

Impacts of the 2024 Floods in Commune V of the Bamako District, Mali

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Abstract—The 2024 rainy season was one of the most severe Mali has experienced, with 729 flood events and 88,083 households affected nationwide. Located on the right bank of the Niger River, in a low-lying and densely populated area, Commune V of the Bamako District was among the most exposed. This article examines what these floods cost residents in social, economic and environmental terms, and what the response to them reveals. We surveyed 100 households in Badalabougou, Daoudabougou, Torokorobougou and Bacodjicoroni in September and October 2025, conducted six interviews with local officials, technical services and neighbourhood chiefs, visited the affected areas and reviewed available documentation. Of the households surveyed, 72% were affected in 2024, and 74% believe floods are becoming more severe. Among affected households, 54.17% suffered damage to their homes, 37.50% lost property, 6.94% reported an injury and 1.39% a death. Nearly nine out of ten (88%) had to leave their homes, often for schools turned into shelters, which delayed the start of the school year. The main barrier to health care was lack of money (51.39%). While 63% of respondents received emergency aid, 71% considered it insufficient. Only 33% had taken individual protective measures, yet 92% said they were willing to take part in collective action. The real damage is less due to the rainfall than to the obstruction of stream beds, blocked drains, and a reactive risk management strategy that typically responds post-disaster. Residents' willingness to engage provides a basis for shifting from relief to prevention.

Keywords— floods; urban vulnerability; socio-economic impacts; resilience; Commune V; Bamako.

I. INTRODUCTION

Floods are the natural hazard that affects the largest number of people worldwide. In Africa, their human toll has grown since the 1990s, and Di Baldassarre et al. (2010) note that this rise is due as much to the settlement of populations in flood-prone areas as to changes in rainfall. In 2024, more than seven million people were affected across sixteen countries in West and Central Africa (OCHA, 2024).

Sahelian cities are particularly exposed. Their rapid growth pushes the poorest households towards lowlands, riverbanks and stream beds, where land is vacant and cheap. Drawing on six African cities, Douglas et al. (2008) showed that informal neighbourhoods combine exposure to water, a lack of drainage and limited means of recovery. In Ouagadougou, Tazen et al. (2019) show that most floods occur with ordinary rainfall, and that their increase since 2006 is mainly due to uncontrolled urbanisation and inadequate drainage. Risk there is therefore not merely a matter of climate: it also depends on how the city has been built (Wisner et al., 2004).

This reading rests on a simple distinction. Risk arises from the encounter between a hazard, here rising water, and exposed elements: people, houses, livelihoods. Its intensity depends on the vulnerability of these elements, that is, their capacity to withstand the shock and recover from it. Cutter et al. (2003) showed that this vulnerability is first and foremost social: income, education, housing quality and access to services explain why, under the same rainfall, some households lose far more than others.

Bamako is no exception to this pattern. Dembélé and Ouattara (2019) mapped buildings located in risk zones along the river, where residents remain highly vulnerable. Da and Bonnet (2020) identified the social factors that explain why some households suffer more damage than others. The health consequences are also well documented. Floods promote waterborne diseases, vector-borne diseases such as malaria, and psychological disorders (Ahern et al., 2005; Alderman et al., 2012).

The 2024 rainy season gave these findings an unprecedented scale. According to the authorities, the rains caused 729 flood events in Mali, the collapse of 47,306 houses and the destruction of 2,915 granaries and storehouses, affecting 88,083 households. A national disaster was declared in August 2024, and a USD 73 million action plan was launched (World Bank, 2025). In Commune V, a recent medical thesis recorded 450 flood victims and described serious health effects, including a high prevalence of depression and anxiety (Dembélé, 2025).

These studies mainly describe the hazard, its mapping or its health effects. Less is known, at the scale of a single commune, about the full range of losses suffered by households and how they assess the aid they received. This is what this article seeks to document for Commune V. Three questions guide us: what were the social impacts of the 2024 floods? What were their economic and environmental impacts? What actions could reduce their reach? We hypothesise that these floods had considerable and multifaceted effects, that they displaced many families, impoverished households and degraded their environment, and that appropriate actions can mitigate their effects.

II. METHODOLOGY

2.1. Study area

Established in 1978, Commune V is one of the six communes of the Bamako District. It lies on the right bank of the Niger River, bounded by the river to the north, the airport

zone to the south, Commune VI to the east and the rural commune of Kalaban-Coro to the west (Figure 1). It comprises eight neighbourhoods: Badalabougou, Torokorobougou, Sabalibougou, Quartier-Mali, Daoudabougou, Kalaban-Coura, Bacodjicoroni and Sema I. Its population was estimated at 645,568 in 2022, making it one of the most populous communes in the capital.

