows that 91 per cent of localities (175) are at risk from at least one type of natural disaster. Overall, 52 per cent of localities are at risk of flooding (42% of localities in Manica, and 60 per cent in Sofala). Furthermore, 22 per cent of localities in Manica and 29 per cent in Sofala are at either a High or Very High risk of flooding. It should be noted that 17 localities (10 in Manica, 7 in Sofala) reported that they are not at risk of any natural disasters.



The data collected shows that all administrative posts in both Manica and Sofala have at least a small level of vulnerability with respect to floods. Taking the average rating of vulnerability risk to flooding of all the localities in each post, Macate post in Manica as well as both Marromeu and Nhamatanda in Sofala have a “High” vulnerability risk for flooding. Furthermore, 50 per cent of posts in Sofala have a “Moderate to High” risk profile, while 25 per cent in Manica have the same risk profile.



Strong winds and rains risk/vulnerability by locality



In Manica and Sofala, 76% of localities are at risk of strong winds and rains. This corresponds to 72 localities in Manica and 73 localities in Sofala. The table below presents a risks calculation based on key indicators and whether localities are at risk of strong winds and rains.

Risk	Manica	Sofala	Total
Very High	3%	4%	7%
High	13%	13%	26%
Moderate to High	16%	7%	23%
Moderate	5%	14%	19%
Least	2%	5%	6%
None	9%	9%	18%
Grand Total	48%	52%	100%

Strong winds and rains risk/vulnerability by administrative post

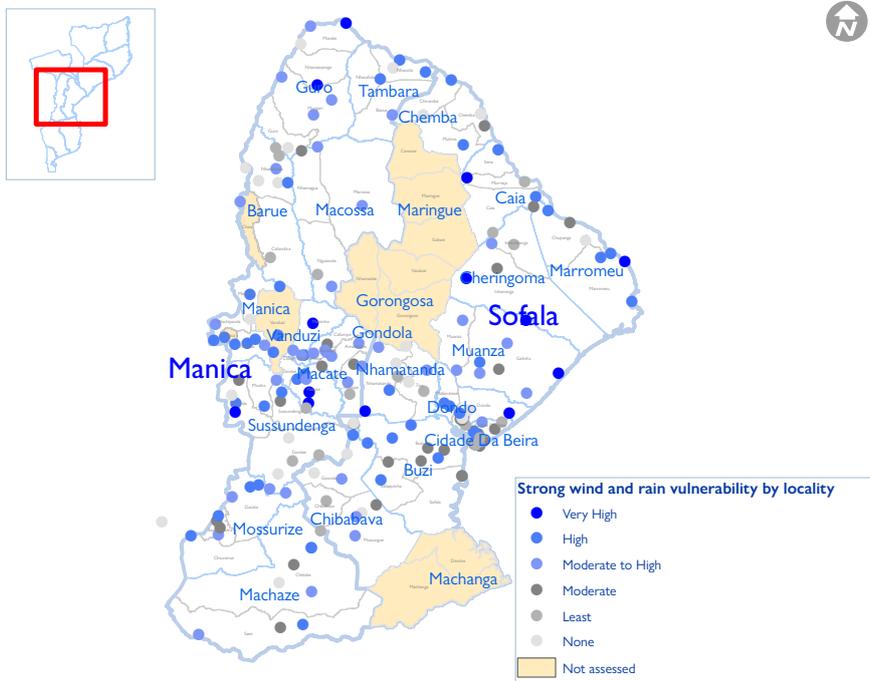


In Manica and Sofala, all posts have at least one locality that is under some risk or vulnerability from strong winds and rains. The posts with the highest risk profiles are Macate (Macomia), Marromeu (Sofala), and Nhamatanda (Sofala).

