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Unlocking Locally-led Resilience amid Conflict and Climate Stress

Views from Community Leaders in Mali on Development Priorities, Aid Distribution, and Anticipatory Action

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Abstract

We surveyed 2,919 community leaders across seven regions of Mali to provide insights on the prevalence and severity of shocks and crises across localities; which types of shocks and crises are most difficult from which to recover; the formal and informal ways in which local actors are involved in aid distribution systems; and the types of programming local actors view as most beneficial for promoting resilience. Despite increasing prevalence of conflict across localities, leaders predominately cited climate-related shocks as the most difficult from which to recover—especially droughts. We find that localities vary in the inclusiveness of local governance around aid distribution: while elected mayors are almost always involved, traditional leaders, women's group and youth leaders in villages, civil servants, and civil society leaders are each involved in 40–60% of localities. We used both a budget allocation exercise and an experimental game in which we introduced the concept of anticipatory action (AA) programming—aid that is "triggered" by an early warning signal to arrive before a shock and mitigate its worst effects—to probe preferences over aid modality. We found that leaders see value in balancing investment across resilience programming (including AA) and humanitarian response, especially food aid. However, there is some important variation between village- and commune-level officials: village-level leaders are more likely to prioritize aid modalities that target households directly, like food aid and cash transfers, while commune-level leaders are more likely to prioritize risk prevention trainings. Our findings have important policy implications for promoting local resilience in Mali, including the importance of investing more in drought resilience, engaging actors at different levels of local governance who have different information and perspectives, and simultaneously investing in capacity-building around early warning system accuracy and dissemination.

Keywords: governance, resilience, climate, conflict, aid

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Contents

1 Introduction

Malians are increasingly facing compound crises, with overlapping exposure to natural disasters, weather shocks, price shocks and economic crises, and escalating insecurity. Food insecurity is dire and is expected to worsen as climate conditions deteriorate and armed groups restrict access to certain regions. The United Nations estimates that over one million Malian children are at imminent risk of acute malnutrition and that approximately 7.1 million need urgent humanitarian assistance (International Rescue Committee, 2024). Intensifying humanitarian need, the exit of key donors from Mali, and the growing complexity of overlapping crises is putting current development actors under strain. Delivering effective aid in fragile settings like this one necessitates difficult decisions, as actors navigate complex tradeoffs under conditions of significant uncertainty. Understanding the prevalence, characteristics, and recovery trajectories of shocks and crises across Mali is essential for securing food, land, and water security; reducing poverty; and aiding development actors in responding effectively.

This paper presents evidence on shocks and crises across Mali, drawing on an original survey of 2,919 local leaders. The survey captured diverse perspectives by engaging various types of leaders who represent different segments of society—elected officials, traditional authorities, and women's, youth, and civil society representatives—across different regions in Mali. We explored three key themes. These questions have important implications for how donors can foster local resilience in fragile contexts, particularly in Mali. While household surveys and community needs assessments can identify humanitarian needs at a specific point in time, understanding local leaders' perspectives on long-term recovery challenges can help uncover gaps in aid programming and improve the design and effectiveness of aid delivery.

1. What shocks and crises are most prevalent, and which are the hardest to recover from?
2. How are local leaders involved in aid distribution, both formally and informally? What types of local leaders engage in different aspects of aid distribution and how does this vary across regions?
3. What types of programming do local leaders see as most beneficial, and how do they balance humanitarian response with resilience programming when resources are limited?

These questions also speak directly to two key tradeoffs around the design of aid programming in fragile settings. First, in designing aid programs, donors face tradeoffs around localization—deciding how much decision-making and implementation to delegate to local actors versus directing efforts centrally. Donors and international non-governmental organizations (INGOs) have committed to increasing local participation in humanitarian response, consistent with research that has found local involvement improves aid outcomes

(Autesserre, 2014; Campbell, 2018). Local actors often possess better knowledge of community needs, are better positioned than external actors to negotiate access to conflict-affected areas, and typically have the trust from community members necessary to manage aid distribution and mitigate potential intra-communal disputes around the distribution of aid (Alderman, 2002; Hayek, 1945; Logan and Amakoh, 2022).

However, local actors' interests, preferences, and capabilities may differ from those of donors, and discretion in decision-making can be used to divert program resources from intended purposes. Local participation does not guarantee accountability (Ebrahim, 2013; Winters, 2010), and outcomes of local processes are shaped by politics, culture, and economic and social inequalities which can exclude many groups from decision-making (Mansuri and Rao, 2012). Even with consensus on increasing local involvement, there remains a broad spectrum of what this participation can look like in practice. Local leaders vary widely in their responsibilities, skills, interests, and authority. There are also multiple tiers of local governance, and it is not necessarily clear who to engage across these tiers to reap the potential benefits of localization.

Donors also face tradeoffs between immediate response and long-term resilience. Given urgent humanitarian needs, how should resources be allocated between rapid response and building resilience to future crises? The concept of a humanitarian-development nexus—where humanitarian aid transitions seamlessly into long-term development assistance—has gained traction among INGOs and donors, highlighted at the World Humanitarian Summit in 2016 (World Humanitarian Summit, 2016). Yet, in settings where crises are recurrent, the boundary between humanitarian response and resilience programming becomes blurred. Donors, agencies, and INGOs have to consider appropriate aid modalities and priorities based on their comparative advantages and shifting dynamics on the ground (United Nations Evaluation Group, 2018). Ideally, humanitarian and development actors should coordinate efforts to address immediate needs while tackling the underlying causes of poverty and vulnerability.

In practice, however, the same actors often manage both humanitarian and resilience programming, constrained by limited budgets and capacity. Redirecting resources from immediate relief can be challenging, especially when the effectiveness of resilience programming in fragile settings is uncertain. For example, the effects of resilience programming depend on implementation details, long-term sustainability, and buy-in from the community. Projects that are begun may collapse before their impacts are felt when features of the local context change in ways that disrupt implementation. Understanding how local leaders themselves prioritize and navigate tradeoffs under budget constraints can help inform donor strategies.

To shed light on these questions, we conducted a novel survey of 2,919 diverse local leaders from across seven regions in Mali, the 2024 Mali Local Leaders Aid and Resilience Survey (MLLAR Survey).[1] These

[1] The survey was fielded between February and May 2024 across 139 rural communes in Mali.

leaders represent a diverse set of local actors, each with unique insights into community needs distinct roles influencing the effectiveness of aid programming. Despite increasing calls for more localized aid delivery, much of the research on views toward aid in aid-receiving countries has focused on actors operating at the national or regional levels (Custer et al., 2021) or on households (Milner, Nielson, and Findley, 2016; Shapiro, 2020). The views of local leaders—who are responsible for local development, respond to shocks and crises, and play pivotal roles in the success of aid programs—are less known. Local leaders are often formally or informally involved in solving last mile delivery challenges, mediating local disputes around resource distribution, negotiating access to conflict-affected or isolated communities, providing donors with critical information on community needs. They also play key roles in organizing collective responses and representing and representing the needs and preferences of their communities to donors and central governments (Baldwin, 2013, 2020). In the Malian context, our study fills this gap by identifying and surveying a variety of local leaders with both formal and informal authority in arenas that shape resilience and shock recovery in Mali. These include religious and civil society leaders, mayors, civil servants, traditional village chiefs, and other informal village-level leaders.

We begin by examining local leaders' perspectives on the prevalence and severity of shocks and crises across Mali. We find that exposure to droughts, floods, and conflict is widespread, with 90%, 33%, and 69% of local leaders, respectively, reporting damage or loss from these shocks in the past 12 months. However, When asked to reflect on shock *severity*, 69% of leaders identified drought as one of the two most difficult shocks their locality faced in the past five years—more than twice as many as cite either floods or conflict as the most severe shock. The accumulated effects of these crises have resulted in acute food and water insecurity in many areas. Yet, when reflecting on the past five years, 45% percent of leaders note that their locality never received *any* aid from donors or from government to support recovery from the most severe shock facing their locality. We then explore the involvement of different types of local leaders in aid distribution, both formally and informally. In Mali, where many aspects of governance are decentralized to the commune level, mayors are almost always formally involved in aid distribution through"Aid Distribution Committees." Involvement of civil society leaders, village chiefs, women's leaders, and youth leaders varies by locality. Across our sample, these leaders are included in Aid Distribution Committees in 40-60% of localities.

We show that this variation in inclusiveness of aid distribution committees is likely consequential for aid outcomes, as different types of leaders express different preferences for how aid should be allocated. By interviewing leaders at both the village level (the lowest level of local governance, led by traditional leaders) and the commune level (the lowest administrative level of local governance, comprising multiple villages and led by elected mayors and commune councils), and various types of leaders at each level, we are able to compare preferences across governance levels and types of leaders. The most notable differences emerge

between village and commune leaders, rather than between different types of leaders at the same level of governance. Village-level leaders tend to prioritize aid that directly benefits households, especially food aid, while commune-level leaders are more likely to prioritize risk prevention programs, such as disaster preparedness training.

Finally, we examine how local leaders weigh tradeoffs between humanitarian response and anticipatory action (AA)—aid that is triggered by an early warning signal to arrive before a shock, and mitigate its worst effects. While investments in AA are made in advance, the programming itself relies on a decision to act which "is based on a forecast, or collective risk analysis, of when, where and how the event will unfold" (Anticipation Hub, 2023). We probe leaders' views on the idea of reallocating resources that would otherwise go to humanitarian response toward AA through an experimental game, using a cartoon explainer of AA programming and tangible tokens to help illustrate resource allocation and payoffs of different allocations. We find that most leaders are amenable to moving some resources toward AA programming, but almost none would move all resources toward AA. Accuracy of shock forecasts played a significant role in leaders' evaluations: when leaders randomly draw an inaccurate forecast—which leads to a failure to trigger AA despite arrival of a negative shock—they are more likely to reduce future investments in AA.

This work has several important policy implications. First, leaders' assessments of shock severity show a strong need to focus more programming on resilience to droughts and on water security. Despite myriad shocks and compound crises, these shocks tend to pose the greatest recovery challenges. Second, when considering how to localize aid programming, the results show that the tier of local governance is an important consideration, as well as variation across localities in how inclusive aid distribution systems may be. What these preferences are and whose voices are heard will determine the outcome of increasing aid localization. Third, our results show that leaders see value in supporting resilience programming, even when humanitarian need is high and when budget limitations are imposed. Results from the AA game also show that investments in forecasting accuracy and in wide dissemination of forecasts could improve leaders' support for this new form of resilience programming.

The remainder of the paper is structured as follows. Section 2 discusses local governance in Mali and introduces the sample of leaders included in our survey. Section 3 reports prevalence and severity of various crises and shocks across Mali. Section 4 examines the involvement of different types of leaders in formal and informal aid distribution systems. Section 5 outlines the preferences of leaders over different aid modalities, including the results of the AA game. And Section 6 concludes.

2 Local governance context in Mali

This paper uses original data we collected on the perceptions and attitudes of local leaders in Mali who play a key role in coordinating responses to the various crises that rural Malians face: political leaders at the commune level, village leadership, and members of civil society at both the commune and village levels. Mali's lowest level of decentralized territorial administration is the commune; the country has 819 communes with elected mayors and communal counselors.

The first municipal elections were held in 1999 with a five-year cycle.[2] However, the last municipal elections were held in 2016;[3] subsequently, Mali has not been able to hold local elections. Even so, mayors continue to play an important role in public service provision and coordinating humanitarian aid. In fact, as national politics have destabilized in recent years, local-level governments have remained relatively stable. As evidence, looking across the six Afrobarometer surveys since 2008, average trust in local governments has only varied by about 0.2 standard deviations, whereas trust in the president has varied by 1.2 standard deviations.

While mayors are a focal point for local public service provision, a range of other local leaders play formal and informal roles in local resilience and crisis response. To identify the types of leaders most influential to aid distribution dynamics, crises, and response in Mali, we conducted preliminary qualitative fieldwork with mayors and regional coordinators of programming for non-governmental organizations (NGOs) in five communes in the Sikasso and Ségou regions in central and southern Mali. The communes varied in conflict-affectedness and accessibility, factors which often shape aid distribution dynamics at the local level. In these interviews, we asked open-ended questions about how aid distribution works in practice and the various actors that play both formal and informal roles in the process (Bleck et al., 2023).

As a result of our initial, qualitative fieldwork, we decided to interview a diverse group of key leaders to get a range of perspectives. In each of 139 communes, we recruited the mayor[4] (or his representative) and four other leaders: the primary state-appointed civil servant, the secretary general; an opposition politician; and two civil society leaders (one from a religious organization and one from a youth association). In our qualitative fieldwork, mayors highlighted that that frequently rely on traditional leaders within villages to assist with logistics, distribution of goods and materials, and input on aid targeting, in addition to the diverse set of leaders that can be involved at the commune level. Therefore, we further asked mayors to help us identify four villages within their commune to include in our survey sample. This enabled us to examine

[2]The Algiers Accords prescribed greater decentralization in Mali as a way to satisfy insurgent discontent about lack of representation- with the establishment of new regions.

[3]Some of these elections were plagued by jihadist violence or the threat of violence, but most of the country's territory was able to hold these elections.

[4]In our sample, these were always men.

multiple tiers of local governance.

Because relationships between communes and villages can vary—ranging from geographically proximate and cooperative to more remote and/or strained—we asked mayors to identify four villages based on the following criteria: the village at the commune seat (the *chef-lieu*), the village most affected by crisis, a village with strong ties with the mayor, and a village with weak ties with the mayor. The idea behind the sampling of villages within communes was to try to ensure variation in exposure to crisis and in the closeness of the relationship between commune officials and village officials. In cases where the mayor was unable to provide this information to aid in sample selection, we selected villages at random within the commune until reaching four villages in total within the commune. Within each village (four per commune), we then first spoke with the village chief, who we then asked to identify three other village leaders: the women's leader, the youth leader, and another resource person or key interlocutor for the village on whom the chief relies.

The mayor and secretary general play important roles managing the commune budget and governing at the municipal level. Civil society actors at the commune level can play important roles in assisting with service provision and allocating for the needs of their constituents. They also often have knowledge of the broader commune if they reside in multiple villages. We also interview an opposition candidate—someone who competed in municipal elections, but was not elected—in each of the 139 communes where we conduct research. Given Mali's competitive parties and history of multi-party elections, opposition candidates who competed and were not elected to office are likely to retain oppositional views to municipal actors in power (Gottlieb, 2015).[5] These candidates can play an important role in organizing and representing those with opposing views to the incumbent leadership. We anticipate that they are more likely to challenge the status quo than are other types of leaders.

Local actors within the commune seats noted that they often relied heavily on village and traditional leaders to help them with aid distribution logistics and problem-solving, even if village leaders did not have formal roles within aid programming. This was particularly true in areas where security and conflict concerns were high—making it difficult or impossible for mayors and other commune officials to access parts of the commune—or when there were disputes among and within communities over who would receive aid.

Village chiefs, the traditional leaders of villages in Mali, retain an important role overall in local governance through dispute resolution, public goods provision, and as brokers of citizens' preferences and concerns. Afrobarometer data shows that the Malian traditional leaders are among the most trusted on the continent(Logan, 2009), and are more trusted than national and local elected leaders. Traditional leaders regularly convene

[5]In contrast, research has shown that opposition candidates, when elected to serve on councils, can be co-opted by ruling party members (Gottlieb and Kosec, 2019).

village meetings to disseminate information and solicit citizen perspectives. They typically work closely with a set of counselors—who put their ideas into action.