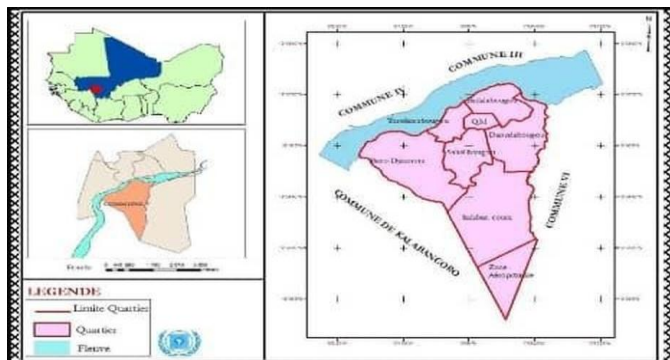


Figure 1: Location of Commune V of the Bamako District and its neighbourhoods.

Source: Mahamadou Housseini Maïga, 2010.

The climate is Sudanian. The rainy season runs from May to October, peaking in August, and annual rainfall ranges from 722 to 1,500 mm, with an average of about 1,100 mm. The commune is low-lying, close to the river and crossed by seasonal streams. Several riverside neighbourhoods host Bozo fishing camps built at the water's edge, often of banco (mud brick). The network of drains and collector channels is inadequate and poorly maintained.

2.2. Data collection

We combined four sources of information.

The document review covered official reports (Civil Protection, the town hall, the United Nations, the World Bank), available scientific studies and the local press.

The questionnaire was administered in September and October 2025 to 100 randomly selected households in four neighbourhoods identified as vulnerable: Badalabougou, Daoudabougou, Torokorobougou and Bacodjicoroni. It covered household profile, flood exposure, damage suffered, displacement, access to health care, aid received and preventive measures.

Semi-structured interviews were conducted with six people: the fifth deputy mayor in charge of social affairs, the head of the local service for the promotion of women, children and the family, the flood focal point of the local service for social development and the solidarity economy, and the neighbourhood chiefs of Badalabougou, Daoudabougou and Torokorobougou.

Direct observation involved walking through the affected neighbourhoods to record the condition of drains, dwellings and riverbanks.

2.3. Data processing and analysis

Questionnaire data were entered and processed using Microsoft Excel and SPSS, then presented as frequencies and percentages. Questions on damage and access to health care

applied only to the 72 affected households. Interviews were subjected to manual thematic analysis, organised around the causes of flooding, exposed areas and reported impacts. Informed consent was obtained from all participants and their anonymity was respected.

2.4. Limitations

Time and resource constraints limited the sample size, and some households declined to take part. The survey took place one year after the floods, which exposes responses to recall errors and reconstructed memories. Finally, in the absence of precise statistical data on costs, economic losses could not be quantified in monetary terms.

In addition, the question on damage allowed multiple answers, but only one type of damage per household was retained during data processing. The percentages obtained should therefore be read as the main reported damage, not as the frequency of each type of loss.

III. RESULTS

3.1. Profile of surveyed households

Respondents are mostly men (58%) and working-age adults, with one third aged between 34 and 43. Their level of education is low: half attended Koranic school and a quarter never went to school. Fishermen (31%) and housewives (29%) make up the two largest groups. Almost all (94%) have lived in their neighbourhood for more than five years and therefore know its flood history well (Table 1).

TABLE 1: Profile of respondents

Characteristic	Category	Frequency	%
Sex	Men	58	58
	Women	42	42
Total		100	100
Age	24 to 33 years	21	21
	34 to 43 years	32	32
	44 to 53 years	20	20
	54 years and over	27	27
Total		100	100
Level of education	Koranic school	50	50
	No formal schooling	26	26
	Primary	13	13
	Secondary or higher	11	11
Total		100	100
Occupation	Fisherman	31	31
	Housewife	29	29
	Trader	15	15
	Driver	11	11
	Other	14	14
Total		100	100
Length of residence	More than 5 years	94	94
	5 years or less	6	6
Total		100	100

Source: field survey, 2025.

3.2. Exposure to flooding

Seventy-two out of one hundred households were affected in 2024. For most, it was not the first time: 35% of affected households had already experienced at least three flood episodes, and 15% more than five (Figure 2). Three out of four respondents believe that floods are becoming more severe, while only 5% think they are decreasing (Table 2).