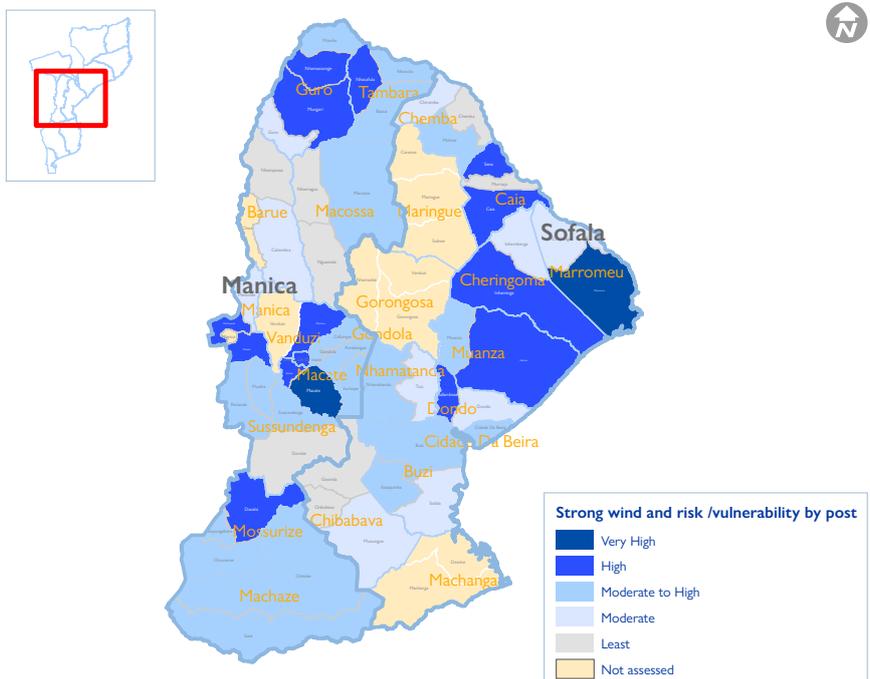
Risk	Manica	Sofala	Total
Very High	3%	0%	3%
High	8%	7%	16%
Moderate to High	30%	36%	66%
Moderate	7%	8%	16%
Least	0%	0%	0%
None	0%	0%	0%
Grand Total	48%	52%	100%

Strong Winds and Rains

Overall, 76 per cent of localities are at risk of strong winds and rains (78% of localities in Manica, and 73 per cent in Sofala). Furthermore, 34 per cent of localities in Manica and 32 per cent in Sofala are at either a High or Very High risk of strong winds and rains. Overall, 26 localities (12 in Manica, and 14 in Sofala) reported that they are not under any risk of strong winds and rains.



The data collected shows that all administrative posts in both Manica and Sofala have at least a small level of vulnerability with respect to strong winds and rains. Two posts in Manica and one in Sofala have a risk indicator of “Moderate”, while the majority in both provinces are “Moderate to High”. Taking the average rating of vulnerability risk to flooding of all the localities in each post, Chimoio, Manica, and Vanduzi posts in Manica as well as both Marromeu and Muanza in Sofala have a “High” vulnerability risk for strong winds and rains.



Drought risk/ vulnerability by locality



In Manica and Sofala, 17% of localities are at risk of flooding. This corresponds to 23 localities in Manica and 10 localities in Sofala. The table below presents a risks calculation based on key indicators, and whether localities are at risk of drought.

Risk	Manica	Sofala	Total
Very High	1%	1%	1%
High	4%	2%	6%
Moderate to High	6%	1%	7%
Moderate	2%	2%	3%
Least	5%	17%	22%
None	31%	30%	60%
Grand Total	48%	52%	100%