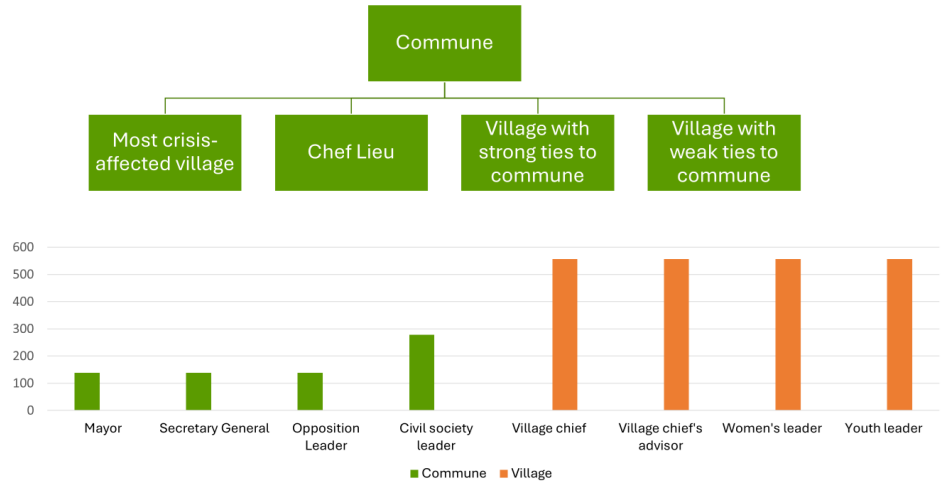
Mali also has a rich associational life (Bleck et al., 2021, 2024). Women and youth groups play important roles providing welfare support and advocacy for their members. Most villages have a woman's association and a youth association whose leaders may be consulted by the village chief or council of elders when making decisions. There is also coordination of these groups across villages. Historically, some of these grassroots civil society groups have played an important role in making demands on the state at the commune level and/or lobbying traditional leaders (Johnson, 2021; Shapland et al., 2023). Leaders of these kinds of organizations often play a key role in representing the population's perspective. However, Mali also remains plagued by social inequities. Mali has high rates of gender inequality and a strong gender gap in knowledge and participation (Gottlieb, 2016; Bleck and Michelitch, 2018). In addition, the village chief can often wield a significant amount of power in the context of consensual village-level decision-making (Shapland et al., 2023). Malian society also continues to be characterized by caste structures that can impact social relations and opportunities for local-level participation (Sangaré, 2019).

Local leaders vary in their degree of access to resources as well as their participation in existing humanitarian relief programs. Some communes may make most decisions centrally and engage villages only as aid recipients, while in others, village-level leaders take key decisions relevant to humanitarian relief. Moreover, mayors and other commune leaders may not delegate uniformly across villages within their commune. Villages which are closest to the commune seat or whose leaders maintain close ties to mayors may be treated differently compared to villages seen as less cooperative. All of these factors are likely to shape village leaders' preferences about aid distribution. Therefore, this study pays close attention to the status of each leaders as "insiders" vs. "outsiders" of existing power dynamics, and to regional variation across Mali.

This study was conducted in 139 communes in rural Mali across seven regions. We worked with the implementing survey firm, the GISSE Institute, to select rural communes in each region. We asked that—where possible—GISSE survey at least one commune in each region. When selecting multiple communes from a region, GISSE selected communes that were non-contiguous to attempt to maximize variation in exposure to various types of crises. Given the security situation in Mali, commune selection was also governed by communes that GISSE could safely access. We also consulted with World Food Program to ensure that they had some activities in at least a subset of the communes we selected, given our desire to make this research useful to them. Figure 1 provides an illustration of our key interlocutors for the MLLAR Survey.

Given the above discussion about the diversity of local leaders (formal and informal) in Mali, we sought the

Figure 1: Diagram of Sampling Strategy



Source: MLLAR Survey (2024)

Table 1: Survey sample of local leaders

	All sample	Southern Mali	Central Mali	Northern Mali
N of unique cercles	41	20	13	8
N of unique communes	139	82	45	12
N of unique villages	557	329	181	49
Mayors or their representatives	139	82	45	12
Civil servants	139	82	45	12
Opposition leaders	139	82	45	12
Civil society leaders	278	164	90	24
Village chiefs	556	328	180	48
Village advisor	556	328	180	48
Women's leaders	556	328	180	48
Youth leaders	556	328	180	48

Source: Mali Local Leaders Aid and Resilience Survey (2024)

perspectives not only of the mayor but also of other local leaders with important and potentially competing perspectives about aid and its distribution. Table 1 shows the distribution of each leader type across the sample and in each major geographic zone of Mali: South, Center, and North. The survey sample spanned the regions of Gao and Tombouctou in the Northern zone, Mopti and Segou in the Central zone, and Kayes, Koulikoro, and Sikasso in the Southern zone. With approximately 16 village-level leaders and five commune-level leaders per commune, we ultimately recruited 2,919 respondents in total from across the 139 communes. By design, we have four times more village-level actors than commune-level actors. While Southern Mali comprises the majority of our sample, we also have a sizeable sample from Central Mali, and a smaller one from Northern Mali, consistent with the sizeable differences in populations across these zones.

3 Prevalence and severity of shocks and crises across Mali

Malians cope with a range of environmental disasters—including flooding, droughts, and crop pests—as well as conflict. A key aim of the MLLAR (2024) Survey is to obtain a contemporaneous picture of the types of shocks confronting Mali as of early 2024, as well as the perspectives of local leaders on the severity of these shocks. Mali is among the countries most affected by climate change, which is especially problematic for the nearly 80% of the Malian population that relies on agricultural and pastoral livelihoods, and has also led to substantial increases in food insecurity (Tucker, 2023). Other factors, such as import restrictions due to sanctions and bottlenecks from COVID and the war in Ukraine, have also contributed to a nearly 30% increase in food prices from 2019 to 2023. In early 2023, 15% of the population was severely food insecure or at risk of becoming severely food insecure (ibid.).

For more than a decade, Mali has also suffered a variety of governance crises, which has resulted in increased exposure to conflict for civilians. In 2012, a rebellion in the North of the country was led by secessionist and jihadist groups. Early jihadist victories precipitated a coup in Bamako, which removed then President Amadou Toumani Touré from power a month before scheduled presidential elections. During this time, rebel groups—allied with jihadist groups—moved to take two-thirds of the country's territory including what are now the regions of Kidal, Gao, Timbouctou, Taoudénit, Ménaka, and part of Mopti. After a French intervention in 2013, the government was able to retake the majority of the territory and hold multi-party elections in the summer and fall of that year. In 2015, the government—led by President Ibrahim Bouboucar Keita (IBK)—signed the Algiers Accords with hopes of putting an end to the conflict in the North.

However, during this period, the number of violent groups—including jihadists, secessionists, and militias—grew as existing groups fragmented and new groups emerged and expanded their reach into the center of the

country, to the Ségou and Mopti regions. Mali also started to experience increasing conflict and casualties as there was an uptick in inter-communal conflict. Popular dissatisfaction with the government's management of the conflict as well as accusations of the constitutional court's meddling in the legislative election results led to a second coup in 2020. A military junta—led by General Assimi Goita—has run the country since 2020.[6]

Mali continues to grapple with banditry, communal conflict, and jihadist violence. The crisis has displaced hundreds of thousands of Malians; the Internal Displacement Monitoring Centre reported that by 2023, 344,000 people remained internally displaced. ACLED reported that violence was up 38% in 2023 as compared to the prior year. However, as we see in Figures 8, 9, and 10 below, the distribution of conflict in Mali is spread unevenly across territory, with the most-conflicted affected areas in the Center and North of the country.

We asked leaders about both shock prevalence and shock severity. Shocks have been prevalent across Mali in the last 12 months, with 90% of leaders reporting crop loss due to drought in their locality in the last 12 months; 72% reporting loss of livestock to disease; and 33% reporting damage to dwellings and productive assets due to flooding (see Figure 2). Conflict is also prevalent across Mali, with 70% of leaders reporting at least one type of conflict in their locality in the last 12 months. Banditry was the most common form of conflict in the last 12 months, though violent extremism was reported by 29% of leaders in their localities.

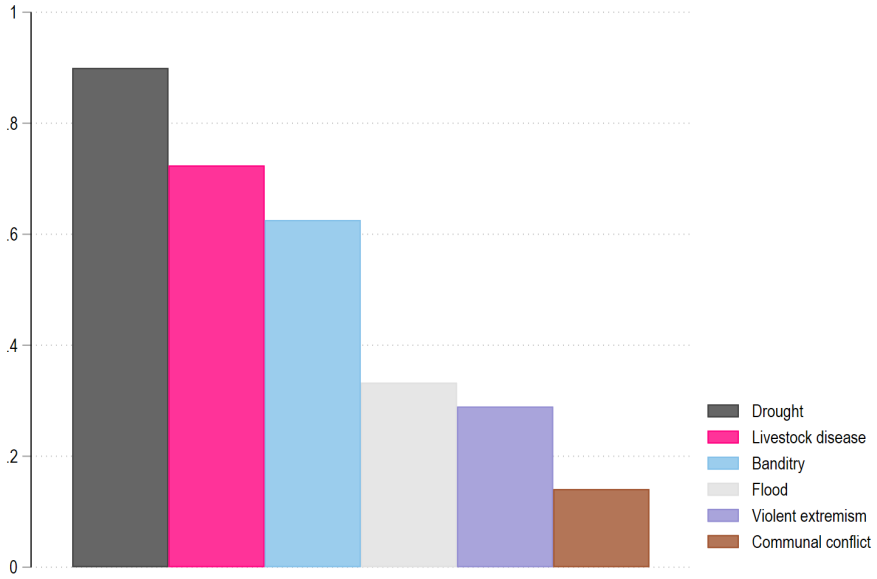
When asking about shock severity, we asked leaders to reflect upon shocks their locality experienced over the past five years of any type and to identify the two shocks which were the *most difficult* from their perspective for the households in their locality, either because of loss of life, property, or income. Figure 3 plots the most severe shocks in each locality over the past five years, from the perspectives of leaders.

Droughts are by far the most difficult shock, with 69 percent of leaders citing droughts as either the most severe or second most severe shock that their commune has faced in the past five years. Research has shown that prolonged droughts in Mali have severely impacted agricultural productivity and food security (Food and Agriculture Organization, 2023). Floods are the second most commonly-cited among difficult shocks, though they are only half as likely to be mentioned as droughts (34 percent of leaders mention them). In Mali, heavy rainfall and subsequent flooding have led to displacement and destruction of infrastructure (UN OCHA, 2022).

Violence is third most likely to be listed as among the two most severe shocks faced, at 24 percent of leaders—reflecting the ongoing conflict and insecurity in various regions of Mali (Human Rights Watch, 2023). This

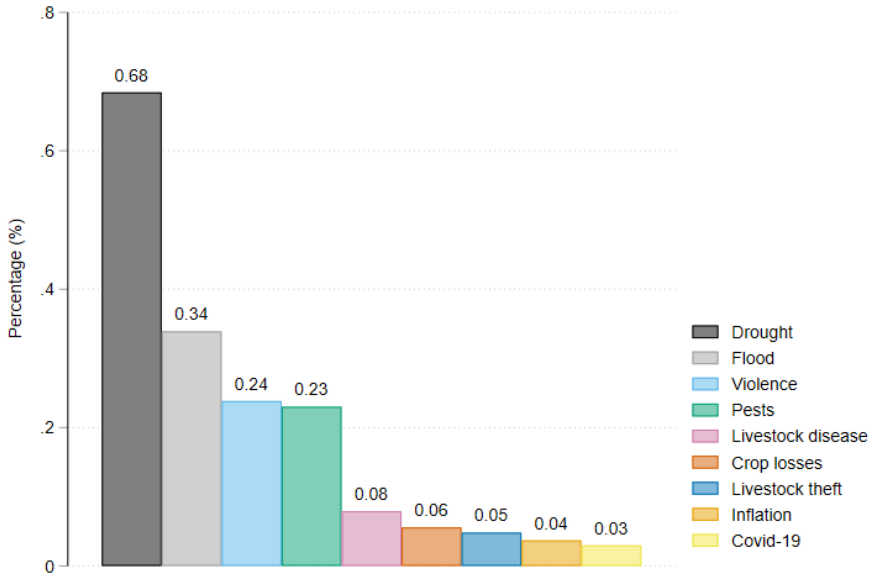
[6] Goita disbanded his civilian-appointed government in 2021 in Mali's third coup in a decade.

Figure 2: Share of leaders indicating shocks faced during the last 12 months



Source: MLLAR Survey (2024)

Figure 3: Share of leaders indicating each shock was among the two most severe faced in the past five years



Source: MLLAR Survey (2024)

is closely followed by pests, at 23 percent, which have plagued crops and further exacerbated food insecurity. All other shocks mentioned as being among the most difficult faced in the last five years (livestock disease, crop losses, livestock theft, inflation, and COVID-19) were mentioned significantly less (8 percent or fewer of leaders). A number of other shocks were mentioned by leaders as the most severe for their locality—including food price inflation, other human disease outbreak (beyond COVID-19), and influx of internally-displaced persons into their locality—though these all were cited by fewer than 2 percent of leaders.

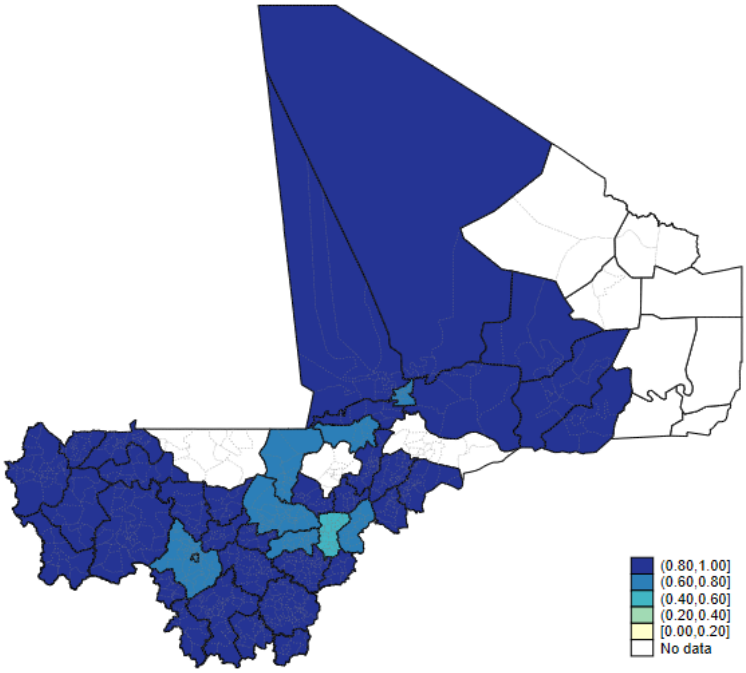
Given their numerical importance in the sample, below we consider experiences with drought, flood, and violence in greater detail. Overall, the evidence points to a high level of exposure to all three types of shocks, though with substantial variation across space. Because many of the leaders participating in the study hold official positions and could be identified based on their locality, when we graphically display information from the survey, we aggregate it to the cercle level. Cercles in Mali have a varying number of communes and villages; some cercles contain a single commune, while others contain more than 30 communes. On average, we sampled 25 percent of the communes in each of the 41 cercles in our sample, but this ranges from 6 percent of the total communes in the cercle to 44 percent. When interpreting the cercle-level summary statistics below, it is important to note that they do not represent all communes in each cercle. Nonetheless, because the communes were selected randomly within each cercle, the aggregated data should be viewed as a random snapshot of the cercle even if it reflects varying levels of precision.

3.1 Drought

In a study examining the effects of varying types of natural disasters going back to 1970, Grasso (2021) finds that drought-related events have led to more fatalities than any other type of weather-related disaster, accounting for 95% of all deaths related to weather on the continent. This is worrying as Figure 4 reveals a nearly universal experience of recent crop loss due to drought, with the vast majority of cercles in our sample having 80 percent or more of interviewed leaders reporting crop loss due to drought within their locality during the past 12 months.

Consistent with findings about the severe consequences of droughts, we also find that leaders frequently cite droughts as the most difficult shock faced by their locality in the last five years (which we refer to as "severe droughts"). While drought exposure during the last 12 months provides information on the extent to which droughts are affecting localities across the country, asking leaders about the shocks that are the most difficult for their locality provides information on which types of shocks are causing the most loss of life, income, and property and might be most in need of external resources to support recovery.

Figure 4: Share of leaders in each cercle reporting crop damage due to drought in the past 12 months

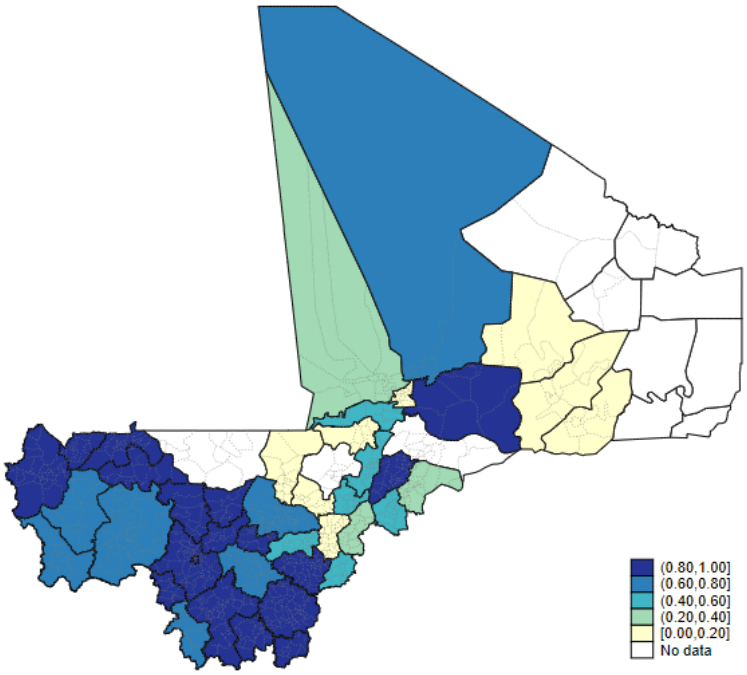


Note: The map displays the share of leaders in each cercle reporting crop loss due to drought within their locality during the past 12 months. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

Figure 5 illustrates variation across cercles in exposure to severe drought. We see that these are mostly in the south of Mali, where upwards of 40 percent of leaders indicate that a drought was the most difficult shock they faced in the last five years. It is important to note that this does not necessarily mean that droughts in southern Mali were themselves more severe than those in northern Mali but rather that among all the shocks faced by a locality, droughts were more often considered among the most severe shock faced by the locality in southern Mali.