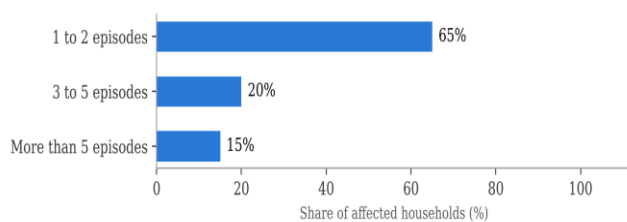


Figure 2: Number of floods experienced by affected households. Source: field survey, 2025.

TABLE 2: Household exposure and perceived trend in flooding

Question	Response	Frequency	%
Household affected in 2024	Yes	72	72
	No	28	28
Total		100	100
Trend in flood severity	Increasing	74	74
	Stable	21	21
	Decreasing	5	5
Total		100	100

Source: field survey, 2025.

In the field, riverside neighbourhoods show dwellings built at water level, in stream beds and on the riverbanks. In Bacodjicoroni as in Daoudabougou, fishermen's houses were flooded, sometimes up to half their height, with canoes moored in front of the doors (Figure 3).



Figure 3: (a) Flooded riverside dwellings in Bacodjicoroni; (b) submerged fishermen's houses in Daoudabougou. Source: SLDS-ES Commune V, 2024.

3.3. Displaced families and schools turned into shelters

Of the 72 affected households, 63 (88%) had to leave their homes. Some found refuge with relatives, others in mosques, schools or, for lack of space, in the street. In Badalabougou, the courtyard of the Mamadou Goundo Simaga school complex hosted more than a hundred flood victims (Figure 4a). Other schools in the commune were directly damaged: classrooms filled with mud, cracked walls, overturned furniture (Figure 4b).



Figure 4: (a) Flood victims sheltering in the courtyard of the Mamadou Goundo Simaga school complex in Badalabougou; (b) flooded school in Commune V.

Sources: Africa Press, 2024; La Nouvelle Voie du Mali, 2024.

These occupations delayed the start of the 2024–2025 school year in several schools. Respondents also report separated families, overcrowded collective shelters, and significant anxiety about the future. According to the fifth deputy mayor, “flood victims lose everything, and poverty sets in”.

3.4. Material losses and difficult access to health care

Housing is the first to be hit. More than half of affected households (59%) report damage to their dwelling, and over a third (35%) the loss of belongings: mattresses, wardrobes, televisions, food stocks. Five households had an injured member and one household lost a family member (Table 3).

TABLE 3: Main damage reported by affected households

Type of damage	Frequency	%
Damage to dwelling	59	59
Loss of material possessions	35	35
Injury in the household	5	5
Death in the household	1	1
Total	100	100

Source: field survey, 2025.

Losses did not stop at household belongings. Fishermen saw their canoes and nets damaged, market gardeners their plots flooded, and small businesses came to a standstill. Several neighbourhood chiefs speak of a “halt to income-generating activities” and a lack of means to rebuild.

Getting health care became difficult. For more than half of affected households (52%), the main obstacle was lack of money, followed by a shortage of medicines and the cost of treatment. Distance to health centres was cited by only 5% of them (Table 4). Respondents mainly mention malaria, skin diseases and, less frequently, cholera.

TABLE 4: Main obstacle to accessing health care during the floods

Obstacle	Frequency	%
Lack of financial means	52	52
Shortage of medicines	26	26
High cost of treatment	17	17
Health centre inaccessible	5	5
Total	100	100

Source: field survey, September–October 2025.

3.5. A degraded urban environment

Field observations and interviews describe a damaged living environment. Floodwater lingered in the streets for an extended period, carrying mud, waste, and wastewater. Drains, already clogged with refuse before the rainy season, became even more silted up. Riverside market gardens were contaminated. Several interviewees also mention uprooted trees, gullied soils and, on slopes, a risk of landslides.

3.6. Aid deemed insufficient and prevention still limited

Emergency aid reached a large share of households: 63% of respondents say they received it, in the form of food, hygiene kits, tarpaulins, mattresses or cash. It was provided by the State and by humanitarian organisations; in Bamako, IRC and CRS supported 328 and 621 households respectively. However, 71% of respondents consider it insufficient to cover their immediate needs (Figure 5).