Drought risk/ vulnerability by administrative post

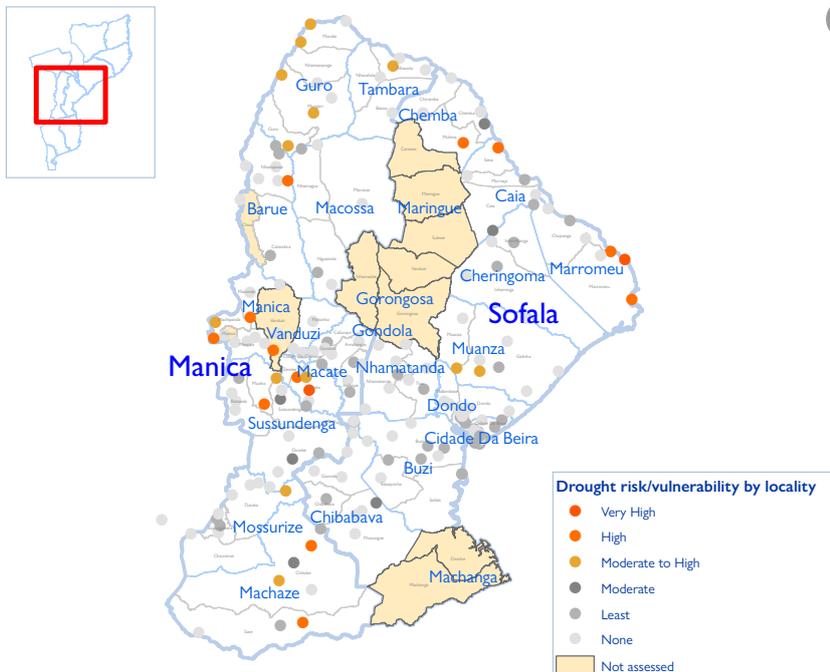


In Manica and Sofala, all posts have at least one locality that is under some risk/vulnerability from droughts. The posts with the highest risk profiles are Guro and Macate in Manica.

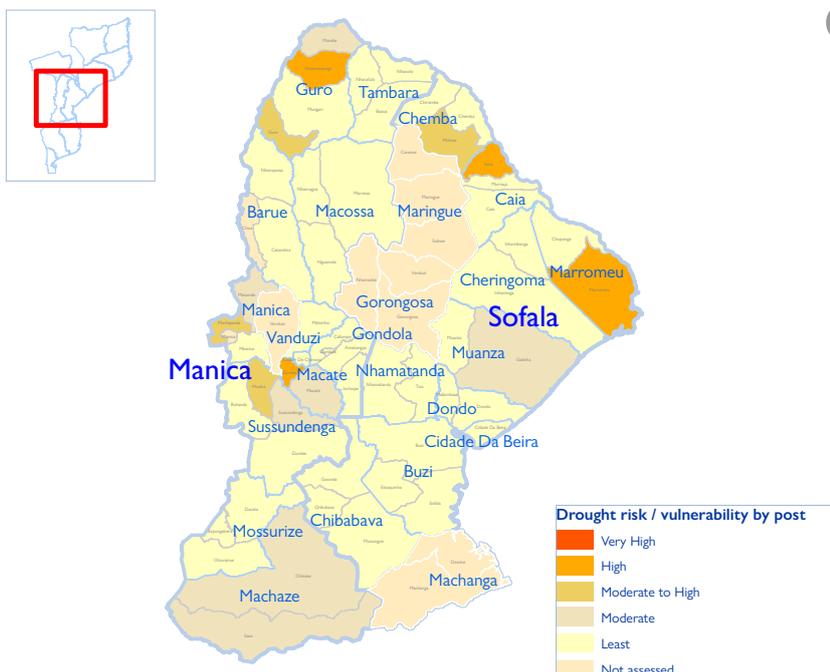
Risk	Manica	Sofala	Total
Very High	0%	0%	0%
High	0%	0%	0%
Moderate to High	7%	0%	7%
Moderate	9%	6%	15%
Least	32%	46%	78%
None	0%	0%	0%
Grand Total	48%	52%	100%

Drought

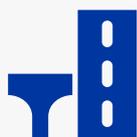
Overall, 17 per cent of localities are at risk of droughts - 25 per cent of localities in Manica, and 10 per cent in Sofala. Furthermore, 5 per cent of localities in Manica and 3 per cent in Sofala are at either a High or Very High risk of droughts. It should be noted that 107 localities (54 in Manica, 53 in Sofala) reported that they are not under any risk of droughts.



The data collected shows that all administrative posts in both Manica and Sofala have at least a small level of vulnerability with respect to droughts. Taking the average rating of vulnerability risk to flooding of all the localities in each post, Guro and Macate posts in Manica have a “Moderate to High” risk or vulnerability to droughts. No posts in Sofala have the same risk profile. Overall, 20 per cent of posts in Sofala are under “Moderate” risk/vulnerability from droughts, and 17 per cent with the same risk profile in Manica.