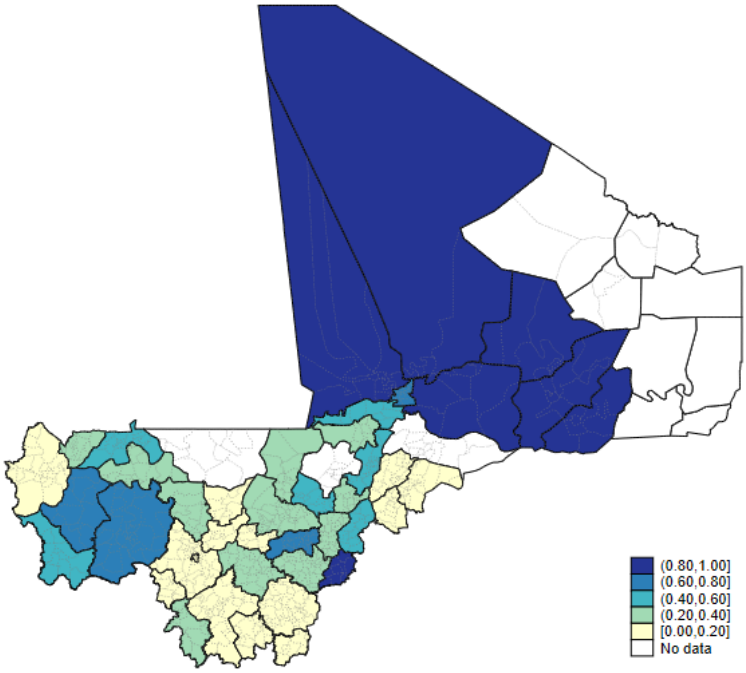
We additionally asked leaders about the duration of severe shocks, impacts on food security, and recovery from shocks. Among those who reported a drought was the most difficult shock faced in the last five years, the average length of time for which they were impacted was 11.8 months—with 21 percent noting that this severe drought was still ongoing at the time of the survey. Food insecurity appears to accompany the crop loss wrought by droughts; 93 percent of leaders said that severe droughts resulted in very or extremely serious impacts on food security. Recovery from droughts also appears elusive, with 91 percent of leaders saying that their localities had not yet been able to return to prior conditions after the severe drought. This may be in part explained by the fact that 43 percent of leaders who cite drought as the most severe shock experienced in the last five years note that they never received aid from donors or the government to aid recovery.

Figure 5: Share of leaders in each cercle reporting a drought was the one of the two most severe shocks faced in the last five years



Note: The map displays the share of leaders in each cercle reporting that a drought was among the two most difficult shocks experienced by their locality within the last five years. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

Figure 6: Share of leaders in each cercle reporting flood affectedness in the past 12 months



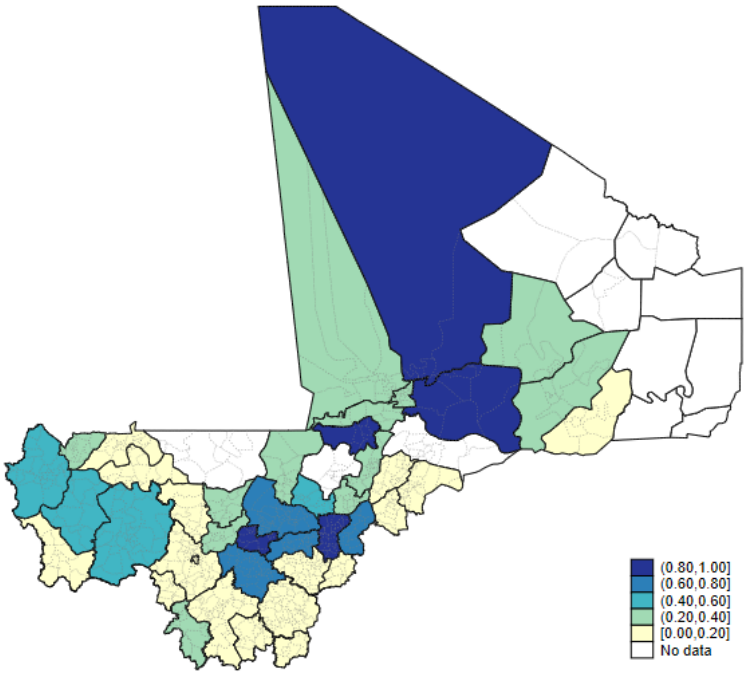
Note: The map displays the share of leaders in each cercle reporting flood damage within their locality during the past 12 months. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

3.2 Floods

Flooding is a key natural disaster affecting Mali that has increased in severity over time due to several factors, including climate change as well as intensifying deforestation and soil degradation from unsustainable farming practices (Elagib et al., 2021). As Figure 6 illustrates, nearly half of the cercles in our sample had 40 percent or more of interviewed leaders reporting flood damage within their locality during the past 12 months, but we observe a large amount of variation across cercles. On average, 33 percent of leaders overall note that their locality experienced flood damage in the past 12 months.

Figure 7 illustrates variation across cercles in the extent to which local leaders cited floods as among the two most severe shocks faced in the past five years. These severe floods appear most prevalent near the Niger River and its tributaries—indicating significant vulnerability in these areas (where often, 40 percent or more of leaders indicate that a flood was the most difficult shock they faced in the last five years). A full 91 percent of leaders facing severe floods reported that they resulted in "very serious" or "extremely serious" impacts on food security; 82 percent said that their localities have not yet been able to return to prior conditions since the severe flood that occurred within the last five years; and 43 percent note that no aid from donors or the government was *ever* received to support recovery.

Figure 7: Share of leaders in each cercle reporting a flood was one of the two most severe shocks faced in the last five years



Note: The map displays the share of leaders in each cercle reporting that a flood was among the two most difficult shocks experienced by their locality within the last five years. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

Flooding may be less devastating if it is anticipated—allowing for preparations that reduce the risk of catastrophic damage, like using sandbags as a barrier to divert moving water around (rather than through) homes or digging trenches around villages and fields. However, only 39 percent of leaders who said that flooding was the most difficult shock they faced in the last five years indicated that they received an early warning before the severe flood occurred. Those who did receive an early warning tended to hear through a local weather report an average of 23 days before the severe flooding event.

3.3 Conflict-affectedness

Increasing violence also emerges as one of the more difficult shocks faced by local leaders. Rural Malians are confronted by multiple types of conflict, however. First, communities can be consumed by inter-communal conflict—or fighting among sub-groups within neighboring villages or the broader region. This type of violence has emerged along sedentary/herder cleavages, but also as a result of local militias and insurgent-sponsorship of other groups. Second, localities are confronted by recurring banditry. In localities with unchecked banditry, individuals are often robbed on their way to and from local markets, making it impossible for them to sell their harvests and wares. Livestock are often targeted, and gender-based violence is also common during banditry attacks. Rampant banditry severely impacts the delivery of health and education services, as well as humanitarian aid (Human Rights Watch, 2017). A third type of conflict is the presence of violent extremist actors who may be hostile to international actors—specifically, those associated with Western countries. Whether extremist actors are engaged in violence or exert relatively peaceful control of territory (with minimal episodes of violence), their presence may deter humanitarian actors from entering as they fear being targeted by these groups.

Table 2: Descriptive Statistics: Violence indicators by region

Regions	Community conflict between ethnic groups	Banditry	Violent extremism
Gao	0.06	0.83	0.70
Kayes	0.08	0.68	0.14
Koulikoro	0.02	0.66	0.18
Mopti	0.60	0.76	0.83
Ségou	0.05	0.52	0.26
Sikasso	0.10	0.48	0.08
Tombouctou	0.04	0.75	0.43
N	2,919	2,919	2,919

Table 2 provides descriptive statistics on the prevalence of various types of violence local leaders in our survey report in different regions of Mali over the past 12 months. Banditry clearly emerges as the most common form of violence, followed by violent extremism. The data reveal significant regional variation; Gao, Mopti,

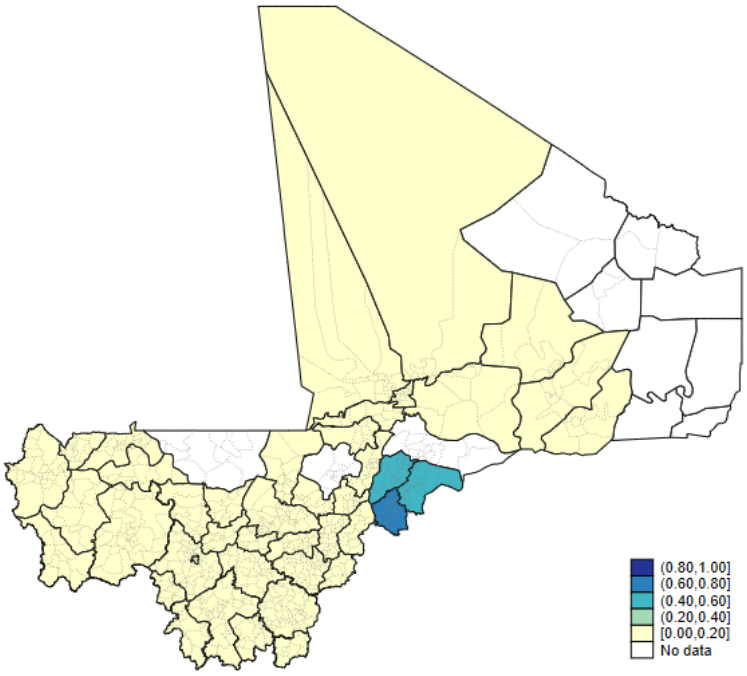
and Tombouctou show higher levels of violent extremism, with the share of local leaders reporting violent extremist there being 0.70, 0.83, and 0.43, respectively. Banditry is most prevalent in Gao (83 percent of leaders reporting it) and Mopti (76 percent), while the lowest rates are found in Sikasso (48 percent). Community conflict is notably high in Mopti (60 percent of leaders reporting it) which contrasts with but relatively low rates in other regions, such as Koulikoro (2 percent). This information reflects the differing security challenges across Mali's regions.

Increasing violence has harsh impacts on localities. Overall, 24 percent of leaders noted that an increase in conflict within their locality was one of the two most severe shocks they faced in the past five years. Among this 24 percent, one-quarter reported communal conflict as the source of increasing violence, another one-quarter identified banditry as being the source, and half cited the source of increasing violence as violent extremism. Considering those who rated one of these three forms of violence as the most severe shock they faced in the last five years, the average such episode of violence lasted 37 months. Further, 67 percent of leaders noted that the increase in violence is still ongoing in their locality. 92 percent of leaders said that it resulted in very or extremely serious impacts on food security; 89 percent said that their localities have not yet been able to return to prior conditions after the increase in violence began; and 35 percent note that no aid from donors or the government was ever received to help them respond to the increasing violence.

Figures 8, 9, and 10 illustrate the geographic variation in where conflict is considered among the most severe shocks, while Figure 11 aggregates across types of conflict to show where conflict was generally considered among the most severe shocks faced by the locality. There are clear geographic patterns across the different types of conflict. While leaders in Mopti were more likely to cite communal conflict as among the most severe shocks, banditry was cited more frequently in Gao and along the border with Senegal. Meanwhile, violent extremism was cited as among the most severe shocks in Timbouctou, Ségou, and Mopti.

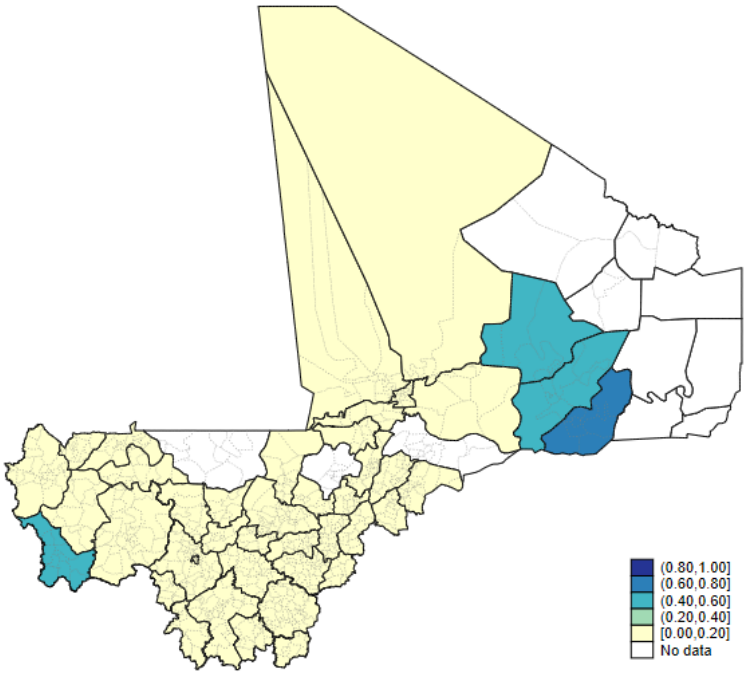
We find even less evidence of functional early warning systems for violence compared to floods; only 26 percent of leaders in our sample that described increasing violence as the most difficult shock they faced in the last five years said that they received an early warning before it occurred. Almost all of these early warnings were unofficial reports from others that an increase in violence was coming as opposed to those from a formal risk monitoring system, and on average they were received 6 months before the increase in violence actually occurred. Among the few who did receive early warnings of an impending increase in violence, only 30 percent said that they were able to use this information to take any preparatory actions. Those who did act reported using the information either to warn the local population or to ask for aid. Among those who were not able to act, most cited insufficient resources as the primary reason they were unable to use the early warning.