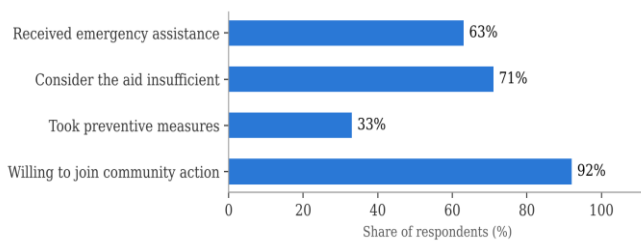


Figure 5: Assistance received and preventive measures reported by respondents.

Source: field survey, 2025.

The public response was organised from the start of the season. The Crisis Coordination and Management Centre was activated by Decision No. 2024-000435/MSPC-SG of 30 May 2024, for the period from 1 June to 30 October. The government distributed food and FCFA 128,595,800 in cash, and rehoused 903 households in schools. For 2025, a programme to clear the District's drains and collector channels, estimated at FCFA 2.66 billion, was announced with World Bank support.

On prevention, the contrast is stark. Only one third of respondents had taken steps to protect themselves, and nearly half (46%) had done nothing. Yet 92% say they are willing to take part in collective action, such as clearing drains or awareness-raising.

3.7. Perceptions of local stakeholders

The six interviewees agree on the causes. They cite first the occupation of stream beds and their easements, then drains clogged with refuse and never cleared in time, the absence of drains in some neighbourhoods and non-compliance with building standards. Table 5 summarises their views.

TABLE 5: Summary of interviews with local stakeholders (n = 6)

Theme	What stakeholders say
Causes	Construction in stream beds and easements, clogged and uncleared drains, absence of drains, non-compliance with building standards, heavy rainfall
Most exposed areas	Bozo camps in Badalabougou, Bacodjicoroni and Torokorobougou; stream banks in Daoudabougou, Sabalibougou and Kalaban-Coura
Social impacts	Collapsed houses, homeless families, injuries and deaths, trauma, weakened social fabric
Economic impacts	Halt to income-generating activities, damaged canoes, nets and gardens, lack of means to rebuild
Health and environmental impacts	Malaria, skin diseases, cholera, polluted water, poor hygiene, contaminated gardens

Source: interviews, 2025.

IV. DISCUSSION

4.1. A disaster that reveals long-standing vulnerability

The figures for Commune V confirm the scale of the 2024 rainy season, but they also tell another story. More than a third of affected households had already experienced at least three floods. For them, 2024 was not an isolated accident: it was the most violent episode in a series. This finding is consistent with Di Baldassarre et al. (2010), for whom the rise in flood victims in Africa is explained first and foremost by the continued settlement of populations in exposed areas.

The causes cited by local stakeholders all point in this direction. None of them blames the rain alone. They speak of houses built in stream beds, clogged drains and ignored standards. Wisner et al. (2004) described this mechanism: a hazard only becomes a disaster when it meets populations made fragile by their living conditions. In Bamako, Dembélé and Ouattara (2019) had already identified such buildings in risk zones, and Da and Bonnet (2020) had shown that the damage suffered by households depends heavily on their social situation. The fishing camps of Commune V are the clearest illustration. Their residents live at the water's edge because their livelihood requires it, in banco houses that withstand rising water poorly.

Drainage is the other weak link. Drains exist in some neighbourhoods, but they are filled with refuse well before the rainy season, owing to the lack of regular collection and of transfer sites. The clearing programme planned for 2025 responds to the emergency, but it will solve nothing unless waste collection follows. Maintaining the network is a yearly task, and household waste management is its precondition.

The belief that flooding is worsening, shared by three out of four respondents, should be taken seriously. In Ouagadougou, Tazen et al. (2019) showed that most floods occurred with rainfall that was in no way exceptional: it is the city, densified without adequate drainage, that overflows more often. A similar mechanism is probably at work in Bamako, even though 2024 was also a year of abnormal rainfall. Our survey does not allow us to determine the exact contribution of each of these two factors.

4.2. Losses that perpetuate poverty

The distribution of damage observed here is close to that reported by Dembélé (2025) in the same commune, from a larger sample of 450 flood victims: housing comes first (54% here, 47% in that thesis), followed by loss of belongings (38% versus 43%). This consistency between two independent surveys strengthens the reliability of the finding.

These losses hit households that had few reserves. Half of the respondents had no schooling beyond Koranic school, and many live from fishing or petty trade. When the canoe is damaged or the stall closed, income stops overnight. Douglas et al. (2008) described this spiral in several African cities. Floods hit first those with the fewest means to recover, and each episode makes them a little poorer. At the global level, Hallegatte et al. (2017) speak of disasters that push households into poverty or keep them there.