Physical access constraints by locality



In Manica and Sofala, 52% of localities have physical access constraints. The table below presents the percentage of localities with different physical access conditions as a proportion of the total localities in both provinces.

Risk	Manica	Sofala	Total
No constraints	21%	27%	48%
Partial constraints	16%	10%	26%
Major constraints	11%	15%	26%
Grand Total	48%	52%	100%

Risk of becoming inaccessible by locality

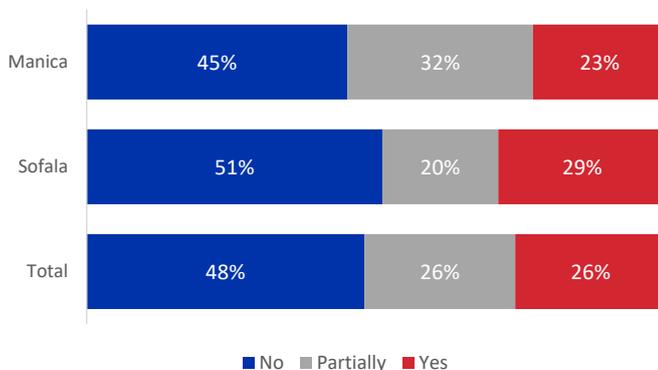


Comparing the data in the table below to the one above, it is expected that following natural disasters around half of sites without access constraints will become at least partially inaccessible. This increase is slightly more pronounced in Sofala than in Manica.

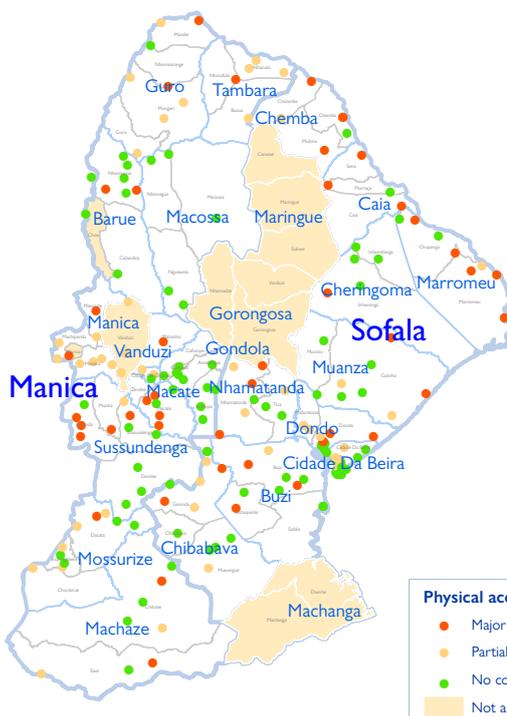
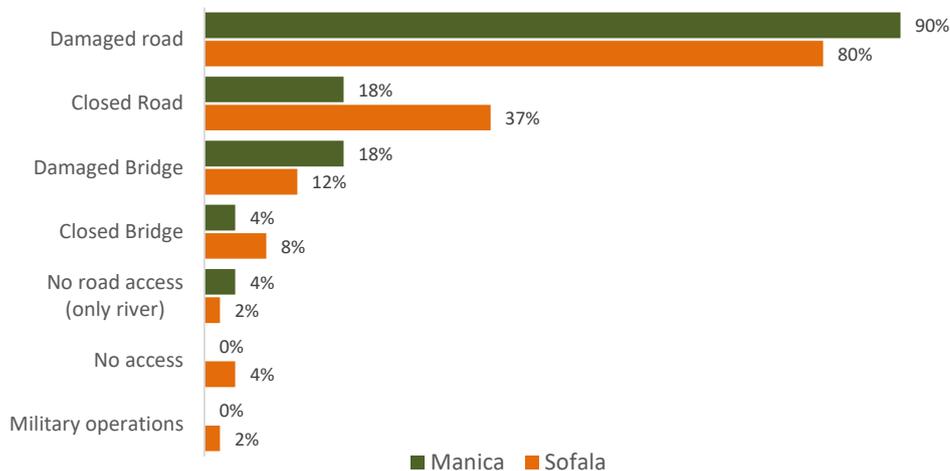
Risk	Manica	Sofala	Total
No constraints	15%	12%	27%
Partial constraints	21%	20%	41%
Major constraints	13%	20%	32%
Grand Total	48%	52%	100%