Figure 8: Share of leaders in each cercle reporting communal conflict was one of the two most severe shocks faced in the last five years



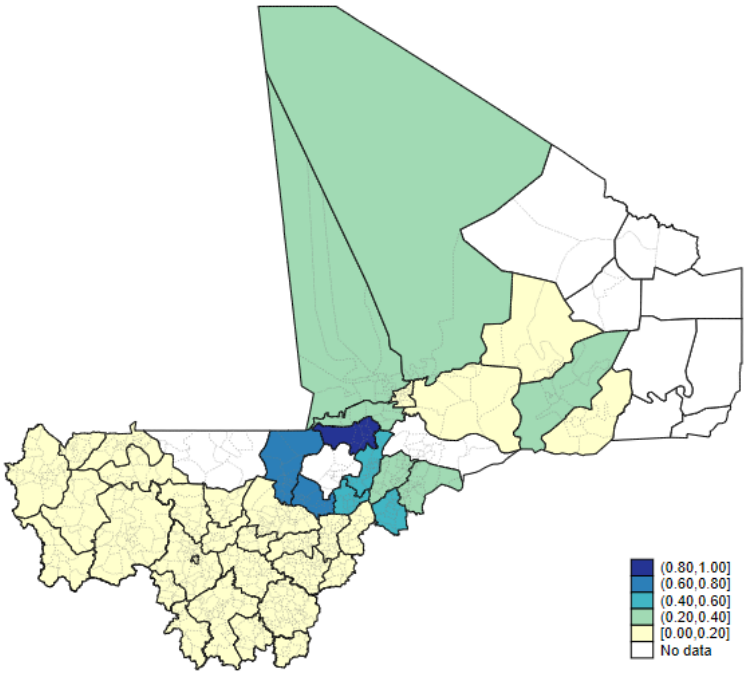
Note: The map displays the share of leaders in each cercle reporting community conflict between ethnic groups was among the 2 most severe shocks in the past 5 years. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

Figure 9: Share of leaders in each cercle reporting banditry was one of the two most severe shocks faced in the last five years



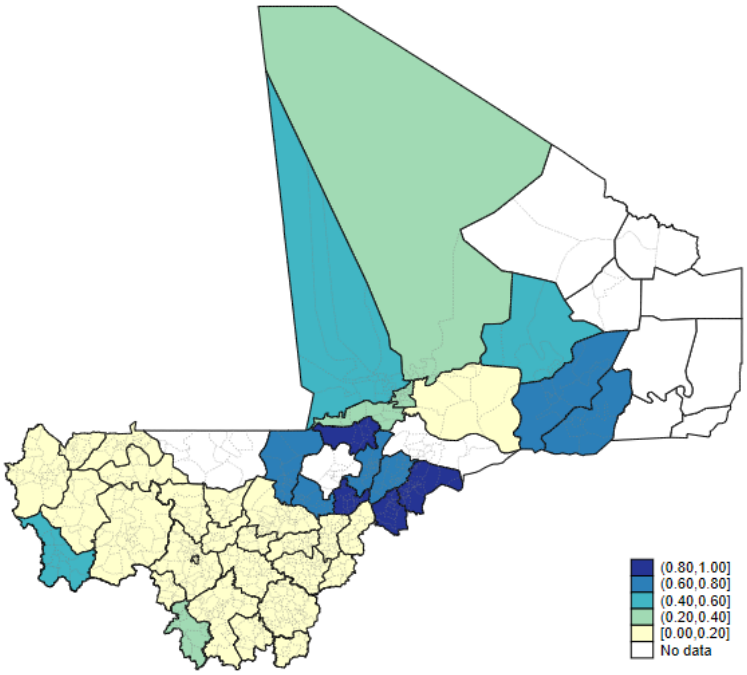
Note: The map displays the share of leaders in each cercle reporting banditry was among the 2 most severe shocks in the past 5 years. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

Figure 10: Share of leaders in each cercle reporting violent extremism was one of the two most severe shocks faced in the last five years



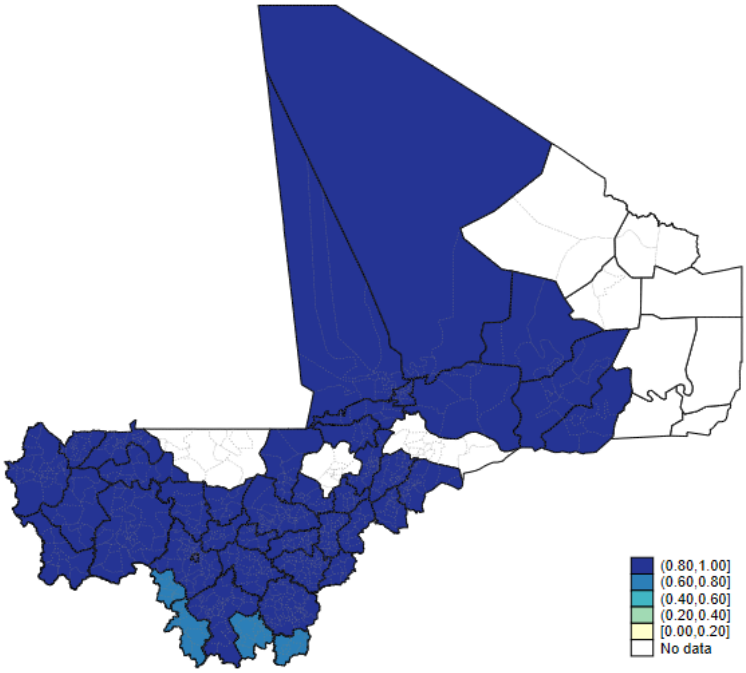
Note: The map displays the share of leaders in each cercle reporting violent extremism was among the 2 most severe shocks in the past 5 years. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

Figure 11: Share of leaders in each cercle reporting any conflict was one of the two most severe shocks faced in the last five years



Note: The map displays the share of leaders in each cercle reporting any form of conflict was among the 2 most severe shocks in the past 5 years. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

Figure 12: Share of leaders in each cercle reporting food insecurity as a moderate or a large problem



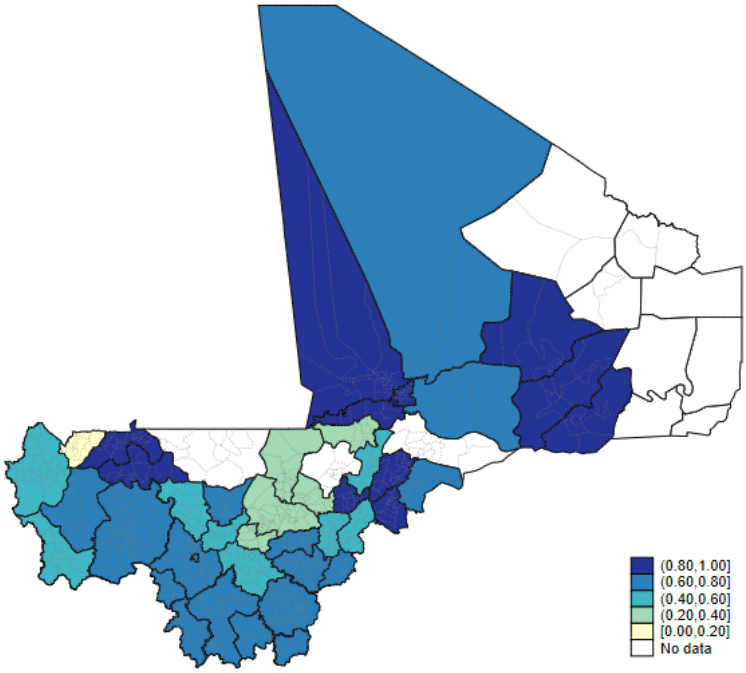
Note: The map displays the share of leaders in each cercle reporting that food insecurity is a moderate or very large problem in their locality. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

3.4 Food security, water shortages, and livestock disease

Given the prevalence and severity of shocks across Mali, it is not surprising that leaders also report food insecurity, water shortages, and livestock disease. Most strikingly, Figure 12 visualizes the share of leaders in a cercle reporting that food insecurity is a moderate or very large problem in their locality. We see that in all but four cercles, over 80 percent of leaders report food insecurity as a moderate or very large problem. These findings indicate that a significant portion of the population lacks consistent access to sufficient and/or nutritious food. Food insecurity negatively impacts people by leading to malnutrition, reduced cognitive development in children, and overall diminished productivity and quality of life for affected individuals and communities (World Health Organization and others, 2023).

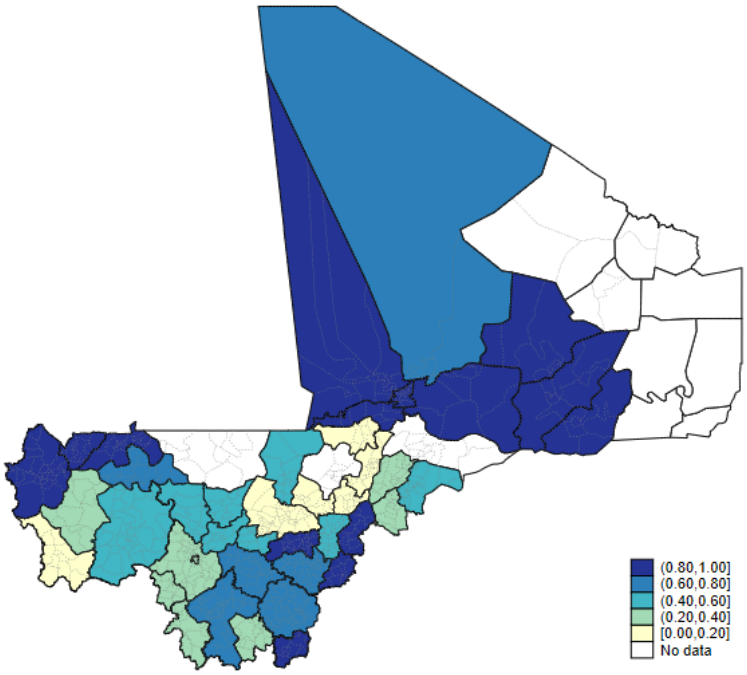
In addition to diminished access to food, we also find widespread susceptibility to water shortages (Figure 13 shows the share of leaders reporting that water shortages pose a moderate or very large problem in their locality) and livestock mortality (Figure 14 captures the share of leaders in each cercle reporting that livestock mortality poses such a challenge). Table 3 summarizes these challenges by Mali's geographic zones, as well as by whether or not localities were exposed to different types of shocks within the past 12 months. The first column reinforces the dire nature of food insecurity in Mali, also shown in Figure 12. There is more

Figure 13: Share of leaders in each cercle reporting water shortages to be a moderate or a large problem



Note: The map displays the share of leaders in each cercle reporting that water shortages pose a moderate or very large problem in their locality. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

Figure 14: Share of leaders in each cercle reporting livestock mortality to be a moderate or a large problem



Note: The map displays the share of leaders in each cercle reporting that livestock mortality poses a moderate or very large problem in their locality. Darker shades represent higher shares. Note that we aggregate data to the cercle level in order to protect the identity of respondents.
Source: MLLAR Survey (2024)

Table 3: Descriptive Statistics: Community needs by geographic areas and shock exposure

Geographic Zones	Food insecurity	Water insecurity	Livestock mortality	N
Southern Mali	*90.5*	*63.*1	*58.2*	*1,722*
- Drought-affected	91.4	63.5	59.3	1,634
- Flood-affected	93.2	62.3	61.1	445
- Conflict-affected	90.5	61.9	61.3	1,095
- Compound shocks (>1 of above)	91.8	63.6	62.3	1,180
Central Mali	*96.8*	*56.7*	*39.8*	*945*
- Drought-affected	97.1	59.7	38.9	755
- Flood-affected	96.0	49.5	46.8	301
- Conflict-affected	96.2	58.1	32.5	704
- Compound shocks (>1 of above)	96.6	58.6	36.3	705
Northern Mali	*99.2*	*90.1*	*94.0*	*252*
- Drought-affected	99.2	90.3	93.7	237
- Flood-affected	99.1	90.2	93.3	225
- Conflict-affected	99.1	90.7	94.0	215
- Compound shocks (>1 of above)	99.2	89.8	93.9	246

Source: MLLAR Survey (2024).

regional variation in water insecurity and livestock mortality, with localities in Northern Mali facing the highest needs across all categories. Interestingly, there is not much variation within region on food and water insecurity or livestock mortality by type of shock exposure in the past 12 months. Overall, these findings point to substantial need for policies to support poverty reduction, sustainable and resilient livelihoods, and productivity.

4 Local involvement in aid distribution

Given this background of extensive shocks and crises across the country and significant levels of humanitarian need, it is valuable to understand how aid distribution systems work across Mali and how community leaders are involved (or not) in current systems of aid distribution. We look at two aspects of aid distribution systems: (1) variation across villages and types of shocks in humanitarian response (i.e., receipt of aid), and (2) the degree of inclusion of different types of leaders in our sample in aid distribution committees, and their involvement in different aspects of aid distribution.

4.1 Variation in humanitarian response

A first question in understanding local involvement in aid distribution is whether localities are receiving aid in the first place. Despite high community need (with communities generally struggling to recover from shocks), around 45 percent of leaders report receiving no aid from the government or from donors to support recovery from their most severe shock, regardless of shock type.

Table 4 reports by region the share of leaders who state that their locality received any aid after the most severe shock that affected their commune in the past five years (Column 1), the share of leaders that state that their locality received enough aid to at least somewhat cover humanitarian needs after the most severe shock (Column 2), and the share of leaders that state that their locality returned to its previous conditions after the most severe shock. There is significant regional variation in the extent to which localities receive aid after a severe shock, and shock recovery appears to be positively correlated with receiving such aid. Indeed, it appears possible that some localities are simply better able to negotiate access to aid programming compared to others. For example, only 5.8% of respondents in Gao report receiving *any* aid after their most severe shock in the past five years—the lowest of any region in our sample. This compares to 86% of respondents in Mopti, 61.9% in Tombouctou, and 56.9% in Sikasso reporting receiving at least some aid. Not surprisingly, only 1.6% of respondents in Gao state that their locality was able to return to pre-shock conditions, compared to 12.9% of respondents in Mopti, 25.4% in Tombouctou, and 22.9% in Koulikoro. This 6-fold or greater likelihood of recovering is large and suggestive of the value of aid.

Table 4: Aid response to most severe shock

Regions	Received aid after most severe shock	Aid covered needs at least somewhat after most severe shock	Locality recovered after most severe shock	Number of respondents by region
Gao	5.8	0.0	1.6	126
Kayes	52.6	20.3	16.3	546
Koulikoro	47.1	2.6	22.9	546
Mopti	86.0	5.5	12.9	420
Ségou	48.6	11.2	6.7	525
Sikasso	56.9	33.3	17.9	630
Tombouctou	61.9	26.2	25.4	126
N	2,919	2,919	2,919	2,919

Source:MLLAR Survey (2024)

Beyond regional variation, different villages within communes may be more or less likely to receive an aid response. In our sampling strategy illustrated in Figure 1, we interviewed a range of village types with

varying exposure to crisis and with varying relationships to commune officials. Table 5 reports the share of leaders who state that their locality received any aid after the most severe shock that affected their commune in the past five years (Column 1), the share of leaders that state that their locality received enough aid to at least somewhat cover humanitarian needs after the most severe shock (Column 2), and the share of leaders that state that their locality returned to its previous conditions after the most severe shock by type of village in our sample.

Consistent with the idea that villages at the seat of the commune are both easier to reach and perhaps better able to lobby for their needs, these villages are more likely to receive some type of aid after a severe shock, more likely to receive aid that at least somewhat covers humanitarian need, and to recover from shocks. Surprisingly, the difference between villages with strong versus weak ties to the mayor in receipt of aid was not large (around 4.6 percentage points)—both are less likely to receive aid after a shock compared to the village at the commune seat. Villages that were randomly-selected during the survey rather than selected by mayors according to our sampling criteria were less likely to receive any type of aid after a shock. This could indicate that the average village within a commune is less likely to receive any type of aid compared even with a village that the mayor reports having a weak relationship. Randomly-selected villages are also less likely to report that aid was sufficient to cover needs if they did receive aid: only 9.2% of village leaders in our sample report that the aid received after the most severe shock in the past five years could at least somewhat cover humanitarian needs.

Table 5: Aid response to most severe shock by village type

Village type	Received aid after most severe shock	Aid covered needs at least somewhat after most severe shock	Locality recovered after most severe shock	Number of respondents by village type
Head of commune	60.1	18.5	15.5	556
Most crisis-affected	55.6	15.7	11.9	428
Strong ties with mayor	52.9	18.4	13.0	408
Weak ties with mayor	48.3	15.5	12.4	420
Randomly-selected	38.8	9.2	12.6	412

Source: MLLAR Survey (2024). Includes only village-level respondents.

4.2 Inclusiveness of local governance around aid distribution

Another consideration for weighing tradeoffs around localization of aid is *who* would be involved in decisions about aid distribution if they were devolved to the local level. In the Malian context, involvement of local leaders in aid distribution occurs through "Aid Distribution Committees." These committees are responsible for coordinating and overseeing the distribution of humanitarian aid and are usually formed at the commune level, though village officials can be part of the committee as well. By operating at the local level, it is hoped that thee committees can address specific local issues and ensure more effective and equitable distribution of resources. Preexisting informal power structures and social relations might be expected to heavily influence how aid distribution committees are created and how they operate; for example, existing research shows that these affect how local planning processes work in practice and the extent to which they are inclusive of women and other excluded groups (Kosec, Song, and Zhao, 2020; Parthasarathy, Rao, and Palaniswamy, 2017). Localities with more inclusive consultation processes around aid distribution tend to make decisions that are perceived as fairer by the local population and that are less likely to exclude marginalized groups (Baldwin, Muyengwa, and Mvukiyehe, 2022). We find that in practice, the inclusiveness of aid distribution committees to different types of leaders varies across localities.

Figure 15 shows the average levels of participation in the aid distribution committee by the different types of leaders in our sample. While mayors are almost always included on the aid distribution committee (96%), involvement of other types of leaders varies. Former opposition candidates are rarely included on committees (26%). Secretary Generals—important centrally-appointed civil servants within the commune—are included on 54% of aid distribution committees, and civil society leaders—who are primarily religious leaders and leaders of other associations within the commune—are included on 60% of committees in the sample. Women's and youth's leaders are included on 46% and 43% of committees, respectively. Despite variation across actor types, however, it is interesting to see the wide variety of actors prospectively influencing aid allocation decisions at the local level.