Access to health care is a direct consequence. The main obstacle is not distance but money. Health centres remain accessible, but households can no longer afford the consultation or medicines, at the very moment when health risks are rising. Ahern et al. (2005) and Alderman et al. (2012) point out that floods increase diarrhoeal diseases, malaria and psychological disorders. The diseases cited by our interviewees, and the high prevalence of depression and anxiety reported by Dembélé (2025), show that Commune V is no exception.

4.3. Schools turned into shelters

The occupation of schools illustrates how a disaster spreads from one sector to another. In the absence of reception sites planned in advance, schools became shelters. While flood victims found shelter, the start of the school year was delayed for many pupils. The Sendai Framework stresses the protection of critical infrastructure, including schools, and the preparation of evacuation sites (UNDRR, 2015). In Bamako, this last-minute choice shows that planning for the reception of disaster victims has yet to be built.

The effects on children go beyond a mere delay in the school calendar. Pupils spent weeks away from home, in collective shelters, sometimes separated from part of their family. Respondents speak of trauma and stress, which is confirmed by the high prevalence of anxiety disorders reported by Dembélé (2025). Resuming classes in damaged classrooms, or ones shared with flood victims, does not provide the conditions for a return to normal. Psychosocial support in the affected schools would have a rightful place in the response.

4.4. From crisis management to shared prevention

In 2024, the response was genuine, featuring the activation of the crisis management centre, the distribution of food and cash, support from humanitarian organizations, and a collector-clearing program funded by both the State and the World Bank. It nevertheless remained largely focused on relief. The 71% of respondents who consider the aid insufficient are a reminder that assistance, however well organised, cannot make up for the loss of a home or a work tool.

The question of equity also arises. Aid was primarily targeted at households deemed most vulnerable, often headed by a woman or having lost their home. This targeting is legitimate, but it leaves out some of those affected: more than a third of respondents received nothing. Local stakeholders also describe interventions scattered among the State, NGOs and associations. A shared register of flood victims, kept by the commune together with the Civil Protection, would help avoid both duplication and omissions.

The most encouraging finding of the study lies in the gap between two figures. Only one third of households took protective measures, yet 92% say they are willing to engage in collective action. This willingness is a resource. It suggests that individual inaction stems from indifference than from a lack of means and organisation. The Sendai Framework makes community participation one of the pillars of disaster risk reduction (UNDRR, 2015). In Commune V, neighbourhood committees responsible for clearing drains, monitoring streams and issuing alerts could build on this willingness.

Such collective action will not be enough without harder public decisions. As long as households live in stream beds, every heavy rain will cause the same damage. Clearing hydraulic easements and resettling the most exposed families are sensitive measures that require serious social support. Yet they are the precondition for a lasting reduction in risk.

4.5. Revisiting the hypotheses

The main hypothesis is confirmed: the 2024 floods had considerable and multifaceted effects in Commune V. The hypothesis on social impacts is also confirmed, with 88% of affected households displaced and schools occupied. The hypothesis on economic and environmental impacts is confirmed for loss of belongings, the halt to activities and the degradation of the living environment. However, river pollution and soil erosion were only noted through observation and testimonies; they were not measured. The last hypothesis, that appropriate actions can reduce the impacts, is supported by the analysis of causes and by residents' strong willingness to engage. It remains to be verified in practice.

V. CONCLUSION

We set out to establish what the 2024 floods cost the residents of Commune V. In the neighbourhoods studied, seven out of ten households were affected. Most had to leave their homes, more than half saw their houses damaged, and many lost their belongings or their work tools. Getting health care became difficult for lack of money, and schools turned into shelters delayed the start of the school year. The environment of riverside neighbourhoods was left degraded, with stagnant water, silted drains and contaminated gardens.

This damage is not solely the result of an exceptional season. It stems from the occupation of flood-prone areas, the poor state of drainage and a risk management approach that acts mainly after the disaster. Emergency aid reached a majority of households, but most of them considered it insufficient.

Several courses of action emerge. First, the easements of streams and the river should be enforced, and the resettlement of the most exposed households supported. The clearing of drains and collector channels should be regular and scheduled before each rainy season, rather than triggered after the damage. The commune would also benefit from identifying in advance reception sites other than schools. Finally, the willingness expressed by 92% of residents could be harnessed through neighbourhood committees involved in drainage maintenance and early warning.

This study opens several avenues for research: fine-scale mapping of the commune's risk zones, a costing of household economic losses, and multi-year monitoring of their capacity to recover.

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