PHYSICAL ACCESS CONSTRAINTS

Physical access constraints were reported in 52 per cent of localities (100 out of 192 in Manica and Sofala). Of these localities, 50 reported partial physical access constraints, while 50 reported major barriers. Proportionally more localities in Sofala than Manica reported having major access constraints (29% and 23% of the localities in each province respectively). Fifty-one per cent of localities in Sofala reported no access constraints, against 46 per cent in Manica.



Of the localities that reported constraints, 85 per cent have damaged roads, 27 per cent have closed roads, 15 per cent damaged bridges, and 6 per cent closed bridges. This data is presented below but separated by province.



EVACUATION PLANNING

Evacuation Routes

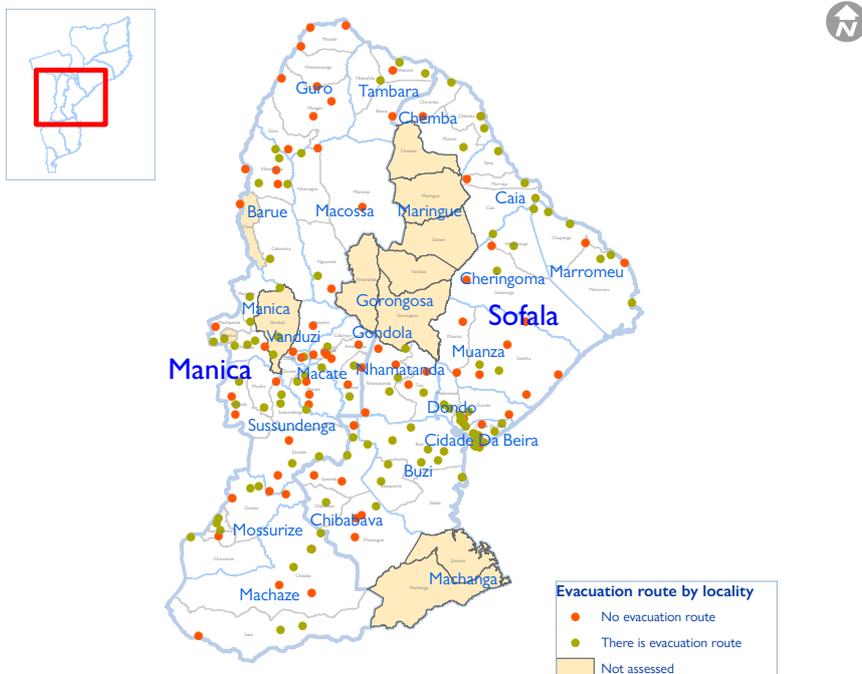
Overall, 61 per cent of localities (117 out of 192) have identified evacuation routes to use in the event of a natural disaster. Looking at the provinces separately, 71 per cent of localities in Sofala have a planned evacuation route, while only 50 per cent have on in Manica. In total, 75 localities have no planned evacuation routes, 46 in Manica and 29 in Sofala.

Localities without evacuation routes



Across Manica and Sofala, 39 per cent of localities still do not have a designated evacuation route (though proportionally this constraint is more severe in Manica than in Sofala).

	Manica	Sofala	Total
With routes	24%	37%	61%
Without routes	24%	15%	39%
Grand Total	48%	52%	100%