In our qualitative research, we found that aid distribution dynamics worked quite differently in areas affected by conflict, especially violent extremism. In these areas, interviewees argued, there was more of a need to rely on village-level leaders compared to leaders within commune seats (Bleck et al., 2023). Figure 16 displays aid distribution committee composition, comparing communities that reported extremist violence in the last 12 months. We see this in our quantitative survey as well, with the Secretary Generals 20 percentage points less likely to be included on the aid distribution committee in areas affected by violent extremism, and village chiefs, women's leaders, youth leaders, and village advisors all 12, 20, 14, and 14 percentage points more likely to be on the committee, respectively.

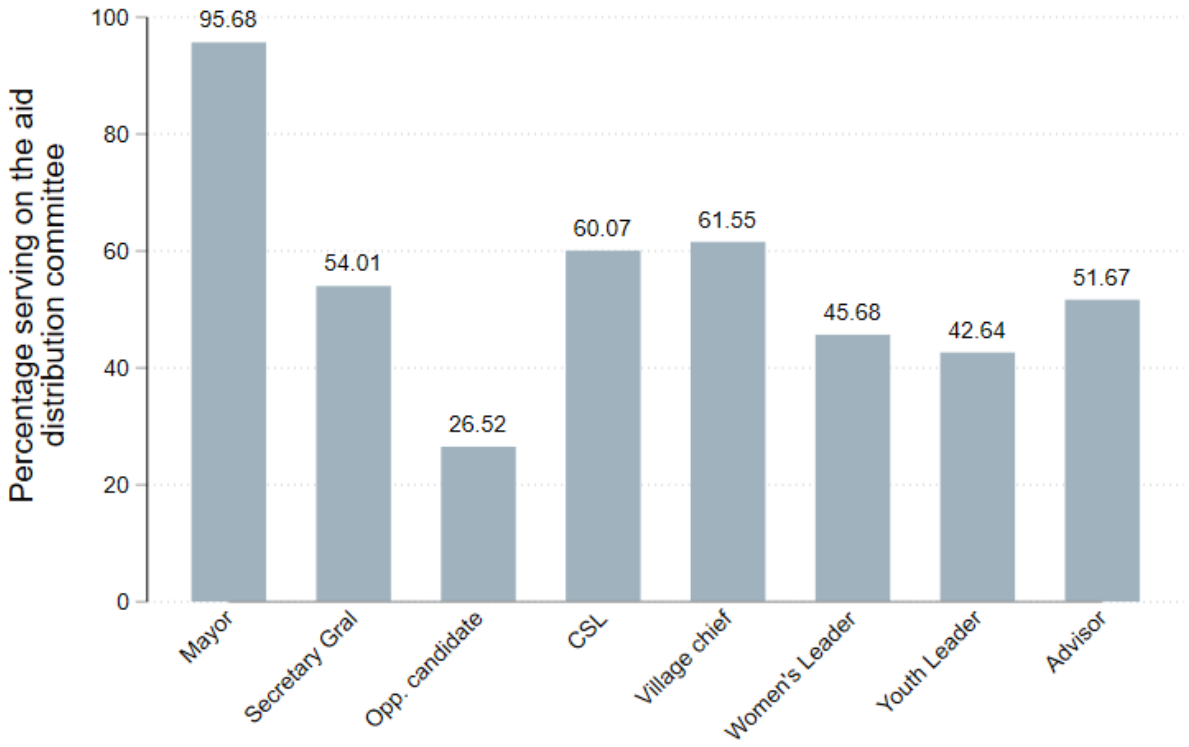


Figure 15: By type of leader

In addition to formal involvement in the aid distribution committee, many community leaders are involved *informally* in aid distribution systems. We asked about seven different forms of involvement in aid distribution systems, in addition to being a member of the aid distribution committee: (1) deciding which households to target; (2) deciding amount of aid per households; (3) procuring materials; (4) handling transport and logistics; (5) monitoring aid quality and implementation; (6) resolving disputes over allocation; and (7) providing advice on local needs to the central government and/or to donors. Tables 6 and 7 present the share of each type of leader in our sample involved in these aspects of aid distribution within the last 12 months for commune leaders and village leaders, respectively. The cells in the tables are shaded based on how likely each leader is to be involved in that aspect of aid distribution, with darker shades representing higher shares (dark blue >= 80%, medium blue = 60-80%, light blue = 40-60%, very light blue = 20-40%, and no shading = 0-20%).

Mayors are by far the most involved leaders in aid distribution decisions, commonly playing roles in deciding which households to target, deciding on amounts per household, monitoring aid quality and implementation, and providing advice on local needs. They are more likely to be involved in procuring materials for aid distribution than other leaders, but all leader engagement in this aspect of aid distribution is low overall.

Table 6: Average involvement in local aid distribution decisions, commune leaders

	Mayor	Secretary General	Opposition leader	Civil society leaders
Share of respondents involved				
Aid distribution committee member	0.96	0.54	0.27	0.60
Deciding which households to target	0.74	0.50	0.31	0.50
Deciding amount per household	0.65	0.43	0.29	0.48
Procuring materials	0.35	0.19	0.12	0.13
Handling transport and logistics	0.46	0.25	0.13	0.18
Monitoring quality and implementation	0.72	0.47	0.32	0.38
Resolving disputes	0.83	0.59	0.38	0.59
Providing advice on local needs	0.88	0.68	0.34	0.47
Average number of areas of involvement				
Number of areas of involvement	4.63	3.09	1.88	2.72
N	139	139	139	278

Note: Darker shades represent higher shares of this type of leader being involved in each aspect of aid distribution.

Table 7: Average involvement in local aid distribution decisions, village leaders

	Village chiefs	Women's leaders	Youth leaders	Village advisors
Share of respondents involved				
Aid distribution committee member	0.62	0.46	0.43	0.52
Deciding which households to target	0.73	0.34	0.46	0.68
Deciding amount per household	0.67	0.30	0.41	0.65
Procuring materials	0.21	0.09	0.14	0.19
Handling transport and logistics	0.41	0.09	0.26	0.38
Monitoring quality and implementation	0.58	0.24	0.34	0.51
Resolving disputes	0.81	0.45	0.54	0.72
Providing advice on local needs	0.52	0.30	0.37	0.47
Average number of areas of involvement				
Number of areas of involvement	3.92	1.80	2.50	3.60
N	556	556	556	556

Note: Darker shades represent higher shares of this type of leader being involved in each aspect of aid distribution.

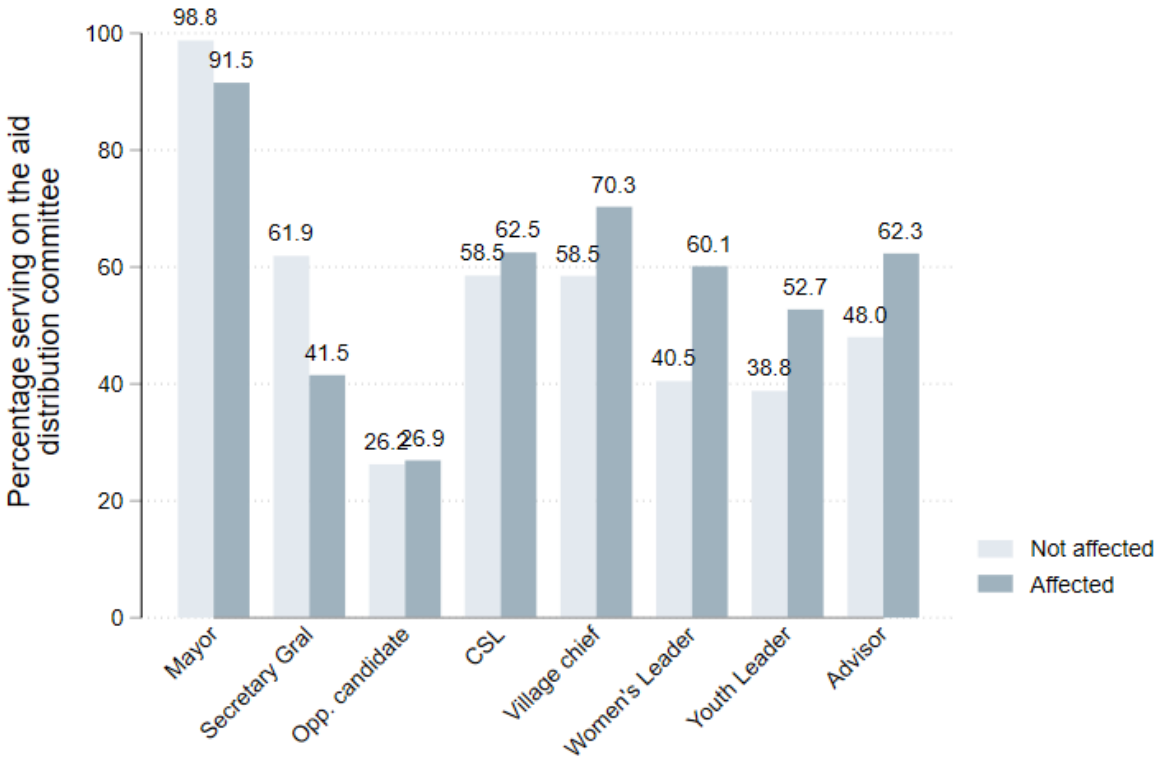


Figure 16: By type of leader and affectedness by violent extremism

Village chiefs and their advisors are also likely to be involved in multiple dimensions of aid distribution, especially in targeting and amount decisions and resolving disputes. Secretaries General are most likely to be giving advice to central government and donors on commune needs, while civil society leaders are most likely to be involved in resolving disputes over aid. Opposition leaders are less likely to be involved in any aspect of aid distribution. Women and youth leaders are also less likely to be involved in aid distribution than other leaders, though both are more likely to play a role in resolving disputes over aid compared to other aspects. It is notable that women and youth leaders are rarely consulted to provide advice on community needs.

5 Leaders' preferences over aid

The variation across localities in prevalence and severity of different types of shocks underscores the need to consult with local actors around community needs. However, the variation in local aid distribution systems illustrates how localization decisions would have different implications for who is involved in aid distribution and who is consulted about community needs. In this section, we probe how different types of leaders weigh community needs and the value of different aid modalities.

Both shock affectedness and the characteristics of local governance systems could play important roles in leader preferences and how they would weigh tradeoffs between humanitarian response and resilience programming. Localities facing dire and immediate humanitarian needs may prioritize resources today over resilience programming, given limited budget. Those facing conflict may instead prioritize forms of aid which are not easy to divert or capture. Meanwhile, different types of actors may feel differently about localization of aid decision-making based on whether or not they expect to be included within those decision-making processes and how capable they perceive local actors to be compared to alternatives.

In this section, we examine aid preferences among community leaders in two ways. First, we examine how leaders prioritize different types of aid, like cash transfers, food aid, equipment, training, and budgetary support. We look at preferences both by affectedness by different types of shocks and by type of leader. Second, we presented respondents in our survey with an experimental game, designed to explain anticipatory action (AA) programming as a type of aid that can reduce the damage caused by shocks and improve resilience and to test whether leaders would support diverting aid from humanitarian response toward AA.

5.1 Type of aid

First, preference over aid modality could vary by type of shock and/or by region. In order to measure leaders' preferences for aid, we gave respondents 10 stones and asked them to allocate them across seven categories of aid: food aid to households, cash aid to households, risk prevention training, infrastructure projects, equipment and materials (e.g. agricultural inputs), and commune budget support. Respondents were asked to imagine that the 10 stones represent a budget, placing more stones within categories where they would want more aid.

Table 8 reports how leaders allocated the stones in the budget allocation exercise. Overall, leaders prefer dividing aid among a variety of modalities rather than concentrating on a single modality; this may be seen as a better hedge against risk. We found that food aid to households, risk prevention training, and infrastructure projects emerged as the three most commonly-preferred aid modalities in the sample, followed by equipment and materials. Respondents allocated very little to budget for the commune government. It is notable that cash transfers to households are relatively less favored compared to other forms of aid, especially food aid. There is little variation in preferences by type of the most severe shock faced in the last five years (drought, flood, or conflict), though there is some variation by region. Respondents from Mopti and Tombouctou placed the highest allocations in food and cash aid to households, while respondents in Ségou, Sikasso, Kayes, and Koulikoro placed relatively more weight on infrastructure projects compared to leaders in other areas.

Table 8: Share of budget allocated to each type of aid by shock type and by region

	Food aid	Cash transfers	Risk prevention training	Infra-structure	Equipment	Commune budget support
Average aid allocation across sample						
Full sample	0.24	0.13	0.21	0.21	0.18	0.04
By most severe shock						
Drought	0.24	0.13	0.21	0.22	0.17	0.04
Flood	0.23	0.13	0.21	0.22	0.18	0.03
Conflict	0.25	0.14	0.21	0.18	0.17	0.04
By region						
Gao	0.24	0.16	0.24	0.14	0.17	0.04
Kayes	0.24	0.12	0.23	0.22	0.16	0.04
Koulikoro	0.24	0.11	0.22	0.21	0.19	0.03
Mopti	0.28	0.18	0.19	0.19	0.14	0.03
Ségou	0.21	0.12	0.20	0.23	0.18	0.04
Sikasso	0.23	0.12	0.20	0.23	0.18	0.04
Tombouctou	0.27	0.19	0.21	0.13	0.16	0.03

Source: MLLAR Survey (2024).

Preferences over aid modality could also vary by type of leader. While the sample of respondents all constitute different types of local leaders, they operate in different domains and are likely to have varying preferences about types of aid. The mayor and the secretary general sit in the commune seat and control the formal budget for the commune government. This might make them more predisposed than other actors to want direct support for the commune budget and/or potentially support larger infrastructure projects with relatively less support to aid or training that goes directly to households or village leaders. Similarly, civil society leaders, that may have fellow members throughout the commune, might value large infrastructure projects or equipment distribution that can benefit entire communities relative to actors at the village-level. An opposition leader might prefer types of aid that are more visible and easily monitored or those that are non-excludable. We might anticipate that those at the village level—chiefs, women's leaders, and youth leaders—would be more likely to prefer aid that goes directly to the village or household, such as food aid, cash aid, or local leader or household training, as this would increase the odds that their community would benefit. Forms of aid that would be more likely to remain in the commune seat—like trainings, infrastructure, or budget support—might be less attractive to village-level leaders.

Table 9 reports preferences across aid modality by type of leader. Overall, the most significant differences are between leaders at the village-level and those at the commune-level. Those at the village level were more likely to prefer aid that directly targets households, while they were less likely to prefer support for training than commune-level leaders. A few other differences stand out: women's leaders allocate the most compared to any other leader type to aid that directly targets households, including both food aid and cash transfers, and the least to risk prevention trainings—perhaps because women are often excluded from such programming. Secretaries General, meanwhile, allocate the least to aid that directly targets households and the most to risk prevention trainings and to commune budget support compared to other leader types. Contrary to our expectations, there are not significant differences between members and non-members of aid distribution committees.

Despite these differences, it is interesting that there seems to be overall alignment across many diverse types of leaders on several key areas:

- When directly targeting households, food aid is generally preferred above cash transfers by all leader types, across all regions, and across localities faced by different types of severe shocks. This may reflect food being less prone to theft, easier to target or distribute, or being perceived as having a higher value amid underdeveloped markets.
- Even with high humanitarian need, many respondents value risk prevention training targeted at both leaders themselves and households. We asked respondents to specify whether trainings would be tar-

Table 9: Share of budget allocated to each type of aid by leader type

	Food aid	Cash transfers	Risk prevention training	Infra-structure	Equipment	Commune budget support
Average aid allocation across sample						
Member of aid committee	0.24	0.13	0.21	0.20	0.17	0.04
Non-member of aid committee	0.23	0.13	0.21	0.22	0.18	0.03
Village vs. commune						
Commune-level leaders	0.21	0.10	0.24	0.21	0.18	0.06
Village-level leaders	0.25	0.14	0.20	0.21	0.18	0.03
By type of leader						
Mayor	0.21	0.10	0.23	0.23	0.15	0.08
Secretary General	0.18	0.08	0.26	0.20	0.17	0.10
Opposition candidate	0.21	0.08	0.24	0.22	0.19	0.03
Civil society leader	0.22	0.11	0.23	0.11	0.19	0.04
Village chief	0.25	0.12	0.19	0.22	0.18	0.03
Women's leader	0.26	0.16	0.17	0.20	0.18	0.04
Youth leader	0.23	0.13	0.22	0.21	0.17	0.03
Village advisor	0.24	0.14	0.21	0.21	0.17	0.03

Source: MLLAR Survey (2024).

geted at households or at leaders, and respondents of all types divided training support relatively evenly between leaders and households.

- Leaders of all types and across all regions and shocks did not concentrate their aid allocation into a single area but indicated wanting a variety of aid programming. With some variation in the ranking of the different modalities, food aid, risk prevention training, and infrastructure were commonly the three most-valued modalities.