Evacuation Centres

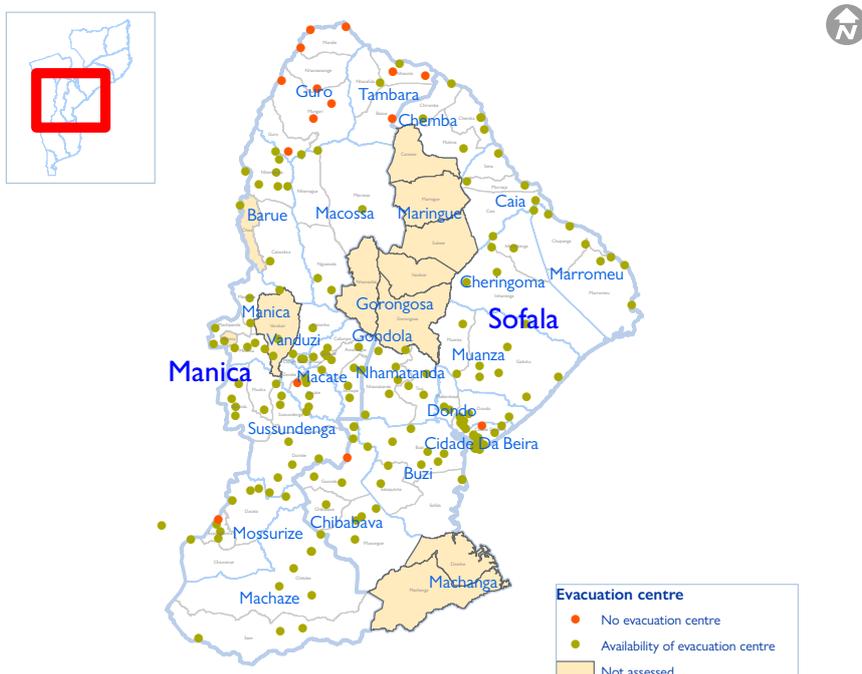
Overall, 92 per cent of localities (177 out of 192) have identified evacuation centres to use in the event of a natural disaster. In Sofala 98 per cent of localities have identified suitable evacuation centres, while in Manica 86 per cent of localities have identified such centres. For a mapping of the estimated capacity of the available evacuation centres, please proceed to the next page.

Localities without evacuation centres



Almost all localities across both Sofala and Manica have designated evacuation centres that can house IDPs in the event of a natural disaster. Postos in the north of Manica have the most severe gaps.

	Manica	Sofala	Total
With routes	41%	51%	92%
Without routes	7%	1%	8%
Grand Total	48%	52%	100%



EVACUATION PLANNING

Evacuation Centre Capacity

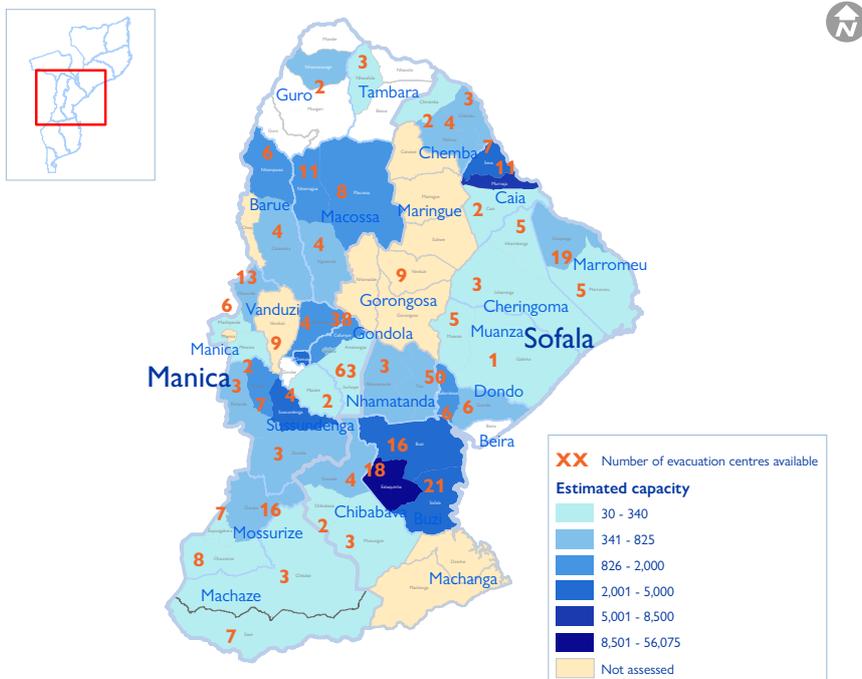
Locality evacuation/
emergency centre
capacity



There are a similar number of buildings available to shelter IDPs in Sofala and Manica, even though the total capacity to shelter IDP families is over two times greater in Sofala.