5.2 Anticipatory action

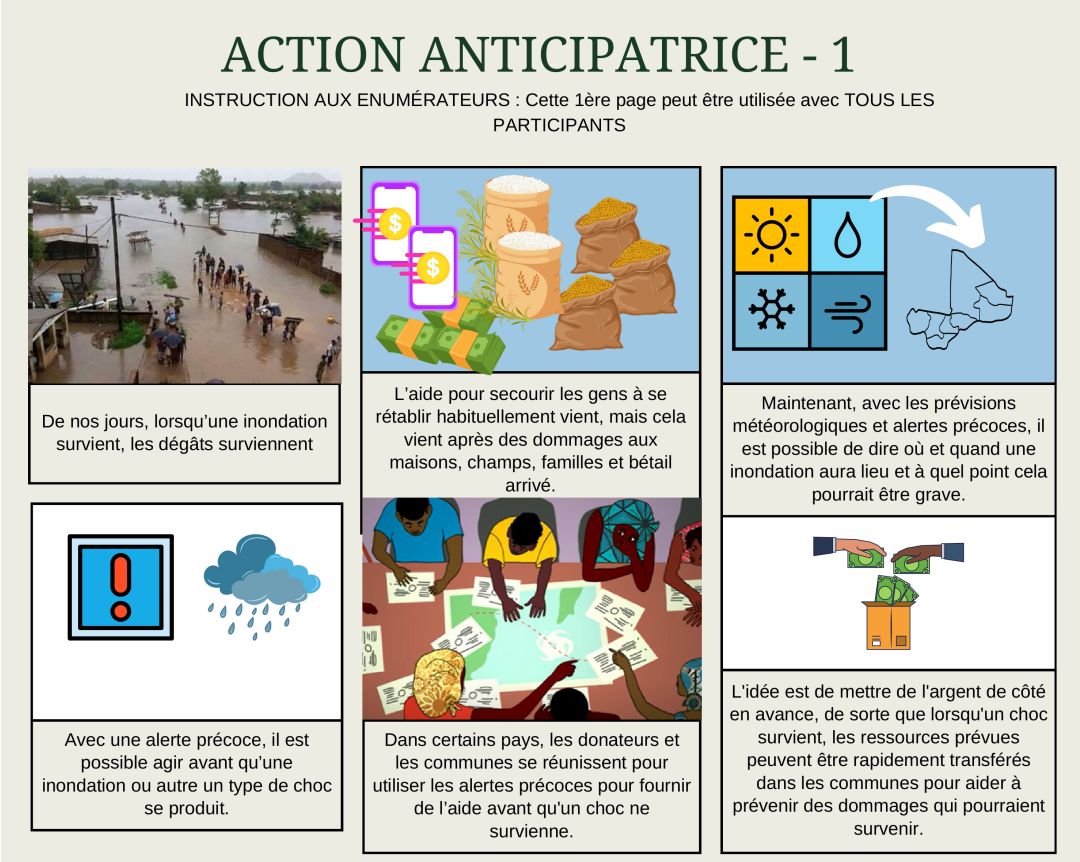
In addition to asking leaders to allocate aid across modalities, we implemented an experimental game to understand how leaders weigh resilience programming versus humanitarian response. Within this game, we focus on a specific type of resilience programming: anticipatory action (AA). AA programming provides support for households and communities to act ahead of predicted shocks in order to reduce the humanitarian impacts of shocks before they unfold. The decision to release AA programming is based on a risk analysis or other forecasting of when a particular event or shock may happen. AA can be a cost-effective means for promoting resilience (Food and Agriculture Organization, 2023) and is being piloted across the Sahel (World Food Programme, 2023).

Before asking leaders about their preferences around AA and humanitarian response, we wanted to ensure that all respondents understood how AA works. We created a cartoon storyboard to explain how AA works designed to be accessible to respondents with low literacy levels who have likely never heard of AA programming before. Figure 17 displays the first page of the 6-page storyboard which was shown to all respondents in order to explain how AA works as well as some of the tradeoffs around implementing AA in practice. We piloted the storyboard to ensure that local actors understood the concepts. The storyboard introduced eight critical pieces of information to explain AA. Text in italics provides the English translation of the prompts used with respondents to accompany the cartoon storyboard, and the full storyboard is provided in the Appendix:

1. Policy context: We frame the current approach to managing crises in Mali which relies primarily on humanitarian response. *These days, when a flood comes, the damage comes. Aid to help people recover usually comes, but it comes after damage to homes, fields, and livestock have happened.*

2. Nature of proposed reform: We then explain and present how AA programming can work differently from humanitarian response. *Now, with weather forecasts and early warnings, it is possible to tell where and when a flood will happen and how bad it might be. With an early warning, it is possible to take*

Figure 17: AA storyboard



Note: This storyboard was used to explain AA to respondents. This is the first page of a 6 page storyboard, which is included in full in the Appendix.
Source: Authors' elaborations.

action before a flood or other type of shock happens. In some countries, donors and communes are coming together to use early warnings to provide aid before a shock comes. The idea is to set aside money in advance, so that when a shock is predicted, resources can be quickly moved to communes to help prevent damage from happening. For example, communes could receive sandbags and shovels to build protective dykes to prevent flooding damage. The thinking is that an ounce of prevention is worth a pound of cure.

3. Policy tradeoffs: We then present one of the key tradeoffs in adopting AA programming, which is that early warning systems cannot predict the timing, location, and severity of events like floods with perfect accuracy. *Preparing for a crisis that has not happened yet can be hard. While weather forecasting and early warnings are often accurate, sometimes they get it wrong. They might predict one commune will receive a bad flood this year, but actually the community is okay. And sometimes, they might predict that the commune will be ok, but actually the commune does get a flood. Even when the forecast is correct, no matter how prepared we are, we cannot always stop all the damage, and people might still need help recovering.*

4. Explanation of the aid allocation game: We then inform leaders that we are going to play a game in which they will be able to choose how to allocate 5 million CFA—between humanitarian aid and this new type of programming (AA) which we have just explained to them. We fix ideas that resources are now allocated fully into humanitarian response. They are given 5 physical tokens, each of which represents 1 million CFA which they must allocation within the game. We also pull out five physical game pieces to represent "quartiers," or neighborhoods, within a village. *Now we want to play a game. Before we start, imagine that you get 5 million CFA and you can choose how much to allocate to anticipatory action—this type of aid that can come before a crisis, when an early warning signal is received—and the other to humanitarian response, the type of aid that comes after a shock hits and helps your community to recover. We want to understand how you would choose to allocate these 5 million CFA. There are no right or wrong answers - the needs of every commune and village are different. There are also some pluses and minuses of each type of aid. Let's talk them through. Let's say that these 5 game pieces represent the homes, fields, and livestock in 5 quartiers in your village. Each of these money tokens represents 1 million of the 5 million CFA budget. You can allocate between 0 and 5 million CFA to AA and between 0 and 5 million to humanitarian response, but you only get 5 million total.*

5. Explanation of payoffs: All respondents receive the same information about the payoffs of their allocation decisions. *For every 1 million CFA that you allocate to AA, you will get resources to help protect the homes, fields, and livestock in one quartier of your village. So if you allocate 2 million CFA to AA, you will get enough sandbags and shovels to protect the homes, fields, and livestock of 2 quartiers*

in your village, 3 million for 3 quartiers, etc. But, the resources only get released if there is an early warning signal saying that a flood is coming. For every 1 million that you allocate to humanitarian aid, you get this same amount back in the value of food aid if a flood occurs. Today, things mostly work like humanitarian response aid. Aid comes when a flood or crisis happens. So, I'm going to put all 5 million CFA over in the humanitarian response bucket to represent the world today. You can probably see that there are some pluses and minuses of moving the money over to AA.

6. Benefits of the proposed reform: All respondents then receive the same information on the long-term benefits of AA. *First considering the benefits of moving the money to AA, if there is an early warning signal for your area that a flood is coming, your village would get resources to help you prepare. Over time, this could do a lot to prevent flood damage. If early warnings work most of the time, communities are getting AA in advance, preparing for floods before they happen, and damage is prevented. Communities are able to avoid large losses on average.*

7. Costs of the proposed reform: All respondents are given the same information on the costs of the proposed reform. *Next, consider some of the disadvantages of moving money to AA. Sometimes, the early warnings do get it wrong, as we showed you, and then there is less money available for humanitarian response. You may also have people in your community involved in distributing humanitarian aid today, and they could be upset that they have too little humanitarian response aid right now.*

8. Uncertainty: Finally, we explain uncertainty in prediction models for early warning systems using a jar of differently-colored marbles. *This jar is going to represent the early warning signal that you could get that a flood is coming. There are 10 marbles in the jar. The number of black marbles in the jar represents the number of times the early warning signal is right, and the number of white marbles in the jar represents the number of times the early warning signal is wrong for your village. So for the jar in the picture, the early warning signal is able to tell you in advance that a flood is coming 5 times out of every 10 floods. So if you invest exactly 1 million CFA in AA, for every 5 out of 10 floods, you would get shovels and sandbags in advance and be able to prevent damage to 1 quartier in your village.*

While all leaders received the same information as laid out above, we then implemented two experimental variations in order to test whether (1) differing levels of prediction accuracy and (2) different mechanisms for distributing AA affects level of support. Each of these treatments was randomly-assigned using simple randomization:

1. **Accuracy of early warning signals**: We first experimentally vary the accuracy of early warning signals. In one treatment arm, respondents are told that early warning systems accurately predict a

flood with 50% probability.[7] To ensure that the probability is salient to respondents, they are shown a jar with 5 black marbles and 5 white marbles and told that the number of black marbles represents the number of times out of 10 that a flood would be accurately predicted. In the second condition, respondents are told that early warning systems accurately predict a flood with 80% probability. They are shown a jar / cup with 8 black marbles and 2 white marbles and told that the number of black marbles represents the the number of times out of 10 that a flood would be accurately predicted. In both conditions, respondents are reminded that even if the early warning signal is wrong sometimes, they can still prevent damage over the course of many years by taking preventative actions if they think that their village may get a lot of floods over time.

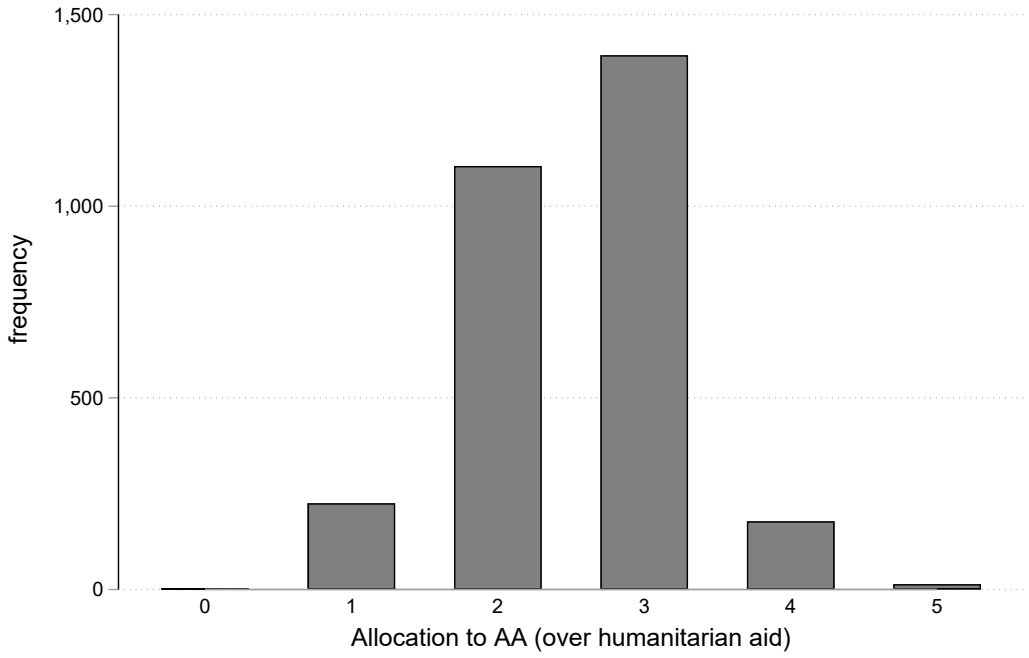
2. **Logistics**: We additionally vary which actors would be responsible for distributing AA. In the "donors" condition, respondents are told that donors would distribute supplies when an early warning signal comes to help prevent flood damage. In the "local discretion" condition, respondents are told that supplies for AA would be stored in grain banks, and the commune aid distribution committee would be responsible for moving supplies from grain banks to communities when an early warning signal comes to help prevent flood damage. In both cases, respondents are shown images on the cartoon storyboard of the truck of an international donor distribution shovels and sandbags or a grain bank, respectively, to fix ideas.

After going through this storyboard, we ask respondents to allocate their 5 million CFA between AA and humanitarian aid. We then ask respondents to close their eyes and draw a real marble out of the jar which contains the number of black vs. white marbles which they have been experimentally assigned. We explain that a flood occurred and, based on which color marble they draw, whether the early warning signal would have been accurate or not and what outcomes their investment in AA vs. humanitarian would result in. For example, if the respondent allocated 3 million CFA tokens to AA and 2 million CFA tokens to humanitarian aid and drew a black marble (correct signal), we inform them that they would receive an accurate early warning signal, enough AA to prevent damage to 3 quartiers, and 2 million CFA in humanitarian response. Alternatively, if the respondent made the same allocation but had drawn a white marble (inaccurate signal), we inform them that they would not receive AA but would receive 2 million CFA in humanitarian response. After going through this exercise, we ask respondents if they want to change their allocation decision.

Figure 18 displays the average allocation to AA over humanitarian aid made by respondents in our sample.

[7] It is difficult to find precise estimates for the accuracy of early warning systems for flooding in Mali. From the perspectives of local leaders, the accuracy of early warning systems would depend both on the accuracy of predictions made by modeling as well as the ability of early warning systems to broadcast signals that reach local leaders in practice. However, upon consultations with AA implementing organizations working in the region, several noted that AA programming reached communities with approximately 50% accuracy during piloting phases. We therefore used 50% to represent an expected accuracy level, at least in early years of AA programming.

Figure 18: Average allocation to AA



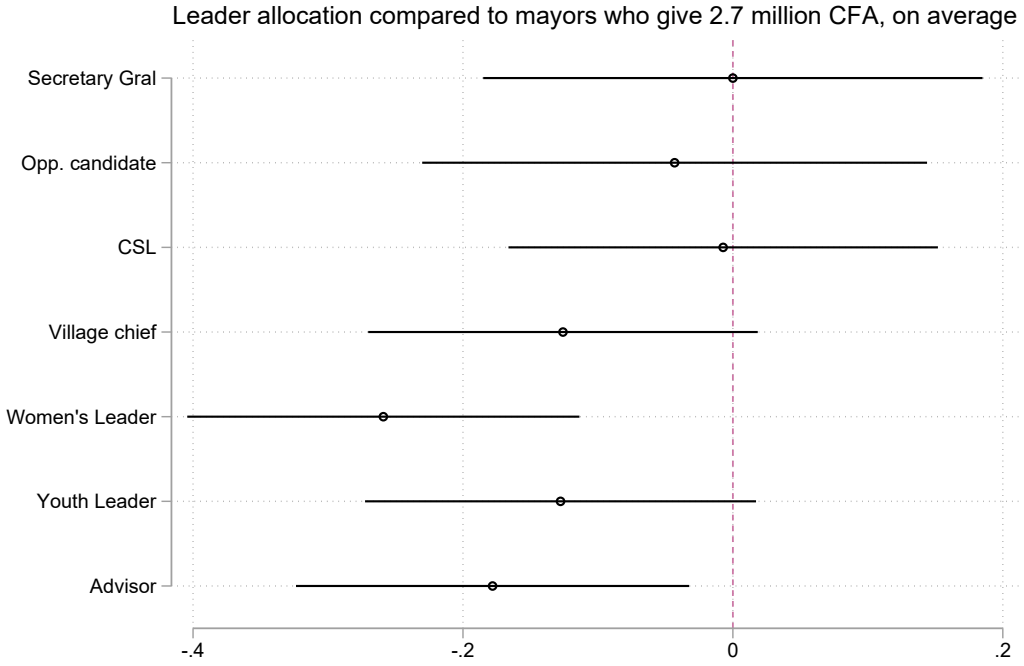
Note: This figure includes all respondents and averages across treatment arms.
Source: MLLAR Survey (2024).

Overall, most leaders allocated either 2 or 3 million CFA to AA. Similar to what we saw with the budget allocation exercise across aid modalities, most leaders prefer to spread limited aid budgets across a number of modalities rather than concentrating in one. Figure 19 displays the average allocation to AA by type of leader in our sample. The dashed red line represents the average allocation by mayors to AA in the sample (2.7 million CFA); each dot represents the difference between the average allocation for the relevant leader type and the mayor average, and lines represent confidence intervals. There are some significant differences between commune- and village-level leaders in allocation decisions: village-level leaders allocate less on average than do commune-level leaders to AA, with women's leaders allocating the least to AA overall.

We next test whether either of the treatment conditions affect either the amount allocated to AA or the degree of expressed support for AA, using a 4-point Likert scale question asking about the extent to which respondents had favorable views toward AA. As shown in Table 8, neither of the treatments significantly affected levels of support for AA either measured by the amount allocated to AA or the Likert-scale question on support for AA.

While AA programming in Mali is nascent, it is possible that some localities in the sample will have received some type of AA programming or other type of resilience programming intended to provide localities with

Figure 19: Average allocation to AA by leader type



Note: This figure includes all respondents and averages across treatment arms. CSL is civil society leader.
Source: MLLAR Survey (2024).

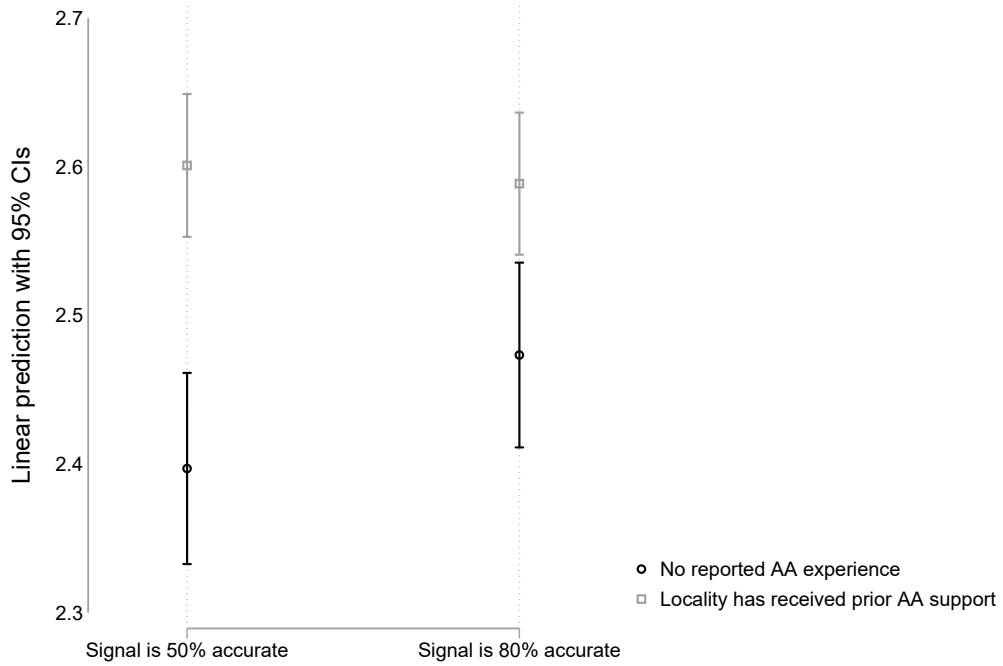
Table 10: Effects of early warning system accuracy and local discretion over aid targeting and distribution on support for anticipatory action programming

	Amount spent on AA	Degree of support for AA
High Accuracy	0.017	0.026
	(0.028)	(0.017)
Local Discretion	0.026	-0.004
	(0.028)	(0.017)
R-squared	0.000	0.001
Observations	2919	2919

Source: Mali Local Leaders Aid and Resilience Survey (2024)

Notes: (1) *Amount spent on AA* refers to the portion of the 5 million CFA allocated to anticipatory action rather than humanitarian aid. It ranges from 0 to 5 million CFA, in increments of 1 million. (2) *Degree of support for AA* indicates the level of support for donors and NGOs increasing spending on AA programs, even at the expense of humanitarian aid. It is measured on a 4-point Likert scale. (3) *High Accuracy* refers to a set condition representing a 4 in 5 chance of the warning system accurately predicting the shock.(4) *Local discretion* represents a set condition where supplies for AA would be stored in grain banks, and the commune aid distribution commission would be responsible for moving supplies from grain banks to communities when an early warning signal comes to help prevent flood damage.

Figure 20: Average allocation to AA based on accuracy treatment and prior experience with resilience programming

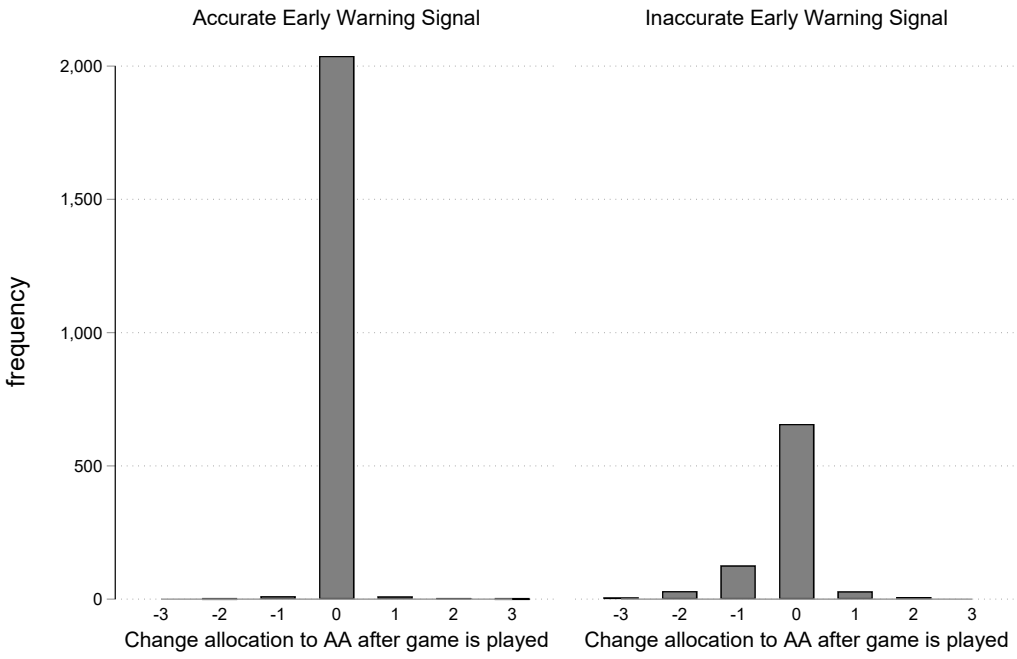


Source: MLLAR Survey (2024).

resources to prepare for a crisis. Having prior experience with AA could change how leaders reason about the tradeoffs around moving resources from humanitarian response to AA. Figure 20 graphs allocations to AA based on (1) whether respondents were assigned to the treatment arm in which signals were 50% accurate in predicting flooding or the treatment arm in which signals were 80% accurate in predicting flooding and (2) whether the respondent indicated that they had prior familiarity with receiving either AA specifically or other types of resilience programming *before* a shock happened in order to mitigate its effects. Leaders who report prior experience with some type of AA programming are significantly more likely to allocate more resources to AA in the experimental game. There is also a small positive effect of higher signal certainty among leaders with no prior experience AA (weakly significant), suggesting that information on signal accuracy may be more salient to respondents with no prior awareness with AA.

Finally, we additionally look at the effects of randomly drawing an inaccurate early warning signal in the experimental game. As we would expect by random chance, approximately 20% of respondents in the "80% accuracy" condition drew a white marble, indicating that they received an inaccurate early warning signal (exactly 19%). In the "50% accuracy" condition, 40% of respondents drew a white marble—slightly fewer than would be expected by random chance. Those who receive an inaccurate early warning signal in the game are significantly more likely to revise their allocation to AA downward (see Figure 21. Meanwhile,

Figure 21: Effect of experiencing an inaccurate early warning signal in the game



Source: MLLAR Survey (2024).

those who receive an accurate early warning signal in the game almost always choose to keep their allocation to AA versus humanitarian response constant.

In all, the AA experimental game reinforced four key ideas for donors looking to scale AA programming in Mali and in similarly fragile contexts:

- First, local leaders are amenable to AA programming—even at the expense of redirecting some share of humanitarian response.
- Second, village- and commune-level leaders varied in their support for AA, with commune-level leaders being more likely to move more resources away from humanitarian response toward AA. When combined with the results on leader preferences over aid modalities, this reinforces the importance of consulting leaders at multiple levels of local governance, who vary in their views on what programming might best support their localities. Women's leaders in particular were more reluctant to move resources away from humanitarian response.
- Third, prior experience with AA improved leaders' views toward AA programming. Piloting AA programming could thus be a good way to build further local support for this type of resilience programming over the long-term.

- Finally, the results suggest that investments in forecasting accuracy as well as wide dissemination of accurate signals and systems are worthwhile: leaders reduce support for AA when early warning signals are inaccurate.

6 Conclusions

We engaged a unique sample of local leaders in Mali with the objectives of learning from and sharing the valuable insights that this diverse group of leaders have on how shocks have affected their localities, how local aid distribution systems work in practice and vary subnationally, and what types of aid can best support local recovery. Hearing the perspectives of these interlocutors is important for aid effectiveness and for donors and INGOs improving community engagement strategies and investing in resilience programming in the region. In this paper, we analyzed the responses from 2,919 diverse leaders—including civil servants, elected mayors, opposition leaders, civil society leaders, village chiefs and their advisors, and women's and youth leaders—on their priorities and preferences, informed by their experience leading local populations through crisis. While we have reported many detailed findings throughout the paper from this survey, there are three broad insights we can highlight from this work.

6.1 Implication 1: Drought and water security need more external support

While localities report high prevalence of all types of shocks in the past year—including droughts, floods, conflict, livestock disease, and more—it is notable that 68 percent of leaders cited drought as among the two most difficult shocks their localities have faced in the past five years. This is more than twice the share of leaders who cited conflict as the most difficult shock facing their locality. Across almost all of Mali, a high share of leaders cited water shortages as a moderate or large problem facing their community (Figure 13). This is consistent with messages we heard in our early qualitative work supporting this study, when many interviewees stated that access to clean water was an urgent need in their community receiving little external support (Bleck et al., 2023). Indeed, around half of leaders in our survey citing drought as among the two most difficult shocks noted that they received no aid at all to support recovery (Figure **??**. This underscores the need for more external support to address these catastrophic shocks.

6.2 Implication 2: Community engagement should reach multiple levels of local governance and randomly-selected villages

While we made extensive efforts in our sampling strategy to engage a diverse set of local leaders who might have very different views on community needs and aid modalities based on their relative positions in and out of power, leaders varied less than we hypothesized in their preferences over aid. The most notable differences across all of the different ways that we examined leader preferences were consistently between leaders at the commune level and those at the village level rather than between different types of leaders. On average, village leaders were more likely to prioritize aid modalities that are more likely to provide more direct support for households, especially food aid and to a lesser extent cash transfers, compared to aid modalities like training or budget support which might remain in the commune seat. Village leaders, especially women's leaders, were also more reticent to move resources away from humanitarian response toward AA programming.

It is also notable that even though village leaders are often not formally included on aid distribution committees, they play a significant role in many aspects of aid distribution, including influencing decisions about which households to target, the amount of aid each household will receive, and resolving local disputes over aid distribution. Getting their views on how best to support local resilience and aid modalities that will work locally is important for aid effectiveness, especially since these views vary systematically from those shared by leaders in the commune seat.

Our sampling strategy also sought to engage a wide array of types of villages, including those in the commune seat, those who are perceived by the mayor to be very affected by crisis, those that have strong political ties to the commune seat, and those that have weak political ties to the commune seat. There are some differences across these types of villages in their exclusion from current aid distribution systems. For example, villages with weak ties to the mayor are 4.6 percentage points less likely to receive aid after a severe shock compared to villages with strong ties to the mayor (Figure 5. However, villages which we selected at random were the least likely to receive aid after a severe shock, with only 38.8% reporting receiving aid (Table 5). When designing community engagement plans, these findings suggest that there can be value in randomly sampling villages to consult in addition to any targeted strategies. For example, we specifically asked mayors to identify the village in their commune with weak ties to the commune seat—thinking that these identified villages might be more vulnerable and more excluded from current aid distribution systems—yet, villages sampled at random were 10 percentage points less likey to receive aid after a severe shock than villages with weak ties.

While it is hard to argue that more local consultation would always be better and give donors more information about local needs, in practice, donors face limited staff and resources with which to conduct community

engagement. These findings suggest that when tradeoffs need to be made, there may be more value in consulting leaders across levels of local governance (e.g., at both the commune and the village level) versus leaders from different segments of society within the same level of governance, and that randomly-selecting villages within communes for consultations will yield quite different information and insights compared to asking commune-level leaders which villages to consult. Although women's leaders in this context are often the wives of local elites (Bleck et al., 2021), women's leaders tended to have the most distinct views on aid preferences compared to any other type of leader. Given their role in representing women within the village in local affairs, consulting women's leaders on aid programming could bring forward new information, perspectives, and preferences.

6.3 Implication 3: Leaders see value in reallocating aid toward resilience programming, while ensuring some resources for humanitarian response

Finally, despite the high levels of humanitarian need across Mali and reported by leaders, we see strong support for resilience programming, even when it means shifting some resources away from humanitarian response. In a budget allocation game in which leaders allocated a fixed number of stones between aid modalities, risk prevention training for leaders and for households was consistently chosen as among the three most preferred aid modalities. In an experimental game designed to explain AA programming to leaders who may have no experience with this type of resilience programming, leaders allocated around half of a fixed budget to AA compared to humanitarian response. Overall, this indicates a high demand for resilience programming of varying types, while still ensuring resources for humanitarian response. As noted above, there were important differences between village and commune-level respondents in their demand for resilience programming. While both supported more resilience programming, village leaders tended to maintain more resources for humanitarian response—especially food aid.

Our results also suggest that investments in early warning system accuracy and in better dissemination of early warnings could increase support and effectiveness of resilience programming. Few leaders reporting receiving any early warning for the most severe shock their locality had faced, limiting their ability to prepare for them. And, we found in the AA experimental game that leaders reduced support for AA when they received an inaccurate early warning signal. By investing in better systems, local leaders might build confidence in AA that translates into higher support and thus greater willingness to divert emergency humanitarian response funds to prevention and preparedness efforts.

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A AA Storyboard (French)

ACTION ANTICIPATRICE - 1

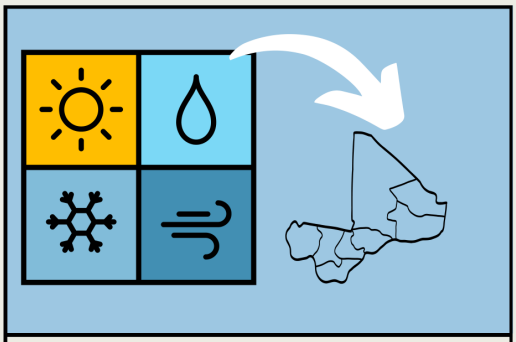
INSTRUCTION AUX ENUMÉRATEURS : Cette 1ère page peut être utilisée avec TOUS LES PARTICIPANTS

De nos jours, lorsqu'une inondation survient, les dégâts surviennent

Avec une alerte précoce, il est possible agir avant qu'une inondation ou autre un type de choc se produit.

L'aide pour secourir les gens à se rétablir habituellement vient, mais cela vient après des dommages aux maisons, champs, familles et bétail arrivé.

Dans certains pays, les donateurs et les communes se réunissent pour utiliser les alertes précoces pour fournir de l'aide avant qu'un choc ne survienne.



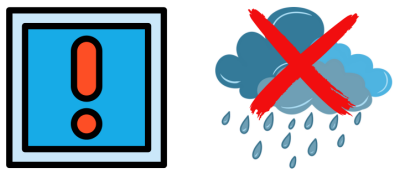
Maintenant, avec les prévisions météorologiques et alertes précoces, il est possible de dire où et quand une inondation aura lieu et à quel point cela pourrait être grave.

L'idée est de mettre de l'argent de côté en avance, de sorte que lorsqu'un choc survient, les ressources prévues peuvent être rapidement transférés dans les communes pour aider à prévenir des dommages qui pourraient survenir.

ACTION ANTICIPATRICE - 2

INSTRUCTION AUX ENUMÉRATEURS : Cette 2ème page peut être utilisée avec TOUS LES PARTICIPANTS

Par exemple, les communes pourraient recevoir des sacs de sable et des pelles pour construire des digues de protection pour empêcher dégâts causés par les inondations. L'idée est qu'une prévention vaut la peine qu'une tonne d'actions humanitaires.