Province	No. Buildings	No. Families
Manica	811	96,752
Sofala	850	220,962
Grand Total	1,661	317,714

Overall, 1,661 buildings have been identified by locality leaders in Manica and Sofala for use in the event of a natural disaster, that can house an estimated 317,714 families. The map below shows the distribution of these facilities by their capacity (the postos with the greatest capacity can be found in Estaquiha and Murraça. Sofala province has over twice the evacuation/emergency shelter capacity of Manica.



ACCESS TO SERVICES

Below is the access/availability of services (healthcare, potable water, electricity, education, livelihood opportunities) in localities in Manica and Sofala.



Overall, 92 per cent of localities have access to health services (85% of localities in Manica and 98% of localities in Sofala).



Overall, 77 per cent of localities have access to drinking water (80% of localities in Manica and 73% of localities in Sofala).



Overall, 52 per cent of localities have access to electricity/energy (41% of localities in Manica and 62% of localities in Sofala).



Overall, 98 per cent of localities have access to education services (98% of localities in Manica and 98% of localities in Sofala).



Overall, 95 per cent of localities have livelihood opportunities (93% of localities in Manica and 97% of localities in Sofala).

DTM IN MOZAMBIQUE

IOM’s Displacement Tracking Matrix (DTM) is a system to track and monitor displacement and population mobility. It is designed to regularly and systematically capture, process and disseminate information to provide a better understanding of the movements and evolving needs of displaced populations. DTM has been implemented in Mozambique since 2013 with contextualized forms and tools for disaster and crisis responses in coordination with the INGD.

METHODOLOGY

To ensure a more robust targeted response for the humanitarian community, DTM provides key information and critical insights into the situation on internal displaced persons (IDPs), affected populations and returning populations across disaster prone areas facing multiple, sequential, or combined hazardous events. DThrough the baseline locality assessments, DTM tracks the locations and sizes of the three core target populations categories, building an understanding of the main internal displacement patterns and dynamics in the affected region.

The disaster risk assessment was carried out through key informant interviews by DTM enumerators as well as focal points from INGD and SDPI (Service at District level for Planning and Infrastructures). Risk to natural disasters was not assessed based on geophysical conditions but based on local authorities knowledge on past exposure to disastrous events.

VULNERABILITY LEVEL ANALYSIS MATRIX

Step 1:

Local authorities were interviewed and asked if the locality is at risk of flood and strong wind and rain, the presence of physical access constraint and evacuation routes.

Step 2:

At locality level, population vulnerability to flood and strong wind and rain was calculated by factoring the following criteria: risk, physical access constraint and evacuation routes at locality level (see table 1).

CRITERIA FOR VULNERABILITY LEVEL ANALYSIS AT LOCALITY LEVEL			
RISK LEVEL	FLOOD/ STRONG WIND AND RAIN RISK	IS THERE PHYSICAL ACCESS CONSTRAINT?	IS THERE EVACUATION ROUTE?
VERY HIGH	YES	YES	NO
HIGH	YES	YES	YES
	YES	PARTIAL	NO
MODERATE TO HIGH	YES	NO	NO
	YES	PARTIAL	YES
MODERATE	YES	NO	YES
LEAST	NO	NO	YES

Table 1: Criteria for vulnerability level analysis at locality level

Step 3:

Based on each locality vulnerability level a quantitative rank is attributed (see Table 2). Sum the values of the ranking by locality and divide the sum by the count of localities in the post. Each post is given a value based on Table 3.

RANKING VULNERABILITY LEVEL	
VERY HIGH	10
HIGH	8
MODERATE TO HIGH	6
MODERATE	4
LEAST	2
NONE	0

Table 2: Ranking vulnerability level by locality

RISK RANKING FOR MERGING LOCALITIES TO POSTOS	
VERY HIGH	More than 8
HIGH	6.01 to 8
MODERATE TO HIGH	4.01 to 6
MODERATE	2.01 to 4
LEAST	0.1 to 2
NONE	0

Table 3: Ranking vulnerability level by post