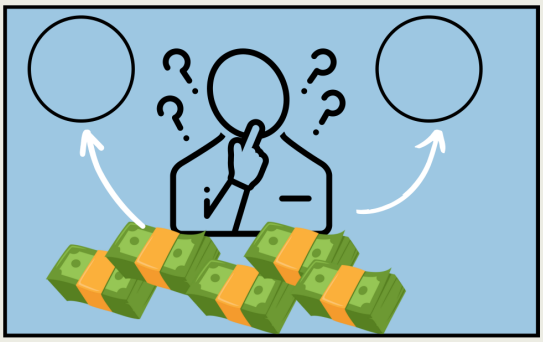
Se préparer à une crise qui n'a pas encore eu lieu est arrivé mais cela peut être difficile. Alors que prévisions météorologiques et début les avertissements sont souvent précis, parfois, ils se trompent. Ils pourraient prédire qu'une commune subir une grave inondation cette année, mais en fait, la communauté va bien.

Et parfois, ils pourraient prédire que la commune ira bien, mais en fait, la commune bénéficie d'une inondation.

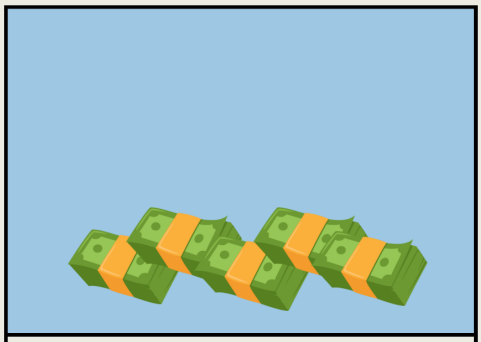
ACTION ANTICIPATRICE - 3

INSTRUCTION AUX ENUMÉRATEURS : Cette 3ème page peut être utilisée avec TOUS LES PARTICIPANTS

Même lorsque les prévisions sont exactes, quel que soit notre niveau de préparation, nous ne pouvons pas toujours arrêter tous les dégâts, et les gens peuvent encore avoir besoin d'aide pour se rétablir.



Maintenant, nous voulons jouer à un jeu. Avant de commencer, imaginez que vous recevez 5 millions de FCFA et que vous puissiez choisir quel montant allouer à l'action anticipative -- ce type d'aide qui peut intervenir avant une crise, lorsqu'un signal d'alerte précoce est reçu -- et l'autre à l'aide humanitaire. le type d'aide qui intervient après un choc et aide votre communauté à se rétablir. Nous souhaitons comprendre comment vous choisiriez d'allouer ces 5 millions de FCFA. Il n'y a pas de bonnes ou de mauvaises réponses -- les besoins de chaque commune et village sont différents, et c'est vous qui connaissez le mieux vos habitants. Il existe également des avantages et des inconvénients pour chaque type d'aide. Parlons-en.

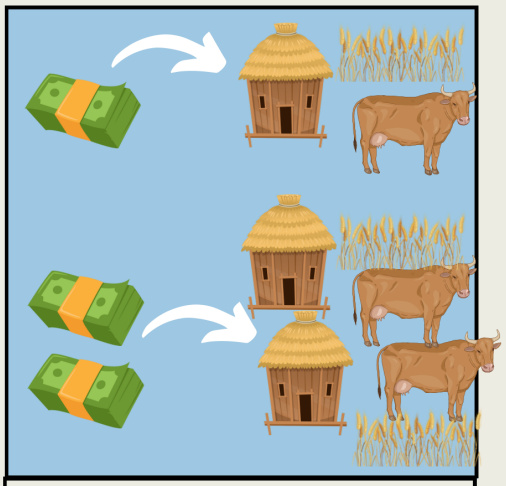


Disons que ces 5 jetons représentent les maisons, les champs et le bétail dans 5 quartiers de votre village. Chacun de ces jetons représente 1 million des 5 millions de FCFA du budget. Vous pouvez allouer entre 0 et 5 millions de CFA à AA et entre 0 et 5 millions de CFA à la réponse humanitaire, mais vous n'obtenez que 5 millions au total.

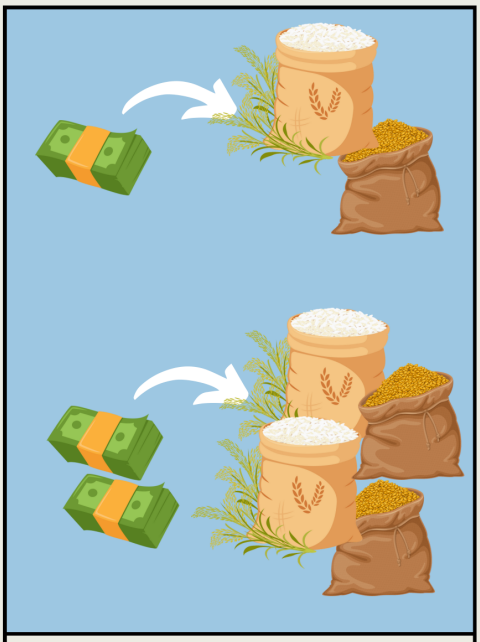
[Note à l'enquêteur : distribuez 5 jetons.]

ACTION ANTICIPATRICE - 4

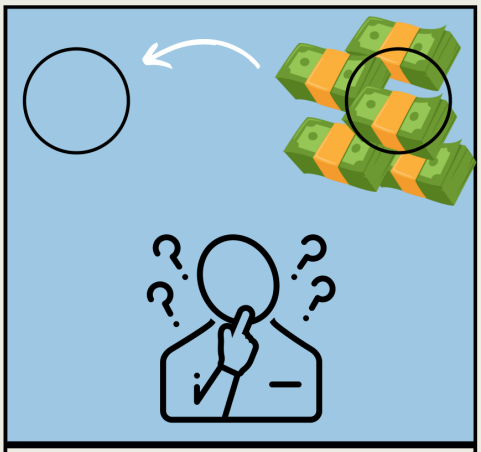
INSTRUCTION AUX ENUMÉRATEURS : Cette 4ème page peut être utilisée avec TOUS LES PARTICIPANTS



Pour chaque million de FCFA que vous allouez aux AA, vous obtiendrez des ressources pour aider à protéger les maisons dans 1 quartier de votre village. Alors si tu alloues 2 millions de FCFA à AA, vous obtenez suffisamment de sacs de sable et de pelles pour protéger les maisons, les champs et élevage de 2 quartiers dans votre village, 3 millions pour 3 quartiers, etc. **Mais les ressources ne sont libérées que s'il y a un signal d'alerte précoce annonçant qu'une inondation approche.**



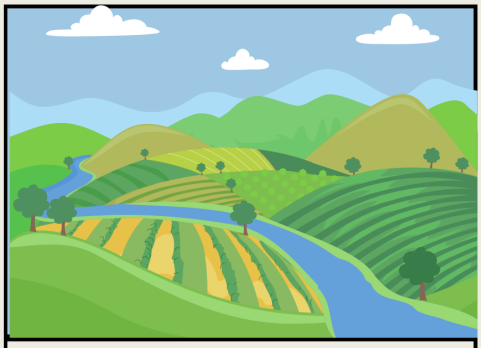
Pour chaque million que vous allouez à l'aide humanitaire, vous récupérez 1 million d'aide alimentaire en cas d'inondation.



Aujourd'hui, les choses fonctionnent principalement comme une « aide humanitaire ». L'aide arrive lorsqu'une inondation ou une crise survient. Je vais donc mettre les 5 millions de FCFA dans le seau humanitaire pour représenter le monde d'aujourd'hui.
Vous pouvez probablement constater qu'il y a des avantages et des inconvénients à transférer de l'argent vers les AA :

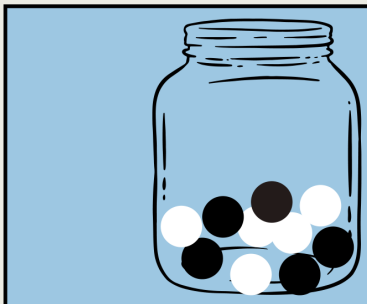
ACTION ANTICIPATRICE - 5

AUX ENUMÉRATEURS : Cette 5ème page peut être utilisée avec TOUS LES PARTICIPANTS



Avantages: Considérant tout d'abord les avantages de transférer de l'argent aux AA, s'il y a un signal d'alerte précoce dans votre région indiquant qu'une inondation approche, votre village recevra des ressources pour vous aider à vous préparer. Au fil du temps, cela pourrait contribuer grandement à prévenir les dégâts causés par les inondations. Si les alertes précoces fonctionnent la plupart du temps, les communautés reçoivent des AA à l'avance, se préparent aux inondations avant qu'elles ne surviennent et préviennent les dommages. Évitez les pertes importantes dues aux inondations en cas de rage.

Inconvénients: Considérez ensuite les inconvénients du transfert d'argent vers les AA. Parfois, les premières alertes se trompent, comme nous vous l'avons montré, et il y a alors moins d'argent disponible pour l'intervention humanitaire. Il se peut également que des membres de votre communauté soient impliqués dans la distribution de l'aide humanitaire et qu'ils soient contrariés de ne pas disposer actuellement de suffisamment d'aide humanitaire.



Ce pot va représenter le signal d'alerte précoce que vous pourriez recevoir de l'arrivée d'une inondation. Il y a 10 billes dans le pot. Le nombre de billes noires dans le pot représente le nombre de fois où le signal d'alerte précoce est correct, et le nombre de billes blanches dans le pot représente le nombre de fois où le signal d'alerte précoce est erroné pour votre village. Ainsi, pour le pot sur la photo, le signal d'alerte précoce est capable de vous indiquer à l'avance qu'une inondation se produira 5 fois sur 10 inondations. Ainsi, si vous investissez dans AA, pour 5 inondations sur IO, vous recevrez des pelles et des sacs de sable à l'avance et serez en mesure d'éviter des dommages à un quartier de votre village.

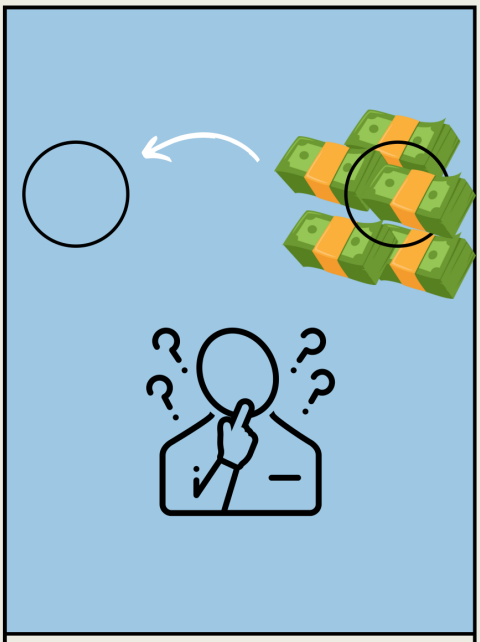
ACTION ANTICIPATRICE - 6A

INSTRUCTION AUX ENUMERATEURS : Cette 6ème page peut être utilisée UNIQUEMENT AVEC LES PARTICIPANTS OÙ AA_logistics=="6a"

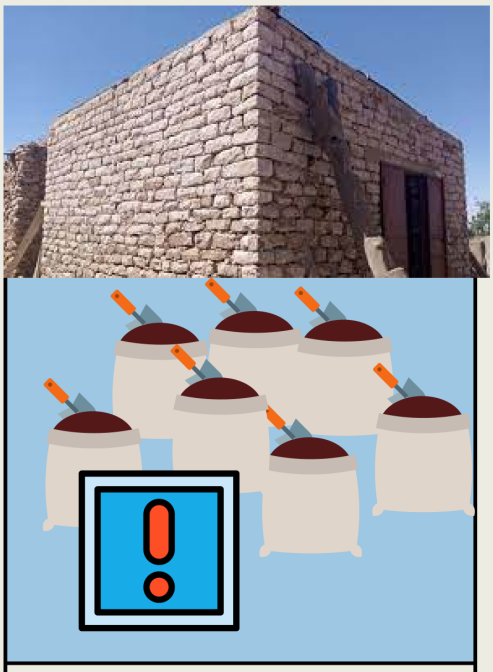
Maintenant, je vais vous montrer un vrai pot avec un vrai nombre de billes noires et blanches. Les billes blanches représentent toujours le nombre de fois où le signal d'alerte précoce est erroné, et les billes noires représentent toujours le nombre de fois où le signal d'alerte précoce est correct.

N'oubliez pas que même si le signal d'alerte précoce est parfois erroné, vous pouvez toujours éviter les dégâts sur de nombreuses années si vous pensez que votre village pourrait subir de nombreuses inondations au fil du temps.

[Instruction à l'enquêteur : Montrer le vrai pot. Si CAPI affiche AA_marbles == "2 billes blanches", affichez le pot avec 2 billes blanches et 8 billes noires. Si CAPI affiche AA_marbles=="5 billes blanches", montrer un pot avec 5 billes blanches et 5 billes noires]



Imaginez qu'un bailleur de fonds propose une réforme pour conclure un accord avec la commission de distribution de l'aide de votre commune afin de transférer une partie de ces 5 millions de francs CFA de la réponse humanitaire vers AA.



Les fournitures pour les AA seraient stockées dans des banques de céréales, et la commission de distribution de l'aide serait chargée de déplacer les fournitures des banques de céréales vers votre commune lorsqu'un signal d'alerte précoce arrive pour aider à prévenir les dégâts causés par les inondations.

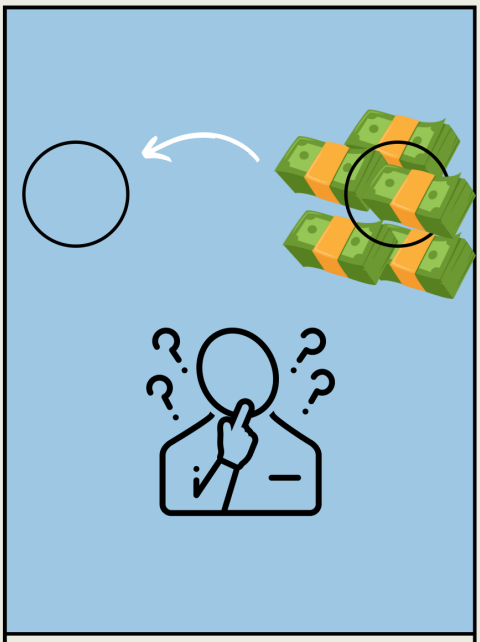
ACTION ANTICIPATRICE - 6B

INSTRUCTIONS AUX ENUMERATEURS: Cette 6ème page peut être utilisée UNIQUEMENT AVEC LES PARTICIPANTS OÙ AA_logistics==”6b”

Maintenant, je vais vous montrer un vrai pot avec un vrai nombre de billes noires et blanches. Les billes blanches représentent toujours le nombre de fois où le signal d’alerte précoce est erroné, et les billes noires représentent toujours le nombre de fois où le signal d’alerte précoce est correct.

N'oubliez pas que même si le signal d'alerte précoce est parfois erroné, vous pouvez toujours éviter les dégâts sur de nombreuses années si vous pensez que votre village pourrait subir de nombreuses inondations au fil du temps.

[Instruction à l'enquêteur : Montrer le vrai pot. Si CAPI affiche AA_marbles == “2 billes blanches”, affichez le pot avec 2 billes blanches et 8 billes noires. Si CAPI affiche AA_marbles==”5 billes blanches”, montrer un pot avec 5 billes blanches et 5 billes noires]



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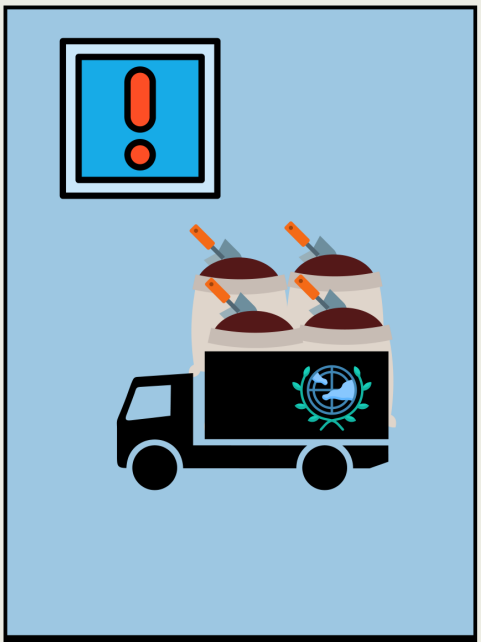

Les donateurs distribueraient des fournitures lorsqu'un signal d'alerte précoce arriverait pour aider à prévenir les dégâts causés par les inondations.

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